2013

Washington State Department of Transportation

TOLL DIVISION OPERATIONAL REVIEW

NOVEMBER 2013

Title VI Notice to Public

It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinators, George Laue at (509) 324-6018 or Jonte' Sulton at (360) 705-7082.

Americans with Disabilities Act (ADA) Information

This material can be made available in an alternate format by emailing the WSDOT Diversity/ADA Affairs team at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA (4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

Table of Contents

Study Purpose 1

State Auditor's Office Performance Audit 2

- Focus 2
- Recommendations 2
- WSDOT Response 2

Cost to Collect 4

- Background 4
- Uses 5
- Flexibility in Analysis 5
- Results 5
- Agency Cost to Operate and Maintain Comparisons 7

Lean Review 8

- Lean Organization 8
- Lean Advisory Board 9
- Lean Training 9
- Customer Experience Survey 10
- Survey Results 10
- Lean in Action 11

Evolution of Modern Tolling Within WSDOT 13

- History and Overview 13
- 2006 Transportation Commission Tolling Study 13
- 2008 Legislation Created Tolling Framework in Washington State 14
- WSDOT "Virtual" Toll Organization 14

Development of the Toll Division 15

- 2009 WSDOT Strategic Toll Organization Development Report 15
- 2009 JTC Independent Expert Review Panel 15
- 2011 Return of the Expert Review Panel 17
- Legislative Direction on Tolling 17
- Toll Program Growth 19

Comparing Agencies 20

- Maryland Transportation Authority 20
- Florida Turnpike Enterprise 21

Texas Department of Transportation 23
North Carolina Turnpike Authority 24
E-470 Public Highway Authority. 24
Additional Context on Tolling Structures 25
WSDOT Unique Characteristics 26
Future Tolling Direction 27
Legislative Direction 27
Current and Proposed Toll Projects 27
Other Plans and Studies 28
State Funding Trends 31
National Trends 32
Toll Division Challenges 35
Business Practice Challenges 36
Planning and financial challenges 38
Roles, Responsibilities and Toll Division Workplan 40
Roles and Responsibilities Clarification 40
Functions of the Toll Program 40
Shared Roles and Authorities 41
Avoiding and Resolving Conflicts 42
Toll Division Work Program 43
Toll Division Interim Goals 43
Goal: Sustainable funding and performance 43
Goal: Deliver as promised 45
Goal: Customer service quality 46
Goal: Transparency and Credibility 47
Goal: Strategic Vision 48
Goal: Communication and Leadership 49
Toll Division Resources 51
Business model 51
Current Organizational Structure 53
Review of Organization Structure 53
Toll Program Budget 54
Space and Facilities 58
Lean Management 60
Implementation of Toll Division Program Management Organization 60

Lean Initiatives 61
Cost to Collect 62
Key Findings 64

Table of Figures

Figure 1: Peer Agency Cost per Transaction to Operate and Maintain 8
Figure 2: DMAIC Process 12
Figure 3: Toll Division Work Plan 18
Figure 4: Toll Division Projected Transactions and Revenue 19
Figure 5: The purchasing power of the state fuel tax is declining 31
Figure 6: Reduced forecasts of future state fuel tax revenue 32
Figure 7: 2009 WSDOT Statewide CSC Bid Comparisons 36
Figure 8: Toll Division Table of Organization 54

Table of Tables

Table 1: Tacoma Narrows Bridge FY 2013 Q1-Q4 Cost to Collect Analysis 6
Table 2: SR 167 FY 2013 Q1-Q4 Cost to Collect Analysis 6
Table 3: SR 520 FY 2013 Q1-Q4 Cost to Collect Analysis 7
Table 4: Potential Lean Projects 11
Table 5: Annual Toll Revenue, Transactions and Staffing of Peer Agencies 20
Table 6: Approved 2013-15 Biennium Budget 55
Table 7: Approved 2013-15 B Program Budget 56

Table of Appendices

Appendix A: *Good To Go!* Customer Experience Survey Report
Appendix B: Lean Review Report for $0.25 Pay By Plate Fee Reversals
Appendix C: Lean Review Report for Escalated Customer Inquiries
Appendix D: Lean Review Interim Report for Image Review of Photo Enforced Transactions

CHAPTER 1

Study Purpose

The 63rd State Legislature passed a budget proviso requiring the Washington State Department of Transportation (WSDOT or the Department) to conduct a review of the Department's toll operations and maintenance program in order to identify and eliminate inefficiencies and redundancies, incorporate lessons learned, and analyze opportunities to conduct operations more effectively. The Legislature further directed the Department to use the results of the state audit and the Cost of Service Study as the basis for a "Lean" review. Using Lean management principles, the WSDOT Toll Division examined opportunities to eliminate waste, standardize processes, and foster a culture of continuous improvement.

Lean management is a culture that organizations use to eliminate waste and reduce costs while improving quality. It is a process of continuous improvement that examines individual processes with high potential to be more effective and less costly and to incrementally improve over time. WSDOT is in the beginning stages of implementing Lean management, and has already made an early identification of the three operational processes to improve as discussed in Chapter 6.

In order to fully describe WSDOT's tolling program, organization, and cost structure, this report contains a broader range of topics. It addresses the Toll Division's management approach and use of resources in order to consider efficiencies at a broader level, while describing costs that are fixed or could increase over time.

Inside you will find the following:

- Chapter 1, Introduction, introduces the Toll Division Operational Review and describes its purpose and context including the State Auditor's Office (SAO) performance audit and cost of collection study.
- Chapter 2, Evolution of the Toll Division, describes the cost-reducing decision to include the Toll Division within WSDOT, the reasons it makes practical sense to be integrated into the Department and the evaluation of the Toll Division within the Department.
- Chapter 3, Future Tolling Direction, discusses possible directions and considerations for the future of tolling in Washington as well as to give an overview of the upcoming work and the challenges the Toll Division will need the capacity to address.
- Chapter 4, Roles and Responsibilities, discusses applicable roles and responsibilities of the Toll Division. Roles and responsibilities determine our working relationships within WSDOT and are the context for understanding our resource needs.
- Chapter 5, Resource Requirements, describes the resources required to operate the *Good To Go!* toll program, including state staff, consultant and vendor support, and other ongoing costs. It identifies the Toll Division's business model and funding sources, and how they affect toll rates.
- Chapter 6, Lean Management, describes the Lean management process that has been adopted within the Toll Division, possible efficiencies, and quality improvements currently being evaluated.
- Chapter 7, Key Findings and Next Steps, describes the results of the operational review, as well as policy issues that require further discussion.

State Auditor's Office Performance Audit

Focus

In August 2013, the State Auditor's Office released its performance audit of the Department's implementation of the statewide all-electronic toll system on SR 520 and the back-office system. The audit was designed to evaluate what lessons could be learned from WSDOT's development and implementation of statewide all-electronic tolling for application to future projects. The performance audit focused on the following elements:

- Identification of cost savings related to project delays;
- Analysis of the roles and functions of the Department, including recommendations to change or eliminate Departmental roles or functions related to clarifying Department roles and responsibilities for future projects;
- Analysis of Departmental performance, data measures , and self-assessment systems; and
- Identification of best practices.

Although the SAO Report focused on development activities, not operations, many of the recommendations are transferrable and will be used to make improvements throughout the Toll Division.

Recommendations

The auditors recommended that to improve WSDOT's management of future tolling projects and to minimize the risk of project delays the following actions be taken:

- "The Secretary [of Transportation] ensure roles, responsibilities, and decision-making authority are clear for projects managed by the Toll Division.
- The Assistant Secretary, Toll Division, to establish policies and procedures to guide the development and implementation of tolling projects."

WSDOT Response

WSDOT's formal response has been detailed in the document entitled "Official State Cabinet Agency Response to the Performance Audit on Washington's Tolling Program: Lessons Learned from Project Delays" dated August 1, 2013. WSDOT responses, action steps and time frames are outlined below.

Recommendation 1: The Secretary should clarify the roles, responsibilities, and decision-making authority for future tolling projects.

The concerns expressed by SAO regarding roles and responsibilities, relates to interactions of the Toll Division with other divisions within WSDOT.

RESPONSE

The roles, responsibilities, and decision-making authority within WSDOT will be reviewed to ensure that future tolling projects directed at improving the major urban transportation corridors across the state are implemented efficiently and effectively.

Action Steps and Time Frame
The Toll Division is coordinating with WSDOT executive management and those organizations impacted by this finding to clearly define roles, responsibilities, and decision making authority. Roles and responsibilities have been a key consideration in the Division's organizational realignment work.

- The Secretary's Office will issue an executive order that officially establishes the roles and responsibilities of the Toll Division and addresses cross-functional relationships across WSDOT divisions. (December 31, 2013)

- The Secretary's Office will issue an updated executive order for delegation of authority to clearly define the decision-making authority of the Toll Division. (December 31, 2013)

While the final executive orders are not due until late 2013, the organizational realignment work done as part of the Toll Division Operational Review considered roles and responsibilities, cross-functional relationships, and decision making authority. The initial assessment is outlined in Chapter 4, Toll Division Roles and Responsibilities, as well as in Chapter 5, Organization Structure Changes. This work will be finalized in the executive orders issued late this year.

Recommendation 2: The Assistant Secretary, Toll Division, should establish policies and procedures to manage future tolling projects.

In April 2012 the Division established the Toll Policy Team, made up of WSDOT executive management and cross-functional senior management and led by the Assistant Secretary, Toll Division. The team evaluates and recommends statewide policy. In November 2012, the Toll Division started developing Standard Operating Procedures to document fundamental Toll Division activities.

RESPONSE
WSDOT supports the recommendation to further establish policies and procedures, as they will further strengthen the Toll Division's ability to coordinate future toll projects. To establish a solid framework for strengthening standards and processes, the Toll Division is establishing a program management organization (PMO). The PMO is a group within the Toll Division to define and maintain project management standards, as well as working to standardize processes and introduce economies of repetition in the execution of projects. Additionally, the PMO will be the source of documentation, guidance, and metrics for project management. The Toll Division's goal for the PMO is to ensure the success of each project, standardize project management practices (including change management, risk assessments, and mitigation strategies), and lower overall costs. As part of this effort, the Toll Division will continue to work with other divisions in WSDOT who have a part in supporting toll project delivery to establish the process and procedures for how cross-functional units will work with the Toll Division to meet project needs and requirements.

Action Steps and Time Frame

- The PMO structure and practices have been developed and the PMO was officially initiated in August 2013. The Toll Division held the first monthly PMO meeting in September 2013. The Charter and Procedures documentation is under final revision.
- As part of the PMO, the Toll Division will work with other divisions in WSDOT to produce a project management guide outlining the tools, best practices, and documentation required for project management within the Toll Division and its cross-functional efforts within WSDOT (to be completed by March 31, 2014)
- The Toll Division will work with other divisions in WSDOT to establish standards, processes, and procedures for cross-functional efforts within WSDOT (to be completed by March 31, 2014)

Process standardization across the Toll Division, as well as clearly defined roles and responsibilities related to risk governance, change management, and project reporting are key benefits of the new PMO. The PMO support team will be responsible for developing the project management guide. In addition, ongoing Lean Initiatives will be monitored using the new PMO structure.

With clearly defined roles and responsibilities, the Toll Division will be able to work with the other WSDOT divisions on cross-functional standards, processes and procedures to ensure consistent and predictable results for current and future projects.

Cost to Collect

Background

In 2009 the Joint Transportation Committee Toll Operations Cost Expert Review Panel[1] recommended the Department "determine fixed and variable costs of *key customer service account and payment method activities* and establish a management process to report on the same as performance indicators and other information that can be used to modify business rules." In response to that recommendation, in 2010 the Toll Division hired Louthan Consulting to perform a baseline study of costs (Cost of Service Study.) This was particularly important as the Toll Division realized that a number of upcoming changes would result in varied results for subsequent analysis including (i) the impending addition of SR 520, (ii) new payment methods and (iii) a change in the customer service center vendor.

In 2012 and 2013 Louthan Consulting performed a model update and refresh of the Cost of Service Study. Changes to the model including:

- Incorporation of overhead expenses;
- Addition of the SR 520 facility;

[1] The Joint Transportation Committee of the Washington State Legislature contracted with AECOM to form an expert review panel for the purpose of reviewing costs and strategies for electronic toll collection in the state of Washington and, in particular, review WSDOT's plans for implementing the all-electronic-toll-collection project for SR 520.

- Addition of new transaction types (Pay By Plate, Short Term Account, Pay By Mail, Notice of Civil Penalty);
- Removal of the violations transaction type;
- Split of cash collection analysis into cash only and credit/debit card;
- Inclusion of adjudication process; and
- Changes in the back office vendor from TransCore to Electronic Transaction Consultants Corporation (ETCC).

Uses

The purpose of the Cost of Services analysis was to understand cost drivers to allow WSDOT to better evaluate its business model and the effects of its business rules. Additionally, it was believed that the work conducted under the Cost of Service Study would help inform current and future Toll Division processes and studies, including:

- Budget preparation;
- Rate setting;
- Review of fees and discounts;
- Pay By Mail differential;
- Financial forecasting;
- Lean reviews;
- Ferry Integration Study; and
- Improvements to business rules and processes.

Flexibility in Analysis

The 2010 Cost of Services Study evaluated toll expenses paid with toll dollars. The 2013 analysis was established to allow WSDOT to evaluate all expenses, regardless of the funding source. The model has the flexibility to:

- Analyze all facility costs;
- Analyze cost of collection only;
- Analyze toll program expenses only;
- Analyze facility level costs; and
- Analyze cost by payment method.

Results

This analysis established a new baseline for the Cost of Service and, while directionally accurate, reflects the appropriated Toll Division expenses rather than the actual costs to collect incurred by the vendor. The reasons for this are related to the nature of the ETCC contract: first, this is a services only contract and WSDOT does not have insight into the vendor's actual expenses; second, the Department has been informed by the vendor that their actual expenses exceed the value of the original contract terms; and finally, due to a settlement agreement, the actual vendor payments have been reduced from the original contract terms.

The following tables summarize the cost of service analysis for FY 2013, quarters one through four (July 2012 through June 2013) for the SR 16 Tacoma Narrows Bridge, SR 167 High Occupancy Toll Lanes, and SR 520 Bridge respectively. The results of the cost of service analysis highlight areas requiring further examination, such as cash collection on the Tacoma Narrows Bridge and the use of Short Term Accounts. These items are further described in Chapter 6.

SR 16 Tacoma Narrows Bridge

Transaction Type	Transaction Count[1]	Cost to Operate and Maintain[2]	Cost to Collect[3]	Cost to Operate and Maintain[2]	Cost to Collect[3]
		All Funding Sources		Toll Funding Only	
Good To Go! Pass	9,093,586	$0.46	$0.32	$0.43	$0.30
Tollbooth	3,297,580	$1.22	$1.07	$1.20	$1.05
Pay By Mail	658,260	$1.26	$1.11	$1.21	$1.07
Pay By Plate	565,304	$0.57	$0.44	$0.53	$0.40
Non-Revenue	3,650	$0.41	$0.26	$0.38	$0.24
Short Term Account	563	$7.26	$7.03	$6.94	$6.71
Weighted Average	13,618,943	$0.69	$0.55	$0.66	$0.52

Table 1: Tacoma Narrows Bridge FY 2013 Q1-Q4 Cost to Collect Analysis

[1] Transaction counts for this analysis have been adjusted to represent final disposition.
[2] Cost to Operate and Maintain excludes debt payments, transponder costs, capital outlays for software, and adjudication costs.
[3] Cost to Collect is a subset of Cost to Operate and Maintain and additionally excludes insurance, supporting roadway expansion, maintaining bridges/roads, providing ongoing bond support, patrol services, and services rendered by other state agencies or government.

SR 167 High Occupancy Toll Lanes

Transaction Type	Transaction Count[1]	Cost to Operate and Maintain[2]	Cost to Collect[3]	Cost to Operate and Maintain[2]	Cost to Collect[3]
		All Funding Sources		Toll Funding Only	
Good To Go! Pass	1,005,355	$1.12	$0.71	$0.99	$0.63
Non-Revenue	26,877	$0.97	$0.65	$0.84	$0.57
Pay By Plate	N/A	N/A	N/A	N/A	N/A
Short Term Account	N/A	N/A	N/A	N/A	N/A
Pay By Mail	N/A	N/A	N/A	N/A	N/A
Tollbooth	N/A	N/A	N/A	N/A	N/A
Weighted Average	1,032,232	$1.11	$0.71	$0.99	$0.63

Table 2: SR 167 FY 2013 Q1-Q4 Cost to Collect Analysis

[1] Transaction counts for this analysis have been adjusted to represent final disposition.
[2] Cost to Operate and Maintain excludes debt payments, transponder costs, capital outlays for software, and adjudication costs.
[3] Cost to Collect is a subset of Cost to Operate and Maintain and additionally excludes supporting roadway expansion, maintaining bridges/roads, patrol services, and services rendered by other state agencies or government.

SR 520 Bridge

Transaction Type	Transaction Count[1]	Cost to Operate and Maintain[2]	Cost to Collect[3]	Cost to Operate and Maintain[2]	Cost to Collect[3]
		All Funding Sources		Toll Funding Only	
Good To Go! Pass	14,094,962	$0.45	$0.31	$0.41	$0.29
Pay By Mail	3,214,463	$1.14	$0.98	$1.08	$0.94
Pay By Plate	2,560,756	$0.53	$0.40	$0.49	$0.37
Non-Revenue	109,381	$0.62	$0.25	$0.58	$0.23
Short Term Account	6,785	$7.16	$6.97	$6.84	$6.66
Tollbooth	N/A	N/A	N/A	N/A	N/A
Weighted Average	19,986,347	$0.57	$0.43	$0.53	$0.40

Table 3: SR 520 FY 2013 Q1-Q4 Cost to Collect Analysis

[1] Transaction counts for this analysis have been adjusted to represent final disposition.
[2] Cost to Operate and Maintain excludes debt payments, transponder costs, capital outlays for software, and adjudication costs.
[3] Cost to Collect is a subset of Cost to Operate and Maintain and additionally excludes insurance, supporting roadway expansion, maintaining bridges/roads, providing ongoing bond support, patrol services, and services rendered by other state agencies or government.

Going forward the Toll Division plans to limit the Cost of Services work to annual updates and bring the analysis in-house to reduce costs and streamline the evaluation process.

Agency Cost to Operate and Maintain Comparisons[2]

While it is difficult to compare costs between agencies due to the varied facility types, business models, and organizational structures; the following chart provides peer information based on the agencies' published financial statements. This evaluation of peer agencies in Figure 1 demonstrates that WSDOT's cost per transaction is reasonable.

[2] Peer agency comparisons are based on agencies' published financial statements from 2013; those marked with an asterisk are from 2012. WSDOT information shown in blue is from the FY 2013 financial statements, and shown in green is the averaged cost to operate and maintain from the 1st-4th Quarter Cost of Service analysis. Only FTE and Ohio Turnpike report interest expenses under Operating Expenses; all other agencies report interest expenses under Non-Operating Revenue (Expenses), so interest expenses have been removed from the analysis.

Peer Agency Cost to Operate and Maintain

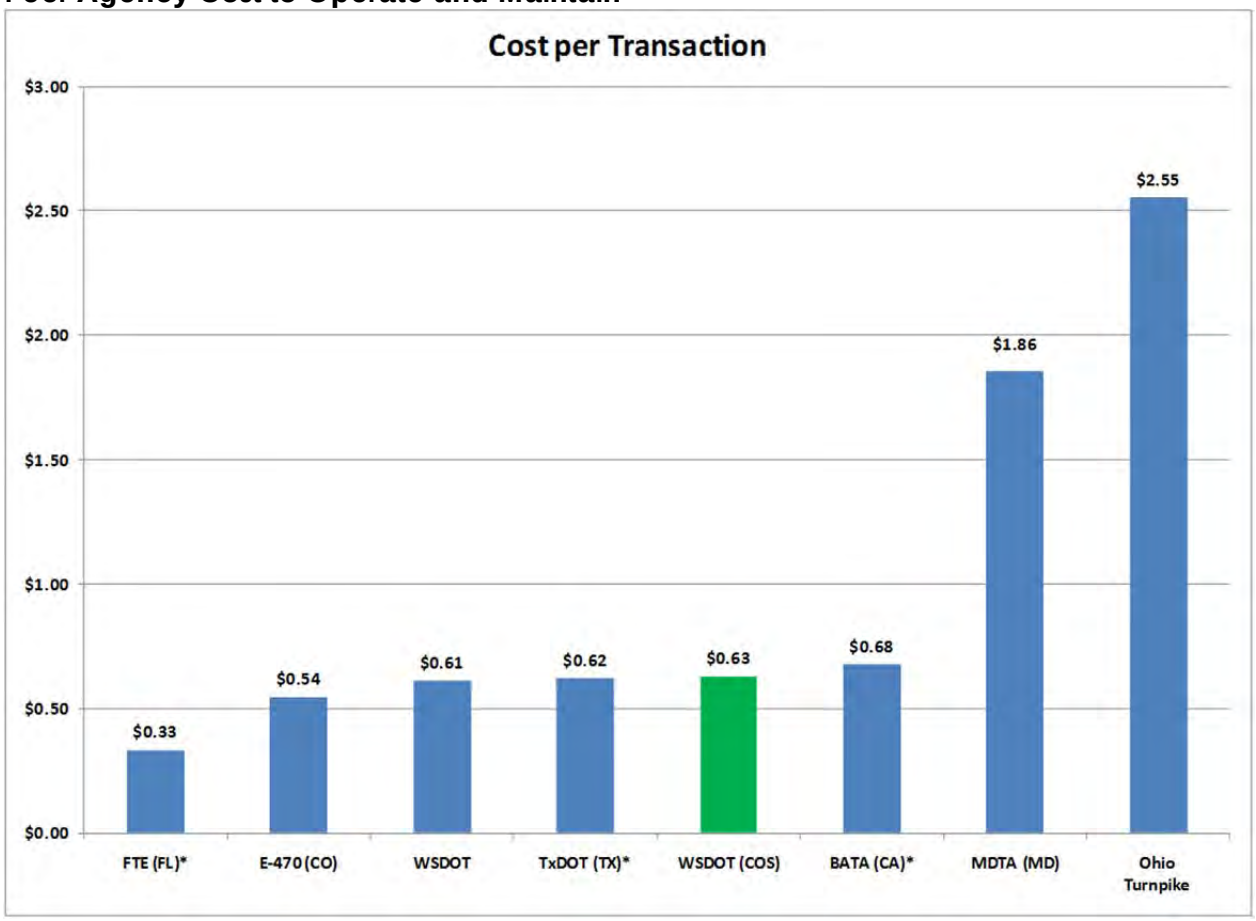


Figure 1: Peer Agency Cost per Transaction to Operate and Maintain

Lean Review

In December 2012, the Toll Division started working with the Statewide Customer Service Center vendor to identify process improvement opportunities. Upon legislative direction to conduct a review of the Toll Division operations using Lean principles, a foundation was established to identify and eliminate waste. This, along with other concurrent efforts described in this report, will ensure the Toll Division is positioned for long-term financial and operational sustainability.

Craig Stone, Assistant Secretary, Toll Division, is the Toll Division Lean sponsor and during a recent Toll Division meeting stated, "We have a huge ramp up of additional work and this is a great period of time for continuous improvement. This is the time to get things stabilized and establish a foundation to build off of going forward".

Lean Organization

The Toll Division Lean team was organized around a core team of specialists, called the "Lean Process Team". The Lean Process Team is made up of representatives from each functional group within the Toll Division, as well as members-at-large providing management and oversight. Functional area leads (Lean Leads) were identified who are responsible to facilitate the Lean work in their specific areas,

coordinating with subject matter experts (SMEs) and end-users for the Lean reviews. The "Lean Leadership Team" includes the Lean Sponsor (Assistant Secretary, Toll Division) and the management and oversight members from the Lean Process Team. The Lean Leadership Team meets regularly to discuss progress, issues, and next steps. Finally, there is an outside guiding body called the "Lean Advisory Board", described below. Upon submittal of this report the Lean Advisory Board and Lean Leadership Team will be dissolved and those coordination efforts will be assumed by the PMO. The Lean Process Team will remain intact.

Lean Advisory Board

As part of the Lean structure, the Toll Division has solicited the support of a Lean Advisory Board (LAB) consisting of four industry experts from around the country to oversee and guide the direction of the Lean process. The LAB meets monthly (or as needed) to receive updates from the Lean Leads on the work that is being done, then reports back to the Lean Leadership Team on next steps. The LAB consists of:

- **Dave Kristick**, Deputy Executive Director/Director of Operations, E-470 Public Highway Authority. Mr. Kristick has extensive toll operations and customer service center experience and in 2008 deployed a Lean culture within his own agency and their customer services vendor contract.
- **Jennifer Crosson**, Toll Program Manager, Jacobs. Ms. Crosson is a CPA, specializing in toll operations and accounting. She previously worked for the Transportation Corridor Agencies and currently consults for several toll authorities across the country.
- **Jorge Figueredo**, Tolls Business Sector Manager, Atkins. Mr. Figueredo is the former executive director for the North Texas Tollway Authority. He has a diverse background with vast experience in operations, customer service, organizational development, and communications.
- **Dennis Lakey**, Six Sigma Black Belt, Jacobs. Mr. Lakey has conducted numerous Lean events and workshops for industrial and manufacturing clients. He has seven years of practical, hands-on continuous improvement and Lean experience and knowledge in a variety of business environments including pulp and paper, chemical, manufacturing, accounting, administrative, and construction.

Lean Training

In order to competently lead the Lean process, WSDOT sent three Toll Division staff and Jacobs Engineering (the "General Tolling Consultant" (GTC) for the Toll Division) sent four staff to "Green Belt" training through the University of Washington's Professional Development Center during the summer of 2013. Green Belt is the initial training on Lean. These individuals received 40 hours of in-class instruction and were required to conduct a Lean review project. The course culminated in a presentation of the Lean review results in order to receive Green Belt certification. There are two additional WSDOT Lean Process Team members who will attend Green Belt Training. Further, two of the Green Belt certified GTC staff have registered for more advanced Black Belt training. Ultimately, it is the intent to have one WSDOT Toll Division staff trained as a Black Belt.

To ensure a culture of Lean and develop a knowledge base within the Toll Division, "brown bag" training was developed for Toll Division staff. To date, five training sessions have been held: two introductory classes, two intermediate classes, and a "Gallery Walk" presentation to show the results of two Lean projects. These classes have been well attended and well received by staff. 36 Toll Division staff and consultants have attended at least one of the Lean classes and 19 have attended both classes. There are plans to develop further training in the future.

With the additional Black Belt training to occur in December, the group of Green Belts, and the internal training being conducted for the remaining staff, the Toll Division will have a solid foundation rooted in Lean processes focused on the identification and elimination of waste with an eye towards creating maximum value for the Department and the public.

Customer Experience Survey

The first skill in developing a Lean culture and effectively applying Lean tenets and tools is to understand "value" from the customer's perspective. Therefore, the first step in the Lean process was to conduct a "Customer Experience Survey." The goal of the Customer Experience Survey (Survey) was to understand customer expectations, specifically for those activities that were considered valuable to the customer, and the associated customer satisfaction with those activities. The Survey was fielded from July 30 to August 30, 2013. The Survey was a statistically valid, stratified random sample by payment type of 24,077 customers with a recent interaction with WSDOT's *Good To Go!* customer service center, either paying a toll via a *Good To Go!* Pass or by contacting the customer service center within 90 days prior to the launch of the Survey. There were 2,815 Survey responses; 2,567 were completed online and 248 were returned by mail. The results of the Survey were used as part of the data analysis for the two Kaizen[3] events found in Appendix B and Appendix C.

Survey Results

Most respondents responded that knowledgeable and respectful representatives are the most important factors of customer service.

Respondents were asked to consider any person-to-person interactions with *Good To Go!* customer service, and then asked to rate how important and satisfied they were with specific factors. Generally all aspects of customer service were ranked as "important" and "very important" by respondents, but the following were the most highly ranked customer service factors (indicated on a scale of 1 to 4, where 1 is not at all important and 4 is very important):

- Representatives are knowledgeable and able to answer my questions (82 percent)
- Representatives provide respectful service in a friendly manner (77 percent)
- Any issue or dispute I have is resolved the first time I call (74 percent)
- Representatives spend a sufficient amount of time to help me resolve my issue (71 percent)

Regarding service received, respondents indicated most satisfaction with the representative's respectful manner and having their issue resolved by one representative.

As with importance, respondents generally rated all aspects of customer service as "satisfied" to "very satisfied", but respondents are the most satisfied with the following customer service factors (Indicated on a scale of 1 to 4, where 1 is not at all satisfied and 4 is very satisfied):

- Representatives provide respectful service in a friendly manner (69 percent)
- My issue is resolved by one representative rather than being transferred to several (65 percent)
- Representatives spend a sufficient amount of time to help me resolve my issue (64 percent)
- Representatives are knowledgeable and able to answer my questions (63 percent)

[3] Kaizen is a method for accelerating process improvement. This process typically requires dedicated teams work full-time for 3 to 5 days versus the typical approach of spreading the work over 3 to 6 months. This is feasible for well-defined projects with data that is readily available.

Having an issue or dispute resolved the first time someone calls has the largest service gap between importance and satisfaction.
Gaps in customer service can be calculated by taking the average importance score minus the average satisfaction score. These gaps can indicate where customer service is exceeding or not meeting respondents' expectations. No customer service factors exceeded respondent expectations and gaps where service did not meet expectations were small. Using Lean principles, these gaps are opportunities to make improvements. The factors with the largest gaps in meeting respondents' expectations were:

- Any issue or dispute I have is resolved the first time I call
- Email to customer service is responded to within 24 hours or less
- Representatives are knowledgeable and able to answer my questions

Most customers are satisfied.
When asked to rate their level of satisfaction with *Good To Go!* customer service on a 4-point scale, more than four-fifths (88 percent) indicated they were "satisfied" or "very satisfied" (54 percent satisfied and 34 percent very satisfied.) Only 12 percent indicated they were dissatisfied or very dissatisfied.

This customer satisfaction input was used as a key input tool in the next Lean steps. The survey results are included in Appendix A.

Lean in Action

Workshops
Equipped with their newly acquired skills, the team of Lean Green Belts conducted workshops for each of the four functional areas in the Toll Division to brainstorm a broad range of possible improvement projects. The potential projects identified through the workshops were diverse and included everything from simple solutions, such as the elimination of redundancies in how timesheets are processed, to issues that are very complex and costly to address, such as the review systems and processes for image-based transactions. Each functional group produced a work plan describing their possible projects and the potential benefits associated with improving those specific processes. Table 4 below lists the total number of projects that were identified in the individual functional workshops. The Lean Process Team is working to identify synergies among functional areas and identify projects with the highest impact potential for implementation.

Functional Group	Potential Lean Projects
Policy and Development	26
Operations	15
Communications	4
Finance and Budget	25
Toll Division Total	70

Table 4: Potential Lean Projects

Currently, each functional group is working to prioritize these Lean projects and develop action plans for the high-priority projects. The Lean leads are using Lean tools[4] to identify the root cause issues and measure the non-value added activities. Once the root cause is identified, the team will develop improvements and calculate the potential savings. Once the improvements are made and the waste is eliminated, the team will monitor the improvements to assure desired results are achieved. These projects will be scheduled as resources allow throughout this biennium.

Top Priority Improvements

Of all the potential Lean projects that were identified, three operations projects were identified as priorities. The three projects are: (1) $0.25 Pay by Plate Fee Reversal Process, (2) Escalated Customer Inquiry Procedures, and (3) Image Review of Photo Enforced Transactions (see Appendix D). The first two projects were identified because they are reasonably easy to implement and yield a relatively high payoff. The third project was previously identified as a longer-term improvement, but has been incorporated into the first round Lean process as a significant potential for waste elimination and increased revenue. These specific projects are discussed in Chapter 6, Toll Division Efficiencies.

General Process

The Toll Division Lean reviews utilized the well-established Six Sigma process known as DMAIC as shown below:

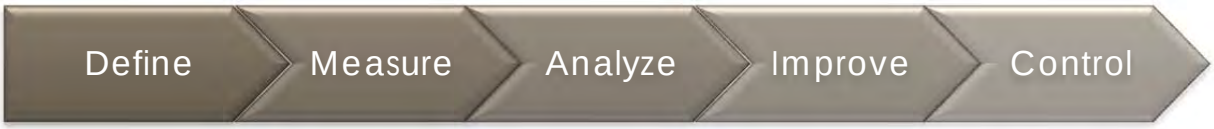


Figure 2: DMAIC Process

- **Define Phase:** Clearly articulate the nature of the project.
- **Measure Phase:** What is the current state of the process?
- **Analyze Phase:** Conduct analysis and present findings
- **Improve Phase:** Consider alternatives and present recommended solutions
- **Control Phase:** Monitor and control the implementation of recommended solutions

For each of the top priority projects under review, the Toll Division is in the final stages of the Analyze Phase, having not yet implemented any of the proposed improvements. The plan is to bring the proposed process changes to a regularly scheduled PMO meeting this fall for approval. Once approved, the process improvements will be implemented and observed to ensure the expected efficiencies have been realized and to calculate the cost savings or revenue increases that have resulted.

[4] Lean Tools include approaches such as: PICK chart analysis which categorizes projects into four categories: (1) Possible, (2) Implement, (3) Challenge, (4) Kill; fishbone diagrams, also known as the cause and effect diagram, used for quality defect prevention by identifying potential factors causing overall effect; and the 5 Whys, an iterative question-asking technique that is used to explore the cause-and-effect relationships underlying a particular problem with the primary goal of determining the root cause.

CHAPTER 2

Evolution of Modern Tolling Within WSDOT

History and Overview

Washington State has a long history of tolling that was interrupted by the interstate highway program, which provided substantial federal funds to build the Interstate system with tax funds. As the Interstate program wound down and federal funding for transportation diminished, states across the country reintroduced tolls as an increasingly important source of transportation funding. The introduction of electronic toll collection has allowed agencies to also use tolling for traffic management.

WSDOT's re-entry into the business of tolling began with the Tacoma Narrows Bridge project which opened in 2007, which evolved from a public-private project. WSDOT assumed the toll vendor contract originally established by the private firm. The toll vendor, TransCore, was originally managed by the Tacoma Narrows Bridge Project Office, but later oversight responsibility moved to the WSDOT Headquarters Traffic Operations Division.

In 2008 WSDOT opened the SR 167 High-Occupancy Toll (HOT) Lanes Pilot Project, which converted existing SR 167 High-Occupancy Vehicle (HOV) lanes to HOT Lanes (tolling single occupancy vehicles while HOV vehicles travel at no cost) to make better use of the available space in the HOV lanes. While new equipment was installed in the lanes of SR 167 by ETCC, transaction processing was supported by TransCore, the same toll vendor who was processing the transactions on Tacoma Narrows Bridge.

Once it became apparent tolling would be needed to complete the SR 520 Bridge Replacement and HOV project, it was determined the existing customer service center for the Tacoma Narrows Bridge and SR 167 could not adequately support the addition the SR 520 facility due to the fact that this project required the introduction of all-electronic tolling (no toll booths) and post-payment options (Pay By Mail and Short Term Accounts).

2006 Transportation Commission Tolling Study

Prior to moving forward with the Tacoma Narrows Bridge project, at the direction of the Legislature, the Washington State Transportation Commission conducted an extensive two-part study of the potential for tolling in Washington in 2006, and then again in 2008. These studies concluded that tolling could play a significant role in transportation funding, and they proposed governance and implementation guidelines.

A background paper produced for the "2006 Transportation Commission Tolling Study" assessed toll agency governance and organization models nationally, and recommended two potential organizational approaches to tolling in Washington. The two models differed based on whether regional agencies would have a role in advancing and selecting toll projects vs. locating project selection authority

centrally for the entire state. In both models, WSDOT would design and operate toll systems statewide. The report provides the following basis for that recommendation[5]:

> Recently enacted tolling organizations have selected an organization and governance model that allows the merging of strengths from an existing multipurpose transportation agency alongside a new organization focused solely on tolling opportunities. The reasons for selecting this approach have included:
>
> - The desire to use available technical resources from an existing agency rather than create duplicate capabilities. In this manner, only tolling-specific skills need to be added within the new organization.
> - The desire to develop greater synergy in integrating long-range goals and transportation system improvements.
> - The desire to have greater control from a centralized transportation agency rather than a more independent agency, whether statewide or regional in nature.
> - Providing a means of funding start-up activities, from administrative to project feasibility assessment.

2008 Legislation Created Tolling Framework in Washington State

In 2008, the Legislature passed legislation providing a framework for tolling in Washington, establishing the purposes of tolling, governance roles, and guidelines for use of toll revenues. By law, "it is the policy of the state of Washington to use tolling to provide a source of transportation funding and to encourage effective use of the transportation system." The legislature reserves authority over the establishment of new tolls on state facilities, and over how toll revenues may be used. The Transportation Commission is delegated authority to set toll rates, exemptions, and fees. WSDOT is the designated agency to plan, implement, and operate toll facilities on state highways.

WSDOT "Virtual" Toll Organization

When tolling was limited to the Tacoma Narrows Bridge, the single bridge toll operation was managed from the Headquarters Traffic Operations Division. Once it was known that tolling could provide funding for the SR 520 project, I-405 Express Toll Lanes, I-5 Columbia River Crossing and potentially other megaprojects under consideration, WSDOT began evolving toward a statewide toll program by using matrix management to staff toll-related projects from various work groups into a "virtual" toll organization.

Development of new toll systems for SR 520 and a statewide customer service center was managed from the Seattle-based Urban Corridors Office, which oversaw megaprojects funded through the legislature's 2003 and 2005 fuel tax increases. In 2008, Toll Operations was consolidated into the Urban Corridors Office to provide a unified approach to tolling statewide.

As a new tolling agency beginning a major project to implement tolls on SR 520, WSDOT engaged consulting assistance to bring industry experience and expertise in-house. WSDOT began developing an

[5] Washington State Comprehensive Tolling Study Final Report, Volume 2 – Background Paper #3: Organizational and Administrative Structures, Cambridge Systematics, September 2008.

integrated team approach with a variety of consultants to assist in all aspects of tolling. WSDOT has also benefitted from including active advice and expertise from peer agencies through FHWA's peer-to-peer program, as well as membership in the International Bridge Tunnel and Turnpike Association.

Development of the Toll Division

2009 WSDOT Strategic Toll Organization Development Report

WSDOT was directed to dissolve its Urban Corridors Office to reduce overhead. To maintain continuity and focus on tolling functions, WSDOT engaged consultants to build on the earlier Transportation Commission work, assess organizational models at peer agency toll entities, and propose an organization structure for a new Toll Division. The resulting consultant report[6] identified strengths and weaknesses of locating tolling within WSDOT and recommended that "if toll authority for SR 520 is enacted by the legislature during this session, the organizational shifts to create the Washington State Toll Division within WSDOT should begin immediately. Most of the changes to form this division can come from existing staff and facilities, focusing on efficiencies and with reassignment of duties."

The report proposed near-term, intermediate, and long-term organization structures. In the near term, the consultants proposed that the following functional groups be established within the new division: toll planning, toll project development, toll finance, and toll operations. WSDOT established the Toll Division in July of 2009.

2009 JTC Independent Expert Review Panel

During the 2009 session the Legislature authorized tolling on SR 520. As WSDOT prepared to contract for the new statewide customer service center, the Joint Transportation Committee (JTC) of the Legislature convened an expert review panel (ERP) to advise them in their oversight role to review costs and strategies for introducing all-electronic tolling on SR 520. The five-member ERP represented a variety of toll-related disciplines, and all members brought recent industry experience and familiarity with emerging trends. They interviewed staff, consultants, and policymakers; and reviewed materials to help understand WSDOT's upcoming vendor procurements. Their report was issued to the JTC in December of 2009.

The ERP report covered several topics, and resulted in several refinements to the procurement process. As part of their review they also advised the JTC on organizational models. The ERP reviewed WSDOT's "Strategic Toll Organization Development" report and other documents; as well as interviewed staff, consultants, vendors, and policy-makers. In their report, the ERP discussed efficiencies from being integrated with a state DOT and the need for bond agencies to have confidence in financial skills and information being presented by the toll agency. The following is an excerpt from the ERP Report[7]:

[6] Strategic Toll Organization Development, PBS&J, January 2009

[7] Final Report of the Expert Review Panel on Tolling, Joint Transportation Committee of the Washington State Legislature, December 2009.

The ERP recommends that WSDOT focus the new Tolls Division as a business unit responsible for the operations of revenue producing projects, including the following functions:

- toll project planning
  - project planning
  - operational feasibility
- financial strategy and operations
  - traffic and revenue projections
  - financial planning and feasibility
  - coordination and advice on bond issuance and reporting
  - responsible for revenue collection and accounting
  - total project cost accounting and overhead allocation toll
- systems development and procurement
  - procurement of toll related services
  - hardware and software development, maintenance and interface to DOT systems
  - toll technology standards
  - toll operating reports and statistics
- toll operations management
  - day-to-day operation support
  - staffing and training
  - business rule development
  - marketing and communications

The Toll Division current organizational structure is consistent with these four major functional areas of responsibility and reports to the Deputy Secretary and Chief Operating Officer on the same level as a District operation. This is consistent with the structure adopted by most Departments of Transportation that house a turnpike or tolling function within their organizational structure. As compared to DOT districts, rather than a geographical area of responsibility, these toll organizations become involved only as revenue producing projects are conceptualized across the state.

