

Performance Management

TransitStat

Over the past two decades, many organizations have embraced the use of data, statistics, and metrics as their means to exceed customer expectations, as well as achieve operational excellence. Six Sigma (6σ), Total Quality Management (TQM), and the Balanced Scorecard are popular examples of proven management techniques embraced by the private sector. In the government sector, Performance Stat programs have proven to be effective tools.

Performance Stat programs are structured continuous management events, which entail the frequent gathering, reviewing, and analyzing of day-to-day government performance. CompStat and CitiStat are credited as the first government STAT programs. Created by Commissioner William Bratton and Deputy Commissioner Jack Maple, CompStat's goals were to infuse timely information and accountability into the NYPD's management and culture. The program used computer mapping and statistical data to capture crime trends at their highest levels, the number of officers on duty, and where those officers were located when the crimes were occurring. By placing officers at the times and locations of the high crime areas, this technique was credited with affecting the dramatic reduction in New York City's crime levels.

Through the leadership of Mayor Martin O'Malley, the City of Baltimore, Maryland developed CitiStat in 2000. Using the same tenets of CompStat, CitiStat tracked performance in waste collection, road repairs, housing enforcement, etc.. Baltimore held bi-weekly meetings lead by the mayor's executive team to review performance, understand trends, and make necessary adjustments to ensure that immediate and long-term goals are met. Since then, other cities and states have adopted Performance Stat programs, including Maryland (StateStat), Atlanta (ATL Stat), San Francisco (SF Stat), Washington State (Office of Financial Management – OFM), and Louisville, Kentucky (LouieStat). These governments have reported immediate success with their Stat programs.

In December 2007, GCRTA adapted the Performance Stat model to the transit environment and titled our program TransitStat, characterized with bi-weekly performance monitoring forums. It is a critical link to achieving high-level performance directed towards the Authority's three most critical objectives:

- 1. Maintain Financial Health**
- 2. Improve Customer Service**
- 3. Enhance the Image of RTA**

The original TransitStat leadership team (panel) included:

- Chief Executive Officer (CEO)
- Deputy General Manager (DGM) – Operations
- DGM – Human Resources
- Director of Procurement
- Executive Director – Internal Audit
- Executive Director – Office of Management & Budget (OMB)

In 2009, Administrative TransitStat was incorporated to the already running TransitStat program. Administrative TransitStat focuses on the performance monitoring of all Administrative Departments.

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The Administrative TransitStat leadership team includes:

- TransitStat Panel (above)
- DGM – Finance & Administration
- DGM – Engineering & Project Development
- DGM – Legal Affairs
- Director of Marketing & Communications

The meetings are coordinated and directed by OMB. Other members with information pertaining to the topic of interest are also invited. The forum ensures that the people needed to address issues are at the table, therefore expediting action and eliminating excuses.

Performance Stat programs center on four principles:

1. Provide timely, accurate, and relevant data.

Begin with available data; data that is already being collected for other administrative purposes. What data is needed to determine whether the agency is or is not improving?

2. Analyze data and develop effective solutions that respond to emerging issues.

A performance program requires performance data. Use the data to discuss, examine, and analyze the agency's recent performance.

3. Deploy resources quickly to address issues.

The staff assigned to the Panel can affect change, foster improvement in performance, and make critical decisions.

4. Relentless follow-up and assessment.

Continuous follow-up on assignments and commitments must be done in order to improve agency operations.



In 2008, RTA implemented TransitStat in the Authority's Operations Division and identified four target areas: overtime (non-operator), inventory management, service reliability, and District scorecards. In 2009, Administrative TransitStat was added. Both programs focused on the FAST approach (a strategic development process):

- **F – Focus** - What will the Authority look like in 1-10 years?
- **A – Accelerate** - Identify 2-3 operating initiatives which would accelerate the movement toward the preferred future.
- **S – Strengthen** - What major organizational objectives might prevent the Authority from moving forward to achieve the goals?
- **T – Tie it all together** - Integrate the preceding activities and refine them.