To provide support to WSDOT and to access the body of knowledge in the industry, the ERP recommended the acquisition of a general engineering consultant specializing in toll operations and systems integration. They indicated that hiring a general engineering consultant that has "hands on" knowledge of other ETC [Electronic Toll Collection]) and AETC [All ETC] applications and that stays aware of technological advances in the industry will bring state-of-the-art knowledge to WSDOT. The consultant will be able to advise WSDOT on an as-needed basis, assist with training, and provide support to the relationships with rating agencies and others. These services will be especially worthwhile in the first 2-3 years of the start-up of the Toll Division."

It is typical along similar toll organizations within state DOTs to employ a general engineering consultant. The Toll Division selected a general tolling consultant in mid-2010.

2011 Return of the Expert Review Panel

The delivery by the customer service center vendor (ETCC) required for the implementation of SR 520 was problematic. ETCC was not able to deliver the customer service center to meet the planned opening date, and the existing customer service center provided by TransCore could not be expanded. For this reason ETCC simultaneously developed its new tolling system while also developing an interim system to replicate the existing TransCore operation – intended to be in place for a very short time, but extended as the implementation date for SR 520 tolling continued to be deferred. Errors and inadequacies of this interim operation caused significant concern among customers, legislators and the press, and raised questions within WSDOT about how much hands-on testing and supervision would be needed before accepting the new customer service center system. As a result of the challenges encountered, the Secretary of Transportation requested the ERP return to assist WSDOT.

The Toll Division and its consultants worked diligently to find the best solutions to address these issues. As part of this, WSDOT contracted directly with the previous ERP for a second independent study to assess readiness to open the SR 520 toll facility. Minor changes were made to the ERP membership. The second ERP again convened in Seattle, reviewed materials, and interviewed staff, consultants, and policymakers. As a part of their review, the panel revisited its organizational recommendations. After interviewing staff and reviewing records from an independent quality assessment team WSDOT retained during the procurement process, the ERP concluded that the Toll Division Director lacked adequate authority in the Department to make timely decisions and deliver projects within scope and schedule.

In their Final Report[8], the ERP recommended stronger authority be provided to the Toll Division based on a review of challenges experienced during the SR 520 toll system and customer service procurement process:

> "The authority for full decision-making has never been given to the Toll Division. … The current organization was adequate to successfully deliver tolling to the SR 520 but opportunities for improvement exist. The ERP strongly suggests that the long-term success of the toll systems will require that the Toll Director position be strengthened to allow for the level of decision-making shown needed. Additionally, incorporating the finance/accounting and IT elements into the tolling organization is also our recommended solution, but we realize that this is not a short-term adjustment."

Legislative Direction on Tolling

To date the legislature has authorized tolling on six highways and has directed toll studies on four additional routes. Tolling has become an important part of the *Moving Washington* transportation strategy, as well as an important part of the central Puget Sound's transportation vision through 2040. The legislatively-authorized facilities and studies are shown on the map below.

[8] Expert Review Panel for WSDOT Tolling: Final Report, AECOM, June 2012

Toll Division Work Plan

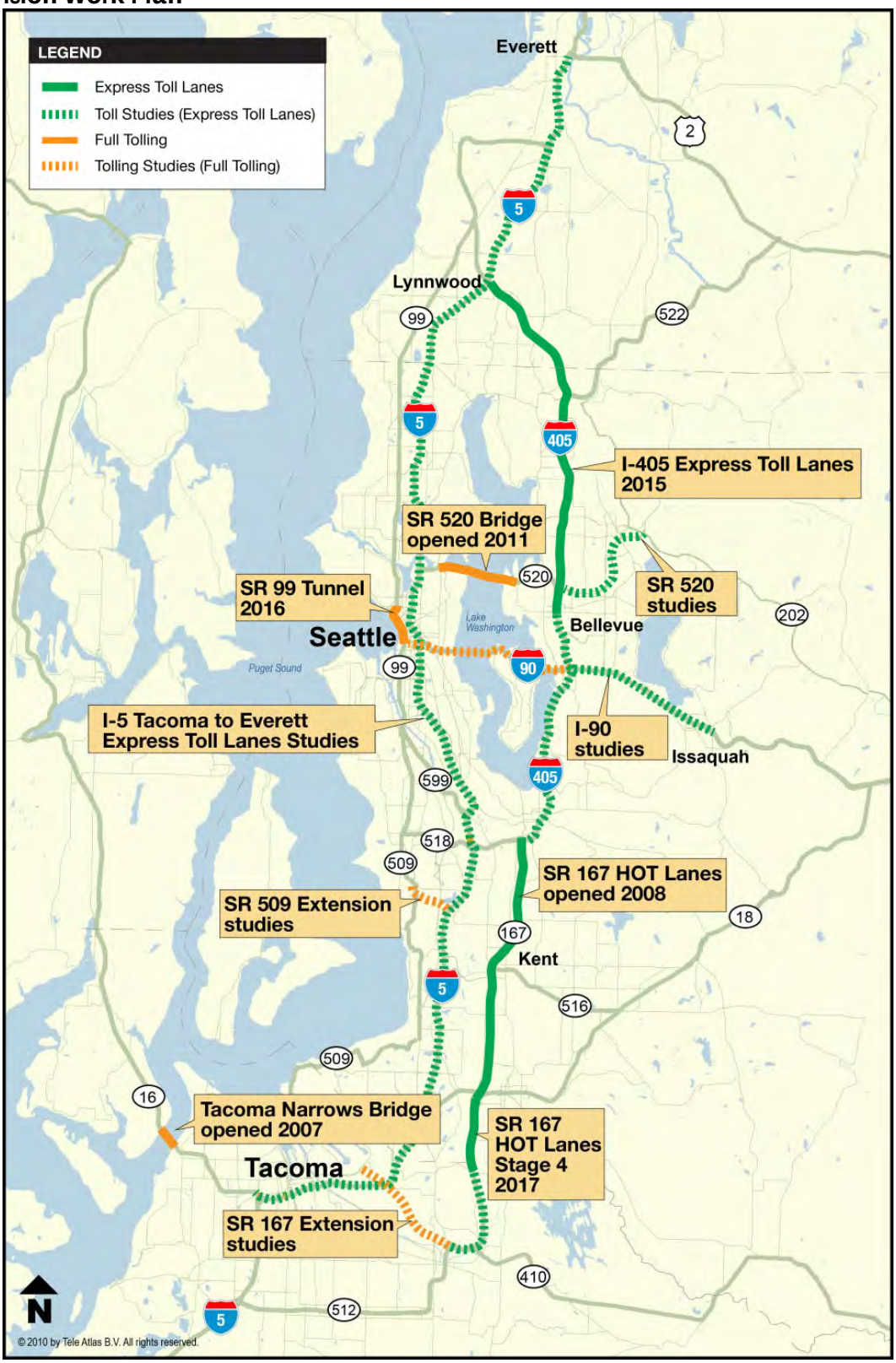


Figure 3: Toll Division Work Plan

Toll Program Growth

When tolling began on the Tacoma Narrows Bridge in 2007, it was a standalone turnkey operation which processed 13 million transactions generating $30 million in revenue. In FY2013 the Toll Division handled 35 million transactions with revenue of $115 million. By FY 2017, if all authorized toll facilities are operational it is projected that the division will process 65 million transactions with $190 million in revenue.

Toll Division Projected Transactions and Revenue through FY 2017

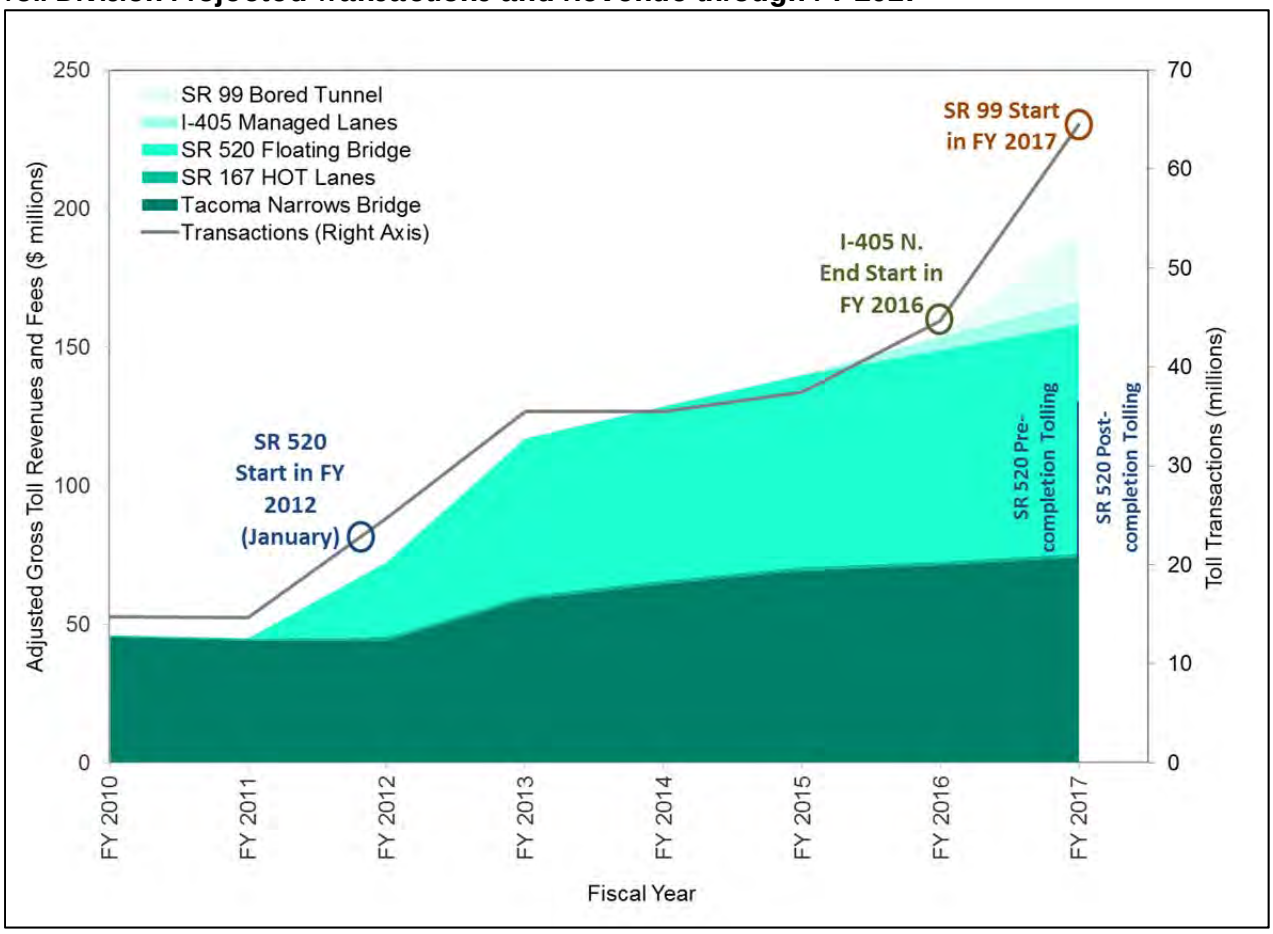


Figure 4: Toll Division Projected Transactions and Revenue

The WSDOT Toll Division is still in a ramp-up phase for toll project development requiring a much higher level of resources than agencies that are in a "steady state" of operating existing facilities. This places WSDOT in a unique situation for resourcing, when compared to other toll agencies in the U.S. WSDOT has adopted a strategy of outsourcing the toll operations just like many other growing toll operations such as the Florida Turnpike Enterprise and the Texas Department of Transportation. Texas is the only state DOT that has a rapidly growing program of new toll projects in the pipeline. However, Texas has opted to develop many of these projects as public-private partnerships meaning a much greater portion of the work for delivery of the projects is placed on the private sector.

During FY 2011-2013 the Toll Division focused on the development of the SR 520 project, the subsequent ramp-up of SR 520 operations and started the transition to steady state operations. The FY

2013-2015 biennium is bringing another surge of development activities for the Toll Division, as well as another ramp up for toll operations activities associated with the I-405 Express Toll Lanes and SR 99 Tunnel projects. Concurrently, at the direction of the legislature, the Toll Division is planning for other new facilities such as the SR 509/I-5/SR 167 Gateway project, I-90 tolling, and possible coordination with the State of Oregon for interoperability as they potentially continue work on the I-5 Columbia River Crossing project.

Tolling is a transportation tool utilized in 30 states across the country. The table below shows the annual toll revenue, transactions and staffing of peer agencies.

Agency	Tolling Since	Toll Revenue[1.]	Transactions[1.]	Agency Staff	Consultant Staff	Business Model for Operations
E-470	1991	$120,064,437	53,965,816	76	On Call	Outsource
MdTA	1940	$578,197,000	133,691,562	1,790	On Call	In-house staff except CSC
FTE	1957	$608,800,000	664,300,000	420	Embedded staff	Outsource
Ohio Turnpike	1955	$252,544,000	49,804,000	Unavailable	Unavailable	In-house staff
TxDOT[2]	2006	$75,694,706	90,031,603	18	TOD Planning + TOD Operations (Embedded Staff of 14)	Outsource & P3

Table 5: Annual Toll Revenue, Transactions and Staffing of Peer Agencies

[1] Toll revenue and transaction information is based on agencies' published financial statements.
[2] Toll Operations Only.

Comparing Agencies

When the governance decision was reached to establish the Toll Division as part of WSDOT, it was based on the following: (1) the acknowledgement of the value of being able to leverage the technical resources of an existing agency, (2) the ability to assure optimal synergies in integrating long-range goals and transportation system improvements, and (3) maintaining control from a centralized transportation agency to make more effective decisions. These are all consistent with Lean principles. Recent trends with other state DOTs throughout the U.S. support this approach as there have been no actions to separate tolling entities from state DOTs and, in many cases, standalone agencies have been incorporated. In Florida, Texas, and North Carolina they started with independent statewide tolling agencies and then incorporated them into the State DOT. In the comparisons described below, several different models are shown for state DOT tolling agencies that are in the process of developing major new toll projects.

Maryland Transportation Authority

The Maryland Transportation Authority (MdTA) is one of the state toll agencies that had developed new large projects over the past several years. MdTA is an agency of the state of Maryland and a unit within The Maryland Department of Transportation (MDOT.) MDOT has several modal administrations: Aviation, Port, Motor Vehicle, Transit, and the State Highway Administration. MdTA was created in 1971 by the Maryland General Assembly and is responsible for the supervision, financing, construction,

operation, maintenance, and repair of certain revenue-producing facilities. The MdTA is comprised of the Secretary of Transportation as Chairman, and eight members appointed by the Governor with the advice and consent of the Maryland Senate.

Unlike WSDOT, MdTA operates largely as an independent entity, although they maintain coordination with the State Highway Administration on the determination of toll projects. The MdTA maintains a large in-house organization. The Executive Secretary of MdTA is appointed by, and reports to, the Secretary of Transportation. The following functions report to the Executive Secretary position: Deputy Executive Secretary, Office of Audits, Office of legal Counsel, Coordinator for the Intercounty Connector and Special Projects, Division of Communications, Division of Operations, and the Authority Police. Reporting to the Deputy Executive Secretary are Capital Planning, Strategic Development, Finance, Procurement, Engineering, and Construction Management. Other senior leadership positions include: Chief Financial Officer, Chief Administrative Officer, Director of Procurement and Statutory Compliance, Director of Strategic Development, Director of Capital Planning, Chief Engineer, Director of Communications, Principal Counsel, and Chief of Police.

On a day to day basis, MdTA operates independently from the State Highway Administration. They handle their own administration, finance, operations, and maintenance. They have their own internal toll transaction auditors in their Division of Finance, but these are primarily focused on cash collection. Unlike the Florida Turnpike Enterprise described below, MdTA's approach is to provide their cash collection operations activities internal to their agency, including housing their own police force. MdTA has 1,790 authorized positions. They do contract with an outside contractor to provide customer service center systems, operations, and toll system maintenance. They also employ a large array of consultants in various on-call contracts to provide expert support.

For many years MdTA was an operation-focused entity operating existing facilities: a turnpike, two tunnels, and four bridges. In the last five years, however, they have taken on significant debt responsibilities for two new projects: the new Intercounty Connector Project and the I-95 Express Toll Lanes. Their facilities include service plazas, restaurants, and service stations.

Unlike WSDOT Toll Division who issues all debt through the State Treasurer, one of the primary functions served by MdTA is that they are authorized, by statute, to issue 30-year debt. This is a strong advantage for toll-based projects because the state's constitution limits MDOT from issuing debt with a maturity of more than 15 years. MdTA relies solely on revenues generated from its transportation facilities. The MdTA is authorized to issue their own revenue bonds up to a maximum level of $3 Billion. As of July 2013, outstanding debt totals $2,268,442,625. Since 2007, they added approximately $1.8 Billion in outstanding bonds. All revenues are pledged to the same system of toll revenues allowing leverage across their entire system.

Florida Turnpike Enterprise

The Florida Turnpike Enterprise (FTE) turnpike system is expansive - consisting of 460 miles of limited-access toll facilities. It is financed primarily by toll and service plaza revenues. More than any state in the U.S., tolling is truly an integral part of transportation financing in Florida. In their current form, FTE has many similar characteristics to the WSDOT Toll Division. However, FTE is strong evidence that finding the right structure for a tolling entity within a state DOT is not an easy solution. The entity that is now known as FTE began life in the early 1950's as the Florida State Turnpike Authority (Turnpike) operating independently until it was brought under the purview of the Florida Department of Transportation (FDOT) in 1969 as the Turnpike District. The Turnpike retained an identity, but decisions

were largely managed by the districts. In 1988, the Turnpike was reorganized as an Office within FDOT. In 1989, major legislation was passed giving FDOT the ability to leverage revenues for the Turnpike's main line, build new projects, bond projects, and raise toll rates. In 1994, the Turnpike became a standalone district of FDOT and was no longer managed by the districts.

In 2002, the Florida legislature passed HB 261 changing the Turnpike District into the Florida Turnpike Enterprise. One of the major changes under this legislation was exemptions from FDOT policies and procedures. The Legislature made these changes to "fully leverage the Turnpike asset by pursuing innovation and best practices found in the privates sector, especially in the areas of management, finance, organization and operations". There are seven major functional areas which report to the FTE Executive Director: the Chief Financial Officer, the Director of Communications and Marketing, the Government Affairs Liaison, the Director of Loss Prevention, the Director of Administration, the Director of Transportation Operations, the Director of Transportation Development, and the Director of Toll Systems.

Based on information from their former executive director, FTE was successful within FDOT. He credited this largely to the on-going communication and coordination with the seven other transportation districts within FDOT. FTE works closely with the other districts on broader transportation issues and decisions at monthly meetings with the FTE executive board. Although it operates as an enterprise, FTE is not independent, rather it is a significant part of FDOT as this maximizes coordination and cooperation of projects.

The FTE website describes their organization as follows: An innovative experiment combining the best of both the government and business worlds, Florida's Turnpike Enterprise utilizes the best practices of the private sector while operating in the public interest. FTE has expanded and increased revenue, while continuing to protect bondholders and improve customer service across the board. The results have been improved efficiency, cost-effectiveness, and timely project delivery.

One of the key elements that FTE considers as a cornerstone for its success is its approach to outsourcing. Based on information made available in 2004, out of 4,600 individuals employed through the FTE, only 1 in 9 was a FDOT employee. They take seriously the approach of "running like a business" by retaining only a small in-house staff and increasing/decreasing contract staff as necessary. Most contracts are for five-year terms with five-year renewable options. Contract staff perform such FTE responsibilities as toll road concessions, troopers, operations, etc. This outsourcing approach allows the FTE maximum efficiency and flexibility.

Like MdTA, and unlike WSDOT, FTE issues their own toll revenue bonds that are backed by the revenues of the entire system. There remain some original toll facilities that are owned by FDOT, but all toll facilities are operated by FTE. FTE continues to make investments in transportation infrastructure and has a formal planning process for the prioritization and selection of capital projects. Existing cash balances, toll revenues, concessions, and bond proceeds fund FTE's capital improvement program. Outstanding bonds totaled $2.9 billion at the end of FY 2012 with plans to issue additional "new money" bonds of $1.1 billion during the FY 2013-FY 2017 period. Given the extensive system, the capital funds are planned to be used for new interchanges, widenings, and operational efficiencies as well as two new limited access toll facilities, the First Coast Outer Beltway and the I-4 Connector.

Texas Department of Transportation

Tolling in Texas has also gone through much iteration. In 1953 the Legislature in Texas created the original Texas Turnpike Authority as an independent entity, headquartered in Dallas, with statewide authority to build toll roads and bridges. These facilities were to be financed by revenue bonds issued by the OTTA and supported entirely by tolls collected from its projects. The original Texas Turnpike Authority's efforts were primarily in the Dallas-Fort Worth metroplex, developing three major toll road projects. Senate Bill 370, passed by the 75th Legislature in 1997, abolished the original Texas Turnpike Authority and created a new division within TxDOT to develop toll roads. The bill also established the regional North Texas Tollway Authority and transferred to it all the original Texas Turnpike Authority assets, rights, and other property located in Collin, Dallas, Denton, and Tarrant counties.

TxDOT's Texas Turnpike Authority Division (TTA) was given statewide jurisdiction for development of turnpikes, but is not prohibited from pursuing projects within the areas covered by other regional toll authorities. The objective of TTA was to consider the development of turnpike projects in any part of the state where there is a demonstrated need and where a project has been shown to be financially feasible.

There are four major tolling entities in Texas – TxDOT TTA, the North Texas Tollway Authority (NTTA), the Harris County Tollroad Authority (HCTRA), and the Central Texas Regional Mobility Authority (CTRMA). There are also a number of other Regional Mobility Authorities throughout the state in more rural areas.

Since the formation of the original Texas Turnpike Authority within TxDOT, they have morphed through several iterations including no longer having an independent board. Unlike WSDOT, TxDOT now has a major emphasis on public-private partnerships (P3). Most of their toll projects are developed and operated through competitively procured, long-term lease agreements where the private entity issues the debt and takes the revenue risk rather than TxDOT. This emphasis on P3 tolling results in a delivery structure that is substantially different than the approach taken by WSDOT. Currently, all design-build and P3 projects that are delivered through what is known as "comprehensive development agreements" are developed and procured by the Strategic Projects Division (SPD) of TxDOT – this includes all tolling projects. The SPD reports to the Chief Planning and Project Officer for TxDOT. In another substantial variation from Washington, Texas has a number of local toll road agencies and a process must be followed to determine who controls each toll project. Current legislation requires that every toll project that is within the jurisdiction of a local tolling authority must go through a formal "primacy" determination to set whether the local entity or TxDOT will control the project.

SPD has Procurement Engineer consulting contracts that support the development of these projects including the tolling aspects. If it is a toll road that is directly financed by TxDOT, the operations are handled through the Toll Operations Division (TOD). They also provide operations for some projects financed by other public entities. The TOD oversees the development of toll collection operating system services for TxDOT toll roads. This includes toll collection systems integration, customer service center operations, and toll management systems contracting. If it is a P3, the involvement of TxDOT will vary according to the agreement and the location. The TOD has contracts for statewide toll operations, customer service, back office system operations and maintenance, as well as statewide toll system integration and maintenance. They also have consulting contracts to assist in toll planning, toll systems development, and toll operations.

The only toll revenue bonds issued by TxDOT are the Central Texas Turnpike System (CTTS). According to the 2012 CTTS financial statements, there was $1,616,749,809 outstanding in toll revenue bonds plus $1,057,876,656 in TIFIA loans for this project.

North Carolina Turnpike Authority

The North Carolina Turnpike Authority (NCTA) was created in 2002 by the General Assembly in response to concerns about rapid growth, heavy congestion, and dwindling resources. The NCTA is authorized to study, plan, develop, construct, operate, and maintain up to nine projects. They opened the Triangle Expressway in three phases from December 2011 to December 2012, and had five other projects in development.

In 2009, the governor decided to bring NCTA under North Carolina Department of Transportation (NCDOT) to conserve expenditures and improve efficiency. Effective June 1, 2010, NCTA was fully integrated into NCDOT operations. NCTA is shown as an enterprise fund in the NCDOT financial statements. The senior staff at NCTA were then organized to report directly to unit heads within NCDOT instead of a separate reporting structure. Additionally, NCTA staff moved into NCDOT's headquarters at the Transportation Building in downtown Raleigh.

Even prior to those steps, when NCTA was operating as a separate entity, they relied upon the NCDOT to fund start-up activities, staffing, and project activities until a revenue stream was realized through projects open to traffic. The original NCTA was authorized to have independent staffing, location, and policy board. However, they were required to have its annual budget and work program approved by the NCDOT Board of Transportation. These expenses are to be repaid from toll revenues as soon as possible, subject to operating and debt requirements. NCTA's original philosophy was a small internal team, use of highly specialized consultants, and outsourcing of toll collection and operations. Procurements were made for the roadside collection system, back office system, and operations services contractor. These projects all collect tolls via all-electronic tolling.

NCTA has revenue bonds outstanding in the amount of $1,256,213,119 as well as a TIFIA loan of $283,508,357 as of the June 2012 financial statements. These were for two projects – the Triangle Expressway and the Monroe Connector. The original Triangle Expressway bonds were issued in 2009 as toll revenue bonds for approximately $623 million and then $10 million for the Monroe Connector in 2011. All other debt issued by NCTA since 2009 have been either State Appropriation Revenue Bonds or Grant Anticipation Revenue Vehicle Bonds. The original two projects were public toll revenue debt with design-build delivery. Both were provided with "gap funding" appropriations for costs not covered by tolls. The third project is being pursued as a P3 and also needs gap funding. The fourth project was also intended as public toll revenue debt with design-build delivery.

E-470 Public Highway Authority.

E-470 is a political subdivision of the state of Colorado and is completely independent of the Colorado DOT from a reporting standpoint. They are responsible for financing, operation, and maintenance of the E-470 toll road. They operate the ExpressToll customer service center, which currently provides all transponder-based processing for the toll roads in Colorado including those owned by the Northwest Parkway Public Highway Authority and the High Performance Transportation Enterprise (HPTE), housed within the Colorado Department of Transportation. E-470's has a board and the members are representatives from the cities and counties who are members of the public highway authority. E-470's jurisdiction is limited to the geographic area of their members, unless specifically requested to provide

services by other entities. They generally follow an outsourcing philosophy and contract for customer service center operations and all maintenance contracts.

E-470 is used as a comparison with WSDOT for purposes of assessing per transaction costs. However, as they are not part of, or associated with, the Colorado DOT, and do not have a statewide jurisdiction, they are not an appropriate comparator for organization and DOT coordination.

Additional Context on Tolling Structures

The choice to locate tolling with WSDOT is supported by the following primary factors:

- The Washington State Legislature has developed a statutory tolling framework that retains authority to authorize individual toll facilities rather than delegate authority to state or regional toll entities;
- As highway construction costs have increased nationally, tolls alone can no longer fully support major projects, so tolls and other state revenues must often be integrated in toll facility financial plans;
- Washington's urban highways form a network that is tightly interconnected and has little redundancy, favoring an integrated highway management by a single agency; and
- There are economies of scale in using existing engineering and organizational resources to build and maintain toll facilities rather than to develop separate and redundant capabilities in separate agencies.

For reference, other tolling entities associated with state Departments of Transportation and their structures are identified below:

- Prior to the NCTA, the most recent merger of a separate turnpike entity into the state DOT was in Massachusetts where MassPike was officially folded into the Highway Division of the state department of transportation on November 1, 2009.
- Indiana had a Toll Road Commission until 1981 when the Indiana Toll Road (ITR) was turned over to the Indiana DOT, but toll operations were retained as a separate division. However, since mid-2006, the ITR has been operated by a concessionaire under a P3 agreement that provided $3.8 billion to the state in return for a 75-year lease and the right to collect toll revenues for that period.
- New Hampshire is structured as part of the New Hampshire DOT with a Bureau of Turnpikes and staff reporting to a Bureau administrator within the state DOT.
- Delaware Turnpike and the DE-1 tollroad are both operated by Delaware DOT, thoroughly integrated into the DOT organization.
- In California there are no state tolling entities. Although Caltrans is the owner of seven toll bridges, in the San Francisco Bay Area they are operated by the Bay Area Transportation Authority. The major independent toll authority is Orange County's Transportation Corridor Agencies. Tolling is also conducted by the Orange County Transportation Authority, operating SR91, and the San Diego Association of Governments, operating Southbay Expressway. The latter two gained their toll facilities by purchasing them from private entities.
- In Virginia, the DOT transferred their main toll road asset, the Dulles Toll Road, to the Metropolitan Washington Airports Authority, but retain two smaller facilities and still run the customer service center. There is also the stand-alone Richmond Metropolitan Authority.

- In addition to FTE, Florida has a wide variety of separate toll authorities including: Miami Dade Expressway, Orlando Orange County Expressway Authority, Osceola Parkway Authority, and Tampa Hillsborough Expressway Authority.
- Colorado houses the High Performance Transportation Enterprise within the Colorado DOT, which operates the I-25 Express Lanes and is building the US36 Managed Lanes. The E-470 Public Highway Authority provides back office services to HPTE. Both of these facilities are expected to be transferred to operation by a private concessionaire if financial close is completed this year.

WSDOT Unique Characteristics

Some of the unique characteristics of WSDOT tolling that vary from any of the agencies described above and therefore impact their organizational and staffing needs include the following:

- WSDOT is still in a "ramp-up" mode of delivering new facilities on a statewide basis.
- Each facility must be accounted for separately and has its own constituency. Consequently, there is no opportunity to leverage funding on a network basis.
- Planning for possible new facilities must come from non-tolling funding sources.
- Proceeds from civil penalties are accounted for in a separate fund for SR 520, but are combined with toll revenue for Tacoma Narrows Bridge.
- All financing is conducted by the state Treasurer's office and, to-date, no debt issued has been non-recourse toll revenue debt.
- Vendor accounting requirements include an unprecedented level of real-time transaction recording along with daily transaction reconciliation.

CHAPTER 3

Future Tolling Direction

There are several factors that need to be considered when evaluating the Department's Toll Program including: legislative direction, the Toll Division work program, long-range planning needs, and funding trends.

Legislative Direction

The direction for tolling in Washington State is provided in statute. ESSHB 1773, now in RCW 47.56. This statute, passed by the Legislature in 2008, provides the framework for tolling, eligible use of revenues, and governing rules.

It defines that:

- The legislature authorizes toll facilities, designates toll corridors, and specifies the use of toll revenues;
- The Washington State Transportation Commission sets toll rates, policies, fees, and exemptions; and
- WSDOT plans, implements, and operates toll collection systems, as well as collects tolls.

Current and Proposed Toll Projects

The toll projects described below have been authorized by legislative action.

I-405/SR 167 Eastside Corridor Express Toll Lanes

The first phase of the I-405/SR 167 Express Toll Lanes project is currently under construction between Bellevue and Lynnwood, and the design of the toll systems is underway. The I-405 Bellevue to Lynnwood Widening and Express Toll Lanes project began construction in February 2012 and will open to traffic in mid-2015. Crews will build one new northbound and southbound lane on I-405 between NE 6th Street in Bellevue and SR 522 in Bothell that will be paired with the existing carpool lane and operate as a two-lane express toll lane system. Additionally, the existing carpool lane on I-405 from SR 522 to I-5 in Lynnwood will be converted to a single express toll lane. The resulting 17-mile express toll lane system will provide a more reliable trip for transit and those drivers who choose to use them.

Future phases of this project will proceed as funding is available by action of the legislature. Current plans call for widening the section between I-90 and Renton by one lane. The new lane and the existing HOV lane will then be converted into a two-lane express toll facility similar to the current Bellevue to Lynnwood project. A new flyover ramp will connect this facility to the existing SR 167 HOT lane, and the HOT lane will be upgraded to provide a continuous express toll lane facility throughout the I-405/SR 167 Eastside Corridor. Express toll lanes improve traffic performance for all lanes in the corridor because they add capacity and manage demand by using toll rates that adjust in real time according to traffic levels to ensure consistently fast travel times.

SR 99 Tunnel

The SR 99 Alaskan Way Viaduct is an aging structure that is at risk of failing during an earthquake. The new SR 99 tunnel, scheduled to open in early 2016, will move the state highway underground through downtown Seattle. This will open more than nine acres of public space for a world-class waterfront area while maintaining a vital transportation route through downtown for people, as well as goods and

services. The current plan calls for tolls to help pay $200 million of the estimated $3.1 billion project. Over the last year, the Toll Division's efforts have centered on planning support for the SR 99 project team, including working with the team and our statewide roadway toll vendor to coordinate the toll system design.

In Fall 2011, WSDOT and the City of Seattle established the Advisory Committee on Tolling and Traffic Management. The committee is exploring ways to refine tolling of the SR 99 tunnel to minimize traffic diversion, meet funding goals, and investigate strategies to reduce or mitigate diversion. The committee will submit its initial recommendations in 2013 to the Governor, legislature, State Transportation Commission, WSDOT, Seattle Mayor, and the Seattle City Council. The committee will finalize its recommendations in December 2015. It will continue work for up to one year after tolling begins to evaluate its effect on city streets and I-5 traffic.

SR 509 , I-5, and SR 167 Puget Sound Gateway Project
The SR 509, I-5, and SR 167 Puget Sound Gateway Project will relieve traffic congestion and improve freight mobility by completing the long-planned SR 167 and SR 509 corridor connections to I-5. The Gateway project is key to enhancing the state's economic competitiveness, both nationally and globally, by connecting the state's largest ports to key distribution centers in King and Pierce counties, as well as to Eastern Washington. This project is in the initial planning and conceptual design stage. Tolling is part of the funding and phasing concepts to provide a revenue source and to efficiently manage traffic operations.

I-90 Lake Washington
The Legislature is considering tolls on I-90 to raise revenue to help fund completion of the SR 520 ridge program and balance traffic across the Cross-Lake Washington Corridor. It is anticipated that tolling I-90 will help alleviate congestion, accommodate regional growth, and provide more reliable transportation on I-90. WSDOT has been instructed to complete an environmental review of tolling I-90 between I-5 and I-405, which will include public outreach, to include coordination with stakeholders, cities, and elected officials to ensure complete findings. The results of the study are due in 2015, upon which the State Legislature will make the decision whether or not to toll I-90. As with all major decisions, the public is invited to learn more about the project and weigh in on the decision-making process by attending public meetings and visiting the project website.

Other Plans and Studies

I-5 Columbia River Crossing
The State of Oregon is now considering whether to fund and construct the Columbia River Crossing, a long-term, comprehensive project to reduce congestion, enhance mobility, and improve safety on I-5 between Vancouver and Portland. WSDOT will monitor this effort to determine what role to play in tolling and other elements of the project, as well as how to provide interoperability with *Good To Go!* for Washington toll customers.

PSRC Transportation 2040
The Puget Sound's long-range metropolitan transportation plan, Transportation 2040, was adopted by the Puget Sound Regional Council (PSRC) in 2010 with near-unanimous member support. By the end of the coming 30 years, the plan called for development of a highway pricing approach that would both raise revenues and moderate growth in demand for driving. Until that evolution is complete, the plan calls for continued use of tolls to finance major roadway projects and conversion of the region's HOV lanes into express toll lanes.

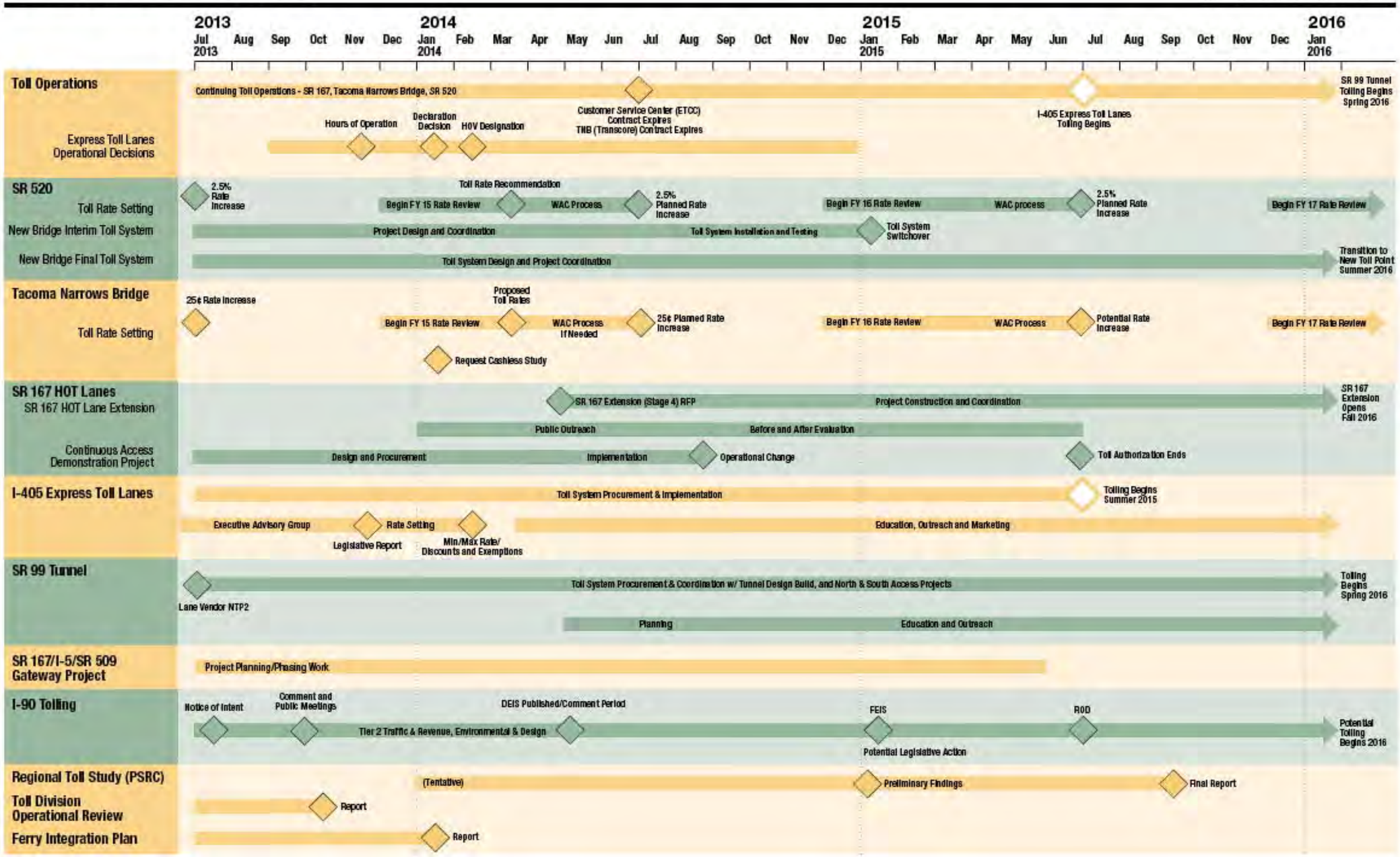
Puget Sound Regional Tolling Study
More recently, the King County Executive and eleven King County mayors from bordering cities on Lake Washington wrote to the PSRC Executive Director and WSDOT Secretary requesting a study to consider alternatives to the facility-specific process of designating and implementing tolls in the Puget Sound area. The plan would address alternative approaches to tolling, and alternative paths to phasing the introduction of new toll facilities. The letter proposed a thorough assessment of the effects of current and proposed tolled facilities, examination of other transportation revenue and financing options, and consideration of key policy issues regarding different measures of equity, uses of toll revenues, and the distribution of benefits and costs.

PSRC, WSDOT, and King County are working together to develop a more detailed study plan and working with the Federal Highway Administration to find funding to support the effort. Current discussion envisions a panel of less than 30 state and regional opinion leaders meeting over an 18-month period, making an interim report prior to the 2015 legislative session and a final report by the fall of 2015.

Express Lanes Pre-Design
WSDOT proposed and received a grant to develop a system plan for its Moving Washington plan to evolve HOV lanes in the Puget Sound region into a system of express toll lanes. Express toll lanes would remedy long-standing speed and reliability problems of HOV lanes, while providing an alternative to sitting in congestion for anyone facing an urgent need to arrive on time. The project examined varying user needs for carpools, transit, freight, and potential tolled users; addressed methods that would be applied consistently throughout the express toll lane system; developed a possible conceptual approach to implementation on I-5; and identified possible funding and financing scenarios. The final project report is in development and expected to be completed by the end of 2013.

Toll Division Work Plan

Washington State Department of Transportation



State Funding Trends

The interest in tolls as a sustainable revenue source and to improve efficient operations of state highways has increased dramatically over the last five years.

Since 2001, state funding for transportation maintenance and operations has declined by 49 percent, while construction costs rose 77 percent. This resulted in a lack of funding to support transportation. The fuel tax rate increases in 2003 and 2005 made it possible to fund specific transportation improvement projects. However, the amount of fuel tax revenues available to support highway preservation, maintenance, and operations has remained relatively flat despite a growing need to resurface many miles of highways and repair bridges.

Purchasing Power of the State Fuel Tax

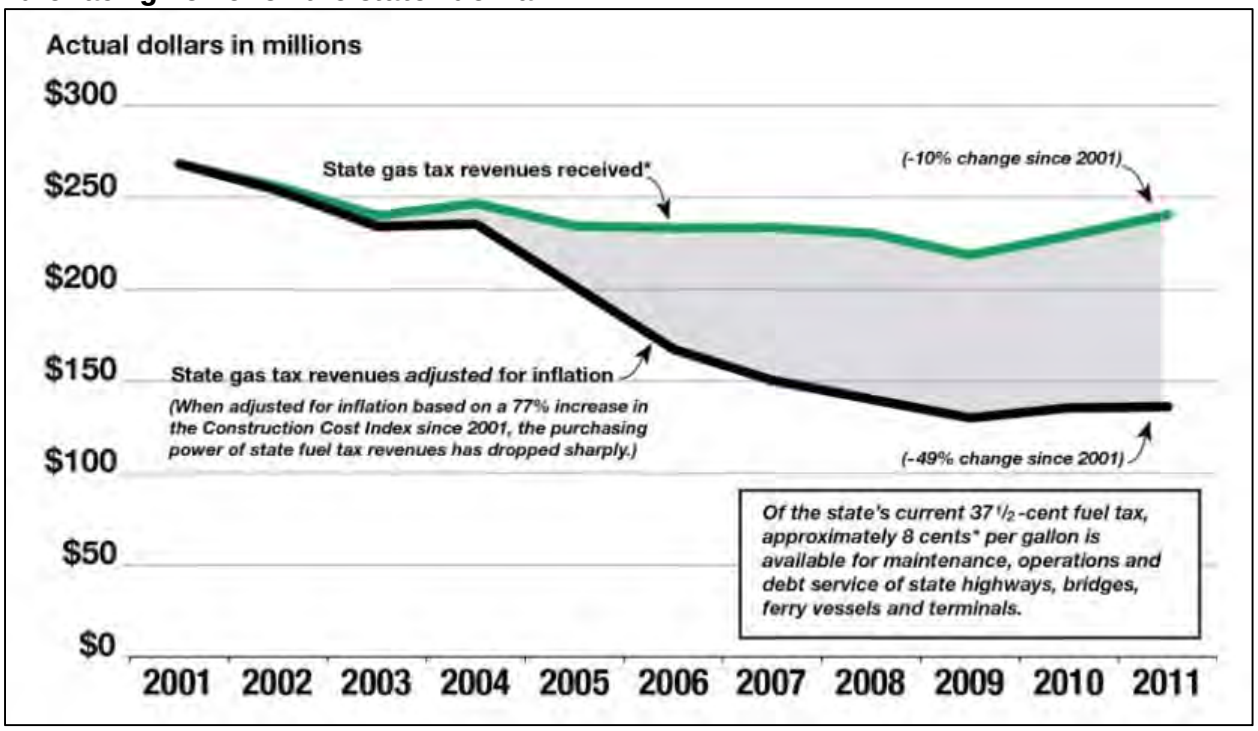


Figure 5: The purchasing power of the state fuel tax is declining

The fuel tax revenue accounts for the largest share of state transportation funding. The purchasing power of the state fuel tax is declining. The fuel tax is a flat tax on each gallon sold. It is not indexed to inflation, and does not rise as the price of fuel goes up. In addition, Washington residents are driving fewer miles per capita, vehicles are becoming more fuel efficient, and new federal fuel efficiency requirements and the emergence of electric vehicles will accelerate this trend. The November 2011 fuel tax forecast included a revision to the fuel consumption forecast model to better reflect these trends. That forecast change, combined with lower consumption, resulted in a decrease in actual and projected fuel tax revenues of $3.6 billion from 2007-2020. Washington's gas tax of 37.5 cents per gallon has not been increased in 4 years. Only eight of the 37.5 cents of the state gas tax is available to fund state highways & ferries, including maintenance, preservation, safety improvements, and congestion relief.

Future State Fuel Tax Revenue

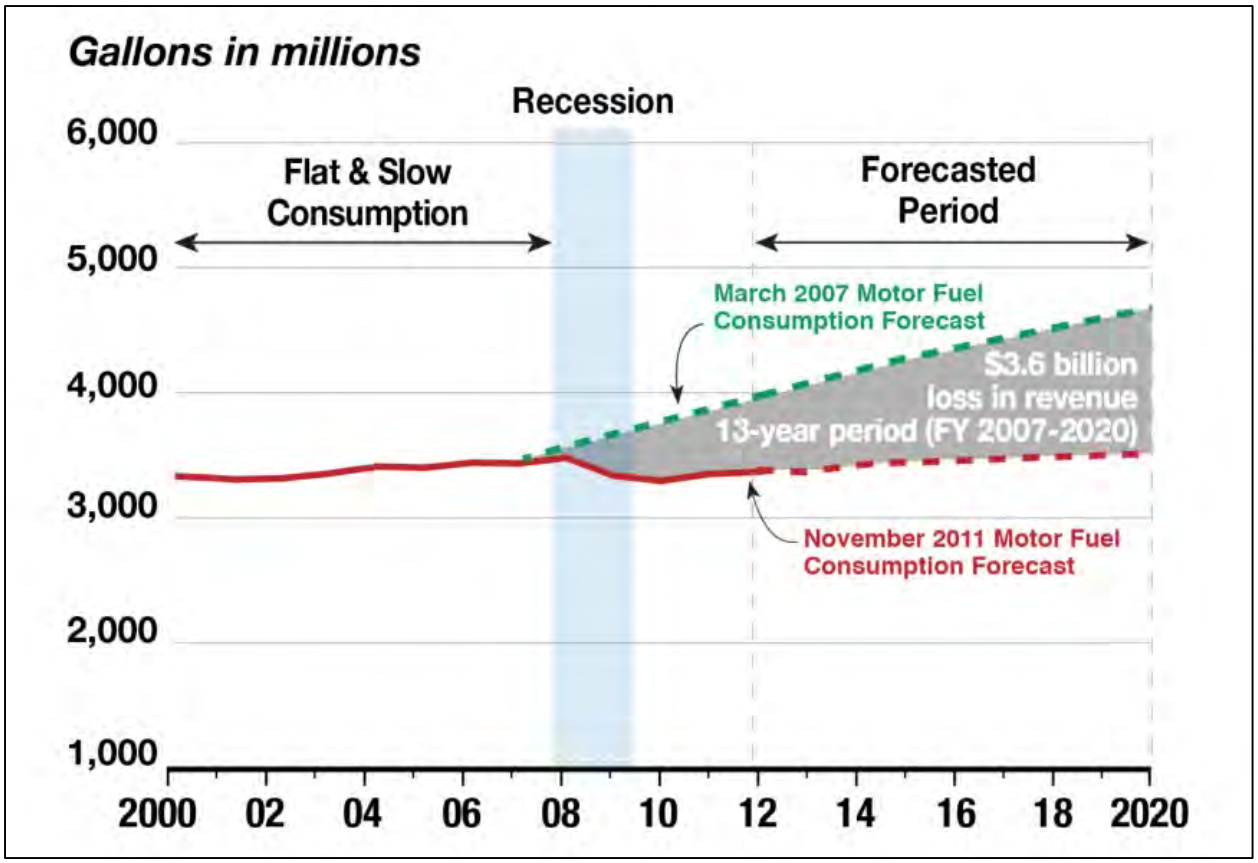


Figure 6: Reduced forecasts of future state fuel tax revenue

National Trends

A similarly austere situation is present at the Federal level as traditional highway funding sources have decreased dramatically in recent years. Federal fuel taxes, which have not been indexed for inflation, have remained at 18.5 cents per gallon since the previous increase was enacted in the 1990s. The most recent federal transportation bill, Moving Ahead for Progress in the 21st Century (MAP-21), did not contain any increases in Federal fuel tax rates. Since 2008, gas tax expenditures have exceeded receipts, requiring a transfer of $34.5 billion from the general fund to the Highway Trust Fund to pay the bills. With increasing gas prices and greater use of energy efficient and alternative fuel vehicles, and the need to maintain at least the current levels of expenditure, the Highway account of the Highway Trust Fund will be insolvent in early 2015 according to the Congressional Budget Office (CBO).

To generate additional funding for transportation, some states have begun to pursue other options: increase state fuel taxes and fees, impose local taxes and fees, implement tolling, pursue other user-fee charging systems, and restructure fuel tax rates. Virginia became the first state to completely eliminate retail fuel gas taxes. Consumers will no longer pay a per-gallon tax at the pump. Instead, the state fuel tax will be replaced by a 3.5% wholesale tax on gasoline, a 6% tax on diesel fuel, an increase in title registrations, a $100 fee on hybrid and electric cars, and an additional 0.3% general sales tax. Many states are searching for the right solutions moving forward.

Some of the trends being observed have a tolling element or are a tolling by-product and will require that the Toll Division be engaged and able to address these emerging issues, including the following:

CAFÉ Standards/Alternative Fuel Vehicles
The Corporate Average Fuel Economy (CAFE) mandate was first established in 1975 and until this past April, has changed little since. It's been years of debate, but finally, the standards have been significantly updated. By model year 2016, the fuel efficiency of the new vehicle fleet sold in the United States will have to average at least 34.1 miles per gallon and 54.5 miles per gallon by model year 2025.

As a transportation community we continue to struggle with the fact that our primary revenue source for transportation has been on a deep downward slide for some time. There is strong resistance to increasing fuel taxes, but even if that were not the case, the "flat tax" approach for fuel taxes has a steadily downward trajectory as CAFÉ Standards are continually increased. This is further complicated by the introduction of alternatively fueled vehicles, including hybrid and electric vehicles. According to one recent study by the American Road and Transportation Builders Association, the new CAFÉ standards alone will result in the loss of more than $65 billion in Highway Trust Fund dollars between 2017 and 2023. A similar study was recently released by CBO. This places even greater emphasis on new revenue sources such as tolling.

Mileage Based User Fee/Vehicle Miles Traveled Fee
A mileage based user fee (MBUF), or vehicle miles traveled fee, is a user charge based on miles driven in a specific vehicle as opposed to the current excise tax on fuel consumed. At its simplest, the fee would be cents per mile. More sophisticated systems could assess different mileage fees based on factors like location, congestion, emissions, and type of vehicle. The effort to bolster the user-pays principle for infrastructure improvements—coupled with the search for more stable revenue sources—has led to calls for a MBUF approach. The biggest merit of MBUF is that it brings us much closer to a user-pay system, by charging drivers directly for the miles they travel and the resulting wear and tear on the roads. It also addresses the declining revenue yield from of the gas tax.

While stable revenue is the main motivation behind mileage-based user fees, they can also:

- Distribute the transportation tax burden more equitably based on actual roadway use;
- Apportion revenue by jurisdiction;
- Reduce congestion, emissions, and road wear;
- Provide value-added services to motorists, such as pay-as-you-drive insurance; and
- Collect detailed but anonymous travel data to improve the effectiveness of transportation planning and operations.

Both MBUF and tolling are roadway pricing schemes rooted in the user-pays principle. But unlike tolling, MBUF is a ubiquitous pricing approach, where mileage driven on all public roadways –city, county, state or interstate-- are charged a fixed per-mile fee with the proceeds invested broadly across the transportation system. While some limited technology tests have demonstrated that a MBUF could be designed to collect passenger vehicle fees that vary based on roadway segment, time of day or even type of vehicle, to date no such system has been implemented anywhere in the world. The state of Oregon recently approved a Road Usage Charge (a mileage-based fee) that will collect a per-mile fee in lieu of their state gas tax from up to 5,000 volunteers. Oregon's system will not require drivers to use GPS-based technology, due to concerns about the cost, complexity and potential privacy infringements of a government-mandated GPS device. Without location-detection technology such as GPS, a MBUF system cannot provide the facility or corridor-based pricing approach now served through tolling. The Washington State Transportation Commission has been charged by the legislature to review and develop a set of recommendations for a road user charge system in Washington State. Tolling policies

and technologies and how they could evolve in the future to a road user charge system will need to be evaluated.

Transportation as a Utility

In the study "Enterprising Roads: Improving the Governance of America's Highways" author David Levinson suggests that "the organizations that manage roads should be able to finance road construction and maintenance through the sale of bonds, without requiring direct consent from higher political authorities." The theory in his paper is that roads should be managed by independent enterprises that are charged with a mission of providing service to customers. One way to achieve this while still maintaining the political control that would prevent abuses of monopoly power is to convert existing government operated road management organizations (such as the state DOTs) into regulated public utilities. The reason this has been suggested is that highway systems do have much in common with other network utilities. Approximately 10% of wastewater utilities, 20% of water utilities, most pipelines, electric utilities, natural gas utilities, and virtually all telecom and cable utilities are investor-owned.

Mr. Levinson discusses a variety of ownership structures, ranging from municipal- or state-ownership to mutual- and investor-ownership. Each structure has its own set of advantages and disadvantages, but he argues they are superior because they "orient the road enterprise away from day-to-day politics and toward providing value to their users." The New Zealand Transport Agency, for example, has an independent board of directors, an appointed CEO, and works in accordance with a performance agreement negotiated with the New Zealand Ministry of Transport. Management is separated from governance, and service delivery is separated from policy. New Zealand's approach has delivered large efficiency gains without compromising service levels.

By definition an investor-owned utility is developed using private capital and private-sector expertise. However, due to certain elements of monopoly and the need to protect the public interest, it is necessary to provide regulatory oversight. Therefore a state public utility commission is established which regulates the prices and the rate of return that can be earned by the private entity. By definition, if competition exists then the concern of a monopoly is removed and the PUC-type entity may not be necessary. In the case of toll roads where "tax roads" offer an alternative, then competition is inherent. However, if the transportation facility is being controlled by a private entity there will need to be government oversight.

One possible alternative to the PUC approach occurs when there is a public-private partnership contract involving toll rates where the contract holds the regulatory provisions including items such as a toll structure and associated performance criteria. All provisions of the contract will be provided oversight by the public partner. Tolls are a direct user-pay system that has comparability with the principles of transportation as a utility.

Multi-modal

The fastest growing category of toll facilities in the U.S. are Managed Lanes, where priced lanes are added to existing facilities, typically providing free or reduced cost use for HOVs. What have not yet been optimized are the synergies between these priced lanes and express bus service or Bus Rapid Transit. As has been frequently stated by Robert Poole of the Reason Foundation, "a variably priced lane is the virtual equivalent of an exclusive busway, but serves both cars and buses compatibly." He points out that one of the best examples of this is the I-95 Express Lanes in Miami. "With only the 7 miles of Phase 1 in service to date (and the 14-mile Phase 2 under construction), this formerly gridlocked

commuting route has seen one of the most impressive growth rates in express bus services anywhere in the United States."

A report on this topic was commissioned by the Florida Department of Transportation ("Integrating Transit with Road Pricing Projects," by the Center for Urban Transportation Research at the University of South Florida). Their recommendations discuss factors that will enhance the combination of new Managed Lanes and transit including first assessing the amount of express bus demand for a corridor and then, what can be added to the project to increase the effectiveness such as Park & Ride lots and direct-access ramps.

Tolling Interoperability

Interoperability for non-cash toll collection across the U.S. is one of the largest topics that many toll agencies are considering for the future. MAP-21 requires that all Federal-aid highway toll facilities implement technologies or business practices that provide for the interoperability of electronic toll collection by October 1, 2016 (four years after the enactment of MAP-21's new tolling requirements). The International Bridge, Tunnel, and Turnpike Association (IBTTA) is the industry association primarily focusing on public toll agencies in the U.S. and that group is attempting to find solutions to address the national interoperability issue. Many agencies have already dealt with this on a regional basis, such as the E-ZPass Interagency Group, which celebrated its 20th anniversary on August 3, 2013. In July 2013, the IBTTA members met in Denver for IBTTA's 2013 Summit on All-Electronic Tolling, Managed Lanes and Interoperability to focus on just these issues. IBTTA formed an Interoperability Steering Committee in 2010 with a focus on an interoperable systems that would enable customers to drive on any North American toll facility using a single account, and with a choice of payment methods. Regional interoperability may be a first step to national interoperability. WSDOT is engaged in this National Standards debate by providing leadership for the Western Region Interoperability Group consisting of toll agencies in the western states and western Canada.

Public-Private Partnerships

States and local entities are struggling to find new solutions as traditional funding sources, like the Federal Highway Trust Fund, continue to diminish. One of the strategies that can be used is P3s; especially those that include a private finance component.

Definitions of P3 can be very broad and cover many types of project delivery, contracting, and financing arrangements between the public and private entity, including design-build procurements. The Federal Highway Administration defines P3s as "a contractual agreement formed between public and private sector partners that allow for greater private sector participation in the delivery and financing of transportation projects."

Toll Division Challenges

This chapter has described a variety of unknowns that make certainty in planning for the future difficult. There are a series of questions and challenges the Toll Division will need to address going forward to be prepared for change and to bring down the cost and complexity of tolling over time. In addition to the issues addressed elsewhere in this report, the following is a list of expected challenges the Toll Division faces in the coming years. For each challenge faced, the Toll Division will use Lean principles to assess the most efficient and effective solution to meet the needs of its customers.

Business Practice Challenges

Vendor Cost and Quality

The 2009 WSDOT Statewide CSC procurement resulted in a contract price much lower than market value. WSDOT has struggled openly with vendor system delays and operating quality issues in its relationship with its statewide customer service vendor (CSC Vendor). While most system functionality is complete, key reports necessary for the required daily accounting reconciliation remain unfinished by the CSC Vendor, as do automated write-offs and collections functionality. At the same time, WSDOT has been informed by the CSC Vendor that their actual expenses exceed the value of the original contract. Errors and customer service shortcomings continue to require additional costs by WSDOT staff and consultants for intervention and support. With the current CSC Vendor contract nearing an end (June 30, 2014), and the potential options for extension, changes to contracting and contract costs are likely, although the nature and timing of these changes cannot be accurately forecasted. While the CSC Vendor system is not complete, work to date has resulted in a system that is closer to meeting WSDOT requirements than is readily available from other vendors in the industry. Still, with the current CSC contract expiring, WSDOT expects an increase in CSC vendor costs.

2009 WSDOT Statewide CSC Bid Comparison

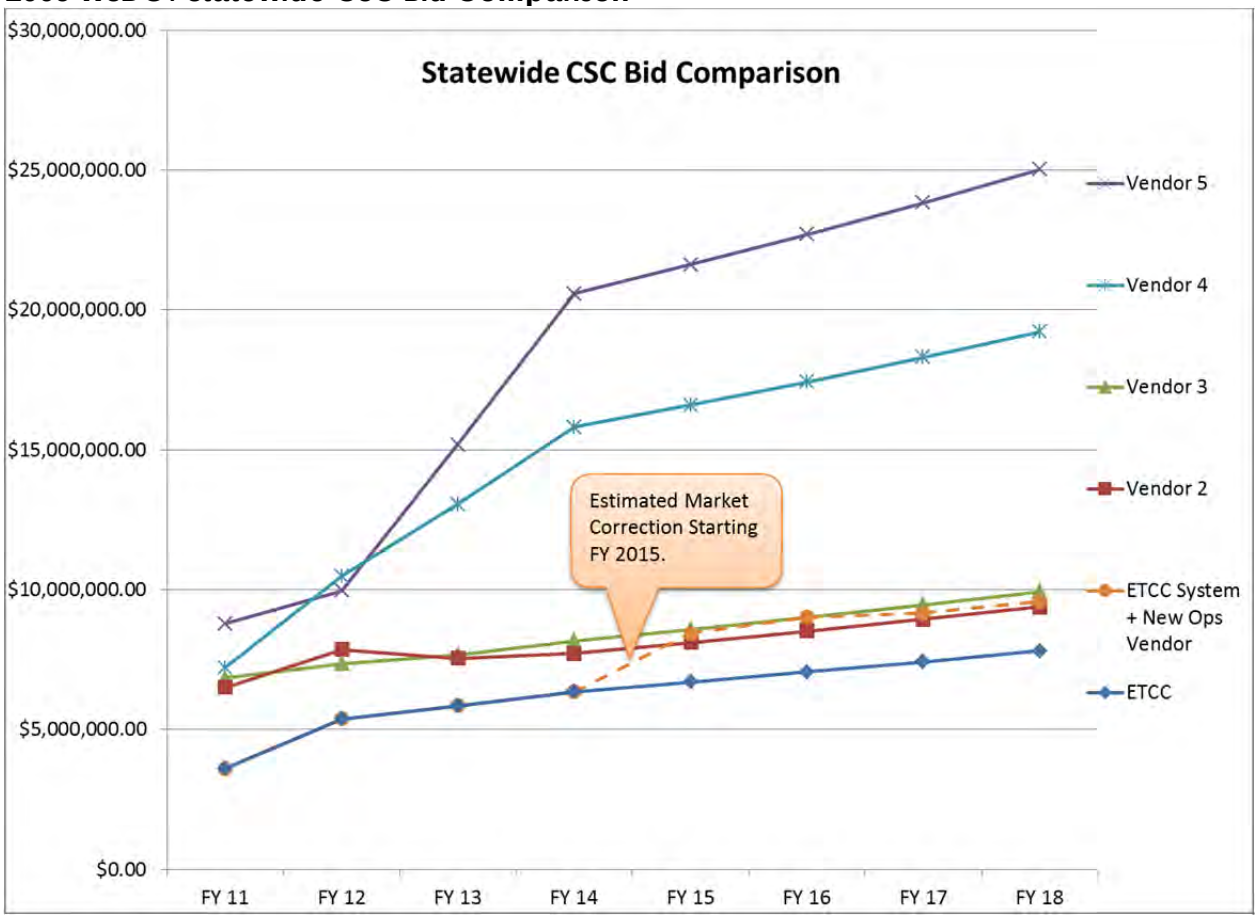


Figure 7: 2009 WSDOT Statewide CSC Bid Comparisons

Figure 7 shows the 2009 bid proposal values and the estimated market correction, to market rates, expected starting in FY 2015.

Use of Infrequent User Payment Options
The least costly method to collect tolls is through the use of transponders attached to prepaid customer accounts. Collecting cash tolls requires significant labor expense, while "Pay By Mail", based on recording license plate images, requires issuance of toll bills and accounts receivable that are not always paid. There are two ways to look at infrequent user payment options such as Pay By Mail. On one hand, they raise the average cost per transaction, making that option seem more expensive. Conversely, is that their incremental costs are designed to be covered by higher toll rates paid by the customer. Approximately 70 percent of tolls on the Tacoma Narrows Bridge and 80 percent of tolls on SR 520 are paid with a *Good To Go!* account. Review of the cost to collect analysis shows that Tacoma Narrows Bridge costs an average of a dime more per transaction than SR 520. Preliminary analysis suggests WSDOT could reduce toll costs on the Tacoma Narrows Bridge by eliminating cash payment, however *Good To Go!* toll rates on Tacoma Narrows Bridge have been subsidized by other payment methods, including cash collection. The elimination of cash collection would likely result in need to raise the *Good To Go!* transponder rate.

Reducing Uncollected Tolls and Improving Enforcement
Since electronic tolls were introduced in Washington, a small percentage of toll customers have chosen not to pay their Pay By Mail toll bills. Preliminary estimates show that 98% of tolls on the Tacoma Narrows Bridge and 95% of tolls on SR 520 are resolved; the remaining tolls are pursued through enforcement methods. With transponders and other prepaid accounts, almost all transactions are collected immediately. With Pay By Mail photo tolling, where cameras and optical character recognition equipment read customer license plates, a portion of those plates cannot be accurately translated into valid Washington State license plate numbers. Pay By Mail customers do not have accounts and, even with a license plate number, some of these customers cannot be traced to a valid address. A key question being explored by the Toll Division is how much transaction loss can be reduced by strategies such as more aggressively marketing transponders or working with the Department of Licensing to provide transponders to all Washington vehicle owners through the licensing process.

Interoperability
As described above, Federal law requires states to develop toll technologies and practices that will ultimately allow toll payment in every state using a single account. Several competing models for interoperability are under consideration nationally, including the non-proprietary "6C" transponder standard used in Washington. Washington is an active participant in these discussions, which will become more urgent if Oregon institutes tolling on the Columbia River Crossing of I-5. Should that happen, we may find that residents in King, Pierce, and Snohomish Counties will have accounts with WSDOT's *Good To Go!* program, and residents in Clark County and southwest Washington will establish accounts with the state of Oregon. This strays from the goal to have a single statewide system and the concept of one. If a federal standard is mandated, WSDOT may be required to invest in different technologies and business practices to comply with this unfunded mandate.

Carpool Recognition
For toll facilities with special toll treatment for carpools, such as on express toll lanes, WSDOT will need to determine a method to identify eligibility. WSDOT defines carpools based on the number of people in a vehicle, which cannot currently be determined by cameras or electronic detection. At present, even if an electronic option were available, there is no legislation available to enforce on that basis. WSDOT is examining two options for customers to indicate their carpool status, both of which require visual inspection by Washington State Patrol officers to enforce. The first method would require customers to purchase a transponder with a two-position switch to indicate their carpool eligibility; the second

method allow customers to use any one of the current transponder types offered, but would require customers to register their carpool status through a smart phone application, over the phone, or on the internet prior to making a trip.

Carrying Pre-paid Customer Accounts or Bank-backed Payments
Technology for payments of all types is rapidly evolving and many customers now prefer to control payments using mobile applications. While new technologies are under development to allow customers to use smart phones in place of a toll transponder, the attraction to mobile payment would instead be the ability to make a payment in real time rather than to maintain a prepaid account or receive a bill. One of the issues that WSDOT will need to consider is whether to allow tolls to be paid similar to the Apple iTunes model on a pay-as-you-go basis, rather than requiring customers to establish a pre-paid account with WSDOT. Under this new model customers would provide a debit or credit card number that tolls could be batched and processed on a daily basis. Another option is to expand WSDOT's retail program to provide more in-person account replenishment locations for customers, reducing the need for walk-in customer service centers, which are expensive to operate.

Planning and financial challenges

Toll Administration and Overhead
During the start-up period for the Toll Division, the majority of work was to develop and install capital facilities for tolling, funded in part by WSDOT megaprojects. Over time as tolling matures, funding for administrative positions within the Toll Division will need to shift to operating funds. However, as described in the new trends and challenges discussed in this section, the tolling systems and approaches are constantly evolving and there is a continual need for investment in new systems and equipment.

Plans for Express Toll Lanes
WSDOT has been developing plans over the past decade which call for evolving the current HOV lanes into a network of express toll lanes. However, this planning direction has not been formally established within the agency or recognized by the Legislature. At some point a decision will be needed whether to transition HOV lanes system-wide, similar to the adoption of a Core HOV Program in the 1990's.

Use of Toll Revenue
Traditional tolling has focused on repaying bonds used to fund large capital projects such as bridges and tunnels where construction cannot be effectively staged over a longer period. Increasingly, however, WSDOT faces funding shortages for basic needs such as operations, maintenance, safety, and preservation. Additionally, other agencies face shortfalls maintaining and operating transit and local streets. Consideration could be given to the use of toll revenues for maintenance and preservation, corridor improvements, transit, or local transportation facilities.

Equity and Acceptability
Tolling introduces questions of equity. Perceptions of value and equity are often critical to public acceptance of tolling. Equity concerns arise when planning for when and where toll projects are implemented.

Tolls on Existing Highways
PSRC's Transportation 2040 Plan suggests eventual tolling of all Puget Sound highways to moderate traffic growth and provide significant transportation revenues. This approach has not been endorsed by the Legislature and would likely require new federal legislation, yet it could be a key ingredient in meeting projected transportation system needs in the Puget Sound's regional plan.

Use of Tolls for System Planning and Development
WSDOT relies on the Legislature to fund development of transportation plans and toll proposals, but the Legislature has been reticent to fund studies until convinced that a proposal has support. To conduct preliminary planning and assess feasibility of new tolling projects or approaches WSDOT has relied primarily on federal grants that are no longer available. To develop and test future toll proposals, WSDOT will require funding.

CHAPTER 4

Roles, Responsibilities and Toll Division Workplan

A key finding of the State Auditor Office (SAO) report was that for implementation of SR 520 tolling, "WSDOT's Toll Division lacked the executive support, decision-making authority, and the policies and procedures needed to develop the statewide all-electronic tolling system and start tolling the SR 520 Bridge on schedule. These management challenges were magnified by an ambitious project, uncertainty about its demands, and a tight deadline." The SAO recommended that "the Secretary should clarify the roles, responsibilities, and decision-making authority for future tolling projects." In response, the Secretary will issue executive orders establishing the roles and responsibilities of the Toll Division, addressing cross-functional relationships, and delegating authorities to clearly define the decision-making authority for the Toll Division by December 31, 2013.

As a new organization within WSDOT in 2009, the Toll Division needed to quickly settle into an established organizational structure that was itself evolving. The Urban Corridors Office, formed to deliver high cost and high profile megaprojects funded by two legislative fuel tax increases, was in the process of being dismantled. The Toll Division needed to quickly develop new state-of-the-art tolling capability for SR 520 funded chiefly by the federal Urban Partnership Program under the condition that tolls be instituted on a very short deadline. Additionally, it needed to develop a working relationship with the civil engineering projects that tolls would finance and be installed on, and with WSDOT support groups (particularly in accounting and information technology) that play key roles in toll operations.

The Toll Division and its organizational context have continued to evolve since the time period examined by the SAO. The Toll Division is now led by an Assistant Secretary who has broad responsibility for the planning and operation of the division. The decision making authority vested in this position is being reviewed and clarified to ensure alignment with the responsibilities listed in the section below. A Secretary of Transportation Executive Order will be issued by the end of 2013 to provide this clarification.

Roles and Responsibilities Clarification

The Toll Division benefits from being embedded into the larger Department of Transportation. Availability of many organizational resources provides efficiencies and scale economies, while integration with traffic operation and civil design and construction programs helps ensure coordination and the best use of resources.

In response to the SAO Report, WSDOT will review roles and responsibilities using Lean principles, focusing specifically in the areas of:

- Contracts
- Financial Planning
- Financial Reporting

Functions of the Toll Program

Consistent with the principles above, the Assistant Secretary, Toll Division, is accountable for the leadership, policy, planning, development, implementation, education, operations, and performance of

toll roads, toll bridges, and tunnels, and express toll lanes. The Assistant Secretary will be held accountable for the success or failure of these activities.

Specific responsibilities should include the following:

- Develop, contract, and operate toll road and bridge roadway and back office systems;
- Develop, contract, and operate express toll lane roadway and back office systems;
- Conduct traffic and revenue estimating and reporting;
- Report on toll program performance, including financial plans;
- Advocate and promote advancement of tolling/pricing;
- Communicate with toll customers, stakeholders, and the public;
- Collect all forms of roadway pricing (tolls, VMT, congestion pricing, etc.);
- Develop long-range planning for tolling;
- Evaluate impacts of toll facility proposals;
- Support the Washington State Transportation Commission rate setting and policy work;
- Determine toll payment methods, practices and technologies;
- Establish operating concepts and set standards for design and maintenance of toll systems;
- Establish business rules and operate the *Good To Go!* Program;
- Manage a toll enforcement program to maximize collection of toll revenues; and
- Establishing toll agreements with other agencies including FHWA.

Shared Roles and Authorities

While the Assistant Secretary, Toll Division, has ultimate responsibility for tolling outcomes, the Toll Division shares authority with other groups within the agency. In some cases, the Toll Division is the lead, and will seek concurrence of others where appropriate; in other cases, the Toll Division plays a support role and will set appropriate standards. As a result of the SAO report, WSDOT will review the following areas of responsibility:

- Financial planning: Headquarters Financial Planning is responsible for ensuring that toll-backed bond financing analyses and plans will comply with state financial policies and meet the needs of bond agencies and the Office of the State Treasurer. Their concurrence is required for financial plans for any project when bond sales are pending, and for any deliverable or communication with Office of the State Treasurer.

- Accounting: While the Toll Division is accountable for the content of accounting statements for tolled facilities (the financial performance of tolling), it relies upon Headquarters Accounting and Financial Services for toll customer accounting, financial reconciliation, and to produce accurate and compliant financial statements.

- Information Technology (IT), contracting, purchasing: Support groups within WSDOT have established standards and guidelines to which the Toll Division must adhere. However, because tolling was not anticipated when regulations and standards were developed, sometimes changes or departures will be requested to accommodate unique tolling requirements (for example, contracts that combine IT functions with operating services or with public works activities on the highway).

- Toll-funded Projects: Project Directors for toll-funded engineering and construction projects are accountable for all elements of project delivery. The Toll Division will seek concurrence on toll system design elements that will affect the civil construction project design, cost, or schedule. The Toll Division will develop standards for toll collection systems to aid in project planning.

- Region traffic and maintenance: When toll projects are complete, the regions assume operation and maintenance of the roadway as well as other non-tolling related facility improvements. The Toll Division will seek concurrence from region traffic and maintenance on any issue that affects traffic operation or toll contributions to meet operation and maintenance requirements as well as roadway performance regulations in the future.
- System Planning: Where tolling is an essential element in order to be financially feasible or meet traffic management objectives the Toll Division supports system planning for the projects. This involvement is a concurrence role, providing strategic input and resources for determining revenues, tolling costs, as well as financial strategies and plans. Alternatively, for studies where tolling strategies or practices are the primary consideration, with project chartering required to establish participation roles by other WSDOT units, the Toll Division takes the lead. For express toll lanes, where tolling is the primary method of managing traffic and providing customer value, the Toll Division is lead for coordinating the development of concepts of operation and system policies.
- Program Management: When both tolls and other state funds are applied to finance a project, the Toll Division is accountable for preparing financial plans. With these projects the Toll Division will seek concurrence from the Region or megaproject program management and quality control and concurrence from WSDOT Headquarters Budget and Financial Analysis group. Region or megaproject program management offices are accountable for developing staging plans and the Toll Division plays a concurrence role.

Avoiding and Resolving Conflicts

WSDOT has successful models for managing overlapping roles and authorities in its traditional engineering program. For example, while WSDOT regions and project managers are responsible for delivering engineering and construction projects, they must work within design guidance and constraints defined in the Headquarters Design group, which has authority to assess and grant design deviations. Similarly, the Toll Division must meet established requirements of service providers such as the WSDOT IT and accounting services.

As is true for engineering decisions, on occasion deviations will be requested from support groups when tolling needs differ from other customers, or when it is not cost-effective to comply and less costly, yet effective, approaches are available. Additionally, when regulations or standard procedures have not been issued, the Toll Division will work with these organizations to develop appropriate standards.

Some standard principles and practices are successfully used throughout WSDOT for managing overlapping authority that apply equally to tolling:

- Develop charters and agreements that spell out roles, authorities, communication, decision-making, and conflict resolution processes between work groups or within projects.
- Solve problems early by establishing teams that include affected interests and coordination processes that keep all informed of issues and timelines.
- Publish standard requirements and deviation processes to clarify expectations and approaches to make cost-effective decisions about non-standard situations
- Elevate conflicts that require a program or policy-level viewpoint or where peers are at an impasse. Do not let elevated issues go unsettled.

- Define concurrence roles to clarify exactly what decision roles are played by an office or individual, and the interests they represent at the table.

Concurrence is limited in scope to specific areas of authority. The Toll Division will develop service level agreements with other groups to define the process for working together and resolving differences. The Toll Division will continue to seek a collaborative approach to decision making that aims to settle differences early and at the lowest organization levels. Where changes or deviations are needed from established policies, they will be evaluated and documented, similarly to engineering design exceptions. In all cases, a binding process will be in place to elevate issues when agreement is not forthcoming.

Toll Division Work Program

The Division's work program for 2013-15 identifies key activities to be performed by division staff and consultants. To show why these work items were selected and what they are intended to accomplished, they are arranged to address the primary division goals they are intended to address.

Toll Division Interim Goals

The Department's strategic plan is currently in development. The following interim goals were used to develop the Division's work program, with work items organized according to the goals they primarily address. These interim goals will be revisited and revised to fit into a broader agency-wide strategic framework once the WSDOT strategic plan is issued. At that point, more specific performance measures will also be added.

Each of the following goals is explained more fully on the following pages:

- Sustainable funding and performance
- Deliver as promised
- Customer service quality
- Transparency and credibility
- Strategic vision
- Communication and leadership

Goal: Sustainable funding and performance

Enable stable and growing funding for transportation in a way that improves system performance.

Objective:

Accurate traffic and revenue studies and financial plans are completed for all authorized toll facilities that support project financing on favorable terms.

Strategies:

- Complete authorized traffic and revenue studies and financial plans
- Document consistent statewide T&R assumptions and procedures

Initiatives:

- **SR 520 Traffic and Revenue Update:** CDM Smith is updating its traffic and revenue analysis for SR 520 to incorporate new information from early tolling to aid in financial planning for current

and future projects in the Lake Washington travel corridor. Parsons Brinckerhoff is updating its Net Revenue analysis to incorporate new information from early tolling as well as market adjustments in forward looking costs of operations.

- **SR 99 Traffic and Revenue Analysis:** An investment-grade traffic and revenue analysis and revised financial plan will be completed prior to adoption of initial toll rates for the SR 99 tunnel. Work will begin in early 2014 in preparation for rate-setting in early 2015.

Objective:
Toll rates are managed to meet funding requirements and improve traffic.

Strategies:
- Provide thorough, transparent support for SR 520 and SR 16 toll rate decisions
- Update and maintain traffic and revenue models to reflect trends and anticipated changes

Initiatives:
- **Policy Development for I-405 Financial Planning:** Key decisions are needed prior to rate-setting for I-405 Express Toll Lanes scheduled to open in mid-2015. Assess alternative payment policies and toll collection methods to inform WSDOT executives, corridor stakeholders, and the Transportation Commission, and describe their effects. Decisions made for I-405 Express Toll Lanes could set a precedent for other future express toll facilities.
- **Rate-setting support:** The Transportation Commission is responsible for setting toll rates. WSDOT supports the Commission's rate-setting decision and rule-making process by providing analysis, public information, and staff support.
  - I-405 and SR 99 Initial Rates: The Transportation Commission will set initial toll rates and exemptions for I-405 Express Toll Lanes in 2014 and the SR 99 Tunnel toll rates in 2015. Work includes presentation of financial plans and assumptions, evaluation of policy options, preparation of baseline and alternative rate scenarios, support for Commission public outreach, and preparation of WAC rules for issuance by the Transportation Commission.
  - SR 520: Support the Transportation Commission to set toll rates annually on SR 520, and facilitate independent certifications needed to meet Master Bond Resolution requirements. If the Commission takes no action, tolls will automatically be adjusted upwards by 2.5% in July 2014 and 2015. If analysis shows that a 2.5% increase will be insufficient, WSDOT will recommend a new toll rate proposal and prepare alternative rates scenarios as requested by the Commission.
  - SR 16 Tacoma Narrows Bridge: Support annual Citizen Advisory Committee (CAC) and Transportation Commission rate deliberations, including presentations, responses to questions, and preparation of baseline and alternative toll rate scenarios. Prepare a rate-setting guide for CAC members to explain the financial plan and answer key questions. If the Transportation Commission takes no action, rates will be raised by 25 cents automatically in July of 2014.
  - WAC rules, sign changes and outreach: The Toll Division coordinates efforts within the Department to implement toll rate changes, including preparation of Washington Administrative Code rule changes for filing by the Transportation Commission, outreach efforts to inform the press and the public, and sign changes needed on each facility.

Goal: Deliver as promised

Design, procure, install and maintain reliable, interoperable toll systems on time and budget.

Objective:

Toll system projects are completed on schedule and budget, without adding cost or delay to civil construction projects.

Strategies:

- Expand and adapt Customer Service Center systems to support the new toll facilities
- Implement toll systems for I-405 Express Toll Lanes, the new SR 520 Bridge, and SR 99 Tunnel
- Prepare for the timely implementation of I-90 toll systems, if authorized

Initiatives:

- **I-405 toll system**: Install roadside toll system for the first stage of the I-405 Express Toll Lanes between downtown Bellevue and I-5 in Lynnwood. Infrastructure to support the toll system will be designed and constructed by the civil design-builder. Statewide Roadside Toll System vendor, Telvent, will design, install, test, and operate the express toll lane system on I-405. Northwest Region Traffic is preparing software to integrate with its traffic management system software, including a pricing algorithm. The Toll Division will coordinate and oversee all phases of work. Planned opening is Summer/Fall 2015.

- **SR 99 toll system**: The Toll Division is coordinating design of toll collection systems with the Alaskan Way Viaduct replacement project. Telvent, will design, install, test, and operate the toll lane system on SR 99. Tolling is scheduled to start as early as 2016, with public outreach starting in early 2015.