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Hot Target Areas for both the Operations and Administrative Stat programs were identified in 2009, 2010, and 2011:

Operations TransitStat	Administrative TransitStat
<ol style="list-style-type: none"> 1. Paratransit Part-Time Operators 2. Inventory EOQ – Top 50 FAD items 3. Utilities/Energy Management & Conservation 4. Brand Management 5. Training Initiatives 6. Shift Changes 7. Vehicle Reliability 8. Fare Evasion 9. District/Department Scorecards 10. On-Time Performance 11. MIDAS Upgrade 12. CITME Upgrade 13. Heavy Rail Vehicle (HRV) Overhaul 14. Light Rail Vehicle (LRV) Doors 15. Vehicle/Facility Cleaning 16. Bus Stop Maintenance 17. Maintenance PMs 	<ol style="list-style-type: none"> 1. Capital Plan Execution 2. Stimulus Package Execution 3. Customer Service Performance 4. Revenue/Vaulting Procedures 5. Ridership Reporting 6. Purchasing Card Enhancements 7. Employee Injuries/Return to Work Program 8. Collision Reduction 9. Strategic Healthcare Plan 10. Electricity Audit 11. Healthcare Audit 12. Energy Price Risk Management 13. Sustainability 14. Safety Enhancements

In 2011, fifteen employees went through the Six Sigma (6σ) Green Belt training and graduated in December of the same year. The graduates of this program lead several of the TransitStat projects and assist other employees in gathering, analyzing, and interpreting data and creating improvement plans based on that data. One employee has her Six Sigma Black Belt.

An RTA Public Transit Management Academy was also created, in coordination with the Cleveland State University (CSU) Department of Leadership Development in the Maxine Goodman Levin College of Urban Affairs. The program consists of three cohorts, the first ran from January 2012 through December 2012; the second from May 2012 through June 2013; and the third from June 2012 through July 2013. Each cohort ran approximately 12 months long and reviewed all aspects of management, including labor negotiation, crisis management, and financial management. Within each cohort, the members divided into groups. Each group focused on a problem situation, investigated the problem, performed a root-cause analysis, and identified possible solutions. At the end of the PTMA cohort program, each group presented their problem, analysis, possible solutions, the group's solution, and ending results.

For 2013 and 2014, the focus for the Authority was to provide service that was **Clean**, **On-Time**, and **Safe**. The TransitStat meetings were centered on these three objectives throughout the year.

CLEAN	ON-TIME	SAFE
Bus & Train Clean & Detailing Mobile Clean Teams HealthLine Exterior HRV Interior Customer Complaints / Commendations RTA Capital Reports	On-Time Performance Vehicle Reliability Vehicle Maintenance Bus Stops CITME Revenue Collection & Ridership Reporting	Fare Enforcement / Crime & Security Strategies Farebox Defects Asset State of Good Repair / MAP- 21 FTA/ODOT Audits Operator Training

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Specific meetings, outside of the TransitStat arena, or through task forces, monitored the remainder of the presentations from 2013 and before. In May and September, these groups updated the TransitStat Panel on the progress, challenges, and outcomes of the projects.

2015 – 2025 Strategic Plan

The Strategic Planning process started with a series of SWOT exercises involving key stakeholder groups, including the Board of Trustees, Citizen's Advisory Board, and internal groups from each of the different Divisions (Operations, Finance & Administration, Engineering & Project Management, Legal Affairs, Human Resources, and Executive) and a non-management employee group. Strengths, Weaknesses, Opportunities, and Threats were brainstormed using a 100-point exercise with participants voting for their top choices at the end of each session. Results for SWOT were prioritized noting the top 5 areas in each category. RTA utilized the Six-Disciplines methodology to conduct its strategic planning process (below).