- **SR 520 New Bridge toll systems**: The current SR 520 Bridge toll system is installed in a temporary location on the existing bridge and must be moved in two steps to its final location on the new bridge that will open in 2016. Telvent will design, install, test, and operate each toll system. The Toll Division will facilitate coordination between the design-builder and Telvent.

  - Interim Toll System: Transition to the interim toll point may occur in late 2015, depending on the civil contractor's schedule.

  - Final Toll System: The transition to the final toll point may occur in the summer of 2016, depending on the civil contractor's schedule.

- **SR 167 toll system upgrade and extension**: Extend the existing HOT lanes toll system concurrent with construction of new HOT lane segments between 8th Street E and S 277th Street. Contract with a toll vendor to develop, install, test, and operate the extended portion of the toll system. This work may assess whether and when to upgrade the existing SR 167 toll system to support photo tolling consistent with I-405 Express Toll Lanes plans.

- **Customer Service Center (CSC) planning for new facilities**: Toll Division is developing plans related to bringing on new toll facilities. This work will include business rule analysis, back office system upgrades, updating standard operating procedures, estimating staffing and space needs with associated costs, and developing a roll-out strategy.

Goal: Customer service quality

Use Lean management and technological innovation to deliver excellent and consistent customer service, improving value and lowering cost over time.

Objective:
Continuous improvement to customer satisfaction while reducing toll collection cost.

Strategies:

- Identify key toll processes and performance measures
- Identify and improve inefficient processes to reduce cost or add value
- Evaluate operations options and implement new approach

Initiatives:

- **Toll Division Lean program and B Program Operations Review Report**: ESSB 5024 requires the Toll Division to review toll operations using Lean management principles to eliminate inefficiencies and redundancies, and incorporate lessons learned from the State Auditor's Performance Audit Report and WSDOT Cost of Service Study. The report will review operation of the entire Toll Division and develop an ongoing Lean management program within the Toll Division, including its vendors. Following submittal of the report to the Office of Financial Management and the House and Senate Transportation Committees, the Toll Division will continue to examine processes and opportunities for continuous improvement.
- **Tolling Manual**: Document standard operating procedures (SOP's) for processes both within the Toll Division, and those involving interfaces between the Toll Division, its vendors, and project offices. Prepare a Tolling Manual including adopted SOP's, business rules, policies, concepts of operation, and other documents requiring ongoing updates.

Objective:
Toll systems are enhanced to provide added value to customers and reduce unbilled and unpaid transactions.

Strategies:

- Achieve timely reconciliation
- Fully implement collection and registration hold processes
- Evaluate continuous access to SR 167 HOT Lanes
- Evaluate expansion of *Good To Go!* to serve ferry customers
- Research and develop innovations to improve customer convenience and interoperability

Initiatives:

- **Customer Service Center (CSC) expansion**: Expanding tolling to new corridors will require new functionality, interfaces, and processes for the back office systems and customer service center. Toll Division staff is working with vendors to establish specifications and costs. One key factor

regarding space and timing will be whether a decision is made to co-locate Toll Division with the CSC Vendor to maintain a strong level of customer service even when the CSC is expanded.

- **CSC Contract Modification and/or Extension**: The first term of the Statewide CSC Contract ends June 30, 2014, and has two, 2-year extension options. Ongoing challenges with the service level provided by the customer service vendor has prompted the Toll Division to review the options and determine whether to extend the contract and/or amend the scope or to re-procure the operations portion of the contract.
- **CSC System Enhancement**s: Work with the CSC vendor to implement remaining elements required by contract to provide timely reconciliation of transactions and fully implement other required system features. Work with vendor to implement new services and/or functionality to better serve customers. Initial Lean review findings and the latest customer satisfaction survey data point to the need to invest in CSC system enhancements, such as website improvements and mobile payment options. These enhancements would allow customers to self-service, resulting in operational efficiencies and allowing WSDOT to better meet customer expectations.
- **SR 167 HOT Lane Open Access Demonstration**: Evaluate the effect of providing more open access to SR 167 HOT lanes. This project is funded through the federal Value Pricing program and includes re-striping of the lanes to allow drivers to enter and exit the lanes at more locations along the system, signing changes, public outreach, and a before-and-after evaluation to determine effects on system operations, revenue collection, traffic and transit performance, safety, toll evasion, etc. Public outreach is expected to begin early 2014, and project completion is expected September 2014.
- **Washington State Ferries (WSF) *Good To Go!* Study**: Consistent with ESSB 5024, evaluate the feasibility and develop a plan to integrate and transition customer service, reservation, and payment systems currently provided by Washington State Ferries into the statewide tolling customer service center. The plan is due to the Office of Financial Management and the Transportation Committees by January 14, 2014, and will assess the feasibility, schedule, cost, and customer and policy tradeoffs.
- **Technology and Innovation Program**: Develop and prioritize research proposals and implement a research program to evaluate possible new practices and/or technologies with potential to provide additional value to customers, reduce toll collection costs or losses, or attain interoperability with toll systems in other states.

Goal: Transparency and Credibility

Assure accurate and transparent reporting and projections of toll collection costs, toll revenues, and toll facility financial status.

Objective:
Toll reporting is accurate, transparent, and complete. Tolling stakeholders including Legislators, the Transportation Commission, and bond agencies understand the *Good To Go!* program structure, benefits, and costs.

Strategies:

- Complete quarterly and annual reports that address stakeholder interests
- Complete/improve certification documents for master bond agreements
- Formalize/document quality control process for Toll Division deliverables

Initiatives:

- **Internal Audit Report:** WSDOT's Internal Audit group has services available to the Toll Division. The Toll Division will identify areas for review.
- **On-going Financial Management Reports**: The Finance group is preparing monthly budget to actual expense reports for the B Program to aid in managing toll operations. The reports will be issued in a timely manner and provide sufficient information to answer a multitude of questions and identify trends that require proactive attention.
- **Annual Toll Program Costs Report**: Prepare a comprehensive report describing the cost factors driving toll collection and adjudication costs. Include all direct, indirect, and vendor costs, their funding source, and the allocation of costs to individual toll facilities. Also assess uncollected transactions for each facility. The report will be provided to the Transportation Commission and Tacoma Narrows Bridge Citizen Advisory Committee to assist in their cost oversight role and inform the toll rate-setting process.
- **Annual Revenue and Expense Projections Repor**t: As part of the biennial budget preparation, the Finance group prepares operational budgets on expenses for the subsequent biennium and two subsequent biennia. The Finance group plans to prepare a report identifying annual revenue and expense projections for current and future facilities.

Goal: Strategic Vision

Create toll project and program proposals with clear customer value, and provide full and accurate evaluation to support investment decisions.

Objective:

Proposed toll facilities and/or toll-funded transportation improvements are evaluated to provide decision support for legislative action.

Strategies:

- Prepare EIS and public outreach program for tolling on I-90
- If authorized, develop project toll plans for the SR 167/ I-5 / SR 509 Gateway project
- Develop and propose corridor planning study proposal for I-5 corridor

Initiatives:

- **I-90 Tolling Environmental Impact Statement**: Prepare an environmental impact statement (EIS) assessing potential approaches to managing traffic and providing funding to complete the SR 520 project by tolling I-90 between I-5 and I-405. Conduct extensive outreach to the public, local jurisdictions, and other stakeholders. The Toll Division is coordinating all EIS and public involvement activities, including a second round of scoping in October 2013. Publication of the

EIS is expected in early 2015, leading to a Final EIS during the 2015 legislative session, and a Record of Decision in late Spring of 2015. If the Legislature authorizes I-90 tolling in 2015, WSDOT could implement tolling by late 2016.

- **SR 167/I-5/SR 509 Puget Sound Gateway Project**: WSDOT will coordinate with stakeholders to determine the path forward for the proposed Puget Sound Gateway Project corridors. Work will focus on increasing confidence in the project approach, including a cost estimate validation process (CEVP) and design refinements, economic impact analysis, phased right-of-way acquisition strategies, and strategies for completing new or updated NEPA documents and clearance. WSDOT will assess alternative delivery strategies and staffing to develop work plan for various budget scenarios.

Objective:
State and Puget Sound regional elected officials reach agreement on the future role of tolls among transportation revenue tools, and the policy guidelines that will guide equitable and publicly acceptable system development.

Strategies:
- Engage regional/state leaders to confirm tolling vision and development plans
- Evaluate system-level policy options and facilitate collaborative process

Initiatives:
- **Regional Tolling Implementation Study (pending approval/funding)**: WSDOT and King County will support PSRC to lead this study that will address current and alternative approaches to regional tolling. FHWA has given conditional approval to use of $1.6 million in value pricing funds. The scope, approach, and agency roles are still under discussion. A committee will be formed to consider the value and effects of toll projects, distribution of costs and benefits, uses of toll revenue, alternative finance options, long term vision for tolling, and phasing plans out to 2040. A two phase project is anticipated with an interim report prior to the 2015 legislative session and a final report prior to the PSRC update to Transportation 2040.
- **I-5 express toll lanes system planning and pre-design**: WSDOT received grant funding from the Value Pricing Pilot Program to develop a system concept and policies for converting Puget Sound HOV lanes into an express toll system, and design concepts to implement express toll lanes on I-5. The work is mostly complete. Additional work is needed to review and accept the final project report, and work within the department to determine the next steps towards system planning and implementation.

Goal: Communication and Leadership

Foster broad understanding and acceptance of tolling in Washington by ensuring public awareness of tolling programs, practices, and outcomes for transportation and communities.

Objective:
High awareness, acceptance, and participation in the *Good To Go!* program.

Strategies:

- Proactive toll communications program
- Active marketing and education for new and existing toll facilities and programs

Initiatives:

- **External Relations**: Communications staff coordinates outreach for legislatively directed studies such as I-90 tolling and the Gateway Project. For example, the team expects three I-90 tolling EIS scoping meetings in October to be attended by more than 1000 constituents. The team also coordinates Joint Transportation Committee, Governor, and legislative updates; coordinates with local governments; conducts community outreach; leads responses to Toll Division audits; and writes the Toll Division annual report.

- **Constituent Relations**: Most *Good To Go!* customer questions are handled by our customer center. However, legislators' offices, the Governor's Office, the Attorney General's Office, and the transportation secretary's office refer customer inquiries to the Toll Division, and communications staff answers them. Communications staff processed 82 of these types of inquiries from January to August 2013. This number will increase as new facilities launch.

- **Customer Relations and Public Education**: The communication team leads outreach efforts to educate the public about changes in facilities through media and customer updates. They coordinate rate setting discussions with the Tacoma Narrows Bridge CAC by reserving venues, notifying the public, compiling data, developing presentation materials, and distributing meeting summaries.

- **Public Outreach:** Communications staff draft presentations to be delivered to partner agencies including the Transportation Commission, local jurisdictions and other interest groups on toll topics. In 2013, the Toll Division will conduct over 25 presentations. This number will grow as new facilities launch. Similar to the SR 520 launch, the staff anticipates holding more than 80 presentations in 2014 as part of new toll facilities outreach.

- **Media**: The Toll Division receives media inquiries every week. Many inquiries are highly technical, requiring extensive data research on toll enforcement, traffic and revenue. Media interest increases as facilities launch. During the SR 520 toll launch, TV, print, radio and online media generated more than 1,900 stories. Earned media is a large part of WSDOT Toll Division and project communications. The team drafts news releases, pitches stories to reporters, maintains a web presence, coordinates with project teams, and manages the *Good To Go!* Twitter account with 2,200 followers.

- **Educational marketing**: Communications manages the *Good To Go!* brand development and leads educational marketing campaigns to reach potential customers and increase participation in the *Good To Go!* program. New launches include:

  - I-405 Express Toll Lanes: Introduces Washington's first tolled facility that charges tolls by segment based on the trip. May require changes to carpool occupancy requirements as well as the introduction of new passes for carpool declaration.

  - SR 99 Tunnel: Represents a new market segment because many SR 99 users don't use SR 520, SR 167, or the Tacoma Narrows Bridge on a regular basis.

CHAPTER 5

Toll Division Resources

Business model

The WSDOT Toll Division is a small, highly-focused, team-oriented organization. The Toll Division brings a strong owner culture that leverages private sector resources with a performance based approach. The Toll Division includes highly-skilled, specialized consultants and vendors to plan, implement, and operate an integrated toll system. Fundamental to the business model are the Toll Division's guiding principles:

- Strong Owner – Only the Owner can be the Owner
- Leverage Private Industry
- Be Flexible and Nimble
- Build on Lessons Learned

Strong Owner – Only the Owner can be the Owner

Although WSDOT leverages private sector resources with an integrated team of consultants and vendors, there are certain decisions that can only be made by WSDOT. Therefore, key positions are needed within the Toll Division to ensure accountability.

Leverage Private Industry

The Toll Division has assembled a group of highly qualified toll industry experts with national experience to help plan, implement, and operate the toll program and systems. This provides access to national and current expertise not available within a state DOT organization, plus the flexibility to switch out resources as priorities and projects change.

General Tolling Consultant

The 2009 JTC ERP recommended that "To provide support to WSDOT and to access the body of knowledge in the industry, the ERP recommends the acquisition of a general engineering consultant specializing in toll operations and systems integration."

In July 2010, WSDOT hired Jacobs Engineering as the GTC. The GTC is part of the integrated team and is co-located with the Toll Division. The GTC provides program management, project development, and project delivery services related to WSDOT toll facilities and customer service center. Specifically, the GTC supports the Toll Division with toll policy development, toll facility and technology planning, standards development, toll payment methods monitoring, toll rate and fee setting, outreach and marketing, toll operations, accounting, reporting, toll industry practices, system and project-level concepts of operations, procurement support, and contract management. In addition, Jacobs is also assisting with toll systems development and implementation on the I-405 Express Toll Lanes, SR 520 All Electronic Toll bridge project (interim toll point and ultimate toll point) and the SR 99 Tunnel project.

Statewide Customer Service Center

With legislative direction to toll the SR 520 Bridge, including implementation of all-electronic tolling, WSDOT recognized the need for a Statewide CSC that would provide services beyond that available with the current customer service center.

In December 2009, WSDOT awarded the Statewide CSC to ETCC. This was structured as a "services only contract" that required ETCC to provide the staff, systems, facilities, and supplies necessary to operate and maintain the Statewide CSC in accordance with WDSOT business rules and requirements. The Statewide CSC provides the customer interface for WSDOT toll customers. All customer interactions are handled by the Statewide CSC call center, website, and walk-in centers. In addition, the CSC manages customer accounts, processes all electronic toll transactions, perform image review, interfaces with the Department of Licensing for license plate look-ups to identify the registered owner of vehicles without a *Good To Go!* account, processes "Pay By Mail" invoices if users are not *Good To Go!* Customers, produces violation notices, and processes customer payments. Furthermore the Statewide CSC provides adjudication support and facilities necessary to pursue non-payment of tolls. The initial term of the contract expires June 30, 2014.

Tacoma Narrows Bridge Lane System

In 2002, WSDOT contracted with TransCore for a "Toll System Supply and Installation" contract for a toll system on the Tacoma Narrows Bridge. In 2005, WSDOT contracted with TransCore for operations, management, and maintenance of the toll system and toll facilities, including toll collection, violation processing, and revenue handling. Many of these functions were transferred to the new Statewide CSC in February 2011, however, TransCore remains under contract for cash toll collection and to operate and maintain the toll collection equipment and facilities on the Tacoma Narrows Bridge. In spring 2012, WSDOT contracted via change order with TransCore to continue operations and maintenance of toll collection facilities and equipment for Tacoma Narrows Bridge. The contract expires June 30, 2014.

SR 167 Lane System

In spring 2007, WSDOT contracted with ETCC to provide the lane system on the SR 167 HOT Lane Pilot Project. In 2008, WSDOT contracted with ETCC to provide warranty and maintenance of the toll system. As this is a pilot project requiring legislature approval, several contract amendments have been executed between WSDOT and ETCC, subject to renewal of legislative toll authority on the facility. Authorization for the SR 167 Hot Lanes is set to expire on June 30, 2015, without further legislative action.

SR 520 Lane System

In May 2010, WSDOT contracted with Telvent (now Schneider Electric) to supply, install, operate, and maintain an all-electronic tolling lane solution on the existing SR 520 Bridge, as part of the FHWA-funded Urban Partnership Agreement. Additionally, Telvent will install a temporary system needed to facilitate construction activities on the new SR 520 Bridge in preparation for the ultimate toll system.

Statewide Roadside Toll System

With several toll projects underway, in June of 2012 WSDOT contracted with Telvent to supply, install, operate, and maintain three toll systems:

- I-405 Express Toll Lanes (scheduled opening summer 2015)
- SR 99 Tunnel Toll System (scheduled opening fall 2015)
- SR 520 Replacement Bridge Toll System (scheduled opening fall 2016)

In addition, the contract allows for up to four additional toll systems to be added to the contract.

Be Flexible and Nimble

The Toll Division has been structured with a core group of WSDOT staff who are supplemented by consultants and vendors who serve as part of an integrated team. This allows WSDOT to adjust staffing levels based on work efforts and program needs.

Build on Lessons Learned

Each new project provides an opportunity to learn from previous projects. The use of industry experts allows the Division to learn from the experiences of toll agencies around the country.

Current Organizational Structure

As described above, the Toll Division is comprised of WSDOT, vendor, and consultant staff. The current Toll Division organization chart has five departments, including: Policy and Systems Development, Toll Operations, Toll Finance, Tolled Corridors Development, and Communications and External Relations. The departments were established to manage the demanding load required during concurrent project deployments. Four of the departments are led by directors and one is led by a manager. All departments report directly to the Assistant Secretary, Toll Division.

As recommended by the ERP, the Toll Division is supported by a GTC. The GTC provides full-time dedicated positions to WSDOT as well as on call support.

As previously described, the Toll Division has contracts with ETCC, Telvent, and TransCore that provide staff to operate the back office and maintain the roadway toll systems. The ETCC contract for operating the Statewide CSC is currently scheduled to expire in 2014. It is not known at this time if ETCC will be willing to extend the contract and if so at what cost to WSDOT. As such, the Toll Division must be prepared to continue to deliver Statewide CSC services and is in the process of assessing the most efficient and cost effective options for potential reprocurement including if WSDOT should assume the responsibility for a portion of the functions currently performed by the vendor.

A finding in the state audit report that unclear roles and responsibilities and decision making authority within the Toll Division contributed to project delays is being assessed as part of this Lean review. In order to address the concerns raised in the audit report and identify opportunities to operate more effectively and efficiently, the organization structure of the Toll Division has been re-evaluated as further described below.

Review of Organization Structure

As part of the Lean review process, the Toll Division structure was analyzed for potential efficiencies and any redundancies, but also to ensure the structure could meet the needs of a Toll Division that is maturing from an organization focused primarily on development to one that must simultaneously increase emphasis on ongoing operations while still developing new projects. The organizational realignment:

- Aligns departments and positions that are interrelated to create synergy and efficiency;
- Creates a concentric direct reporting relationship to a Deputy Chief position for the departments which impact operations;
- Evaluated each position for true need; and
- Evaluated positions which are currently filled by consultants for transition to WSDOT.

The organizational evaluation assessed current and upcoming staffing needs to address ongoing operations as well as the upcoming development work necessary for the implementation of tolling on the I-405 Express Toll Lanes and the SR 99 Tunnel projects. The results of the organizational assessment are shown in Figure 8 below. The organizational realignment resulted in the overall reduction of four WSDOT FTEs, including a Washington Management System Director (WMS4) position, and three and

one-quarter GTC FTEs[9]. The Toll Division will continue to monitor the structure and adjust over time to obtain maximum efficiency to best address program needs.

Toll Division Table of Organization

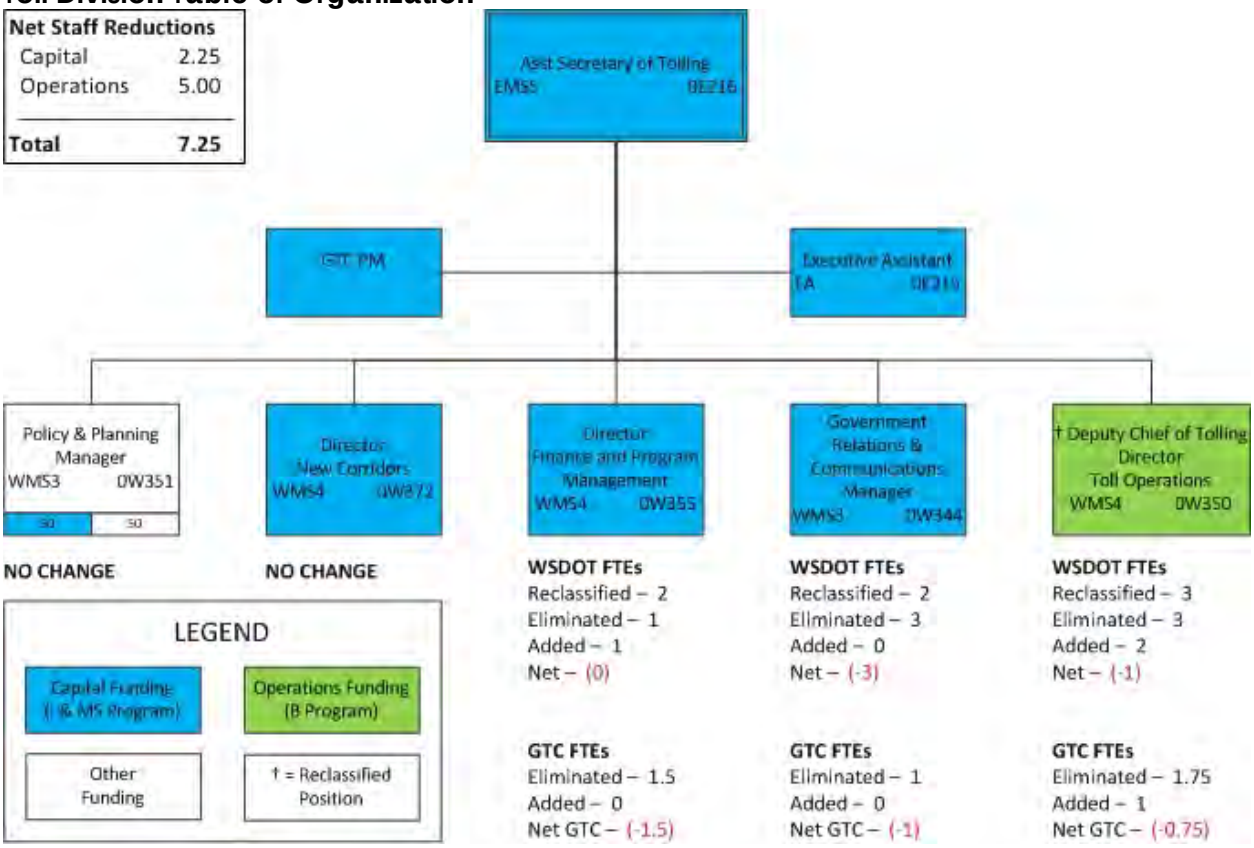


Figure 8: Toll Division Table of Organization

Toll Program Budget

The Toll Division is responsible for the following program dollars:

- B Program (Toll Operations)
  - B1 – Toll Oversight and Planning - funded by the Motor Vehicle Account
  - B2 – Tacoma Narrows Bridge Toll Operations and Maintenance – funded by toll revenue
  - B3 – High Occupancy Toll Lanes Maintenance and Operations –funded by toll revenue
  - B5 – State Route 520 Toll Operations - funded by toll revenue
  - B5 – SR520 Civil Penalty – funded by civil penalty fee revenue
- I Program (Capital/Project)
  - Direct charges to projects for startup
  - Direct project support (MS 6979/80)

[9] Reductions based on current funding levels.

2013-15 Biennium Budget

Program Funding	Allotted/Approved
B Program	$62,438,000
I Program	$27,014,185
I Program (Direct Project Support)	$5,268,200
Total	**$94,720,385**

Table 6: Approved 2013-15 Biennium Budget

B Program

Under the B Program, the Toll Division manages the quality and efficiency of toll operations for state transportation facilities financed through direct user fees or tolls. The Division is forecasted to collect a combined total for all tolled facilities of approximately $287 million in the 2013-15 biennium and $363 million[10] in the 2015-17 biennium. For comparison purposes, the Washington State Ferries Division is expected to collect fares of approximately $332 million in the 2015-17 biennium.

Toll Operations is responsible to forecast and analyze traffic, revenue, operations, and maintenance costs for the purpose of recommending toll schedule adjustments to the toll setting authority. It also provides statewide tolling operations, which currently include the Tacoma Narrows Bridge, State Route 167, and State Route 520. In addition to these B Program roadways funded by toll dollars, the Toll Division also administers the B1 subprogram. When established in 2007, the B1 Subprogram was intended to support program development and management for the State's toll operations program. Funded with gas tax from the Motor Vehicle Account, it was intended to recognize the future growth of the toll program, while not charging operations activities to toll revenue for the current facilities.

During the 2013 legislative session, the enacted budget recognized "the department's tolling division has expanded to address the demands of administering several newly tolled facilities using emerging toll collection technologies. The legislature intends for the department to continue its good work in administering the tolled facilities of the state, while at the same time implementing controls and processes to ensure the efficient and judicious administration of toll payer dollars."

I Program

The Toll Division is provided funding from the Motor Vehicle Account in support of the capital projects program. These funds are to directly provide toll functions for the mega projects and other projects where tolling is being analyzed, developed, or implemented. Direct program support is also provided through a work order that distributes costs to projects for toll project management. It should be noted, the previous WSDOT Administration directed the Toll Division to plan for self-sufficiency in the 2015-17 biennium.

The Toll Division submits budget requests directly to the capital project directors for expenditures related to toll planning, development, design, implementation, and installation associated with the

[10] Transportation Revenue Council, September 2013 Transportation and Economic Revenue Forecast, Volume II Detailed Forecast Tables.

projects. The Toll Division also submits budget requests directly to the Headquarters Program Management Office for direct project support funding.

Budget Responsibilities
The Toll Division is responsible for current and future statewide toll collection operations, including toll account management, customer service, and toll payment enforcement in order to safeguard state assets.

2013-15 B Program Budget

Subprogram	Enacted Budget[11]
B1 – Toll Oversight and Planning	$509,000
B2 – Tacoma Narrows Bridge Toll Operations and Maintenance	$22,310,000
B3 – High Occupancy Toll Lanes Maintenance and Operations	$1,851,000
B4 – I-405 Toll Operations	$0
B5 – State Route 520 Toll Operations	$26,299,000
B5 CP – SR520 Civil Penalty	$4,169,000
Reserves	$7,300,000
Total	**$62,438,000**

Table 7: Approved 2013-15 B Program Budget

Table 7 reflects the 2013-15 budget, as authorized by the legislature. This budget included a 5 percent reduction in vendor and non-vendor categories. Budget items in the vendor category include; customer service center operation, cash collections on Tacoma Narrows Bridge, and toll collection system operations and maintenance. Budget items in the non-vendor category include; Staffing the Division, consultants and other personal services, insurance, credit card processing, printing and postage, and facility operations and maintenance. As five executed vendor contracts are currently in place and executed, and expenditures for direct payments for non-vendor activities such as credit card fees, postage, printing, and insurance are not able to be reduced. As a result, the remaining expenses that are at the discretion of the Toll Division to reduce have been impacted by approximately 10 percent.

The following summarizes the funds which comprise the Toll Operations and Maintenance Program:

Tacoma Narrows Bridge Toll Operations and Maintenance
The Toll Division estimates it will collect more than $136 million from tolls on the Tacoma Narrows Bridge (SR 16) in the 2013-15 biennium, approximately $108 million of which is required for debt service. Additionally, funds are needed for the operations and maintenance expenditures required to support the collection of toll revenues and operation of the adjudication program. In the 2013-15 Enacted Budget, WSDOT was provided $22.31 million with a reserve of $1.3 million to operate and maintain the tolled facility.

SR 167 HOT Lanes Operations
Legislative authorization was provided during the 2013 session to continue to toll State Route 167 High Occupancy Toll (HOT) Lanes until June 30, 2015. The Washington State Department of Transportation

[11] Excludes the $250,000 appropriation from the Puget Sound Ferry Operations Account.

estimates it will collect over $2.1 million in toll revenue for the 2013-15 biennium. Funding of approximately $1.9 million was provided to continue to operate the SR 167 HOT Lanes in the 2013-15 biennium.

SR 520 Toll Operations
The Toll Division estimates it will collect $145 million from tolls on the State Route (SR) 520 Bridge in the 2013-15 biennium. The toll revenues collected from the SR 520 Bridge are used to pay for debt service, operations and maintenance costs, preservation costs, and up to $1.9 billion in construction funding for the SR 520 corridor. Funds are provided for the operations and maintenance expenditures required to collect the toll revenues. The Enacted Budget provided $26.3 million with a reserve of $6 million for operations and maintenance.

SR 520 Civil Penalty Process
If a vehicle uses a toll facility and the vehicle owner does not pay within 80 days from when the facility was used, the owner will receive a notice of civil penalty (NOCP). The NOCP includes a $40 fee per unpaid toll transaction. Unlike Tacoma Narrows Bridge, toll revenues are pledged to support bond financing. Therefore, the revenues and expenses related to operating the SR 520 Civil Penalty process are tracked and reported separately from regular toll operations and maintenance. Funding for the SR 520 Civil Penalty program are expected to be recouped through the $40 NOCP fee. The Enacted budget provided $4.2 million to operate the State Route (SR) 520 civil penalty process in the 2013-15 biennium.

Future Budget Considerations
This toll operations review report has evaluated existing operations and future budget needs against the 2013-15 B Program enacted budget and found three areas the Toll Division will need to address, either due to contractual obligations or to facility changes:

- Expected contract commitments with lane vendors, Telvent and TransCore;
- Risk mitigation strategies for CSC operations;
- Cashless study on Tacoma Narrows Bridge; and
- Ramp up activities in advance of starting the I-405 Express Toll Lanes.

<u>Lane Vendor Commitments</u>
Toll Division contracts with Telvent for toll collection system operations and maintenance services on the State Route (SR) 520 Bridge. The toll collection system (TCS) is being implemented in 3 phases – existing TCS, temporary TCS, and permanent TCS. The original budget request for FY 2013-15 for TCS operations and maintenance services was based on Telvent's contract to support the "existing" TCS system only. Support for the "temporary" and "permanent" TCS solutions was under procurement during the development of the FY 2013-15 budgets and contract pricing was unavailable.

In September 2012, Toll Division selected Telvent to provide the TCS O&M services for both the temporary and permanent TCS solutions on SR 520 Bridge. The executed contract included increased costs for TCS O&M based on the increased scope of work to operate and maintain multiple systems at the same time (existing to temporary; temporary to permanent). The Toll Division will need to cover the shortfall between the previous contract and the new contract pricing.

The contracts with Transcore for manual toll collection and toll collection system operations and maintenance for Tacoma Narrows Bridge expire on June 30, 2014. Toll Division is in the process of negotiating an extension of these contracts through June 30, 2015. It is anticipated that the best case

scenario would be no price increase from FY 2013 levels. Therefore, the Toll Division will need to recoup the 5% reduction included in the Enacted Budgets for FY 2013-15.

CSC Risk Mitigation

The contract for the Statewide Customer Service Center operations with ETCC expires on June 30, 2014. The Department is working with the vendor to determine whether a contract extension is viable. The Toll Division has estimated, through an independent analysis of the vendor's staffing levels that they are likely losing in excess of $2 million dollars annually on CSC operations at the current contract pricing. Based on a risk analysis of existing operations the Toll Division must anticipate a change in the CSC operator, at an increased market rate cost. Therefore the Toll Division will need to be prepared to cover costs associated with a re-procurement, including development and letting of a RFP for CSC operator and transition costs related to bringing on a new operator.

Cashless Study of Tacoma Narrows Bridge

At the request of the legislature in 2010, the Toll Division studied the possible elimination of cash collection on Tacoma Narrows Bridge. The study recommended re-evaluation once photo tolling was implemented. Photo tolling was deployed on Tacoma Narrows Bridge in December 2011; the study would evaluate the potential savings associated with the conversion of toll collection operations to an all-electronic tolling system.

Ramp-up of I-405

Finally, current scheduling for commencement of tolling on the I-405 Express Toll Lanes ranges between May and September of 2015. The Toll Division will need to cover the purchase of initial transponders for I-405 Express Toll Lanes and the expected costs related to operating I-405 ETL tolling for two months of FY 2013-15 biennium.

Some of the needs described above affect the budget of a single facility, while others affect all three existing facility budgets.

Space and Facilities

The Toll Division has five leased spaces housing WSDOT, vendor and consultant staff to support the program. The leased space includes the Statewide CSC, located in the University District of Seattle, which also houses the Seattle walk-in center and adjudication facilities, adjudication facilities in Fife, walk-in centers in Bellevue and Gig Harbor, and administrative offices in downtown Seattle. Most Toll Division and GTC staff are co-located in the administrative offices in downtown Seattle. Given the limited space, WSDOT image certifiers and adjudication support staff are the only staff assigned to the Statewide CSC. Additionally there are two WSDOT offices at the Statewide CSC in Seattle which are shared by a few key members of the Toll Division operations staff. While the Toll Division administrative offices are just 20 minutes from the Statewide CSC, the distance limits WSDOT's insight into day-to-day operations necessary for its role as a strong owner. Lessons learned and the review of space planning found that co-location with the Statewide CSC vendor is essential to the long-term success of the toll program, and would provide better efficiencies, at the lowest cost. Co-location would allow the Toll Division to:

- Work side-by-side with CSC vendor to improve and maintain customer service.
- Assure that processes and decision-making are well developed, transparent, and timely.
- Provide quick turn-around for work products, updates, and responses; working with vendors and staff to gather information.

- Respond immediately to back-office system, roadway tolling, and toll equipment maintenance needs to assure consistent and reliable toll collection.
- Develop and maintain stable, long-term division communications and practices to support the toll business needs of the State of Washington.

This model is consistent with other toll agencies that have also chosen to co-locate with their CSC vendor. One example is the Texas Department of Transportation. In 2006, as a new tolling agency, TxDOT opened its state-owned 20,000 square feet Statewide CSC, with capacity to house 150 vendor and state employees.

Currently, WSDOT leases 15,000 square feet for Toll Division staff. The Statewide CSC vendor leases 12,500 square feet for the statewide CSC and back office, 3,800 square feet for adjudication facilities, and 1,600 square feet for the three walk-in centers. Additionally, WSDOT has 2,000 square feet of state-owned space for inventory and storage. Looking ahead, it is expected the existing walk-in centers could support the new projects opening during the FY 2015-17 biennium. This means no changes are needed for the Bellevue and Gig Harbor walk-in centers or the Fife adjudication facility. However, projections show that the current statewide CSC and back office space is insufficient to support program growth with the addition of the two new toll facilities. It is estimated that a total of 40,000 square feet is needed for the centralized Toll Division center to support the new facilities. In total, the Toll Division space needs range from 42,500 and 45,000 square feet.

For these reasons, the Toll Division will pursue plans to co-locate with the Statewide CSC Vendor. In addition, the Toll Division will evaluate the potential for reduction of walk-in centers as an area of potential savings. While walk-in centers are essential to address the needs of unbanked and cash customers, other agencies have partnered with retailers to provide account replenishment options. This would require up front system enhancements that are not currently funded, but long-term would be much more cost effective.

CHAPTER 6

Lean Management

Implementation of Toll Division Program Management Organization

The SAO Report recommended the Assistant Secretary, Toll Division, establish policies and procedures to manage future tolling projects. In response to that finding, the Toll Division has implemented a Program Management Organization (PMO), which is responsible for establishing policies and procedures to guide the development, implementation, and management of tolling projects. The PMO's mission is threefold:

1. Provide a solid, accepted foundation for identifying and proactively managing project changes, risk, and issues at a Toll Division level;
2. Create a framework for project management best practices within the organization's project teams; and
3. Guide key Toll Division projects to ensure successful results.

The Toll Division PMO utilizes industry-accepted principles established by standard setting bodies in the fields of project management, process improvement, and risk management, including: the Project Management Institute, Lean Enterprise Institute, Information Systems Audit and Control Association, and the Institute of Internal Auditors. PMO approaches are consistent with the requirements related to ISO9000. These principles will provide the Toll Division a common, well-established process for ensuring ultimate project success.

PMO Structure

The PMO consists of the Assistant Secretary, Toll Division, representatives from each functional area, and a parliamentarian, who serves as the meeting facilitator. The PMO meets monthly to receive project updates from project managers, to discuss project risks, and to manage project change, including scope, schedule, and budget. In addition, the PMO is used to review toll facility performance, revenues, and expenses.

When issues are raised that impact WSDOT stakeholders external to the Toll Division, they are invited to participate in the PMO. This group, known as the "Concurrence Authority", has the same authority as a regular PMO member for the issue by which they are affected. This group consists of representatives from:

- WSDOT Accounting and Financial Services
- WSDOT Information Technology
- Region Traffic
- Mega Projects
- Other groups as needed

As discussed in Chapter 1, the Toll Division held its first meeting in September 2013; future meetings will include members from the Concurrence Authority, as needed.

Lean Initiatives

As previously described under Lean Review in Chapter 1, each functional area identified several projects that could potentially benefit from a Lean review. Each functional area is in varied stages of the Lean evaluation process. The Operations group has three projects under way, previously mentioned in the "Top Priority Improvements" section, and as further detailed below under the section titled Operational Efficiencies. The current statuses of the other functional area projects are detailed below:

Policy and Development

The Policy Development group conducted a PICK chart analysis to identify those identified projects that would have the highest impact if implemented. This resulted in 14 projects being selected from the 26 originally identified. Of these 14 high impact projects, the Policy and Development group elected to directly implement nine without a full Lean analysis because the issue was already being addressed for one or more of the following reasons:

- By the implementation of a PMO within the organization;
- Because the cost to formally document, calculate, and summarize the waste and any realized savings would be cost prohibitive; or
- Because the issue was an obvious best management practice that could easily be implemented without extensive analysis.

That left five high impact projects that needed the full Lean analysis. Currently, all of these projects are in the Define phase. Schedules for the completion of the analysis are being developed and the process will continue into 2014 as resources are available.

Communications

The communications team first brainstormed possible improvements and then used an affinity diagram to group ideas for potential projects. The group took each set of ideas and described the process or activity is in its current condition and what it should be like in its future condition. Following is the desired future state of those processes:

- Customer interaction – The communications team should be more involved in updating and developing the customer-facing tools that are managed by the toll vendor.
- Data collection – The communications team will coordinate with the operations team to help inform data collection and reporting to provide a consistent set of data needs on a regular basis that is ready for public use.
- Presentation development –The communications team will develop a clear presentation development process with appropriate checks and balances to allow WSDOT to deliver the best presentations and a clear message.
- Roles and responsibilities – Team members' roles and responsibilities will be more clearly defined after extensive staff changes the past year.

Finance and Budget

The Toll Division Finance team held a workshop to brainstorm possible improvements which resulted in the identification of 25 potential projects, that were categorized into three main categories. The group flushed out each concept and described the current state process or activity and the desired future condition. The following outlines the three areas of improvement:

- Payment processing – This was identified as the highest priority project. Issues with payment processing occur from the time the invoice is first received throughout the process to reporting

in the expenditure reports. This is the first area of Lean improvement and the group is in the define phase, diagramming the process flow and collecting data.

- Data management – Several issues associated with data management were identified, including everything from traffic and revenue forecasting and reporting to budget and accounting data.
- Contract processing – Issues related to contract processing were identified and will be evaluated.

Operations

The Operations group deals with a wide variety of disciplines and tasks in order to accomplish its work. Toll Operations consists of teams responsible for customer service oversight, vendor management, toll system operations and maintenance, and financial accounting.

In July, the Operations group met to brainstorm ideas about possible areas for Lean improvements. The group identified 16 possible improvement projects. To prioritize the list of possible candidates, the group utilized several other Lean principles including PICK charting and process mapping. Three candidate processes - $0.25 Pay by Plate Fee Reversal Process, Escalated Customer Inquiry Procedures, and Image Review of Photo Enforced Transactions – were chosen for their ease of implementation and high pay off value in terms of time and/or cost savings.

Each of the three processes was then defined, measured, and analyzed to determine how best to implement process improvements and what might be expected in terms of future time or cost savings.

- $0.25 Pay by Plate Fee Reversal Process Improvement – the Lean review team believes that it is possible to achieve a 40% reduction in reversal processing time (equal to potentially $27,000 annually) by implementing a customer outreach program, empowering CSC frontline staff to handle reversals without transferring to another team, and streamlining the back-up documentation requirements.
- Escalated Customer Inquiry Procedures Improvement – the Lean review team believes that it is possible to achieve a 40% reduction in escalated customer inquiries forwarded to WSDOT for remediation (equal to potentially $15,000 annually) by implementing a customer outreach program and empowering CSC frontline staff to research and dismiss certain fees which were erroneously assessed or could be dismissed as a part of a customer education program.
- Image Review of Photo Enforced Transactions Improvement– the Lean review team estimates implementation of recommended improvements will lead to a 10 to 20 percent reduction in errors and an increase in revenues.