Six Disciplines of Strategic Planning:

- I. **Decide What's Important (Strategy):** Answer the following questions: 'Why does this organization exist? What specific markets are we going to serve? Who are our competitors? What are we going to invest in to be distinctively different than our competitors? What are we going to "stop" doing?
- II. **Set Goals that Lead (Plan):** Where do we want to be in 10 years? 3years? 1 year? What is the growth strategy in terms of financial, customer, production process, and people perspective? What is the plan to inform and engage team members in the strategy on an on-going basis?
- III. **Align Systems (Organize):** What are the Strengths, Weaknesses, Opportunities, and Threats? Define clear outcomes, produce a schedule for each project and identify the required resources. Who is responsible? What measures and targets are required to align with strategic goals?
- IV. **Work the Plan (Execute):** What are the Vital Few Objectives (VFO) that need to get done within the next year, next quarter, next week? Are the goals on schedule? Are targets going to be met? Who are the accountability partners? When the goals are completed, were the results achieved?
- V. **Innovate Purposefully (Innovate):** When faced with unexpected problems or opportunities, ask 7 times why the problem is occurring and look at root causes. Brain storm on how to solve the problem within the goal constraints. List to other team members and get their perspectives on the problem.
- VI. **Step Back (Learn):** Examine everything carefully. What are the external trends that affect the organization that are outside of our control? What opportunities do we have that should be addressed in our strategic plan? What internal weaknesses do we have? Where did we not meet our goal? Why? What are we going to do in the next year to develop professionally?

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The results of the SWOT Analysis were compiled by Division and identified into categories, for example, financial, leadership, innovation, support, etc. The highlights of the SWOT Analysis are below.

<p>STRENGTHS</p>	<ul style="list-style-type: none"> ➤ Performance management / drive for excellence / willingness to innovate and change ➤ Financial management capabilities ➤ Supportive board of trustees - allows us to focus on mission ➤ Strong perception from the community - seen as a leader in the community
<p>WEAKNESSES</p>	<ul style="list-style-type: none"> ➤ Internal communication throughout the organization - vertical and horizontal ➤ Succession planning, HR policies and practices ➤ Rail operations and infrastructure ➤ Information Technology structure; Better use of existing technology ➤ We have too much of a bureaucratic mindset within our culture - we do not work at the speed of business ➤ Lack of true safety culture