Cost to Collect

The Toll Division analyzed cost to collect during start-up of the new statewide customer service center and tolling on SR 520 (FY 2012, third and fourth quarters), and again during more stable conditions (FY 2013 first through third quarters). The results of FY 2013, first Quarter through fourth Quarter shown in Chapter 1 represent the analysis of steady state, although the areas of concern were somewhat consistent between reporting periods.

When reviewing the cost to collect by payment method, the analysis immediately highlighted the following areas to focus future Lean work.

- **Cash Collection:** The weighted average cost to collect per transaction is $0.40 on SR 520 and $0.52 on Tacoma Narrows Bridge. The difference is predominantly the inclusion of cash

collection on the Tacoma Narrows Bridge. At the request of the legislature in 2010, the Toll Division studied the possible elimination of cash collection on Tacoma Narrows Bridge. The study recommended re-evaluation once photo tolling was implemented. The Toll Division will seek legislative direction during the 2014 legislative session to update the Tacoma Narrows Bridge Cashless Study.

- **Short Term Account contacts:** Although most customers establish short term accounts through online self-service, customers are calling into the customer service center to close the accounts, resulting in unnecessary, costly customer contacts. This has been identified for a future Lean review.
- **Customer Contacts:** WSDOT has a high number of customer contacts per account. The Toll Division is looking for opportunities to decrease customer contacts through first time resolution and self-service. The first time resolution issue is being addressed through the Escalated Customer Inquiry Procedures Improvement Review described above. Improvements to self-service portals will be evaluated as part of the website review scheduled to start in 2014.
- **Inactive Accounts:** Inactive customer accounts require support without off-setting revenue to cover those activities. The Toll Division will review when to begin closing accounts that have been inactive for more than two years and will review the impact to the program.

CHAPTER 7

Key Findings

The Toll Division Operational Review was expansive, extended beyond toll operations, and encompassed all aspects of the Toll Division. Several organizational and operational efficiencies have been identified and the following highlights the key findings of this review.

- Tolling as a Funding Source: Tolling has become a larger share of the transportation funding solution nationally, and within Washington State. Thirty states across the country are using tolling as a funding source and WSDOT has launched three new toll facilities since 2007 and two more are scheduled to open by 2016.
- WSDOT's Tolling Structure is Appropriate: The Toll Division is a highly focused team that leverages the private sector to provide support to implement and operate its integrated toll program. The structure has been validated by the Joint Transportation Committee's Expert Review Panel and the General Tolling Consultant. A review of other toll agencies further confirms the decision to house tolling as a separate division within WSDOT.
- Customer Expectations: According to a recent survey, most customers are satisfied. Having an issue or dispute resolved the first time someone calls is the largest service gap between importance to the customer and customer satisfaction.
- Cost to Collect: A review of Toll Division collection costs by payment method and facility was performed to evaluate cost drivers. The results of the cost of service analysis highlight areas requiring further examination, such as cash collection on the Tacoma Narrows Bridge and the use of Short Term Accounts. An evaluation of peer agencies demonstrates that WSDOT's cost per transaction is reasonable.
- Increased Emphasis on Transponder Accounts: The cost to collect analysis shows *Good To Go!* transponder accounts are the most cost effective method of toll collection. The Toll Division will consider opportunities to more aggressively market transponders or partner with the Department of Licensing on a possible statewide distribution processes.
- Organizational realignment: The organization of the Toll Division was evaluated and restructured to better meet the current and future needs of the organization. Based on this review, the Development and Operations departments were combined under a single Director. Organizational changes will begin in November.
- Clarification of roles and responsibilities: Roles and responsibilities of toll division activities were reviewed to determine the appropriate responsibilities of toll activities and functions. This work will continue through the end of 2013, when an executive order defining roles and responsibilities will be issued by the Secretary of Transportation.
- Reductions in WSDOT staff: Each position was evaluated to validate the function served and to determine the long-term need. Four positions have been identified for elimination.
- Reductions in consultant staff: Consultant activities were evaluated to identify areas were ongoing work elements would be better performed by WSDOT staff. Three and one-quarter positions have been identified for elimination.
- Co-location of Toll Division and statewide customer service center vendor staff: The benefits of co-locating Toll Division staff with the customer service center vendor were evaluated and the Toll Division will pursue co-location opportunities.

- Operational efficiencies: Lean workshops were held and 70 potential Lean projects were identified covering each of the Toll Division functional areas. Three Lean reviews are currently underway and others will follow. The process of applying Lean tools to quantify and eliminate waste is a culture the Division has embraced with the formal adoption of a Lean structure, ensuring the Toll Division operates efficiently and effectively with an eye towards continuous improvement.
- Re-evaluation of toll program funding needs: A thorough review of the impacts of the five percent budget cuts made to the FY 2013-15 biennium B program budget has determined the cuts are not sustainable and WSDOT will need to address the future funding needs.

Appendix A: *Good To Go!* Customer Experience Survey Report

Good To Go! Customer Experience Survey Report

Prepared for the Washington State Department of Transportation

Prepared by PRR, Inc.

September 2013

Contents

Contents 1
EXECUTIVE SUMMARY 2
INTRODUCTION 5
SURVEY RESULTS 8
Typical *Good To Go!* Customer 8
Overall Satisfaction with *Good To Go!* 9
How Customers Pay for Tolls 10
Awareness of Fees 10
Attitudes towards Tolls 11
Customer Interactions with *Good To Go!* 12
Satisfaction and Importance of Person-to-person Interactions 14
Service Features that are the MOST Important 16
Services MOST Wanted 19
APPENDIX A: Survey Questions 21
APPENDIX E: Demographic Profile 22
APPENDIX F: Frequency Tables 26

EXECUTIVE SUMMARY

PURPOSE

The Washington State Department of Transportation conducted this survey to evaluate the customer experience and satisfaction with the services provided by the *Good To Go!* Customer Service Center. These services include the *Good To Go!* website (www.mygoodtogo.com)[1], the customer service center, and written correspondence. The findings from this survey will be used to inform customer service improvement initiatives.

METHODOLOGY

PRR, in collaboration with WSDOT and ETCC staff, developed questions for the survey. The survey was designed to take about seven minutes and to focus on key customer satisfaction issues. See Appendix A for a copy of the paper and online survey instruments. Participants with known email addresses were emailed the survey link, and those without known email addresses were mailed the paper version of the survey.

PRR, WSDOT, and ETCC staff designed the survey to ensure that the results would provide a representative sample of the opinions of customers with recent interactions with *Good To Go!* services. A recent interaction included either paying a toll via a Pass or by contacting the customer service center within 90 days prior to the launch of the survey (May, June, and July 2013). The survey was sent on July 30, 2013 to a proportionate, stratified random sample of 24,077 customers (20,787 via email link and 3290 via mail) and was open until August 30, 2013. The sample was stratified by the following four account types:

- Pay By Mail
- Pass
- Pay By Plate
- Short Term Account

A total of 2,815 completed questionnaires were received of which 2,567 were completed online and 248 were completed via mail. A small amount (144) of the sample was self-reported as business vehicles. This resulted in a response rate of 12 percent. The margin of error for the 2,815 completed questionnaires was +/- 1.84 percent.

KEY FINDINGS

Below are high level findings in regard to key survey questions addressing satisfaction with *Good To Go!* customer service.

[1] The www.mygoodtogo.com website is separate from the WSDOT tolling website.

Typical Good To Go! Customer

- More than two-thirds (67 percent) of respondents used the SR 520 Bridge and almost half (47 percent) used the Tacoma Narrows Bridge in the last 90 days.
- More than one-third (38 percent) of respondents paid tolls on Puget Sound roads one or more times a week, and slightly less (32 percent) paid tolls one to three times per month.
- Most respondents (57 percent) used toll roads for leisure or non-business driving, only a quarter (24 percent) reported using toll roads for commuting to and from work.

Overall Satisfaction with Good To Go!

- Most respondents (88 percent) are *satisfied* to *very satisfied* with *Good To Go!* customer service.
    - Respondents were likely to be more satisfied with *Good To Go!* customer service if they supported tolling, if they were aware of all the fees associated with their tolls, if they were older, or if they use a *Good To Go!* pass.
    - For the most part, a vast majority of respondents were satisfied with *Good To Go!,* but they were less likely to be satisfied if they had a dispute (toll, fee, or civil penalty), if they contacted customer service via phone or email, or if they paid their tolls via the mail.

How Customers Pay for Tolls and Awareness of Fees

- The majority of respondents (77 percent) paid their tolls automatically with a *Good To Go!* pass associated with their vehicle.
- Almost half of respondents (46 percent) were aware of the $.25 fee for not having a *Good To Go!* pass, but even more (65 percent) understood the fee is to pay for additional processing required when photographing plates.
    - Respondents were more aware of fees and their purpose if they had contacted customer service to manage their account, and if they used toll roads more frequently.
    - Respondents were less likely to be aware of fees if they recently had a dispute with a toll, fee, or civil penalty.

Attitudes towards Tolls

- Most of the respondents (86 percent) will continue to use the tolled roadways, and two-thirds (65 percent) agreed or strongly agreed that tolled roadways are a viable option to pay for transportation improvements.
    - Response was more favorable to tolls if they paid tolls on SR 520, if they were older, if they had a higher income, had a newer *Good To Go!* account, or if they had recently contacted customer service to manage their account (pay a toll, change settings, add/remove a pass).
    - Respondents were less favorable to tolls if they paid tolls on the Tacoma Narrows Bridge or

if they had recently had a dispute with *Good To Go!* regarding a toll, fee, or civil penalty.

Customer Interaction with Good To Go!

- Most respondents who had contacted customer service in the last 90 days (N=894) did so via phone (66 percent), their issue was resolved (77 percent), and they only had to contact customer service one time (61 percent).

Satisfaction and Importance of Person-to-Person Interactions

- Most respondents (82 percent) indicated that knowledgeable and respectful representatives were the most important factor of customer service.
- Of those respondents that contacted customer service, most were satisfied with representatives being respectful and friendly (69 percent), and that their issue is resolved by one representative rather than several (65 percent).
    - Respondents were more likely to be satisfied with all aspects of customer service if they had contacted customer service to manage their account, if they were favorable to tolling, if they were older, if they were more aware of fees associated with tolling, or if they had a pass.
    - Respondents were less likely to be satisfied with all aspects of customer service if they had a dispute (toll, fee, civil penalty), if they contacted customer service via phone or email, if they paid tolls via mail, or they have had a *Good To Go!* account for a longer period of time (since 2007).

Service Features that are the MOST important

- When forced to choose the top two most important aspects of customer service, respondents (41 percent) indicated they want their issue or dispute resolved the first time they call, and they want the representative to be knowledgeable (35 percent).
- When forced to choose the top two most important self-serve customer functions, respondents (48 percent) want the ability to view their account history and add funds to their account (44 percent) using the website.

Services MOST wanted

- Improving the *Good To Go!* website is the most wanted customer function (54 percent), as well as developing a mobile application to view and manage accounts (34 percent).
- Overall friendly, helpful, and polite staff was reported as a *Good To Go!* strength, and website malfunctions and difficulty were reported as a weaknesses.
- The one thing respondents wanted to change most about *Good To Go!* is the website.

INTRODUCTION

Background and Purpose

The Washington State Department of Transportation conducted this survey to evaluate customer importance of the services provided by the *Good To Go!* Customer Service Center. These services include person-to-person interactions with the customer service center, as well as "self-service" functions.

WSDOT and ETCCC (the company that provides customer service for the *Good To Go!* program in Washington state) were particularly interested in:

- The typical *Good To Go!* customer (how, when, where do they pay tolls)
- Overall satisfaction with *Good to Go!* customer service
- Understanding how customers pay for their tolls
- Customer awareness of fees associated when using "Pay by Plate"
- Customer attitudes towards tolling
- Customer satisfaction with recent interactions with *Good To Go!* customer service
- Customer ratings of importance and satisfaction of specific person-to-person service interactions
- Understanding the features of *Good To Go!* customer service that are the most important to customers
- Discovering the service functions customers want most

The findings from this survey will be used to inform future customer service improvement initiatives.

Methodology Overview

Survey Question Development

PRR, in collaboration with WSDOT and ETCC staff, developed questions for the survey. The survey was designed to take about seven minutes and to focus on key customer satisfaction issues. See Appendix A for a copy of the paper and online survey instruments. Participants with known email addresses were emailed the survey link, and those without known email addresses were mailed the paper version of the survey.

Survey Implementation

PRR, WSDOT, and ETCC staff designed the survey to ensure that the results would provide a representative sample of the opinions of customers with recent interactions with *Good To Go!* services. A recent interaction included either paying a toll via a pass or by contacting the customer service center within 90 days prior to the launch of the survey (May, June, and July 2013). The survey was sent on July 30, 2013 to a proportionate, stratified random sample of 24,077 customers (20,787 via email link and 3,290 via mail) and was open until August 30, 2013. The sample was stratified by the following four account types:

- Pay By Mail
- Pass
- Pay By Plate

- Short Term Account

A total of 2,815 completed questionnaires were received of which 2,567 were completed online and 248 were completed via mail. A small amount (144) of the sample was self-reported as business vehicles. This resulted in a response rate of 12 percent. The margin of error for the 2,815 completed questionnaires was +/- 1.84 percent.

Variable Indexes

Index scores were created for understanding the importance of person-to-person service, satisfaction of person-to-person service, favorability towards tolling, and awareness of fees associated with accounts. These index scores were created by adding up the response items for these questions and dividing them by the number of items. For example a respondents' ratings for each of the eight items asking them about the importance of person-to-person customer service features (with low importance rated as 1 and high importance rated as 4) are added together and then divided by eight (the number of items) for a total index score. Items responded to as 'not applicable' were not included in the index calculation.

Data Analysis

The data from the paper and online versions of the survey were merged into one database. Response range and logic checks were conducted prior to the analysis to ensure clean data. Logic checks are especially important with paper questionnaires because respondents sometimes do not follow the skip patterns correctly or they choose to not answer certain questions.

The data was further analyzed through cross-tabulations to see whether there were statistically significant relationships among the variables. The cross- tabulation analysis used statistical techniques (Cramer's V, Kendall's Tau c, Spearman, Pearson's R^2).

The crosstab analyses presented only investigated the relationship between two variables at a time, without controlling for other variables or any interaction effects. To address this issue, t-tests were conducted to further identify the key drivers of customer satisfaction.

[2] Cramer's V is a measure of the relationship between two variables and is appropriate to use when one or both of the variables are at the nominal level of measurement. Cramer's V ranges from 0 to +1 and indicates the strength of a relationship. The closer to +1, the stronger the relationship between the two variables. Kendall's Tau c is a measure of the relationship between two variables and is appropriate to use when both of the variables are at the ordinal level of measurement. Tau c ranges from -1 to +1 and indicates the strength and direction of a relationship. Pearson's R is also a measure of the relationship between two variabes at the ordinal or intevallevel of measurement. It ranges from -1 to +1 and indicates the strength and direction of a relationship.

Statistical significance means that the p-value is less than .05. Level of statistical significance is routinely set at this level. This essentially means that there are only 5 chances out of 100 that what appears to be a relationship between the variables is in fact not a true relationship, but rather has occurred by chance.

How to read this report

In this report, overall findings are presented for each of the substantive survey questions, followed by a table or chart that shows those results. Then, cross-tabulation results are presented. Throughout this report, only relationships between variables that are statistically significant at the .05 level or better and that are meaningful to an understanding of the data are reported. For example, if gender is not reported as significant for a particular question, it was not a statistically significant relationship or the relationship was too weak to be reported.

In interpreting the strength of the reported relationships the following cut-offs were used. It should be noted that in social science survey research it is very unlikely to get correlation coefficients higher than .4.

- +/-.4 and above --- very strong
- +/-.3 and above—strong
- +/-.2 to+/- .29—moderate
- +/-.1 to +/-.19—slight
- less than +/-.1—weak (weak relationships were not reported)

It should also be noted that some of the charts and tables presented in the report are for "multiple response variables", meaning that the survey respondent (case) could select more than one answer (response). In such charts and tables the percentages can add up to more than 100 percent. The percents shown are for the "percent of cases" and not the "percent of responses," thereby keeping the percents for these variables in line with those for all other variables which also report the "percent of cases."

Crosstabs for multiple response questions do not have coefficients because statistical tests with multiple response variables are not possible. In those cases the crosstab tables were viewed and reported what appeared to be important differences.

Finally, the base statement in the charts represents the group or subgroup of the sample that was asked a particular question and the "n" that follows this statement represents the number of respondents who answered that particular question.

SURVEY RESULTS

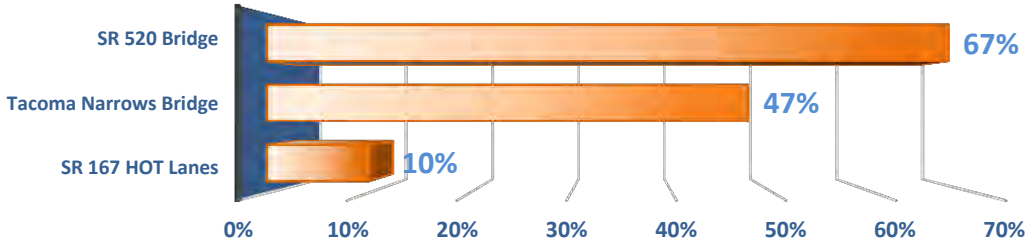
Typical *Good To Go!* Customer

More than two-thirds used the SR 520 Bridge and almost half used the Tacoma Narrows Bridge

Customers were asked on which Puget Sound area roadways they had paid tolls and were allowed to give multiple responses to this question. More than two-thirds (67 percent) had paid tolls on the SR 520 Bridge, while almost half (47 percent) had paid tolls on the Tacoma Narrows Bridge. Far fewer (10 percent) had paid tolls on the SR 167 HOT lanes.

On which of the following roadways have you paid a toll?

Base: All Respondents, Multiple Responses Allowed (N=2797)

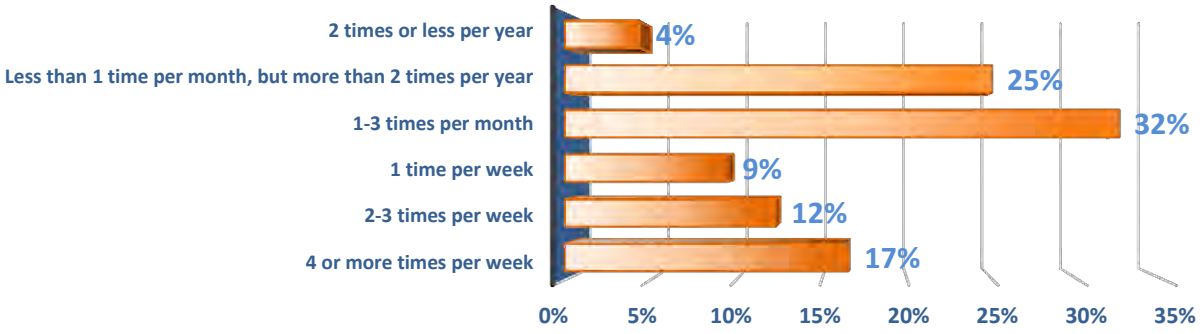


More than two-thirds paid tolls one or more times a week

The frequency of paying tolls varied, with almost two-fifths paying tolls one or more times a week (38 percent). A slightly lower percent paid tolls 1 to 3 times a month (32 percent). There was also a similar percent (29 percent) that paid tolls less than once a month.

How frequently do you pay tolls on the SR 520 Bridge, the SR 167 HOT lanes, and the Tacoma Narrows Bridge?

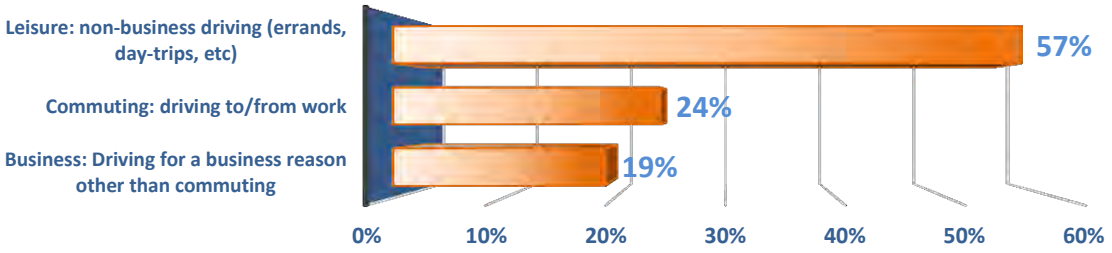
Base: All Respondents (N=2798)



Most used the toll roads for leisure/non-business driving

More than half (57 percent) used toll roads for leisure and non-business driving (errands, day-trips, etc.), while around a fifth used toll roads for commuting (24 percent) and business (19 percent).

Would you say you use these tolled roads or bridges mostly for:
Base: All Respondents (N=2772)

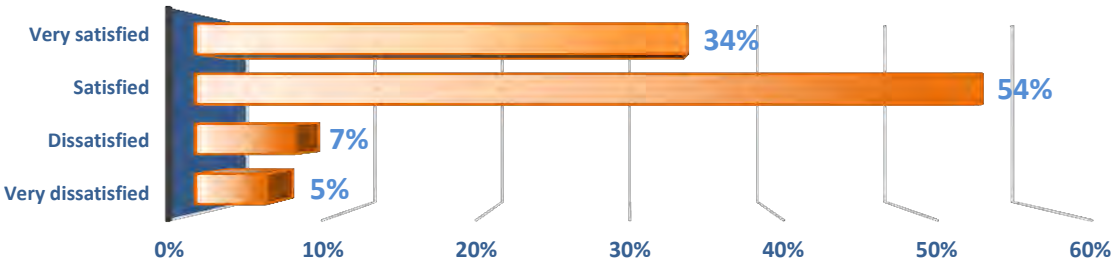


Overall Satisfaction with *Good To Go!*

Most respondents were satisfied

When asked to rate (on a 4-point scale) their level of satisfaction with *Good To Go!* customer service, more than four-fifths (88 percent) indicated they were *satisfied* or *very satisfied* (with 54 percent satisfied and 34 percent very satisfied). Very importantly, few respondents (12 percent) indicated they were *dissatisfied* or *very dissatisfied*.

Overall, how satisfied are you with Good To Go! Customer service?
Base: All Respondents (N=2380)



Statistical Relationships Found[3]:

Respondents MORE likely to be overall Satisfied:

- Favorable towards tolling items (*strong*)
- Aware of service fees on pay by plate accounts (*moderate*)
- Older respondents (*moderate*)
- Use *a Good To Go*! Pass and auto pay tolls (*slight)*

Respondents LESS likely to be overall Satisfied:

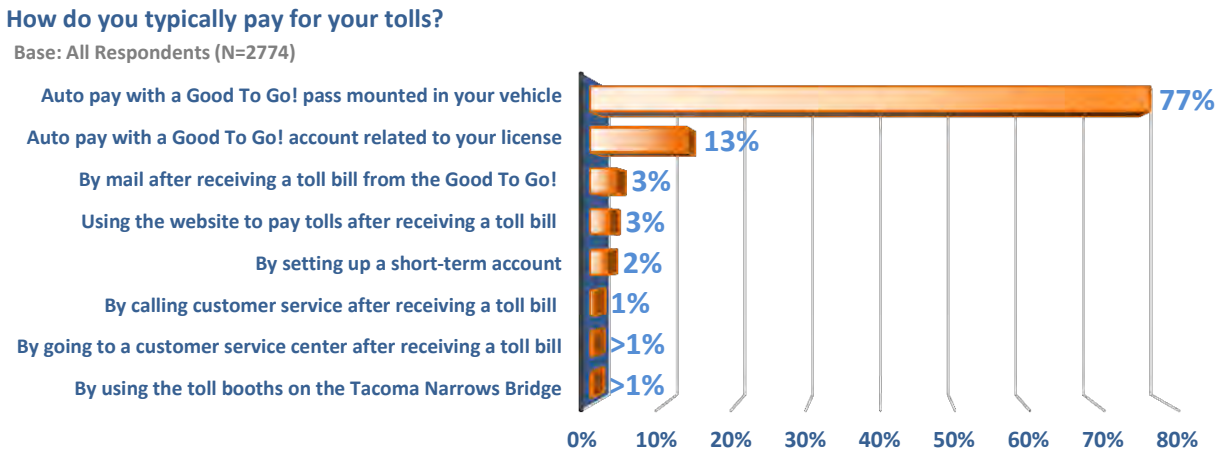
- Disputed a toll, fee, or Civil Penalty (*strong*)
- Contacted customer service via phone (*moderate*)
- Contacted customer service via email (*moderate*)
- Pay tolls by mail (*slight*)

[3] Note: The strength of the reported relationships (strong, moderate, and slight) are represented in the ranges on pg. 7.

How Customers Pay for Tolls

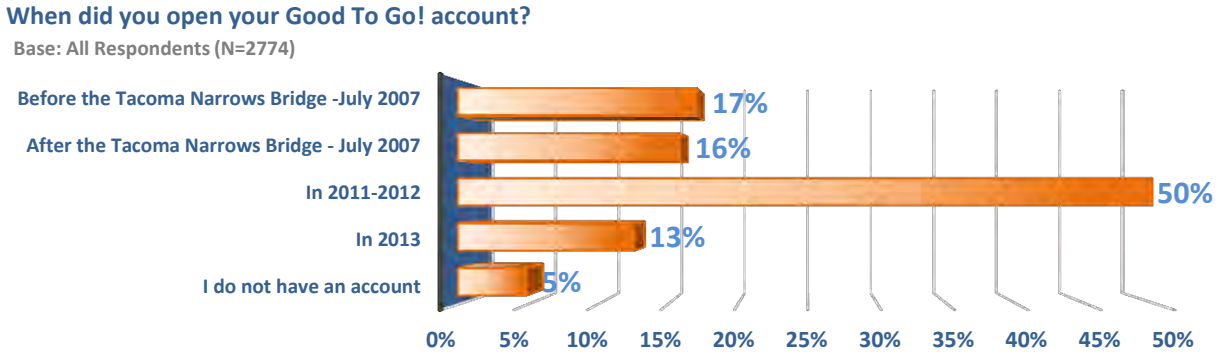
Most typically paid tolls with a pass

The vast majority (77percent) paid their tolls with a pass. The next most frequently used method (13 percent) was a *Good To Go!* account related to the person's license plate (also known as Pay By Plate). Less than 10 percent were those without an account of any kind that paid either when they received a bill or by using the toll booths on the Tacoma Narrows Bridge.



Most established their *Good To Go!* account in 2011-2012

Customers were asked when they had established their *Good To Go!* account. Of those who had an account, half (50 percent) established their account in 2011-2012, while a few (13 percent) reported doing so in in the last year (2013). A third (33 percent) of respondents reported opening their accounts prior to 2011.



Awareness of Fees

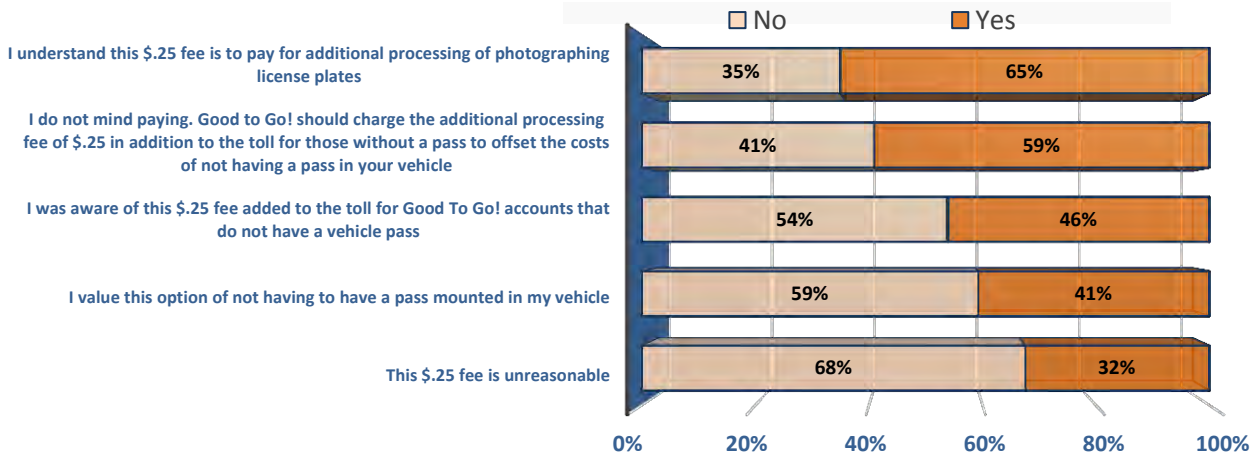
Almost half were aware of the $0.25 fee for not having a *Good To Go!* pass, and most understand this

fee is necessary to pay for additional processing of photographing plates

Respondents were informed that the *Good To Go!* program charges a $0.25 processing fee in addition to the toll for vehicles that do not have a pass, and they were asked several items assessing their knowledge and attitudes towards this fee. Less than half (46 percent) were actually aware of this fee, but more importantly almost two-thirds (65 percent) understood that the fee pays for additional processing to photograph license plates. Additionally three-fifths of respondents (59 percent) did not mind paying the fee knowing that the fee offsets the costs of not having a pass in their vehicle. Lastly, more than two-thirds of respondents (68 percent) did not think the $0.25 fee is unreasonable.

Understanding of $0.25 processing fee for vehicles that do not have a Good To Go! Pass

Base: All Respondents (N=2614-2781)



Statistical Relationships Found:

Respondents MORE likely to be aware of fees (index):

- Contacted customer support to manage account (pay toll, change settings, add/remove a pass) (*slight*)
- Used tolled roads more frequently (*slight*)

Respondents LESS likely to be aware of fees (index):

- Disputed a toll, fee, or Civil Penalty (*slight*)

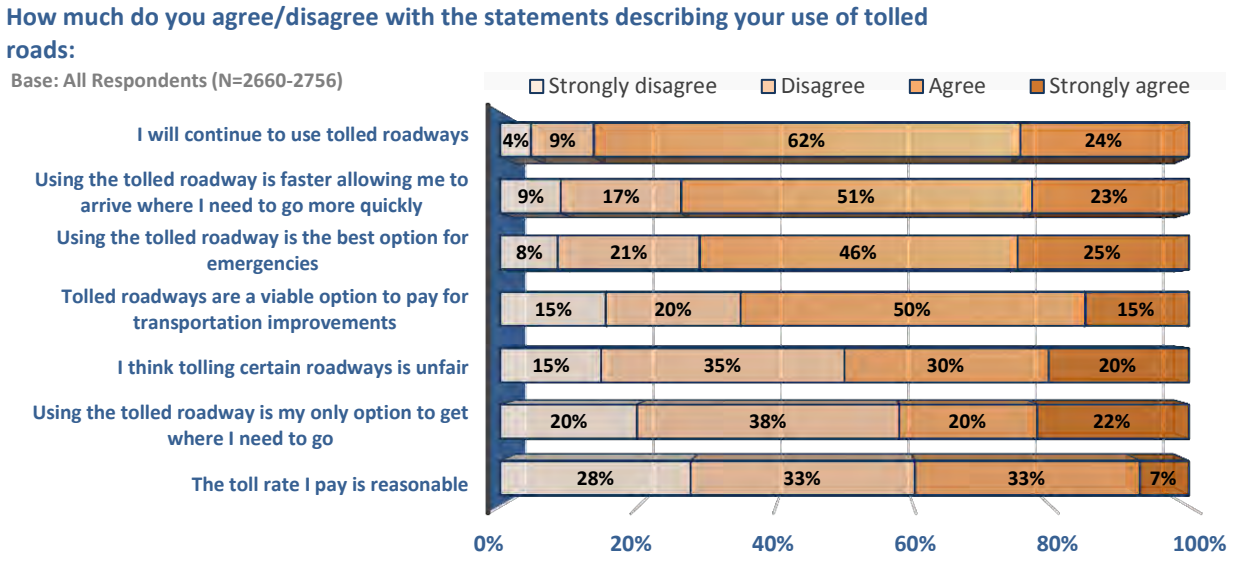
Respondents that pay by plate are specifically more likely to be aware of the $.25 fee (*slight*). Respondents who pay by plate and by mail are more likely to value the option of not having to have a pass mounted in their vehicle (moderate), whereas those with auto pay accounts do not value this option (*moderate*).

Attitudes towards Tolls

Most will continue to use tolled roadways, and will continue to pay tolls

Respondents were asked how much they agreed or disagreed with statements regarding tolled

roadways in Puget Sound. Most respondents (86 percent) *agreed* or *strongly agreed* that they will continue to use tolled roadways. Almost three-fourths of respondents (74 percent) also *agreed* or *strongly agreed* that using tolled roadways is faster and the best option for emergencies (71 percent). Almost two-thirds of respondents (65 percent) *agreed* or *strongly agreed* that tolled roadways are a viable option to pay for transportation improvements. Lastly, half (50 percent) of respondents *agreed* or *strongly agreed* that tolling is unfair, and slightly less (40 percent) *agreed* or *strongly agreed* the toll rate is unreasonable.



Statistical Relationships Found:

Respondents MORE likely to be favorable to tolling (index):

- Paid tolls on SR 520 (*slight*)
- Older respondents (*slight*)
- Higher income (*slight*)
- Have newer *Good To Go!* accounts (*slight*)
- Contacted customer support to manage account (pay toll, change settings, add/remove a pass) (*slight*)

Respondents LESS likely to be favorable to tolling (index):

- Paid tolls on Tacoma Narrows Bridge (*slight*)
- Disputed a toll, fee, or Civil Penalty (*slight*)

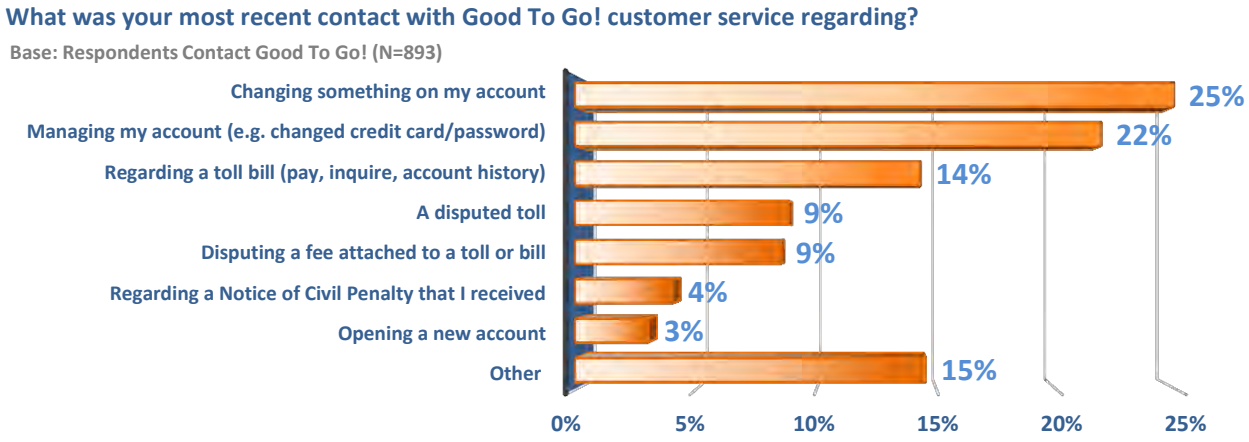
Customer Interactions with *Good To Go!*

Most reported their contact with customer service in last 90 days involved managing their account

About a third of respondents (32 percent), reported they had contact with *Good To Go!* customer service in the last 90 days. Most of those who reported they had contact with *Good To Go!* customer

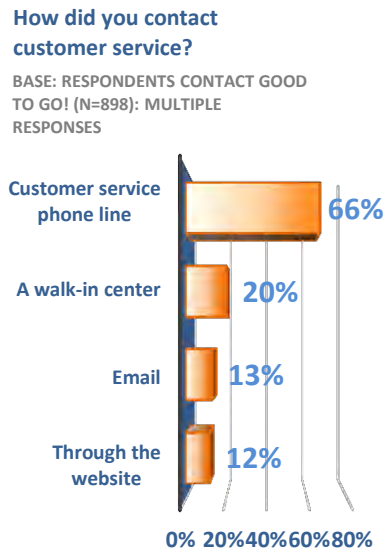
service in the last ninety days indicated that the contact centered around the following three types of contact:

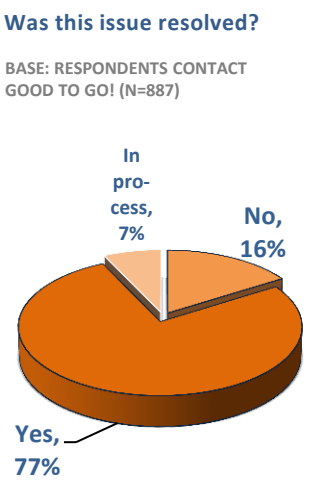
- Changing something on their account such as add/remove/replace vehicle (25 percent)
- Managing their account such as changing a credit card, address, or password (22 percent)
- Regarding a toll bill such as paying, inquiring about, or on account history (14 percent)

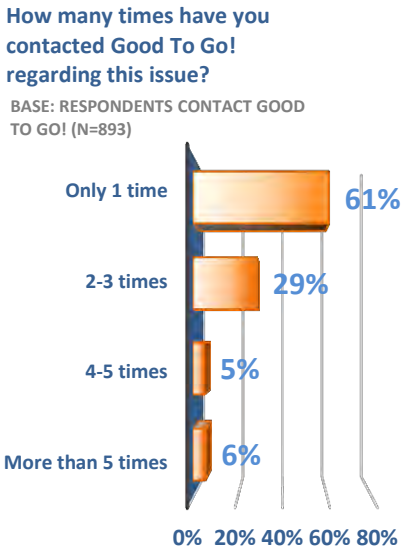


Most who had contact with customer service in the last 90 days did so via the customer service phone line, their issue was resolved, and they only contacted customer service one time

Of those that contacted *Good To Go!* customer service in the last 90 days (n=894), two-thirds (66 percent) had contacted *Good To Go!* using the customer service phone line, whereas few respondents reporting using email (13 percent) or the website (12 percent). For more than three-fourths of respondents (77 percent) their issue was resolved. Also almost two-thirds of respondents (61 percent) only had to contact customer service one time regarding their issue.





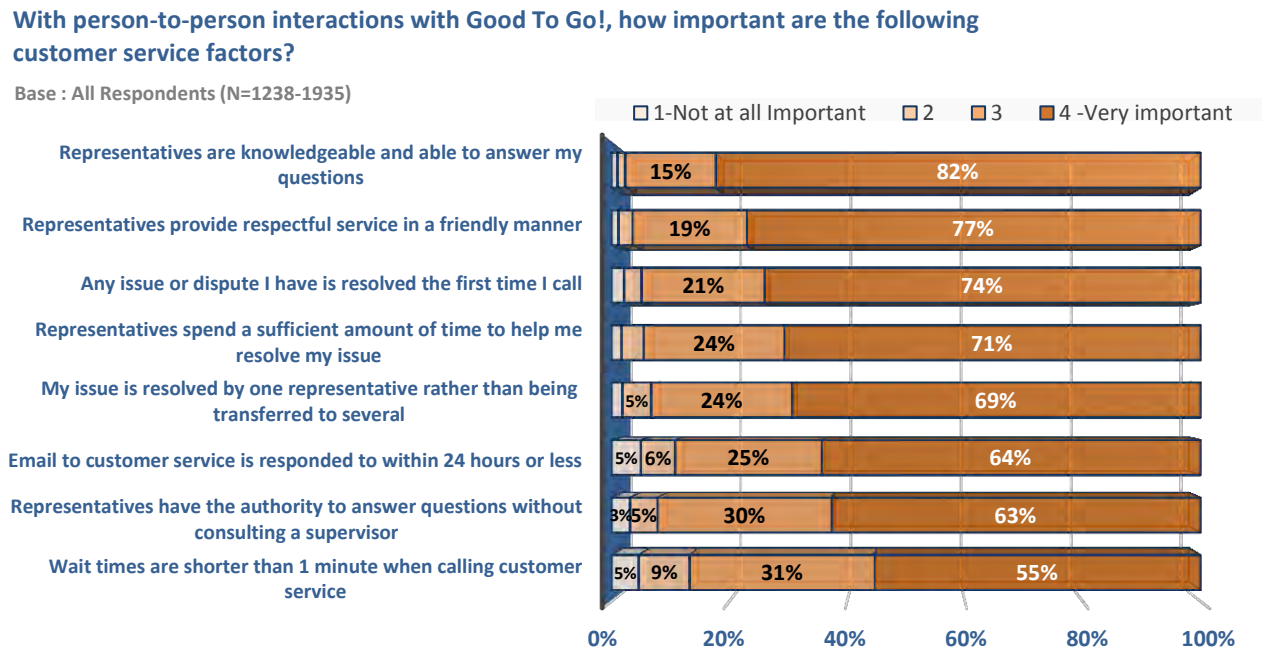


Satisfaction and Importance of Person–to-Person Interactions

Most indicated that knowledgeable and respectful representatives are the most important factors of customer service

Respondents were asked to consider any person-to-person interactions with *Good To Go!* customer service, and then asked to rate how important and satisfied they were with specific factors of customer service. Generally all aspects of customer service *were important* to *very important* to respondents, but the following were the most important customer service factors (Respondents indicated a 4, where 1 is not at all important and 4 is very important):

- Representatives are knowledgeable and able to answer my questions (82 percent)
- Representatives provide respectful service in a friendly manner (77 percent)
- Any issue or dispute I have is resolved the first time I call (74 percent)
- Representatives spend a sufficient amount of time to help me resolve my issue (71 percent)



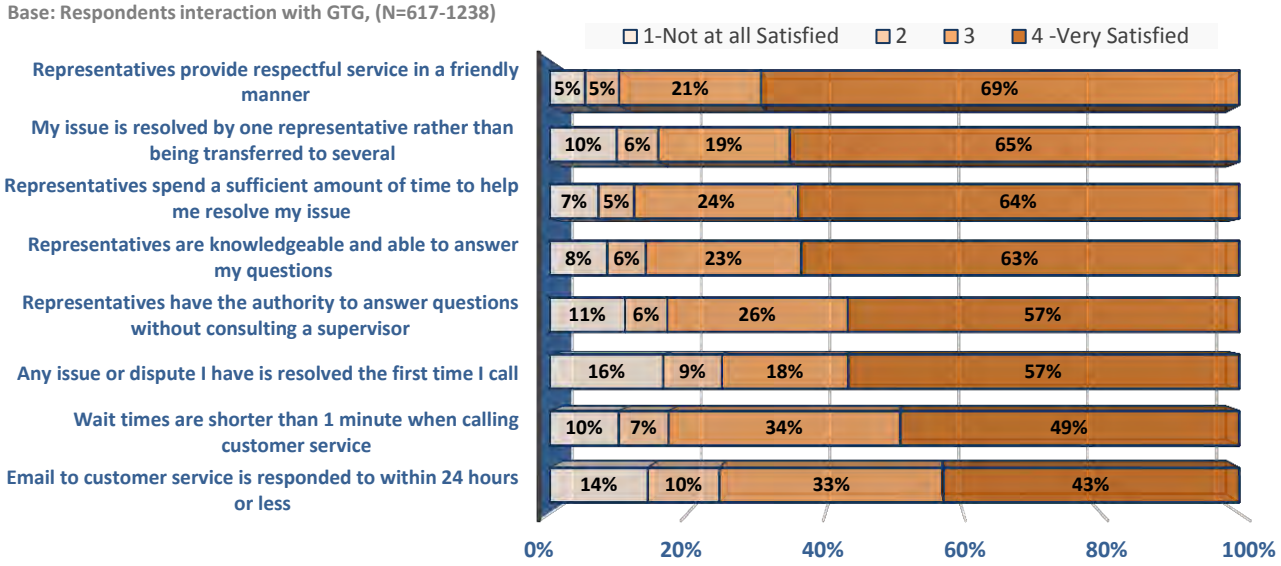
Respondents were most satisfied with the respectful manner of representatives, and that their issue was resolved by one representative rather than being transferred to several

As with importance, respondents generally rate all aspects of customer service as *satisfied* to *very satisfied*, but respondents were the most satisfied with the following customer service factors (Respondents indicated a 4, where 1 is not at all satisfied and 4 is very satisfied):

- Representatives provide respectful service in a friendly manner (69 percent)
- My issue is resolved by one representative rather than being transferred to several (65 percent)
- Representatives spend a sufficient amount of time to help me resolve my issue (64 percent)
- Representatives are knowledgeable and able to answer my questions (63 percent)

With person-to-person interactions with Good To Go!, how satisfied are you with the following customer service factors?

Base: Respondents interaction with GTG, (N=617-1238)



Statistical Relationships Found:

Respondents MORE likely to be Satisfied with aspects of service (index):

- Contacted customer support to manage account (pay toll, change settings, add/remove a pass) (*very strong*)
- Favorable to tolling items (index) (*very strong*)
- Older respondents (*strong*)
- Aware of tolling fees (index) (*strong*)
- Have auto pay accounts (*slight*)
- Paid a toll on the Tacoma Narrows Bridge (*slight*)

Respondents LESS likely to be Satisfied with aspects of service (index):

- Disputed a toll, fee, or Civil Penalty (*very strong*)
- Used customer service phone line *(moderate*)
- Used email to contact customer service (*slight*)
- Use pay by mail *(slight*)
- Have had Good To Go! account longer (*slight*)

Having an issue or dispute be resolved the first time someone calls has the largest service gap between importance and satisfaction

Gaps in customer service can be calculated by taking the average importance score (where 1 is not important to 4 is very important) minus the average satisfaction score (where 1 is not at all satisfied and 4 is very satisfied). These gaps can indicate where customer service is not meeting, or exceeding, respondents' expectations. No customer service factors exceeded respondent expectations, however

gaps where service did not meet expectations were small (less than .5). Still though, these gaps can be seen as factors to make improvements. The factors with the largest gaps in not meeting respondents' expectations were:

- Any issue or dispute I have is resolved the first time I call (.52 difference)
- Email to customer service is responded to within 24 hours or less (.45 difference)
- Representatives are knowledgeable and able to answer my questions (.38 difference)

Service Features that are the MOST Important

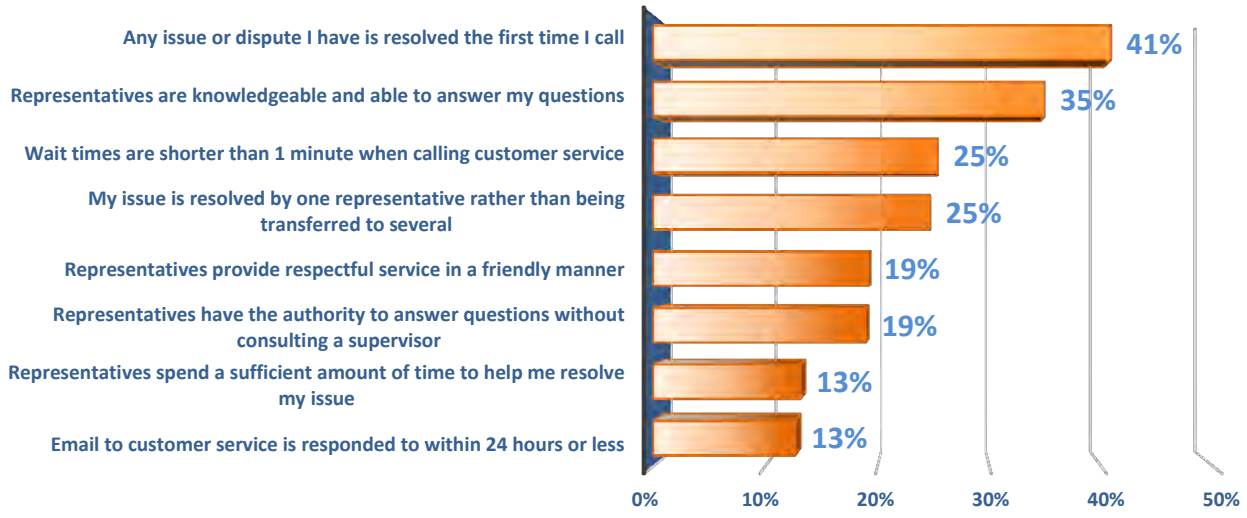
Most respondents indicated that having their issue or dispute resolved the first time they call was the most important, as well as representatives being knowledgeable

In addition to rating importance, respondents were also asked to choose the top two most important aspects of *Good To Go!* customer service. When forced to choose, respondents indicate the following as the most important aspects of customer service:

- Any issue or dispute I have is resolved the first time I call (41 percent)
- Representatives are knowledgeable and able to answer my questions (35 percent)
- Wait times are shorter than 1 minute when calling customer service (25 percent)

Of all these factors of Good To Go! customer service, which are theTWO most important to you?

BASE: ALL RESPONDENTS (N=2262): MUTIPLE RESPONSES



Statistical Relationships Found:

Respondents MORE likely to choose "any issue...be resolved first time ":

- Contacted customer service via phone line (*slight*)
- Had contact with customer service in the last 90 days (*slight*)
- Disputed a toll, fee, or Civil Penalty (*slight*)

Respondents LESS likely to choose "any issue...be resolved first time ":

- Younger respondents (*slight*)

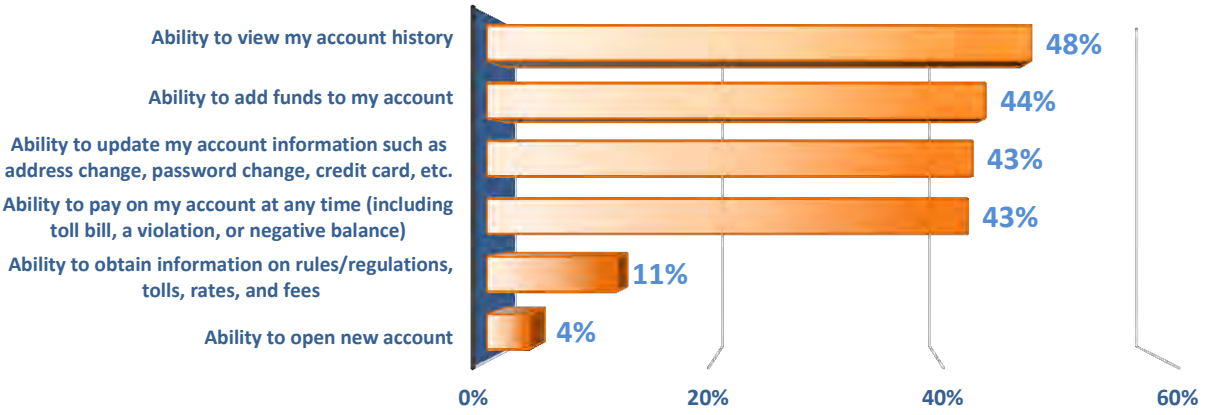
Most respondents want the ability to view account history and add funds to their account using the *Good To Go!* website

Respondents were also asked to choose the top two most important "self-serve" functions of *Good To Go!* customer service. When forced to choose the most important, respondents indicated the following as the most important "self-serve" functions:

- Ability to view account history (48 percent)
- Ability to add funds to my account (44 percent)
- Ability to update my account information such as address change, password change, or credit card, ETCC. (43 percent)

Of the following "self-serve" functions of Good To Go! customer service, which are the TWO MOST important to you?

BASE: ALL RESPONDENTS (N=2413): MULTIPLE RESPONSES



Statistical Relationships Found:

Respondents MORE likely to choose "Ability to view account history":

- Disputed a toll, fee, or Civil Penalty (*slight*)

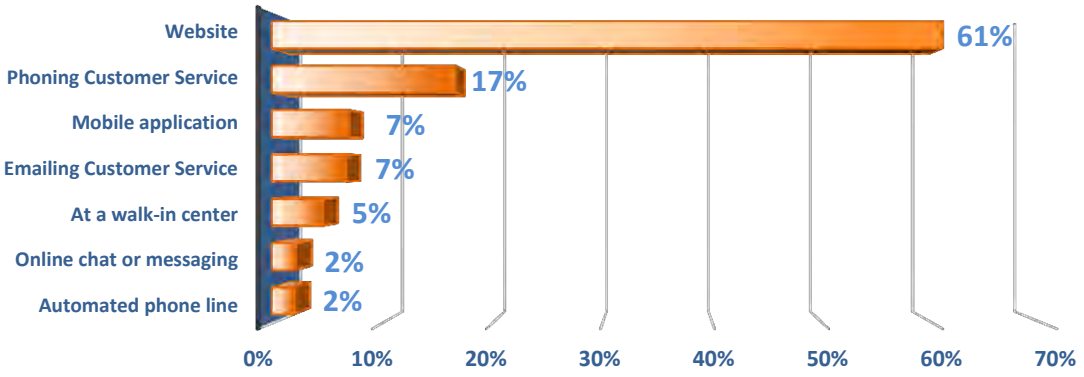
Respondents MORE likely to choose "Ability to add funds":

- Older respondents (*slight*)

When asked how they would most prefer to accomplish these top two "self-serve" functions, most of the respondents (61 percent) indicated they would prefer to use the website. However, just under a fifth (17 percent) of respondents would still prefer to accomplish these functions by calling in to customer service.

Setting aside your experience with current functionality of Good To Go! customer service, how would you MOST prefer to accomplish these top two functions?

BASE: ALL RESPONDENTS (N=2433)

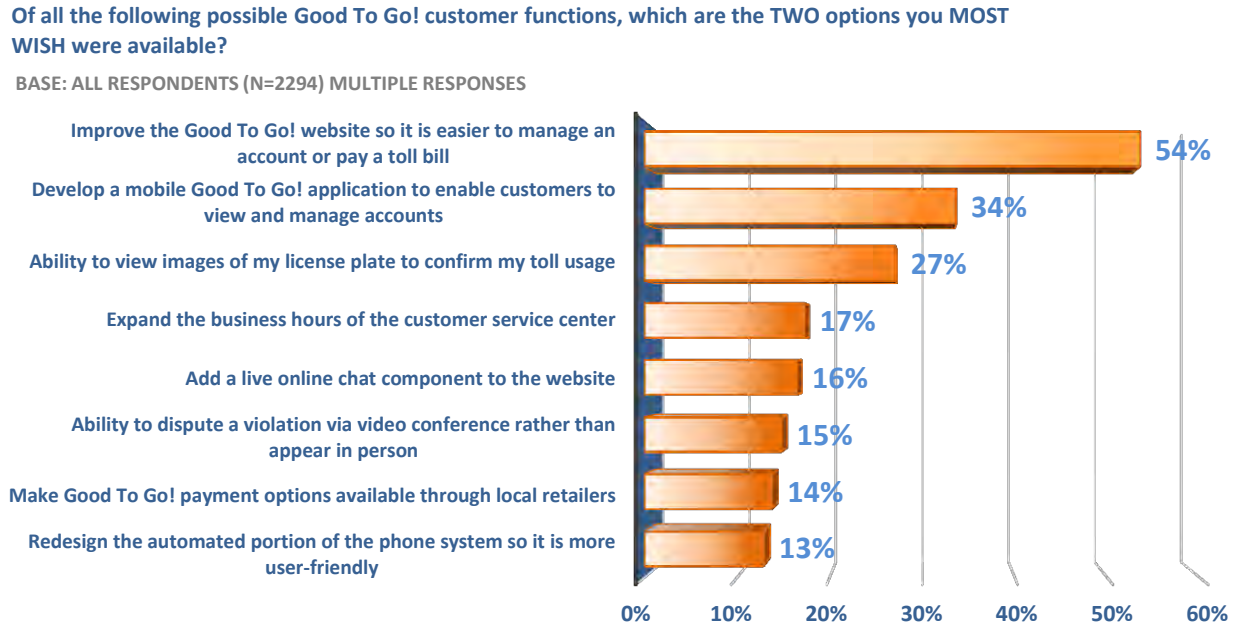


Services MOST Wanted

Most respondents want an improved *Good To Go!* website

Respondents were also asked to choose the top two most important customer service functions they wish were available. When force to choose the most important, respondents indicated the following as the most important:

- Improve the *Good To Go!* website so it is easier to manage an account or pay a toll bill (54 percent)
- Develop a mobile *Good To Go!* application to enable customers to view and manage accounts (34 percent)
- Ability to view images of my license plate to confirm my toll usage (27 Percent)



Statistical Relationships Found:

Respondents MORE likely to choose "Develop a mobile application":

- Younger respondents (*moderate*)

Friendly, helpful, polite staff was reported as number one customer service strength

Respondents were asked to identify the top two strengths of *Good To Go!* customer service. A total of 897 respondents answered this question. Verbatim comments were taken and coded them into

categories. The following were the strengths mentioned most frequently.

- Overall friendly staff/helpful/polite/good service (59 percent)
- Convenient and easy to use (20 percent)
- Good and quick problem resolution (19 percent)
- Website, online, email functionality available (19 percent)
- Good payment options (12 percent)

Website malfunctions and difficulty to use are reported as biggest customer service weaknesses

Respondents were also asked to identify the top two weaknesses of *Good To Go!* customer service. A total of 696 respondents answered this question. Verbatim comments were taken and coded them into categories. The following were the weaknesses mentioned most frequently.

- Website malfunctions and difficulty to use (29 percent)
- Takes too long to resolve issues (21 percent)
- Long waits and lines for service (15 percent)

Improving the website is reported as the ONE thing respondents would like to change most about *Good To Go!*

Lastly respondents were asked to identify one thing they would like changed about *Good To Go!* customer service. A total of 755 respondents answered this question and the most recommended changes were to improve the website (21 percent) and reduce the fees (20 percent).

APPENDIX A: Survey Questions

(See next page)

WSDOT
401 2nd Avenue South, Ste 300
Seattle, WA 98104

JIMMY Q TRAN
HONG A VU
221 10TH AVE N
ALGONA WA 98001-6521

11 /1-1-11

AFFAFFFAFTDDFTDDATDTAADTFAADAFTDTDAFFFADTDTATAAFADDDFTDAAAFDDFFFT

Washington State
Department of Transportation

Lynn Peterson
Secretary of Transportation

Toll Division
401 2nd Avenue South, Ste. 300
Seattle, WA 98104
206-464-1220 / FAX: 206-464-1189
TTY: 1-800-833-6388
www.wsdot.wa.gov

KGK

August 2, 2013

Dear Resident:

As part of our effort for continuous improvement the Washington State Department of Transportation is conducting this survey to evaluate customers' experience with the *Good To Go!* Program. Specifically we want to hear about your experience with the *Good To Go!* website, the call/walk-in centers, and written correspondence. In addition we want to better understand what services and/or functionality you would like from the *Good To Go!* program in the future.

The questionnaire will take about 7 minutes and your answers are completely anonymous. Your address was randomly selected to participate in the survey and your participation will ensure a representative sample. After answering the questions, simply fold so that the return address to PRR, Inc. shows, please secure with one small piece of tape and drop in the mail. No postage is required.

Please mail no later than August 16, 2013.

If you prefer, you can complete the survey online by entering this online address into your browser https://www.surveymonkey.com/s/ETCCsurvey2.

If you have any questions about the survey, please contact research@prrbiz.com.

We thank you in advance for your participation!

Sincerely,

Patty Rubstello

Patty Rubstello, P.E.
Director of Policy and Systems Development, Toll Division

15. Of all the following "self-serve" functions of *Good To Go!* customer service, which are the *two MOST* important to you? (Choose ONLY 2)

- Ability to pay on my account at any time (including toll bill, a violation, or negative balance) ☐
- Ability to view my account history ☐
- Ability to obtain information on rules/regulations, tolls, rates, and fees ☐
- Ability to update my account information such as address change, password change, credit card, etc. ☐
- Ability to add funds to my account ☐
- Ability to open new account ☐

16. Setting aside your experience with the current functionality of *Good To Go!* customer service, how would you *MOST prefer* to accomplish these top two functions? (Choose only one)

Automated phone line | Website | Phoning customer service | Emailing customer servic ☐
Mobile application | At a walk-in center | Online chat or messagir ☐

17. Of all the following possible *Good To Go!* customer functions, which are the *TWO* options you most wish were available? (Choose ONLY 2)

- Make *Good To Go!* payment options available through local retailers ☐
- Add a live online chat component to the website ☐
- Expand the business hours of the customer service center ☐
- Redesign the automated portion of the phone system so it is more user-friendly ☐
- Improve the *Good To Go!* website so it is easier to manage an account or pay a toll bill ☐
- Develop a mobile *Good To Go!* application to enable customers to view and manage accounts ☐
- Ability to view images of my license plate to confirm my toll usage ☐
- Ability to dispute a violation via video conference rather than appear in person ☐

K8S

18. Overall, how would you rate your level of satisfaction with *Good To Go!* customer service?

Very satisfied ☐ | Satisfied ☐ | Dissatisfied ☐ | Very dissatisfied ☐

19. What are the top 2 *strengths* of the customer service provided by the *Good To Go!* program?

1. _____
2. _____

20. What are the top 2 *weaknesses* of the customer service provided by the *Good To Go!* program?

1. _____
2. _____

21. If you could change just *ONE* thing about *Good To Go!* customer service, what would that be?

_____

We ask the following questions to make sure we are getting feedback from a representative sample. Remember, your answers are anonymous.

22. What is your gender? Male ☐ Female ☐

23. Which of the following categories includes your age?

16 to 19 | 25 to 34 | 45 to 54 | 65 to 74
20 to 24 | 35 to 44 | 55 to 64 | 75 and older

24. Are you from a Hispanic, Latino, or Spanish-speaking background? No | Yes

25. What race would you classify yourself as? (Choose just one)

American Indian or Alaska Native | Black/African American ☐ | Some other race or combination of races
Asian | Native Hawaiian or other Pacific Islander ☐ | _____ Please specify
White/Caucasian ☐

26. What was your total household income (before taxes) in 2012?

Less than $10,000 ☐ | $25,000 to less than $35,000 ☐ | $75,000 to less than $100,000 ☐ | $200,000 and over ☐
$10,000 to less than $15,000 ☐ | $35,000 to less than $50,000 ☐ | $100,000 to less than $150,000 ☐
$15,000 to less than $25,000 ☐ | $50,000 to less than $75,000 ☐ | $150,000 to less than $200,000 ☐

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 92 SEATTLE WA
POSTAGE WILL BE PAID BY ADDRESSEE

PRR
1501 4TH AVE STE 550
SEATTLE WA 98101-9863

Washington State Department of Transportation

WSDOT is undergoing a continuous improvement process to improve services and would like to understand your experience with *Good To Go!* customer service.

This questionnaire will only take about 7 minutes of your time, and your answers are completely anonymous. After completing the questionnaire, please fold the page so the return address shows, secure with one small piece of tape and drop in the mail. No postage is required. **Please mail no later than August 16, 2013**. If you prefer you can complete the survey online at: https:www.surveymonkey.com/s/ETCCsurvey2. **Thank you for participating!**

1. On which of the following roadways have you paid tolls? (Choose all that apply)

SR 520 Bridge ☐ SR 167 HOT Lanes ☐ Tacoma Narrows Bridge ☐

2. How frequently do you pay tolls on the SR 520 Bridge, the SR 167 HOT Lanes, and/or the Tacoma Narrows Bridge?

4 or more times per week ☐
2-3 times per week ☐
1 time per week ☐
1-3 times per month ☐
Less than 1 time per month, but more than 2 times per year ☐
2 times or less per year ☐

3. Would you say you use these tolled roads or bridges *mostly* for: (Choose only one)

Commuting: Driving to/from work ☐
Leisure: Non-business driving (errands, day-trips, etc.) ☐
Business: Driving for a business reason other than commuting ☐

4. In Puget Sound we currently have three tolled roadways: the 520 Bridge, the Tacoma Narrows Bridge, and the SR 167 HOT Lanes. How much do you agree or disagree with the following statements describing your use of these tolled roads.

	Strongly disagree	Disagree	Agree	Strongly Agree
Using the tolled roadway is faster allowing me to arrive where I need to go more quickly	☐	☐	☐	☐
Using the tolled roadway is my only option to get where I need to go	☐	☐	☐	☐
Using the tolled roadway is the best option for emergencies	☐	☐	☐	☐
I will continue to use tolled roadways	☐	☐	☐	☐
The toll rate I pay is reasonable	☐	☐	☐	☐
Tolled roadways are a viable option to pay for transportation improvements	☐	☐	☐	☐
I think tolling certain roadways is unfair	☐	☐	☐	☐

5. How do you typically pay your tolls? (Choose only one)

Auto pay with a *Good To Go!* pass mounted in your vehicle ☐
Auto pay with a *Good To Go!* account related to your license plate ☐
Using the website to pay tolls after receiving a toll bill from *Good To Go!* ☐
By calling customer service after receiving a toll bill from the *Good To Go!* program ☐
By mail after receiving a toll bill from the *Good To Go!* program ☐
By going to a customer service center after receiving a toll bill from the *Good To Go!* program ☐
By using the toll booths on the Tacoma Narrows Bridge ☐
By setting up a short-term account ☐

6. When did you open your *Good To Go!* account?

Before the Tacoma Narrows Bridge opened in July 2007 ☐
After the Tacoma Narrows Bridge opened in July 2007, but before 2011 ☐
In 2011 - 2012 ☐
In 2013 ☐
I do not have an account ☐

7. Currently the *Good To Go!* program charges a $0.25 processing fee in addition to the toll for vehicles that do not have a pass. Please answer No or Yes for the following statements:

	No	Yes
I was aware of this $0.25 fee added to the toll for *Good To Go!* accounts that do not have a vehicle pass	☐	☐
I value this option of not having to have a pass mounted in my vehicle	☐	☐
I understand this $0.25 fee is to pay for additional processing of photographing license plates	☐	☐
I do not mind paying. *Good To Go!* should charge the additional processing fee of $0.25 in addition to the toll for those without a pass to offset the costs of not having a pass in your vehicle	☐	☐
This $0.25 fee is unreasonable	☐	☐

CONTACT WITH THE *GOOD TO GO!* PROGRAM

8. In the last 90 days have you contacted *Good To Go!* customer service with a request, question, or issue?

No ***(Skip to Q13)*** ☐ Yes ***(Go to Q9)*** ☐

9. What was your most recent contact with *Good To Go!* customer service regarding? (Choose only one)

A disputed toll ☐
Disputing a fee attached to a toll or bill ☐
Changing something on my account (add/remove/replace vehicle/pass) ☐
Managing my account (e.g. changed credit card/address/password change) ☐
Opening a new account ☐
Regarding a toll bill (pay, inquire, account history) ☐
Regarding a Notice of Civil Penalty that I received ☐
Other *(Please specify)*_____ ☐

10. Thinking of the last contact with *Good To Go!* customer service, how did you contact them? (Choose all that apply)

Customer service phone line ☐ A walk-in center ☐ Email ☐ Through the website ☐

11. Was the issue resolved? No Yes Still in process ☐

12. How many times have you contacted *Good To Go!* regarding this issue?

Only 1 time ☐ 2-3 times ☐ 4-5 times ☐ More than 5 times ☐

13. When considering any *person to person* interactions you may have had with *Good To Go!* customer service (via phone, walk-in center, or email), how important are the following factors and how satisfied are you with *Good To Go!* customer service for each factor? N/A

	Not at all important 1	2	3	Very important 4	Not at all satisfied 1	2	3	Very satisfied 4	Have not experienced 5
Wait times are shorter than 1 minute when calling customer service	☐	☐	☐	☐	☐	☐	☐	☐	☐
Representatives have the authority to answer questions without consulting a supervisor	☐	☐	☐	☐	☐	☐	☐	☐	☐
Email to customer service is responded to within 24 hours or less	☐	☐	☐	☐	☐	☐	☐	☐	☐
Any issue or dispute I have is resolved the first time I call	☐	☐	☐	☐	☐	☐	☐	☐	☐
Representatives provide respectful service in a friendly manner	☐	☐	☐	☐	☐	☐	☐	☐	☐
Representatives spend a sufficient amount of time to help me resolve my issue	☐	☐	☐	☐	☐	☐	☐	☐	☐
Representatives are knowledgeable and able to answer my questions	☐	☐	☐	☐	☐	☐	☐	☐	☐
My issue is resolved by one representative rather than being transferred to several	☐	☐	☐	☐	☐	☐	☐	☐	☐

14. Of all these factors of *Good To Go!* customer service, which are the *two MOST* important to you? (Choose ONLY 2)

Wait times are shorter than 1 minute when calling customer service ☐
Representatives have the authority to answer questions without consulting a supervisor ☐
Email to customer service is responded to within 24 hours or less ☐
Any issue or dispute I have is resolved the first time I call ☐
Representatives provide respectful service in a friendly manner ☐
Representatives spend a sufficient amount of time to help me resolve my issue ☐
Representatives are knowledgeable and able to answer my questions ☐
My issue is resolved by one representative rather than being transferred to several ☐

FOR OFFICE USE ONLY

☐ 2822

Please continue on next page ➡

APPENDIX B: Demographic Profile

Gender	**n=2,815**
Male	51 percent
Female	49 percent
Age	**N=2,479**
16-19	>1 percent
20-24	2 percent
25-34	11percent
35-44	15 percent
45-54	19 percent
55-64	26 percent
65-74	19 percent
75 and older	8 percent
Hispanic/Latino	**n=2,389**
Not Hispanic/Latino	96 percent
Hispanic/Latino	4 percent
Race	**n=2,388**
Black	1 percent
White	87 percent
American Indian/Alaska Native	1 percent
Asian	5 percent
Native Hawaiian/Pacific Islander	>1 percent
Some other race	5 percent
Income	**n=1,986**
Less than $10,000	2 percent
$10,000 to less than $15,000	2 percent
$15,000 to less than $25,000	3 percent
$25,000 to less than $35,000	6 percent
$35,000 to less than $50,000	10 percent
$50,000 to less than $75,000	17 percent
$75,000 to less than $100,000	17 percent
$100,000 to less than $150,000	23 percent
$150,000 to less than $200,000	9 percent
$200,000 or over	11 percent

APPENDIX C: Frequency Tables

q1. On which of the following roadways have you paid toll? (Multiple response allowed)

		Count	Column Response % (Base: Count)
$q1multi	SR 520 Bridge	1880	67.2%
	SR 167 HOT Lanes	283	10.1%
	Tacoma Narrows Bridge	1328	47.5%
	Total	2797	124.8%

Note: Multiple response allowed, total may be more than 100%

q2. How frequently do you pay tolls on the SR 520 Bridge, the SR 167 HOT Lanes, and/or the Tacoma Narrows Bridge?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4 or more times per week	464	16.5	16.6	16.6
	2-3 times per week	344	12.2	12.3	28.9
	1 time per week	264	9.4	9.4	38.3
	1-3 times per month	906	32.2	32.4	70.7
	Less than 1 time per month, but more than 2 times per year	698	24.8	24.9	95.6
	2 times or less per year	122	4.3	4.4	100.0
	Total	2798	99.4	100.0	
Missing	System	17	.6		
Total		2815	100.0		

q3. Would you say you use these tolled roads or bridges mostly for:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Commuting: driving to/from work	668	23.7	24.1	24.1
	Leisure: non-business driving (errands, day-trips, etc)	1572	55.8	56.7	80.8
	Business: Driving for a business reason other than commuting	532	18.9	19.2	100.0
	Total	2772	98.5	100.0	
Missing	System	43	1.5		
Total		2815	100.0		

q4.1 Using the tolled roadway is faster allowing me to arrive where I need to go more quickly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	238	8.5	8.8	8.8
	Disagree	473	16.8	17.5	26.3
	Agree	1380	49.0	51.0	77.2
	Strongly agree	617	21.9	22.8	100.0
	Total	2708	96.2	100.0	
Missing	System	107	3.8		
Total		2815	100.0		

q4.2 Using the tolled roadway is my only option to get where I need to go

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	547	19.4	19.8	19.8
	Disagree	1050	37.3	38.1	57.9
	Agree	551	19.6	20.0	77.9
	Strongly agree	608	21.6	22.1	100.0
	Total	2756	97.9	100.0	
Missing	System	59	2.1		
Total		2815	100.0		

q4.3 Using the tolled roadway is the best option for emergencies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	222	7.9	8.3	8.3
	Disagree	548	19.5	20.6	28.9
	Agree	1228	43.6	46.2	75.1
	Strongly agree	662	23.5	24.9	100.0
	Total	2660	94.5	100.0	
Missing	System	155	5.5		
Total		2815	100.0		

q4.4 I will continue to use tolled roadways

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	122	4.3	4.5	4.5
	Disagree	249	8.8	9.1	13.6
	Agree	1694	60.2	61.9	75.5
	Strongly agree	670	23.8	24.5	100.0
	Total	2735	97.2	100.0	
Missing	System	80	2.8		
Total		2815	100.0		

q4.5 The toll rate I pay is reasonable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	761	27.0	27.6	27.6
	Disagree	898	31.9	32.6	60.2
	Agree	901	32.0	32.7	92.9
	Strongly agree	196	7.0	7.1	100.0
	Total	2756	97.9	100.0	
Missing	System	59	2.1		
Total		2815	100.0		

q4.6 Tolled roadways are a viable option to pay for transportation improvements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	419	14.9	15.3	15.3
	Disagree	535	19.0	19.6	34.9
	Agree	1370	48.7	50.1	84.9
	Strongly agree	412	14.6	15.1	100.0
	Total	2736	97.2	100.0	
Missing	System	79	2.8		
Total		2815	100.0		

q4.7 I think tolling certain roadways is unfair

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	400	14.2	14.6	14.6
	Disagree	964	34.2	35.3	49.9
	Agree	811	28.8	29.7	79.6
	Strongly agree	557	19.8	20.4	100.0
	Total	2732	97.1	100.0	
Missing	System	83	2.9		
Total		2815	100.0		

q5 How do you typically pay your tolls?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Auto pay with a Good To Go! pass mounted in your vehicle	2142	76.1	77.2	77.2
	Auto pay with a Good To Go! account related to your license	371	13.2	13.4	90.6
	Using the website to pay tolls after receiving a toll bill f	71	2.5	2.6	93.2
	By calling customer service after receiving a toll bill from	14	.5	.5	93.7
	By mail after receiving a toll bill from the Good To Go! pro	95	3.4	3.4	97.1
	By going to a customer service center after receiving a toll	11	.4	.4	97.5
	By using the toll booths on the Tacoma Narrows Bridge	9	.3	.3	97.8
	By setting up a short-term account	61	2.2	2.2	100.0
	Total	2774	98.5	100.0	
Missing	System	41	1.5		
Total		2815	100.0		

q6. When did you open your Good To Go! account?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Before the Tacoma Narrows Bridge opened in July 2007	474	16.8	17.1	17.1
	After the Tacoma Narrows Bridge opened in July 2007, but bef	440	15.6	15.9	32.9
	In 2011-2012	1376	48.9	49.6	82.6
	In 2013	349	12.4	12.6	95.1
	I do not have an account	135	4.8	4.9	100.0
	Total	2774	98.5	100.0	
Missing	System	41	1.5		
Total		2815	100.0		

q7.1 I was aware of this $.25 fee added to the toll for Good To Go! accounts that do not have a vehicle pass

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1473	52.3	54.0	54.0
	Yes	1256	44.6	46.0	100.0
	Total	2729	96.9	100.0	
Missing	System	86	3.1		
Total		2815	100.0		

q7.2 I value this option of not having to have a pass mounted in my vehicle

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1549	55.0	59.3	59.3
	Yes	1065	37.8	40.7	100.0
	Total	2614	92.9	100.0	
Missing	System	201	7.1		
Total		2815	100.0		

q7.3 I understand this $.25 fee is to pay for additional processing of photographing license plates

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	932	33.1	35.0	35.0
	Yes	1734	61.6	65.0	100.0
	Total	2666	94.7	100.0	
Missing	System	149	5.3		
Total		2815	100.0		

q7.4 I do not mind paying. Good to Go! should charge the additional processing fee of $.25 in addition to the toll for those without a pass to offset the costs of not having a pass in your vehicle

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1076	38.2	40.9	40.9
	Yes	1553	55.2	59.1	100.0
	Total	2629	93.4	100.0	
Missing	System	186	6.6		
Total		2815	100.0		

q7.5 This $.25 fee is unreasonable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1779	63.2	67.5	67.5
	Yes	855	30.4	32.5	100.0
	Total	2634	93.6	100.0	
Missing	System	181	6.4		
Total		2815	100.0		

q8. In the last 90 days have you contacted Good To Go! customer service with a request, question, or issue?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	1887	67.0	67.9	67.9
	Yes	894	31.8	32.1	100.0
	Total	2781	98.8	100.0	
Missing	System	34	1.2		
Total		2815	100.0		

q9. What was your most recent contact with Good To Go! customer service regarding?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A disputed toll	79	2.8	8.8	8.8
	Disputing a fee attached to a toll or bill	76	2.7	8.5	17.4
	Changing something on my account (add/remove/replace vehicle	222	7.9	24.9	42.2
	Managing my account (e.g. changed credit card/address/passwo	195	6.9	21.8	64.1
	Opening a new account	27	1.0	3.0	67.1
	Regarding a toll bill (pay, inquire, account history)	128	4.5	14.3	81.4
	Regarding a Notice of Civil Penalty that I received	36	1.3	4.0	85.4
	Other (please specify below)	130	4.6	14.6	100.0
	Total	893	31.7	100.0	
Missing	System	1922	68.3		
Total		2815	100.0		

q9 OTHER: What was your most recent contact with Good To Go! customer service regarding - Other?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Add money to account	29	1.0	30.5	30.5
	General inquiry on account	8	.3	8.4	38.9
	Issues with online services/account	30	1.1	31.6	70.5
	Closing an account	4	.1	4.2	74.7
	Problems with pass/not working, plates unrecognizable	24	.9	25.3	100.0
	Total	95	3.4	100.0	
Missing	System	2720	96.6		
Total		2815	100.0		

q10. Thinking of the last contact with Good To Go! customer service, how did you contact them? (Multiple response allowed)

		Count	Column Response % (Base: Count)
$q10multi	Customer service phone line	595	66.3%
	A walk-in center	182	20.3%
	Email	119	13.3%
	Through the website	108	12.0%
	Total	898	111.8%

Note: Multiple response allowed, total may be more than 100%

q11. Was this issue resolved?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	143	5.1	16.1	16.1
	Yes	681	24.2	76.8	92.9
	Still in process	63	2.2	7.1	100.0
	Total	887	31.5	100.0	
Missing	System	1928	68.5		
Total		2815	100.0		

q12. How many times have you contacted Good To Go! regarding this issue?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Only 1 time	543	19.3	60.8	60.8
	2-3 times	255	9.1	28.6	89.4
	4-5 times	45	1.6	5.0	94.4
	More than 5 times	50	1.8	5.6	100.0
	Total	893	31.7	100.0	
Missing	System	1922	68.3		
Total		2815	100.0		

q13_1a. Wait times are shorter than 1 minute when calling customer service - Importance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all important	90	3.2	4.7	4.7
	2	167	5.9	8.6	13.3
	3	608	21.6	31.4	44.7
	4 - very important	1070	38.0	55.3	100.0
	Total	1935	68.7	100.0	
Missing	System	880	31.3		
Total		2815	100.0		

q13_1b. Wait times are shorter than 1 minute when calling customer service - Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all satisfied	115	4.1	10.0	10.0
	2	83	2.9	7.2	17.2
	3	386	13.7	33.6	50.9
	4 - very satisfied	564	20.0	49.1	100.0
	Total	1148	40.8	100.0	
Missing	5 - Not applicable/have not experienced	696	24.7		
	System	971	34.5		
	Total	1667	59.2		
Total		2815	100.0		

q13_2a. Representatives have the authority to answer questions without consulting a supervisor - Importance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all important	60	2.1	3.2	3.2
	2	89	3.2	4.7	7.8
	3	563	20.0	29.6	37.4
	4 - very important	1192	42.3	62.6	100.0
	Total	1904	67.6	100.0	
Missing	System	911	32.4		
Total		2815	100.0		

q13_2b Representatives have the authority to answer questions without consulting a supervisor - Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all satisfied	118	4.2	10.9	10.9
	2	66	2.3	6.1	17.1
	3	282	10.0	26.2	43.2
	4 - very satisfied	612	21.7	56.8	100.0
	Total	1078	38.3	100.0	
	5 - Not applicable/have not experienced	725	25.8		
Missing	System	1012	36.0		
	Total	1737	61.7		
Total		2815	100.0		

q13_3a Email to customer service is responded to within 24 hours or less - Importance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all important	88	3.1	5.0	5.0
	2	102	3.6	5.8	10.8
	3	438	15.6	24.9	35.7
	4 - very important	1132	40.2	64.3	100.0
	Total	1760	62.5	100.0	
Missing	System	1055	37.5		
Total		2815	100.0		

q13_3b Email to customer service is responded to within 24 hours or less - Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all satisfied	88	3.1	14.3	14.3
	2	64	2.3	10.4	24.6
	3	201	7.1	32.6	57.2
	4 - very satisfied	264	9.4	42.8	100.0
	Total	617	21.9	100.0	
Missing	5 - Not applicable/have not experienced	1130	40.1		
	System	1068	37.9		
	Total	2198	78.1		
Total		2815	100.0		

q13_4a Any issue or dispute I have is resolved the first time I call - Importance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all important	39	1.4	2.1	2.1
	2	55	2.0	3.0	5.1
	3	382	13.6	20.9	26.0
	4 - very important	1353	48.1	74.0	100.0
	Total	1829	65.0	100.0	
Missing	System	986	35.0		
Total		2815	100.0		

q13_4b. Any issue or dispute I have is resolved the first time I call - Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all satisfied	163	5.8	16.5	16.5
	2	84	3.0	8.5	25.0
	3	181	6.4	18.3	43.3
	4 - very satisfied	560	19.9	56.7	100.0
	Total	988	35.1	100.0	
Missing	5 - Not applicable/have not experienced	786	27.9		
	System	1041	37.0		
	Total	1827	64.9		
Total		2815	100.0		

q13_5a Representatives provide respectful service in a friendly manner - Importance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all important	22	.8	1.2	1.2
	2	45	1.6	2.4	3.6
	3	364	12.9	19.4	23.0
	4 - very important	1444	51.3	77.0	100.0
	Total	1875	66.6	100.0	
Missing	System	940	33.4		
Total		2815	100.0		

q13_5b Representatives provide respectful service in a friendly manner - Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all satisfied	64	2.3	5.2	5.2
	2	61	2.2	4.9	10.1
	3	255	9.1	20.6	30.7
	4 - very satisfied	858	30.5	69.3	100.0
	Total	1238	44.0	100.0	
Missing	5 - Not applicable/have not experienced	553	19.6		
	System	1024	36.4		
	Total	1577	56.0		
Total		2815	100.0		

q13_6a Representatives spend a sufficient amount of time to help me resolve my issue - Importance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all important	32	1.1	1.7	1.7
	2	70	2.5	3.8	5.5
	3	444	15.8	23.9	29.4
	4 - very important	1313	46.6	70.6	100.0
	Total	1859	66.0	100.0	
Missing	System	956	34.0		
Total		2815	100.0		

q13_6b Representatives spend a sufficient amount of time to help me resolve my issue - Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all satisfied	84	3.0	7.1	7.1
	2	62	2.2	5.2	12.3
	3	282	10.0	23.8	36.1
	4 - very satisfied	759	27.0	63.9	100.0
	Total	1187	42.2	100.0	
Missing	5 - Not applicable/have not experienced	607	21.6		
	System	1021	36.3		
	Total	1628	57.8		
Total		2815	100.0		

q13_7a Representatives are knowledgeable and able to answer my questions - Importance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all important	19	.7	1.0	1.0
	2	25	.9	1.3	2.3
	3	288	10.2	15.4	17.7
	4 - very important	1542	54.8	82.3	100.0
	Total	1874	66.6	100.0	
Missing	System	941	33.4		
Total		2815	100.0		

q13_7b Representatives are knowledgeable and able to answer my questions - Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all satisfied	104	3.7	8.4	8.4
	2	69	2.5	5.6	14.0
	3	279	9.9	22.5	36.5
	4 - very satisfied	786	27.9	63.5	100.0
	Total	1238	44.0	100.0	
Missing	5 - Not applicable/have not experienced	550	19.5		
	System	1027	36.5		
	Total	1577	56.0		
Total		2815	100.0		

q13_8a My issue is resolved by one representative rather than being transferred to several - Importance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all important	34	1.2	1.8	1.8
	2	91	3.2	4.9	6.7
	3	446	15.8	24.0	30.7
	4 - very important	1289	45.8	69.3	100.0
	Total	1860	66.1	100.0	
Missing	System	955	33.9		
Total		2815	100.0		

q13_8b My issue is resolved by one representative rather than being transferred to several - Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - not at all satisfied	111	3.9	9.7	9.7
	2	69	2.5	6.1	15.8
	3	217	7.7	19.0	34.8
	4 - very satisfied	743	26.4	65.2	100.0
	Total	1140	40.5	100.0	
Missing	5 - Not applicable/have not experienced	647	23.0		
	System	1028	36.5		
	Total	1675	59.5		
Total		2815	100.0		

q14. Of all these factors of Good To Go! customer service, which are the 2 MOST important to you? (Multiple response allowed)

		Count	Column Response % (Base: Count)
$q14multi	Wait times are shorter than 1 minute when calling customer service	574	25.4%
	Representatives have the authority to answer questions without consulting a supervisor	429	19.0%
	Email to customer service is responded to within 24 hours or less	287	12.7%
	Any issue or dispute I have is resolved the first time I call	924	40.8%
	Representatives provide respectful service in a friendly manner	434	19.2%
	Representatives spend a sufficient amount of time to help me resolve my issue	297	13.1%
	Representatives are knowledgeable and able to answer my questions	790	34.9%
	My issue is resolved by one representative rather than being transferred to several	559	24.7%
	Total	2262	189.8%

Note: Multiple response allowed, total may be more than 100%

q15. Of the following "self-serve" functions of Good To Go! customer service, which are the 2 MOST important to you? (Multiple response allowed)

		Count	Column Response % (Base: Count)
$q15mult	Ability to pay on my account at any time (including toll bill, a violation, or negative balance)	1026	42.5%
	Ability to view my account history	1162	48.2%
	Ability to obtain information on rules/regulations, tolls, rates, and fees	276	11.4%
	Ability to update my account information such as address change, password change, credit card, etc.	1036	42.9%
	Ability to add funds to my account	1064	44.1%
	Ability to open new account	91	3.8%
	Total	2413	192.9%

Note: Multiple response allowed, total may be more than 100%

q16 Setting aside your experience with the current functionality of Good To Go! customer service, how would you MOST prefer to accomplish these top two functions?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Automated phone line	48	1.7	2.0	2.0
	Website	1481	52.6	60.9	62.8
	Mobile application	170	6.0	7.0	69.8
	Phoning Customer Service	406	14.4	16.7	86.5
	At a walk-in center	112	4.0	4.6	91.1
	Emailing Customer Service	164	5.8	6.7	97.9
	Online chat or messaging	52	1.8	2.1	100.0
	Total	2433	86.4	100.0	
Missing	System	382	13.6		
Total		2815	100.0		

q17. Of the following possible Good To Go! customer functions, which are the 2 options you MOST wish were available? (Multiple response allowed)

		Count	Column Response % (Base: Count)
$q17multi	Make Good To Go! payment options available through local retailers	316	13.8%
	Add a live online chat component to the website	377	16.4%
	Expand the business hours of the customer service center	396	17.3%
	Redesign the automated portion of the phone system so it is more user-friendly	295	12.9%
	Improve the Good To Go! website so it is easier to manage an account or pay a toll bill	1229	53.6%
	Develop a mobile Good To Go! application to enable customers to view and manage accounts	772	33.7%
	Ability to view images of my license plate to confirm my toll usage	622	27.1%
	Ability to dispute a violation via video conference rather than appear in person	339	14.8%
	Total	2294	189.5%

Note: Multiple response allowed, total may be more than 100%

q18. Overall, how would you rate your level of satisfaction with Good To Go! customer service ?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very dissatisfied	117	4.2	4.9	4.9
	Dissatisfied	161	5.7	6.8	11.7
	Satisfied	1293	45.9	54.3	66.0
	Very satisfied	809	28.7	34.0	100.0
	Total	2380	84.5	100.0	
Missing	System	435	15.5		
Total		2815	100.0		

q22. What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	1269	45.1	51.2	51.2
	Female	1210	43.0	48.8	100.0
	Total	2479	88.1	100.0	
Missing	System	336	11.9		
Total		2815	100.0		

q23. Which of the following categories includes your age?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16-19	2	.1	.1	.1
	20-24	45	1.6	1.8	1.9
	25-34	281	10.0	11.3	13.2
	35-44	377	13.4	15.2	28.4
	45-54	481	17.1	19.4	47.8
	55-64	638	22.7	25.7	73.6
	65-74	468	16.6	18.9	92.5
	75 and older	187	6.6	7.5	100.0
	Total	2479	88.1	100.0	
Missing	System	336	11.9		
Total		2815	100.0		

q24. Are you from a Hispanic, Latino, or Spanish-speaking background?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	2294	81.5	96.0	96.0
	Yes	95	3.4	4.0	100.0
	Total	2389	84.9	100.0	
Missing	System	426	15.1		
Total		2815	100.0		

q25. What race would you classify yourself as? (choose just one)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	American Indian or Alaskan Native	25	.9	1.0	1.0
	Asian	125	4.4	5.2	6.3
	Black/ African American	30	1.1	1.3	7.5
	Native Hawaiian or other Pacific Islander	11	.4	.5	8.0
	White/Caucasian	2079	73.9	87.1	95.1
	Some other race or combination of races (please specify bel	118	4.2	4.9	100.0
	Total	2388	84.8	100.0	
Missing	System	427	15.2		
Total		2815	100.0		

q26. Are you answering this survey in regard to:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A personal vehicle(s)	2402	85.3	94.3	94.3
	A business vehicle(s)	144	5.1	5.7	100.0
	Total	2546	90.4	100.0	
Missing	System	269	9.6		
Total		2815	100.0		

q27. Was your total household income (before taxes) in 2012?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than $10,000,	34	1.2	1.7	1.7
	$10,000 to less than $15,000	33	1.2	1.7	3.4
	$15,000 to less than $25,000	59	2.1	3.0	6.3
	$25,000 to less than $35,000	123	4.4	6.2	12.5
	$35,000 to less than $50,000	202	7.2	10.2	22.7
	$50,000 to less than $75,000	334	11.9	16.8	39.5
	$75,000 to less than $100,000	345	12.3	17.4	56.9
	$100,000 to less than $150,00	457	16.2	23.0	79.9
	$150,000 to less than $200,000	180	6.4	9.1	89.0
	$200,000 and over	219	7.8	11.0	100.0
	Total	1986	70.6	100.0	
Missing	System	829	29.4		
Total		2815	100.0		

q19. What are the top two strengths of the customer service provided by the Good To Go! program?

		Count	Column Response % (Base: Count)
$q19mul	Website functionality, online services, email	172	19.0%
	Purchasing passes at local retailers	50	5.5%
	Good/quick problem resolution	173	19.1%
	Good payment options	107	11.8%
	Friendly staff, knowledgeable	538	59.4%
	Generally happy	32	3.5%
	Quick phone access	49	5.4%
	Keeping customers notified	10	1.1%
	Convenient/easy	183	20.2%
	Easy access to account info	32	3.5%
	Saves money	5	0.6%
	Good hours of operation	0	0.0%
	19	2	0.2%
	General positive	0	0.0%
	General negative	0	0.0%
	Total	905	149.5%

Multiple Responses are Allowed, will not equal 100%

q20. What are the top two weaknesses of the customer service provided by the Good To Go! program?

		Count	Column Response % (Base: Count)
$q20mul	1	1	0.1%
	Poor automated phone system	48	6.8%
	Too many additional fees	33	4.7%
	Billing errors	34	4.8%
	Long waits/lines	104	14.8%
	Need more retailers to sell pass	35	5.0%
	Website malfunctions/difficult	205	29.2%
	Too expensive	51	7.3%
	Not enough information given	35	5.0%
	Hours of operation	61	8.7%
	Takes too long to resolve issues	148	21.1%
	Rude staff/unprofessional	56	8.0%
	Reps not knowledgeable	45	6.4%
	Hard to obtain account info	30	4.3%
	Method of payment/adding funds	47	6.7%
	Billing statements difficult	17	2.4%
	Dealing with civil penalties	5	0.7%
	Pass/license photo malfunctions	7	1.0%
	General positive	0	0.0%
	General negative	30	4.3%
	Total	702	141.3%

Multiple Responses are Allowed, will not equal 100%

q21. If you could change just ONE thing about Good To Go! customer service, what would that be?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Reduce fees	151	5.4	20.0	20.0
	Billing accuracy	18	.6	2.4	22.4
	Improve website/online functions	156	5.5	20.7	43.0
	Need more retailers to sell pass	17	.6	2.3	45.3
	Fix automated phone system	16	.6	2.1	47.4
	Need more customer service reps	38	1.3	5.0	52.5
	Need to provide more information	18	.6	2.4	54.8
	Add mobile app	31	1.1	4.1	58.9
	Keep customer notified	28	1.0	3.7	62.6
	Make it easier to manage account	40	1.4	5.3	67.9
	Extend hours of operation	35	1.2	4.6	72.6
	Improve customer service reps	63	2.2	8.3	80.9
	Make it easier to pay bills, improve billing system	45	1.6	6.0	86.9
	Quicker problem resolution	36	1.3	4.8	91.7
	General positive	23	.8	3.0	94.7
	General negative	40	1.4	5.3	100.0
	Total	755	26.8	100.0	
Missing	N/A / Did not use / Don't know	274	9.7		
	System	1786	63.4		
	Total	2060	73.2		
Total		2815	100.0		

Appendix B: Lean Review Report for $0.25 Pay By Plate Fee Reversals

Lean Review Report for $0.25 Pay By Plate Fee Reversals

DRAFT

v0.2

Developed for

Washington State Department of Transportation

October 17, 2013

Page intentionally left blank.

CHANGE LOG

Version #	Date	Revised By	Description
0.1	10/11/13	J. Hall	Initial draft.
0.2	10/17/13	A.Rudell	Edits and comments

Page intentionally left blank.

CONTENTS

Executive Summary 7
Problem Statement / Description 7
Objective Statement 7
Summary of Problem-Solving Approach 7
Major project results, findings, and recommendations 7
Improvement Opportunity: Define Phase 9
Objective Statement 12
Current State of the Process: Measure Phase 13
Analysis and Findings: The Analyze Phase 14
Recommendations: The Improve Phase 16
Monitoring and Control: The Control Phase 17
Next Steps 18

Figure 1: Current State of $.25 Fee Reversal Process 10
Figure 2: Future State of $.25 Fee Reversal Process 11

Page intentionally left blank.

Executive Summary

Some of the customers who sign-up for pre-paid *Good to Go!* accounts choose the option to be billed by their license plate instead of a *Good to Go!* transponder. Because they have chosen not to install a transponder, these customers agree to pay an additional fee for each posted toll transaction. As a result, whenever a toll is posted to their customer account based on a license plate image, a $0.25 Pay By Plate Fee is added to the toll amount. For reasons which will be detailed below, there are more than 600 requests for "reversals" of this fee and that reversal process is labor intensive. This Lean review project focuses on how to reduce both the occurrence of such requests and the costs to process a fee reversal.

Problem Statement / Description

Customers request fee reversals for a variety of reason including customer errors. The procedure for reversing these fees as a customer courtesy is labor intensive and requires a great deal of paperwork to support the reversal. This creates an imbalance between the value of the Pay By Plate fee and the cost of the process to reverse a fee.

Objective Statement

Reduce the amount of time required to process a Pay By Plate Fee reversal by 40 percent through the reduction of non-value added steps associated with transferring reversal requests to the research team and streamlining paperwork required for back-up.

Summary of Problem-Solving Approach

During an August meeting, the Operations team developed a list of data points to be used for investigation to determine the size and scope of the challenge. It was determined that the best place to look for root causes of the process challenge was to measure the level of understanding customers have in a number of areas: the fee and its fairness in terms of cost and when it is applied, the top reasons customers request a reversal, the number of reversals requested, the time required to process a reversal and the cost of processing a reversal.

Major project results, findings, and recommendations

Based on the Objective Statement, several process improvement initiatives are envisioned.

1. **Customer Education** – several of the Lean reviews conducted by the Operations team have found that there is a need for continued customer education related to how the tolling program works.

2. **Empower Frontline Staff** – the current process involves "transferring" a reversal request to a research representative for review, processing of the reversal in the system and gathering back up documentation.

3. **Streamline Process for Gathering Back-Up Documentation** – currently, based on WSDOT requirements, a reversal can involve gathering as many as 20 pages of background documentation. The reason for the large number of pages is based on the customer usage and history. For customers who use the toll facilities a great deal or request reversals on a regular

basis, a multipage history is required as back up to capture all of the relevant information regarding the reversal.

The Operations group is confident that by implementing these process improvements, the objectives of this Lean review can be achieved.

Improvement Opportunity: Define Phase

Some of the customers who sign-up for pre-paid accounts choose the option to be billed by their license plate instead of a *Good to Go!* transponder. Because they have chosen not to install a transponder, these customers agree to pay an additional fee for each posted toll transaction. As a result, whenever a toll is posted to their customer account based on a license plate image, a $0.25 Pay By Plate Fee is added to the toll amount. The purpose of this fee is to offset the added cost of processing the license plate image.

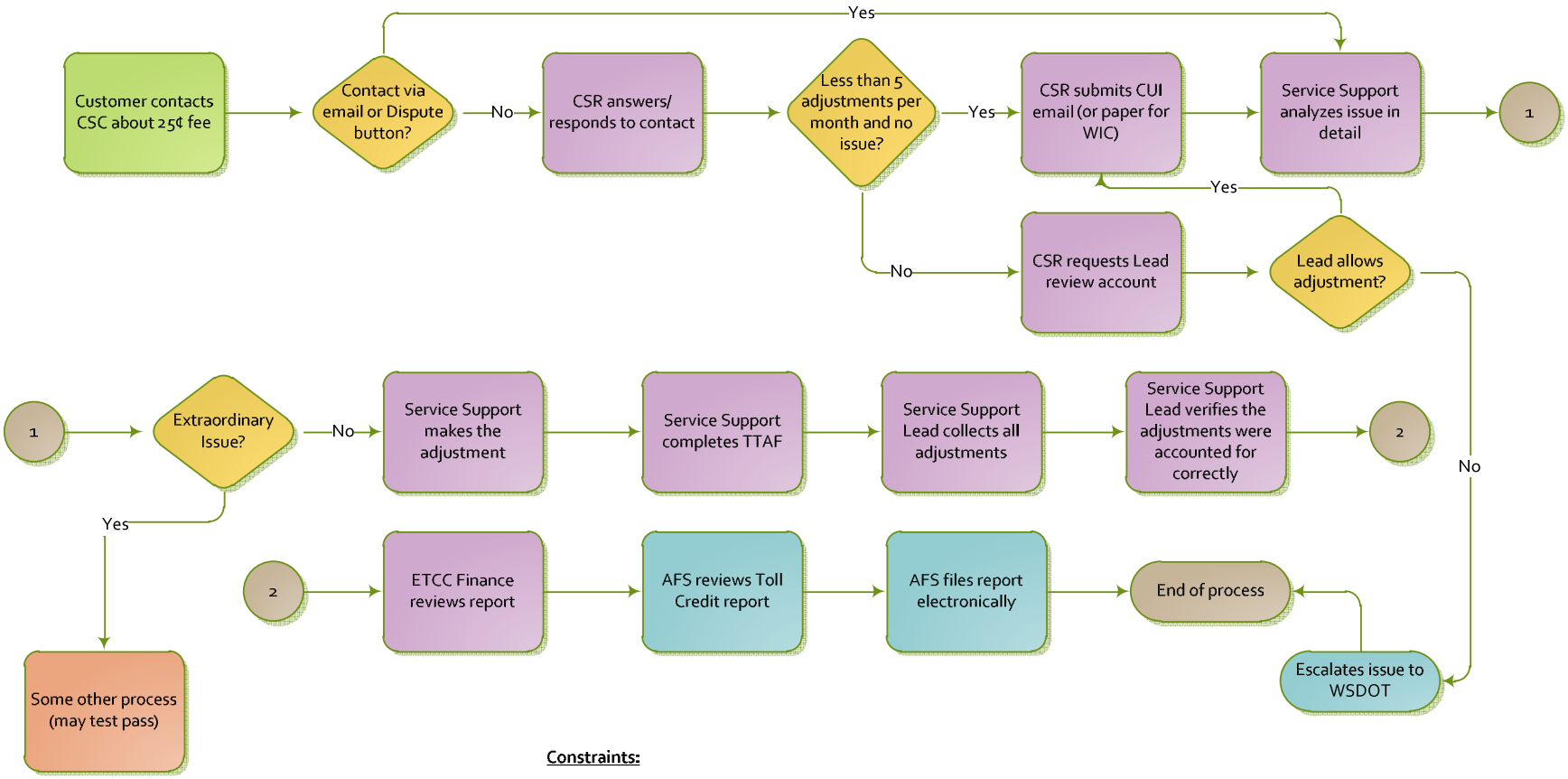
Customers with prepaid transponder accounts can also be assigned a Pay By Plate fee if their transponder fails to read or they do not have their transponder in their vehicle. For these customers, the Pay By Plate fee is charged based on either a system error or user error. In either case, WSDOT has developed business rules which allow for the reversal of a limited number of these fees as a customer courtesy. Approximately $56,000 worth of $0.25 Pay By Plate fees are charged each month.

As can be seen from the "current state" process map (Figure 1), the procedure for reversing these fees as a customer courtesy is labor intensive and requires a great deal of paperwork to support the reversal. This creates an imbalance between the value of the Pay By Plate fee and the cost of the process to reverse a fee.

In August, the Operations group met to further define the critical candidate processes that had been identified. One of the tools used in this analysis was process mapping. The maps (Figures 1 and 2) represent the "current state" and proposed "future state" of a process map for what is required to reverse a $0.25 Pay By Plate fee.

FIGURE 1: CURRENT STATE OF $.25 FEE REVERSAL PROCESS

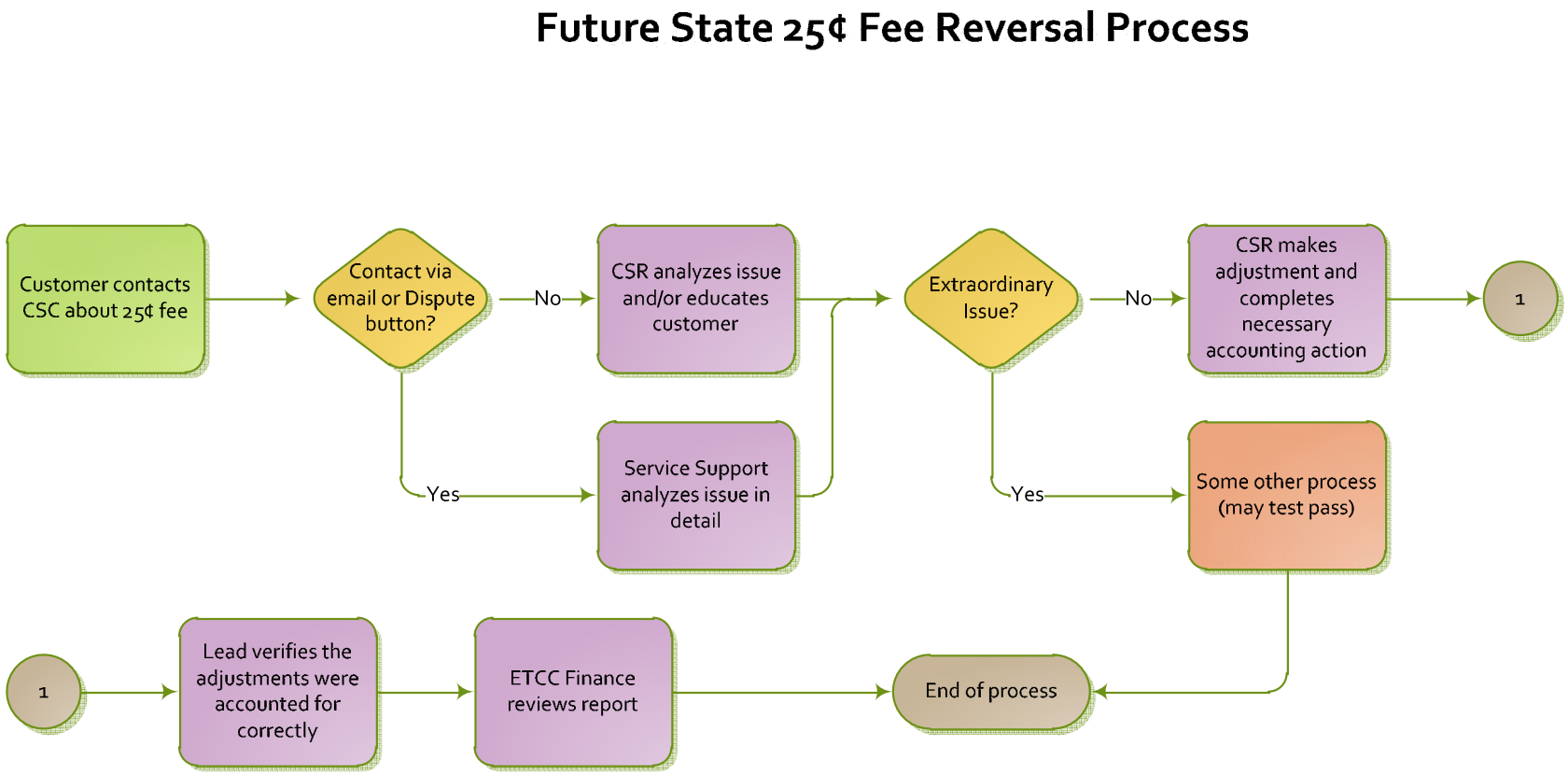
Current State 25¢ Fee Reversal Process



Constraints:

1) ETCC can only adjust five 25¢ fees per month per account.
2) ETCC can not adjust fees past 60 days.
3) Call answering KPI requires hand-off of calls from CSR to higher level.

FIGURE 2: FUTURE STATE OF $.25 FEE REVERSAL PROCESS



Assumptions:

1) ETCC can make unlimited reasonable 25¢ fees per month per account.
2) ETCC can adjust fees all fees, regardless of age.
3) Call answering KPI is revised or removed to allow one call resolution.

Objective Statement

During an August meeting, the Operations team developed the following objective statement to guide the process improvement decisions and assist in measuring the results.

Reduce the amount of time required to process a Pay By Plate fee reversal by 40 percent through the reduction of non-value added steps associated with transferring reversal requests to the research team and streamlining paperwork required for back-up.

If this goal can be achieved, the expected time savings would result in approximately $27,000 in cost savings to the Customer Service Center Vendor, annually. Although the direct cost savings will initially benefit the vendor, WSDOT expects to see improvements in the Vendor's overall achievement of its performance metrics based on customer service staff time freed up by these improvements which will reduce the amount of resources WSDOT must expend to manage the contract. In addition, WSDOT expects that future growth will not result in a linear growth in the CSC Vendor contract price.

Current State of the Process: Measure Phase

During the August meeting, the Operations team developed a list of data points to be used for investigation to determine the size and scope of the challenge. It was determined that the best approach to determine root causes of the process challenge was to measure the level of understanding customers have of: the Pay By Plate fee and its perceived fairness in terms of cost and when it is applied, the top reasons customers request a reversal, the number of reversals requested, the time required to process a reversal and the cost of processing a reversal.

Analysis and Findings: The Analyze Phase

Data was gathered in each of the key measurement areas (1) Level of understanding customers have of the Pay by Plate Fee and its fairness (2) the top reasons customers request a reversal, and (3) the number of reversals processed, the time required to process a reversal and the cost of processing a reversal. The following is the analysis of these data points:

(1) Level of Customer Understanding of by Pay by Plate Fee – this question was posed to customers during a recent Customer Satisfaction Survey.

- Customers who understand reasons for $0.25 Fee - 65.0 percent
- Customers willing to pay $0.25 Fee - 59.0 percent
- Is $0.25 Fee unreasonable? - 67.5 percent

Based on these results, it was concluded that customers had a reasonable understanding and appreciation of value and use of the $0.25 Pay By Plate fee. There is an opportunity to improve customer understanding and acceptance and, thereby, possibly reduce the number of reversal requests. This could add to the potential time savings in processing reversals.

(2) Top Reasons Customers Request Reversal – an audit of past reversal calls and interviews with customer service representatives led to the following list:

- Transponder did not read
- Customer has prepaid account, but did not have transponder in vehicle
- Customer failed to switch transponder to "on" (switchable tags only)
- Customer did not have an account at the time of crossing
- Customer account was not in good standing at the time of crossing

These results demonstrate that a majority of the reversals are based on customer errors. This opens an opportunity for a customer education campaign which could help to reduce the number of reversal requests.

(3) Number of Reversals Processed – data shows that Pay By Plate reversal requests represent approximately 1.0 percent of total customer contacts (phone and email) and 1.6 percent of the total numbers of fees assigned.

Based on the data above, reversals average $900 per month out of a total $56,000 fees assigned or 1.61 percent. Although this does not seem to represent a large issue in terms of total call volume or fee revenues collected, the following time and cost analysis will show that a disproportionate amount of time (and cost) is utilized to process these customer courtesy reversals.

- Time required processing a reversal – working with team members at the customer service center, time values were assigned to the "current state" process map (Figure 1). This analysis showed that it required approximately 21 minutes to process a reversal request. On a monthly basis this represents more than 200 hours of processing time (or approximately 1.25 FTEs).

By focusing on the individual steps in the reversal process, several waste areas were identified for process improvement. These improvement areas are discussed in detail below.

- Cost of processing a reversal – A review of the salaries of the customer service center staff who are involved in the reversal process was conducted. An average staff hourly rate of $26.00 per hour was calculated. Based on this hourly rate and the reversal time analysis above, it was determined that the average fee reversal customer contact costs ETCC $9.15.

The average customer contact involves six Pay By Plate Fees. Therefore, $9.15 is spent to reverse $1.50 in fees.

This data analysis demonstrates that there are opportunities to educate customers which will reduce the total number of reversal requests. In addition, streamlining the process will result in reduced time to process reversals and reduced associated costs.

RECOMMENDATIONS: THE IMPROVE PHASE

Based on the Objective Statement and data analysis above, several process improvement initiatives are envisioned.

- Customer Education – several of the Lean reviews conducted by the Operations group have found that there is a need for continued customer education related to how the tolling program works. Key areas of education are:
  - Importance of a properly mounted transponder
  - Importance of keeping customer accounts current (positive prepaid balance)
  - Value of having a prepaid account (versus a pay by mail option)

The Operations team is working with the Communication team to improve the information provided in various customer contact points – website, account statements, other routine customer correspondences, and customer service scripts used during customer calls. Educating customers and future customers on the benefits (and consequences) of establishing and properly managing a prepaid account should have measurable benefits. For example, a portion of the Pay By Plate fee reversals comes from offering an incentive for Pay By Mail customers to establish a prepaid account. Increasing the number of prepaid accounts should have a direct effect on the number of Pay By Mail customers and thereby the number of Pay By Plate fee reversal requests.

- Empower Customer Service Representatives – the current process involves "transferring" a reversal request to a research representative for review, processing of the reversal in the system and gathering back up documentation. This transfer process adds approximately 7 minutes of "non-value added" time to the process.

By empowering frontline staff to research and process the reversal from their desk, this non-value added time can be eliminated. Empowerment will require training and as well as adding an oversight process to verify that frontline staff does not abuse the fee reversal process.

- Streamline Process for Gathering Back-Up Documentation – currently a reversal can involve gathering as many as 20 pages of background documentation. Based on the value of the transaction and the limited opportunity to abuse the process, a streamlining review of the back-up document requirements will be conducted.

The goal is to reduce the need for back-up documentation and ultimately provide an online interface for gathering and storing this documentation for quality assurance purposes. By working with WSDOT stakeholders, the Operations team believes it can reduce the need for volumes of back up and still provide the level of accountability required. Reducing the time to gather back up is a large part of the planned savings.

The Operations team is confident that by implementing these process improvements, the objectives of this Lean review can be achieved.

Monitoring and Control: The Control Phase

A key step in the Lean process is to measure and analyze the results of the process improvements. The Operations team plans to implement measuring points and metrics which will inform decision makers as to the success of this Lean analysis. These will include:

- Measurement of the number of reversals requested (Is the customer education campaign working?)
- Measurement of time required to process a reversal (Is there time savings or just time shifting?). An unintended consequence of this improvement effort would be if one group of team members achieved a time savings while another actually increased their time to support the process due to the changes.
- Measurement of results of oversight program (Is the new process being abused?). The criteria for what qualifies as "abuse" will be determined during the process change implementation phase.
- Measurement of customer satisfaction (include questions regarding $0.25 fee program)
- Measurement of "single contact" resolution rates. One positive result would be if more customers could get their issue resolved while on the phone or at the first email with no need for any follow on contacts.

NEXT STEPS

The following is the schedule for the next steps in the $0.25 Pay By Plate Fee Reversal improvement program:

Lean Process Stage	Major Tasks	Complete by
Implement Process Improvements	Update Standard Operating Procedures; train on new process	11/30/2013
Measure Results	Implement control measurement data points; gather data; analyze results and offer improvements	12/31/2013

Appendix C: Lean Review Report for Escalated Customer Inquiries

Lean Review Report for Escalated Customer Inquiries

DRAFT

v0.2

Developed for

Washington State Department of Transportation

October 17, 2013

Page intentionally left blank.

CHANGE LOG

Version #	Date	Revised By	Description
0.1	10/11/13	J. Hall	Initial draft.
0.2	10/17/13	A. Rudell	Review and edits

Page intentionally left blank.

CONTENTS

Executive Summary 7
Problem Statement / Description 7
Objective Statement 7
Summary of Problem-Solving Approach 7
Major project results, findings, and recommendations 7
Improvement Opportunity: Define Phase 8
Objective Statement 11
Current State of the Process: Measure Phase 12
Analysis and Findings: The Analyze Phase 13
Recommendations: The Improve Phase 16
Monitoring and Control: The Control Phase 17
Next Steps 18

FIGURES

Figure 1: Current State Escalations Process 9
Figure 2: Future State Escalations Process 10

Page intentionally left blank.

Executive Summary

WSDOT staff is spending more time than anticipated responding to customer inquiries that have been forwarded from the Electronic Transaction Consultants Corporation (ETCC) customer service center (CSC). Although some level of direct customer interaction is unavoidable, with the WSDOT Toll Division being the owner of tolling in Washington State, one of WSDOT's goals in contracting with an outside customer service vendor was to limit the amount of internal resources needed to respond to escalated customer inquiries.

Problem Statement / Description

Currently, WSDOT receives approximately one new customer inquiry that has been escalated from the CSC each day. The research involved in properly responding to these escalated inquiries requires 3 hours of WSDOT staff time (or 0.4 FTEs) on average per day. During a process mapping exercise, it was determined that in order for WSDOT to reduce the number of escalated customer inquiries received, the CSC vendor would need to be empowered to take certain remediating actions to solve the customer issue which are currently not available to them.

Objective Statement

Reduce the number of customer inquiries which are forwarded to WSDOT by 40 percent through customer education and empowering CSC staff to take the necessary remediation actions which will resolve the customer's issue (e.g., dismiss a $5.00 reprocessing fee).

Summary of Problem-Solving Approach

During a meeting in August 2013, the Toll Division's Operations team developed a list of data points that could be investigated to determine the size and scope of the challenge. It was determined that the best way to determine root causes of the process challenge was to measure:

- the level of service the customers expect when contacting the CSC,
- the top reasons customers request an escalation to WSDOT,
- the number of escalated customer inquiries to WSDOT, and
- the time and cost required to respond to a customer inquiry.

Major project results, findings, and recommendations

Based on the Objective Statement, several process improvement initiatives are envisioned.

1. **Customer Education** – Several of the Lean reviews conducted by the Operations team have found that there is a need for continued customer education related to how the tolling program works.

2. **Empower Frontline Staff** – Currently CSC staff are not empowered to dismiss fees or penalties assessed on toll bills or notices of civil penalty in error or even as a one-time courtesy as a part of a customer education strategy.

The Operations group is confident that by implementing these process improvements, the objectives of this Lean review can be achieved.

Improvement Opportunity: Define Phase

WSDOT staff is spending more time than anticipated responding to customer inquiries that have been forwarded from the CSC. Although some level of direct customer interaction is unavoidable, with the WSDOT Toll Division being the owner of tolling, one of WSDOT's goals in contracting with an outside customer service vendor was to limit the amount of internal resources needed to respond to these escalated customer inquiries.

Currently, WSDOT receives approximately one new customer inquiry that has been escalated from the CSC each day. The research involved in properly responding to these escalated inquiries requires 3 hours of WSDOT staff time (or 0.4 FTEs) on average per day. During the August process mapping exercise, it was determined that in order for WSDOT to reduce the number of escalated customer inquiries received, the CSC vendor would need to be empowered to take certain remediating actions to solve the customer issue which are currently not available to them.

The Operations team met again to further define the two process improvement initiatives. One of the definition tools used was process mapping. Figures 1 and 2 represent the "current" state and proposed "future" state of the process to Escalate Customer Inquiries.

Current State Escalations Process

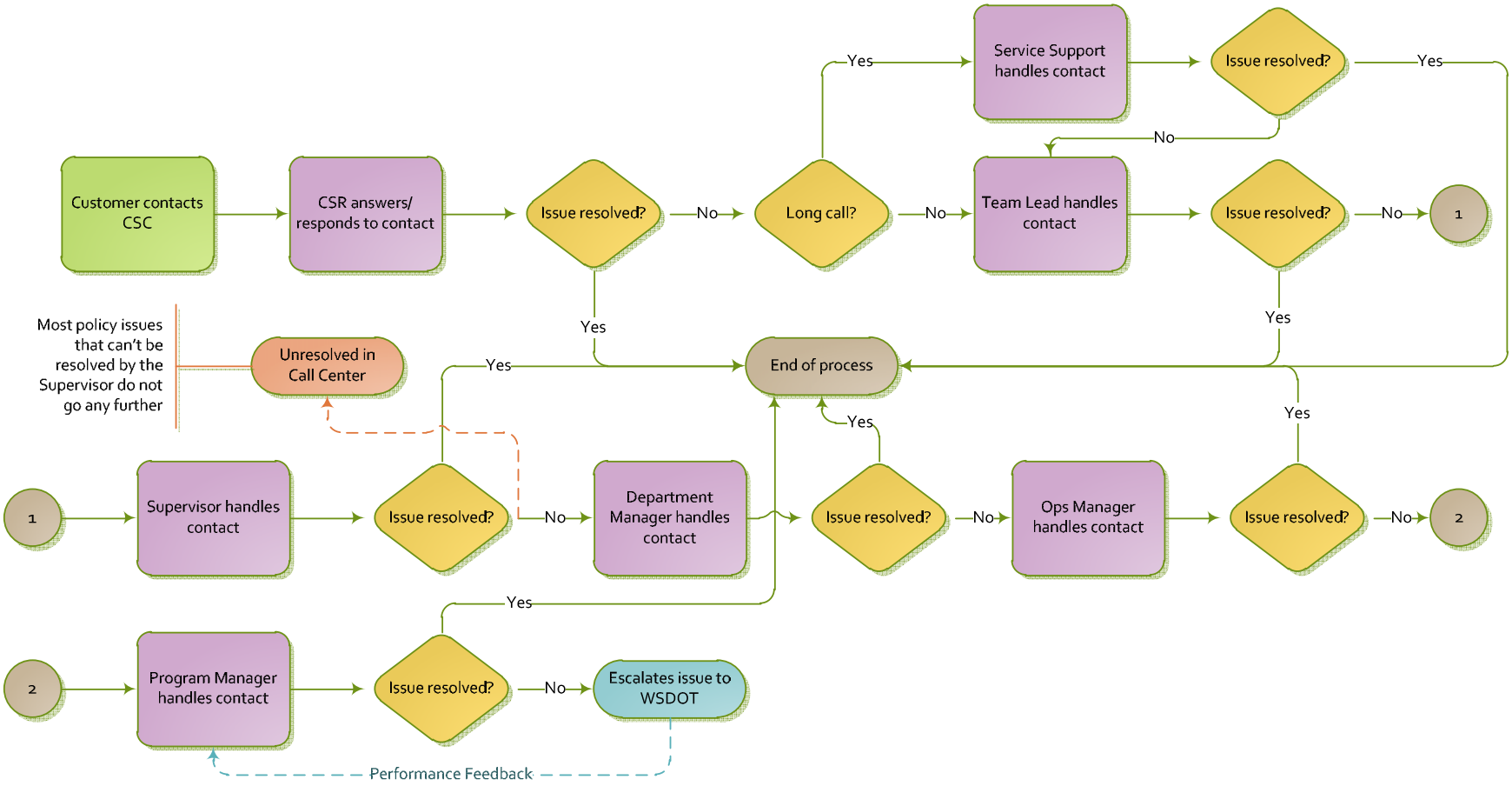


FIGURE 1: CURRENT STATE ESCALATIONS PROCESS

Future State Escalations Process

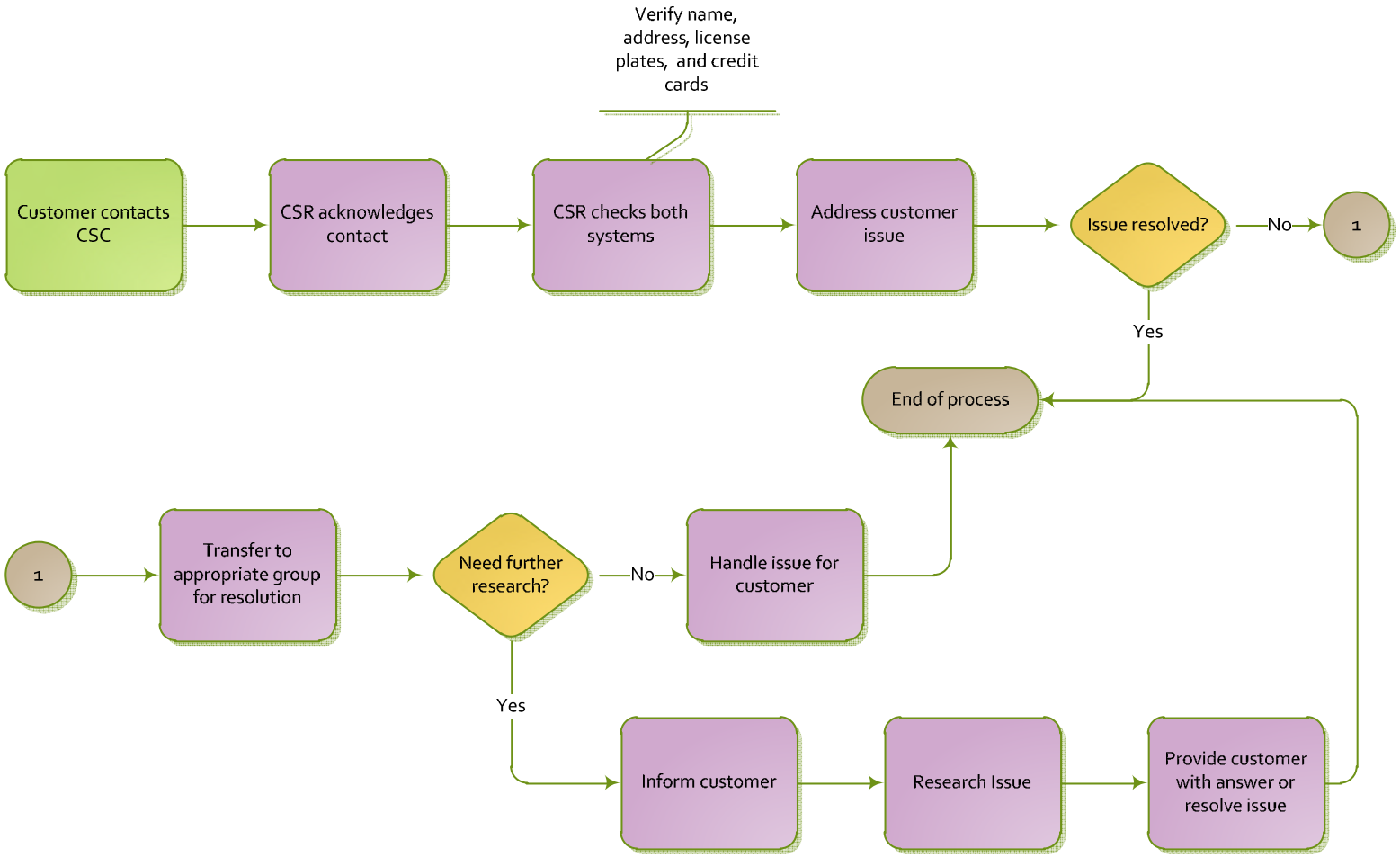


FIGURE 2: FUTURE STATE ESCALATIONS PROCESS

Objective Statement

During the August meeting, the Operations team developed the following objective statement to guide the process improvement decisions and assist in measuring the results.

Reduce the number of customer inquiries which are forwarded to WSDOT by 40 percent through customer education and empowering CSC staff to take the necessary remediation actions which will resolve the customer's issue (e.g., dismiss a $5.00 reprocessing fee).

If this goal can be achieved, the expected WSDOT staff time savings would result in approximately $15,600 in cost savings annually. This reduction would allow WSDOT customer service, communications and management staff to focus the time savings on other, more critical, customer/stakeholder issues. In addition, improvements such as these, despite their apparent small size, will allow WSDOT to absorb future growth without the need for additional staff.

Note: The focus of this Lean review is strictly on limiting the number of escalated customer inquiries received from the CSC. A second phase of Lean review will focus on improving the process WSDOT uses to research an issue, develop a response and communicate with the customer (and other interested stakeholders).

Current State of the Process: Measure Phase

During the August meeting, the Operations team developed a list of data points that could be investigated to determine the size and scope of the challenge. It was determined that the best option to determine the root cause of the process challenge was to measure:

- the level of service the customers expect when contacting the CSC,
- the top reasons customers request an escalation to WSDOT,
- the number of escalated customer inquiries to WSDOT, and
- the time and cost required to respond to a customer inquiry.

Analysis and Findings: The Analyze Phase

Data was gathered in each of the four key measurement areas outlined in the Measure Phase. The following is the analysis of these data points:

(1) Level of service the customers expect when contacting the CSC – this question was posed to customers during a recent Customer Satisfaction Survey.

Importance Questions:

- Number of contacts to get to resolution – 60.8 percent of customers surveyed stated that getting resolution in one contact is important to them.
- Importance of customer service representative (CSR) authority to resolve issues - No Supervisor – 62.6 percent of respondents strongly agreed that it was very important.
- *Importance of receiving a response to an email inquiry within 24 hours – 64.3 percent of respondents rated this very high in importance.*
- *Most importance customer service factors – 40.8 percent of respondents stated 1st call resolution was the most important factor. 34.9 percent of respondents stated that customer service representative knowledge was the most important factor.*

Other Questions

- *Good to Go!* CSRs have adequate authority to resolve issues – more than half of the customers surveyed (58.6 percent) stated that they felt customer service staff had adequate authority to resolve their issue.
- *Good to Go!* email responses are timely and relevant – only 42.8 percent of respondents were very satisfied with email response timelines and relevance.
- Preferred way for customers to self-serve – 60.9 percent of respondents chose the website as their preferred method to self-serve. An additional 16.7 percent responded that they preferred phone interaction.

Based on these results, it was concluded that customers had a reasonable understanding and appreciation of the value of a well-trained and authorized customer service staff when it comes to receiving a premium service. Armed with this understanding of customer expectations, WSDOT can develop a plan for improving the self-service tools available to customers and develop an improved customer service training program which will allow frontline staff to resolve customer issues without the need to transfer to a supervisor should the customer choose to contact WSDOT by phone or email. Improving customer self-service tools and customer service staff training will contribute to a reduction of the number of customer inquiries which require escalation.

- Top Reasons Customers Request Escalations to WSDOT – an audit of past escalated customer inquiries and interviews with customer service representatives led to the following list of the top escalation reasons:
  - $5 Reprocessing fee - perceived as unfair; common assertion is that customer never received first bill.
  - Notice of Civil Penalty (NOCP) Issues – customer requests NOCP Fee amount reduction or dismissal; complaints regarding dispute process; complaints regarding missing deadline to schedule hearing and not being able to schedule a hearing.

- Perceived unwillingness of customer service staff to assist – despite the customer service staff correctly explaining the policy in question, customers are not satisfied with the answer and request escalation to WSDOT.
- Toll Bill or NOCP payment issues – errors in posting which caused transactions to escalate to Toll Bill 2 or NOCP and incur additional fees.
- Delay in posting older transactions – WSDOT had transactions which had been held for quality assurance review which were ultimately released for processing as much as one year after the trip date.

These top reasons demonstrate that several of the key issues can be remediated by improving transaction processing and customer notification processes. For others, empowering the customer service staff to remediate issues through one-time courtesy dismissals or fee waivers might be a workable option. The impacts of these policy changes are discussed in detail below.

- Number of Escalated Customer Inquiries – data shows that the CSC vendor forwarded 24 escalated customer inquiries to WSDOT per month.

Escalation Statistics (June - Sept 2013; 4 Months)		**Count**	**Note**
ETCC Complaint		3	Poor Service
PASS Complaint		3	Not Functioning
General Account Complaint		13	Business-rule related
NOCP Complaint		27	Late delivery, have account,
NOCP Fee Complaint		12	Unfair, too costly, had account
Policy Issue		5	General Policy issues
Toll Bill Complaint		12	Had account, late delivery
$0.25 Fee Complaint		4	Unread tag
Adjudication Process Complaint		3	
Web Issues		1	Couldn't Pay Toll Bill
$5.00 Fee Complaint		3	Never received 1st notice
Discount Plan Inquiry		8	
DOL Hold Inquiry		2	Don't own vehicle
	Total Referrals Received (WSDOT)	96	

Based on the data above, the Operations team decided to focus process improvements on issues related to fees, toll bills and notices of civil penalties. Looking for the root cause of these issues and developing remediation strategies would help to reduce the number of escalated customer inquiries forwarded to WSDOT.

- Time required responding to an escalated customer inquiry – working with team members within the Toll Division, time values were assigned to the "current state" process map (Figure 1). This analysis showed that it required approximately 3 hours of management time to respond to an escalated customer inquiry. On a monthly basis this represents 72 hours of processing time (or approximately 0.4 FTEs).

By focusing on the individual reasons why the customer service vendor could not resolve the customer inquiry without assistance by WSDOT, several business rule and policy issues were identified which could be amended to allow more customer issue resolution by frontline staff. These are discussed in detail below.

Note: This analysis is focused on empowering the CSC vendor to handle customer inquiries without the need to forward to WSDOT. As a second phase of Lean review, the Operations team will review the steps and process involved in responding to an escalated inquiry at WSDOT in order to find ways to improve that piece of the overall process and reduce the time required to respond to inquiries.

- Cost of responding to an escalated customer inquiry – A review of the salaries of Toll Division staff who are involved in responding to escalated customer inquiries was conducted. An average staff hourly rate of $45.50 per hour was calculated. Based on this hourly rate and the response time analysis above, it was determined that the average response costs $136.50. This represents almost $40,000 of staff time annually. A reduction in this staff time would allow WSDOT to either eliminate these costs or redeploy associated resources.

This data analysis demonstrates that there are opportunities to educate customers on general tolling policies and, more specifically, on how the Pay by Mail billings and notices of civil penalty work. In addition, empowering the CSC vendor staff to make judgment calls regarding the accuracy of a bill or fee as well as allowing them to dismiss an erroneously billed charge will result in a reduced number of customer inquiries which require forwarding to WSDOT.

RECOMMENDATIONS: THE IMPROVE PHASE

Based on the Objective Statement and data analysis above, several process improvement initiatives are envisioned.

- Customer Education – several of the Lean reviews conducted by the Operations team have found that there is a need for continued customer education related to how the tolling program works. Key areas of education are:
    - Importance of a properly mounted transponder to avoid receiving a toll bill with an additional fee if a customer has a prepaid account.
    - Importance of keeping customer accounts current (positive prepaid balance)
    - Value of having a prepaid account (versus a non-pre-paid Pay by Mail option)

  The Operations group is working with the Communication group to improve the information provided in various customer contact points – website, account statements, other routine customer correspondences, and customer service scripts used during customer calls.

- Empower Frontline Staff – currently CSC staff are not empowered to dismiss fees or penalties assessed on toll bills or notices of civil penalty in error or even as a one-time courtesy as a part of a customer education strategy.

  By empowering frontline staff to research and mitigate customer inquiries such as this, several escalated customer inquiries could be avoided and the customer could receive what the customer satisfaction survey identified – one contact resolution. In conjunction with this, an oversight program which tracks the number and reason for fee or charge dismissals would need to be established to make sure that the empowerment is being deployed effectively.

The Operations team is confident that by implementing these process improvements, the objectives of this Lean review can be achieved.

Monitoring and Control: The Control Phase

A key step in the Lean process is to measure and analyze the results of the process improvements. The Operations team plans to implement measuring points and metrics which will inform decision makers as to the success of this Lean analysis. These will include:

- Measurement of the number of escalated customer inquiries (Is the customer education campaign working?)
- Measurement of results of oversight program (Is the new process being abused?)
- Measurement of customer satisfaction
- Measurement of “single contact” resolution rates.

NEXT STEPS

The following is the schedule for the next steps in the Escalated Customer Inquiry improvement program:

Lean Process Stage	Major Tasks	Complete by
Implement Process Improvements	Update Standard Operating Procedures; train on new process	11/30/2013
Measure Results	Implement control measurement data points; gather data; analyze results and offer improvements	12/31/2013

Appendix D: Lean Review Interim Report for Image Review of Photo Enforced Transactions

Lean Review Interim Report for Image Review of Photo Enforced Transactions

DRAFT

v0.3

Developed for

Washington State Department of Transportation

October 17, 2013

Page intentionally left blank.

CHANGE LOG

Version #	Date	Revised By	Description
0.1	10/11/13	J. Hall	Initial draft.
0.2	10/11/13	T. Patterson	Initial edits and comments
0.3	10/17/13	A.Rudell	Edits and comments

Page intentionally left blank.

CONTENTS

Executive Summary 7
Problem Statement / Description 7
Objective Statement 7
Summary of Problem-Solving Approach 7
Major project results, findings, and recommendations 7
Improvement Opportunity: Define Phase 9
Objective Statement 12
Current State of the Process: Measure Phase 13
Analysis and Findings: The Analyze Phase 15
Recommendations: The Improve Phase 19
Monitoring and Control: The Control Phase 21
Next Steps 22

FIGURES

Figure 1: Transaction Flow Diagram 11
Figure 2: Concenptual Transaction Flow Chart 13
Figure 3: Categorized Rejections 15
Figure 4: University of Washington Customized Plates 16
Figure 5: Washington State University Customized Plates 17

TABLES

Table 1: Transaction Rejection Reasons 10
Table 2: Customer Related Rejection Reasons 17

Page intentionally left blank.

Executive Summary

In order to accurately bill Pay By Mail transactions, a license plate number must be retrieved from an image taken of a license plate as a vehicle travels on a phototolling facility. Receiving readable images and accurately reviewing those images is a critical part of the process. Although optical character recognition software identifies 65 percent, manually reviewing the license plate images of photo-enforced toll transactions is critical to accurately identifying the correct registered owner in order to bill the correct prepaid customer account by license plate or to send the customer a toll bill in a timely manner. Errors in this manual review process can result in creating a lack of confidence in the Pay By Mail program which could ultimately reduce the number of customers who take advantage of this payment option. From customer feedback and image review rejection reports, it appears that there are opportunities for improvement in the image review process. The Operations team conducted a comprehensiveLean review of the image review process. The following are the results of this analysis.

Problem Statement / Description

Image-based transactions are assigned a confidence level value by the toll collection system's optical character recognition (OCR) software. When this confidence level is above 90 percent, the related transaction is posted directly to a prepaid customer account based on the license plates associated with that account or to a Pay By Mail customer account based on the registered owner information retrieved from the Department of Licensing without the need for manual review. Of the 3.07 million image-based transactions that occurred in March 2013, 65 percent were processed without the need for manual review. Of the remaining 35 percent of the image-based transactions which required manual review, 1.1 percent were rejected. This project is focused on reducing those rejects as they have the potential to represent $1.6 million in uncollected revenue annually. If rejected transactions are defined as errors, the image review value stream performance equals 3.74 sigma or 12,453 errors per million. The *Good to Go!* service center challenge is to move from good to best, by making small continuous improvements to reduce errors to reach a performance level of 4 sigma or 60 errors per million.

Objective Statement

Reduce the number of rejected image-based transactions and enable tolls to be collected.

Summary of Problem-Solving Approach

To conduct the root cause analysis the Operations team grouped the reasons for rejecting an image transaction into four major categories: (1) Image Capture, Saving, and Sharing; (2) Image Processing – System and Reviewer Interaction; (3) Canadian Plates; and (4) Customer related. The Operations team randomly selected a statistically valid sample of 400 images. Based on criteria developed by the Operations team, the quality assurance staff identified and quantified the errors that occurred in each category.

Major project results, findings, and recommendations

The root cause analysis of the errors indicated:

- Rejected images that are 'too dark' often occur on sunny days. They are a direct result of dark shadows created by the bridge super structure.

The Operations team designed and is currently testing the following improvements:

- One of the issues identified was images sent from the lane side that were "too dark". WSDOT and the lane vendor conducted an analysis that pinpointed which cameras were having problems and when the errors were occurring. WSDOT is now working with the lane vendor on solutions.

- Remedies to customer impacts on photo-tolling will focus on customer education regarding important responsibilities on their part. The *Good To Go!* program will communicate with customers on the importance of keeping the information on their accounts up-to-date and remind them to eliminate license plate obstructions. Suggestions will be provided on the appropriate locations for the mounting of license plates as well as how to enter any specialty plate information while filling out an electronic application. The *Good To Go!* program will partner with auto dealerships to remind customers of their responsibilities related to replacing their temporary plates with Department Of Licensing issued plates within the required timeframe.

- WSDOT and ETCC are currently updating the standard operating procedures related to reviewing and certifying images. Based on the revised standard operating procedures, a refresher training course will be taught on evaluating images. Post training feedback will be provided to supervisors on the performance of image review staff and certifiers.

- The WSDOT team analyzed Canadian and specialty plates to determine where issues were taking place and established a feedback loop to help improve the image review process.

The Operations team currently estimates implementation of recommended improvements will lead to a 10 to 20 percent reduction in errors and an increase in revenues.

Improvement Opportunity: Define Phase

Image review is a central component of the toll collection process and is connected with many systems and organizations beyond the control of the Operations team. Image review cannot be improved in isolation and reinserted into the system. Defining variables and identifying the parties that influence them has become a repeated theme throughout this investigation. Variables include the following:

1. **License Plate Design –** the design, colors used and overall human-readability of license plates by the Department of Licensing (DOL);

2. **Registered Plate Database** – the accuracy of the database maintained by DOL;

3. **License Plate Mounting on Vehicles** – the plates are mounted on the vehicle by the customer and enforcement of proper mounting is done by Washington State Patrol (WSP);

4. **Quality Images** – the quality of the image that is captured, saved, and shared by the roadside vendor;

5. **Training and Information** – the training materials and information available from DOL and WSP; and

6. **Laws and Constraints** – governing legislation and circumstantial constraints dictated by federal, state and local governments.

Due to these variables, the breadth of the topic and the multiple roles played by each player, the Operations team defined (narrowed) the scope in the following ways for this interim draft report.

1. **SR 520 Focused:** Image-based transactions from SR 520 are the primary focus because (a) over 80 percent of image-based transactions in Washington State occur on SR 520, (b) the system is very similar to the planned future systems and improvements made now will be implemented on future projects, and (c) the constraints on SR 520 make image capture more challenging (e.g. lighting, vibrations, superstructure).

2. **WSDOT as a Customer:** Discussions were held defining who the tolling customers are. It was clear that owners of vehicles crossing tolling lanes are the primary customer. It was less clear what role ETCC and WSDOT played. ETCC is a customer when it receives images from the lane vendor. As WSDOT's customer service center vendor, ETCC reviews images, issues toll bills and posts payments. WSDOT is a customer of ETCC. However, in relationship to the driving public, WSDOT is both a service provider and an enforcement agency. A decision was made to define WSDOT's role as a customer for the purpose of this investigation.

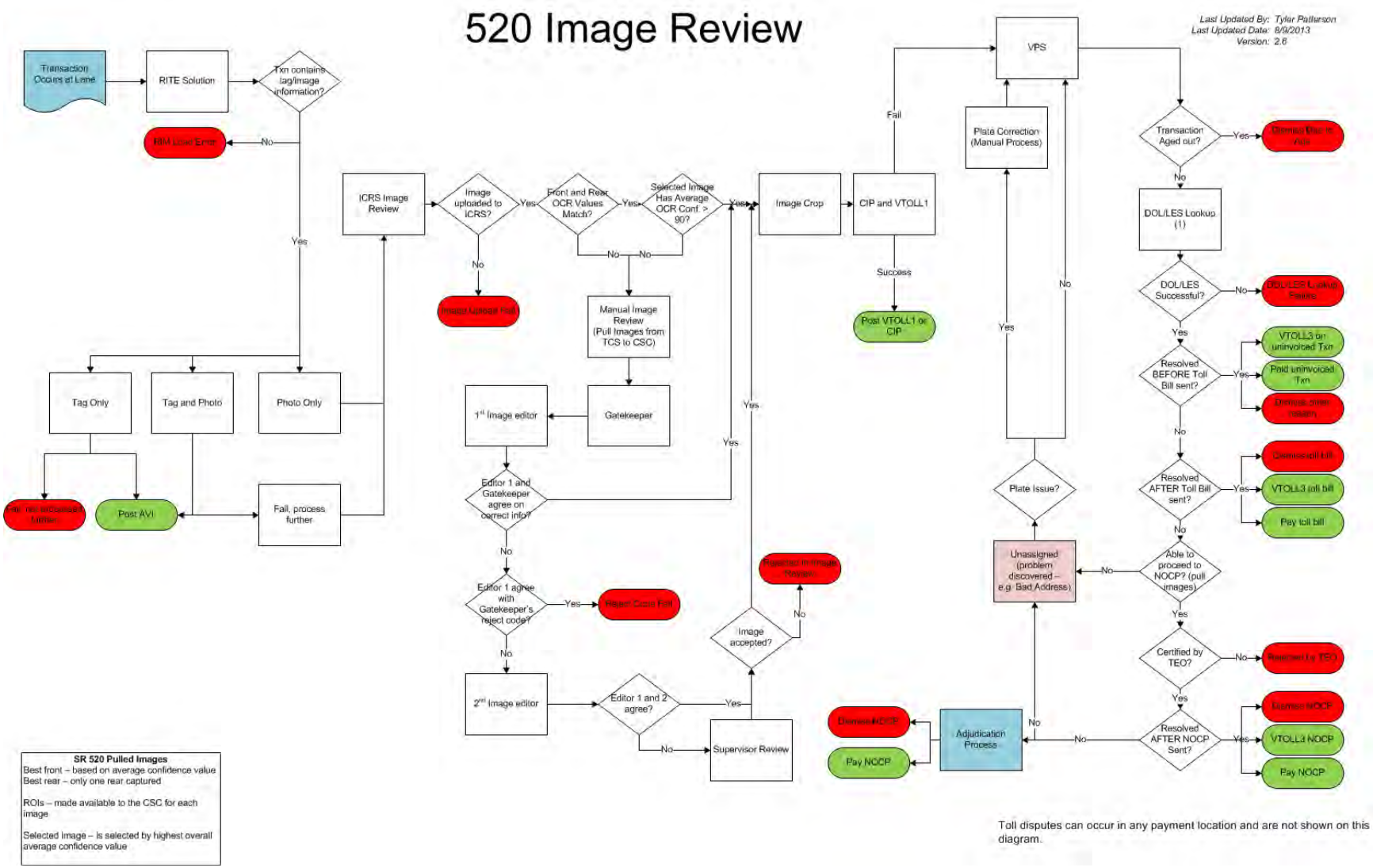
To address the customer needs and define the requirements, the Operations team defined errors as "rejected transactions" and began the investigation. The Six Sigma team members participated in a fish-bone cause and effect analysis to identify reasons why images/transactions were rejected. This is a complex issue as shown in Table 1 where the team identified 158 reasons in 29 different categories for why an image/transaction might be rejected.

TABLE 1: TRANSACTION REJECTION REASONS

Possible Reasons for Rejecting an Image (Fish Bone Analysis Results)	
Accurate Vehicle Information	8
Address Incorrect/ Missing	14
Adjudication	1
Aging	3
Business Rules	6
Class Mismatch	1
Collections	8
DOL/ LES	7
Environmental/ Weather	5
Human Image Review	8
Image Crop	4
Image Quality	6
Image Quality	8
Malformed Transactions	7
Non-Viable Transactions	3
Obstruction	8
OCR/Autopass	9
Plate Types/ Out of State	4
Posting and Posting Rules	4
Reporting	1
Skip Tracing	2
Stuck Transactions	8
Tag Capture	5
Toll Enforcement Officers	2
Toll Rate Assignment	1
Transaction Upload	8
Transponder Mounting	3
TVL (Tag Validation List) File	6
Type 99/ Rim Load	8
Total	**158**

Additionally, WSDOT and ETCC jointly produced a detailed flow chart showing the path that an image/transaction follows from the time a car crosses the bridge until a payment is received. Figure 1 details the process flow. As the team gained knowledge of the value stream, the flowchart was revised (9 times). As a result, WSDOT and ETCC reached consensus on defining the "Photo Enforced Transaction" value stream.

FIGURE 1: TRANSACTION FLOW DIAGRAM



Objective Statement

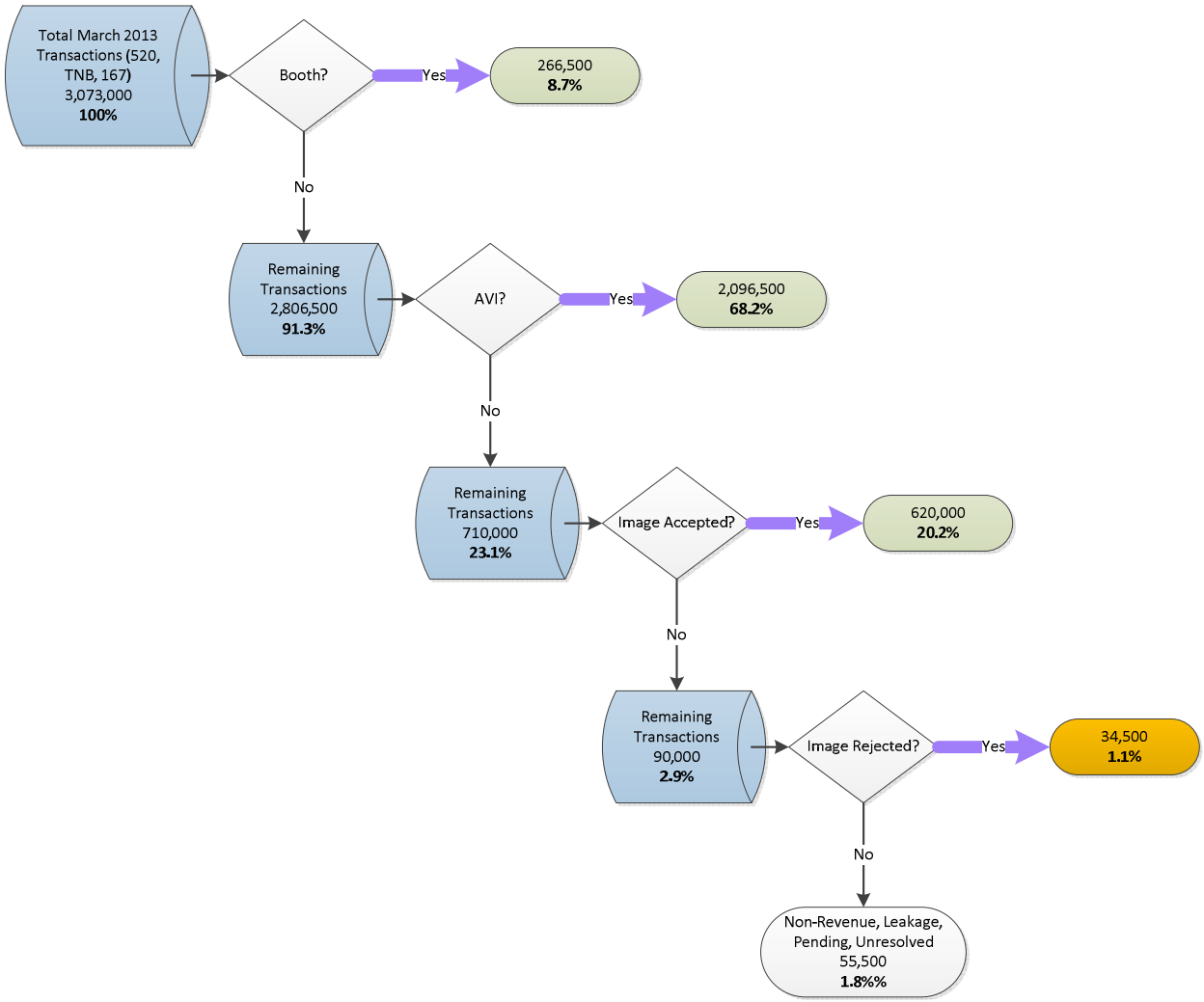
During meetings in July and August of this year, the Operations team developed the following objective statement to guide the process improvement decisions and assist in measuring the results.

Reduce the number of rejected image-based transactions and enable tolls to be collected.

Current State of the Process: Measure Phase

To better understand what constitutes a rejected image, the Operations team used a variety of reports to track the flow of transactions as they move through the image value stream. Figure 2 demonstrates the conceptual level flow chart and shows the steps in the image value stream. Of the 3.1 million transactions of all collection types on all facilities that occurred in March 2013, 1.1 percent were rejected.

FIGURE 2: CONCENPTUAL TRANSACTION FLOW CHART



If rejected transactions are defined as errors, the image review value stream performance equals 3.74 sigma or 12,453 errors per million. The *Good To Go!* project's challenge is to move from good to best, by making small continuous improvements to reduce errors to reach a performance level of 4 sigma or 60 errors per million.

In addition, the Operations team will track the number of customer requests for payment of toll bills via an existing customer account (VTOLL3) as a way to test the effectiveness of the customer outreach

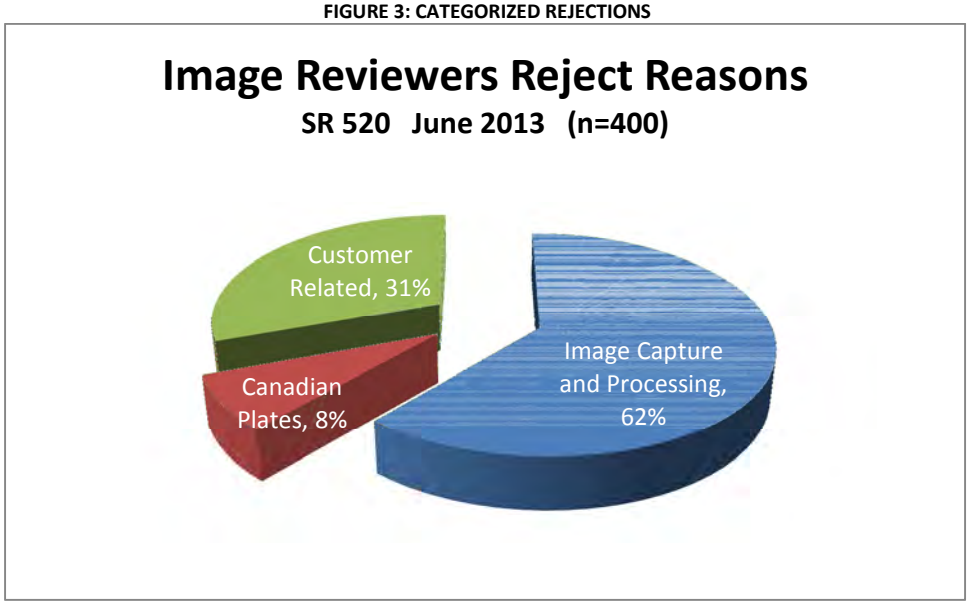
program. A VTOLL is when an image is used to post a transaction to an existing *Good to Go!* Account. One of the main reasons customers request a VTOLL is due to a customer failing to add or update their license plate(s) on their account(s). A reduction in these requests can be directly attributed to customer education.

It is difficult to measure the impact of many customer outreach programs. Direct measurements of the results are not always obvious. For this analysis, the team has set a goal of reducing customer-related image challenges by 10 percent. This will be measured by conducting a similar data analysis of image-based challenges as the one conducted at the beginning of this process (data sampling).

ANALYSIS AND FINDINGS: THE ANALYZE PHASE

To conduct the root cause analysis, the Operations team employed multiple techniques, including an examination of 400 randomly selected image reviewer rejection reasons. These results helped establish categories and clarified the team's direction (Figure 3).

FIGURE 3: CATEGORIZED REJECTIONS



The analysis, findings and challenges are categorized into four areas:

1. Image Capture, Saving, and Sharing
2. Image Processing – System and Reviewer Interaction
3. Canadian Plates
4. Customer Related

Image Capture, Saving, and Sharing

The Operations team's initial analysis indicated that many of the issues seemed to be associated with the image quality received. This, however, does not appear to be completely true because the existing reject categories do not have enough detail to determine the root cause conclusively; additional manual image review and data analysis is necessary. For example, the team initially categorized all transactions rejected as 'too dark' to be based on the quality of the image received from the lane. This categorization fails to allow for other causes, such as – the reviewer only looking at the primary image, the reviewer only looking at the Region of Interest (ROI) on the reviewer screen, and the reviewer's computer monitor settings. Despite the categorization confusion, the team recognized that a challenge existed.

1. **Too Dark Images** – Investigating the rejected image transactions from the roadside vendor's point of view yielded a significant finding: images that are 'too dark' often occur on sunny days. They are a direct result of dark shadows created by the bridge superstructure. The light sensors adjust the F stop based on lighting conditions of the entire image, not the just the license plate.

2. **Specialty Plates** – The system forces all specialty plates to be reviewed by image reviewers by assigning low confidence level values. On SR 520, WSDOT is unable to use white light because of

environmental constraints and uses a near ultra-violet light and a black and white camera. This combination was designed to read standard Washington Plates and has difficulty differentiating between certain colors. See Image Processing section below.

Image Processing – System and Reviewer Interactions

The system processing portion has been the most challenging to understand due to a lack of documentation. Highlights of the process include the following findings:

3. **Primary Image Selection** – The initial selection of the Primary Image (the one that will be placed on the NOCP) is done by the roadside vendor based on their confidence in the license plate number, but the image reviewer must validate the image and finalize the image selection.

4. **Region of Interest (ROI) Inclusion** – The inclusion of the ROI on the review screen invites reviewers to look at it and use it to determine the plate number, instead of the Primary Image. The image reviewer must validate the Primary Image. The ROI cannot be used to issue an NOCP and can only introduce uncertainty and confusion.

5. **Image Crop** – After the image reviewer has confirmed the primary image selection and has scrolled and saved the image, the system then runs the image cropping program. If the image reviewer is doing their job, this program is redundant and introducing error for transactions that have been manually reviewed.

6. **Specialty Plates** – Specialty and customized plates add complexity to the process, as each plate has its own set of rules to follow. In the University of Washington plates below (Figure 4), the purple 'W' on the left is part of the plate ID, unless the characters following are customized. In the plate on the right, the husky head stands for 'UW' and is included in the plate ID.

FIGURE 4: UNIVERSITY OF WASHINGTON CUSTOMIZED PLATES

State: WA
Type: Special – UW
Plate: W0000A

State: WA
Type: Special – UW
Plate: UW00000

Another example is the stacked letters and prefix and suffix issues associated with the WSU series of plates (Figure 5).

FIGURE 5: WASHINGTON STATE UNIVERSITY CUSTOMIZED PLATES

State: WA
Type: Special – WSU
Plate: SMPLWSU

State: WA
Type: Special – WSU
Plate: WSU9999

With roughly 50 specialty plates in circulation, it is understandable why image reviewers (and customers) have a difficult time learning DOL's syntax.

7. **Standard Operating Procedures (SOPs)** – during the investigative inquiries, the Operations team discovered that the TEOs had been operating without a standard operating procedure and a pre-activity safety plan

Canadian Plates

Canadian plates are unable to be used to identify drivers due to restrictions associated with the Canadian response to the Patriot Act.

Customer Related

Of the 126 transactions identified as having a customer behavior root cause, the sub-causes are included in Table 2.

TABLE 2: CUSTOMER RELATED REJECTION REASONS

NO FRONT LP	1	1%
WORN OUT PLATE	1	1%
TWO LPS IN ONE IMAGE	3	2%
TEMPORARY PLATE	11	9%
PLATE OBSTRUCTED	32	25%
NO PLATE	78	62%
TOTAL IMAGES		**126**

As is common with other toll facilities which operate photo-tolling (or violation) systems, the lack of an image of the customer's license plate is a large challenge. In many cases, these issues are a result of a camera that is not aligned or programmed properly. System challenges and remedies will be addressed as part of a remediation strategy for reducing the lane vendor's errors. Systems issues attributed to the lane vendor represent 46 percent of the errors sampled.

As can be seen, Customer Impacts represent 31 percent of the total challenges found in the sample. This is not unusual as there are many things a customer can do (or not do) which will make their license plate difficult to read by even the most advanced systems. This assertion is not to imply fraud on the part of customers – simply a lack of understanding and education on how the photo tolling system works.

One of the highest ranking customer issues is obstructed plates. Again, often the obstruction is by accident (e.g. trailer hitch or dirt/debris). The goal of this analysis will be to assume that obstructions are unintended and a result of a misunderstanding of the importance of having a license plate on one's vehicle which is easily identifiable.

One additional issue which is not included above relates to how a customer enters their specialty plates into their customer account. Inputting an incorrect number or a specialty number in the incorrect order per the Department of Licensing can result in a license plate misidentification. This unnecessarily utilizes image review and Customer Service staff time to remediate.

RECOMMENDATIONS: THE IMPROVE PHASE

Image Capture, Saving, and Sharing

1. **Too Dark Images** – The roadside vendor will adjust the F stop on the light sensors based on seasonal lighting conditions and the time of day.

2. **Specialty Plates** – WSDOT will work with DOL to develop a specialty plate guidance document. Additionally, WSDOT and DOL will explore embedding infrared barcodes on license plates.

Image Processing – System and Reviewer Interactions

The system documentation created as part of this review will be saved in a location available to all parties

3. **Primary Image Selection** – The Operations team will improve the selection of the Primary Image and make it more explicate in the Image Reviewer SOP.

4. **Region of Interest (ROI) Inclusion** – The team will remove the ROI from the reviewer's screen.

5. **Image Crop** – Since manual image reviews involve a human operator choosing the best image and angle of view for the associated image, the Team needs to investigate image crop and revise the program to only perform it on the Autopassed images where no human intervention is used to validate the best image and angle for use on Notices of Civil Penalty.

6. **Specialty Plates** – See #2.

7. **Standard Operating Procedures (SOPs)** – WSDOT will establish SOPs for all image review related activities.

Canadian Plates

WSDOT will continue to establish a positive relationship with British Columbian toll agencies to lay the groundwork for a potential partnership in the future.

Customer Related

After reviewing the image value stream the Operations team identified the duties assigned to the Gate Keeper as non-value added and is recommending the elimination of this function.

The Operations team is currently working on evaluating and selecting possible improvements to reduce errors. WSDOT has met with the roadside vendor and together they identified opportunities for improvement. To capitalize on those opportunities WSDOT started a detailed daily analysis of the OCR cameras. This analysis was able to pinpoint which cameras were having problems and when the errors were occurring. One of the issues identified was images that were sent from the lane side that were "too dark". The OCR camera analysis was able to help identify these times when the collected images were too dark. WSDOT is now working with the lane vendor on solutions for the identified issues.

Remedies to customer impacts on photo-tolling will focus on customer education. Due to the complexity of tolling in Washington State with its multiple variations of payment methodologies, transponders and facility configurations, a robust and continuous customer educational outreach plan is critical.

The following is a list of customer outreach initiatives which can be readily implemented at a relatively low price:

- Add or enhance content regarding the importance of maintaining accurate customer license plate information on a customer account on the *Good to Go!* website, transponder welcome kits, and routine customer emails (e.g., statements).
    - Include language regarding the optimal location of a license plate, the importance of a front plate, how to enter a specialty plate, and reminders about common license plate obstructions (e.g., trailer hitch, dirt/snow, bicycles)
- Add or enhance customer service representative scripts to focus on license plate issues during customer contacts.
- Work with auto dealerships to remind customers of their responsibilities related to changing out their temporary plates with DOL-issued plates.

Within the population of rejected Images, sixteen percent of the errors were attributable to human error. Most commonly the Image Reviewer did not assign the correct reject reason code. This is important as it provides the source data to accurately identify camera image related problems and eliminate the errors.

A determination was made to provide refresher image review training. In developing the curriculum the question arose: Do we train to the standard operating procedures used by ETCC's Image Reviewers or those used by WSDOT's Toll Enforcement Officers (TEOs). A major deliverable of this project is an analysis conducted by WSDOT as to the differences between these two sets of performance expectations. A result of this analysis showed that there are no current performance standards documented for TEOs. Additionally, the analysis revealed that there are two different sets of criteria: one for the Image Reviewers and a separate one for the TEOs. The WSDOT team is currently working on drafting a SOP for TEOs. Additionally, the WSDOT team is reviewing the SOP for Image Reviewers. The team is looking at standardizing the image review process. Currently ETC is conducting a cost benefit analysis to determine how standardizing the two image review processes into a uniform standard would impact revenue.

ETCC employs a third party vendor to review images. ETCC's quality assurance (QA) manager recently reviewed the vendor's quality control plan. The plan involves weekly control checks of the vendor's image reviewers. If a reviewer's work does not conform to ETCC's SOP that individual receives coaching. The third party vendor has agreed to periodic reviews by the ETC's QA staff and to participate in any refresher training.

The root cause analysis showed that image review of Canadian plates was associated with 8 percent of the errors. ETCC provided data to WSDOT and they are using the information to investigate different performance feedback on key issues, such as Canadian and specialty plates. The team analyzed data to determine where issues were taking place and then provided a feedback loop to help improve the image review process.

Monitoring and Control: The Control Phase

A key step in the Lean process is to measure and analyze the results of the process improvements. The Operations team plans to implement measuring points and metrics which will inform decision makers as to the success of this Lean analysis. These will include:

- Measurement of percentage of total image-based transactions which require manual review (Are improvements to toll collection systems working?).
- Measurement of percentage of total transactions which are image-based (Is customer education program resulting in fewer customers without a transponder or prepaid license plate account?).
- Measurement of hours spent conducting image reviews (Is training program working?).
- Measurement of image rejection rate (Are toll collection system improvements and training working?).
- Measurement of customer satisfaction (include questions regarding understanding why some transactions are billed by plate (Is customer education program working?).
- Measurement of percentage of toll bills paid (Is revenue increasing?).

NEXT STEPS

The following is the schedule for the next steps in the Image Review improvement program:

Lean Process Stage	Major Tasks	Complete by
Implement Process Improvements	Update Standard Operating Procedures; train on new process; implement toll collection system improvements; implement customer education program	12/31/2013
Measure Results	Implement control measurement data points; gather data; analyze results and offer improvements	01/31/2014