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OPPORTUNITIES

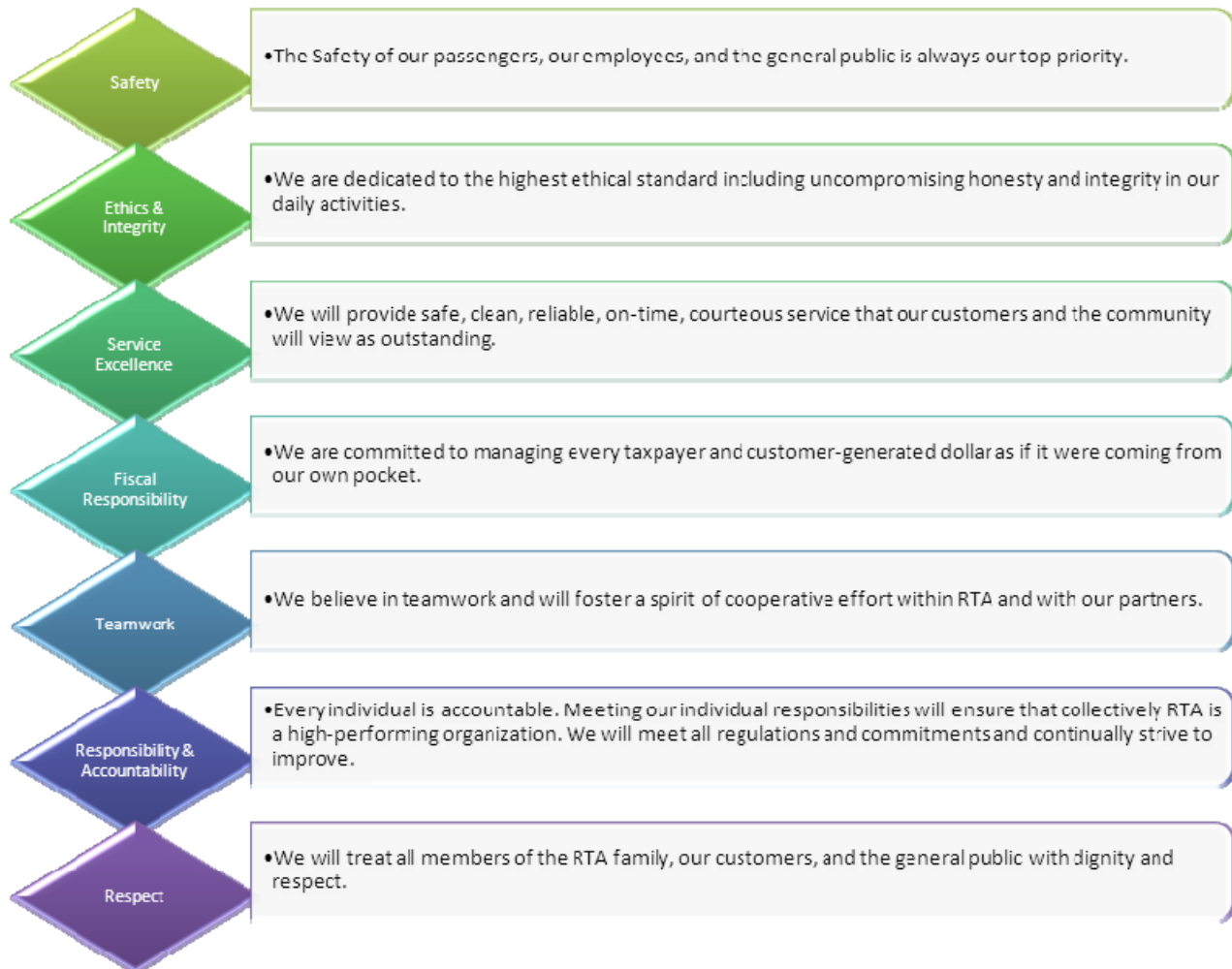
- Pursue key efficiency programs - such as predictive maintenance
- Encourage people to develop and build where we already are; Take advantage of re-development initiatives in Greater Cleveland
- More advocacy by a diverse group; Develop new funding sources
- Simplify and make our system more user friendly
- Pursue partnerships with other agencies
- Focus on attracting millennials as a key part of ridership

THREATS

- Under skilled workforce population; Pending retirements/loss of institutional knowledge
- Inability to pursue certain funding; funding source cuts; Economic downturn
- Unfunded mandates; Growing demand for paratransit
- Aging infrastructure, equipment and facilities - overwhelming cost
- Negative perception of safety and or Risk of Catastrophic safety event
- Lack of transit knowledge and support within outside decision makers

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The Mission, Vision, and Values were then revised at a two-day retreat in August 2014:



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Once the Mission, Vision, and Values were created, RTA leadership developed Vital Few Objectives (VFOs) with Change Initiatives (CI) and action plans on an 18-month timeline and long-term targets on a 5-year timeline. One VFO is to Grow Advocacy, championed by the GM and the Board of Trustees, who will advocate for public transit support and grow funding sources. This is critical to RTA's Growth Strategy, as it will educate key decision makers on the importance of public transit and how they can partner with RTA to support programs to increase awareness and funding.

Greater Cleveland RTA Strategic Plan - Goals and Initiatives							
Vision	Measure	Division Champion(s)	Measure	2014 Target	2015 Target	2016 Target	10 Year Vision
Financial Vision							
	Operating Revenue Growth	Executive	Annual % Growth	3.5%	3.5%	3.5%	3.5%
	Capital Funding Growth	Executive	Capital Funding Dollars	\$75M	\$75M	\$75M	\$75M
	Maintain Expenses	Executive	Annual % Growth	2.5%	2.5%	2.5%	2.5%
Growth Strategy							
	Advocacy Growth	Executive	% of Identified Advocacy Groups Met with	N/A	50%	50%	50%
	Increase Service Usage	Executive	Annual Ridership	49.5M	51.25M	53.0M	2.5% Increase Annually
	Passenger Satisfaction Growth	Operations	Overall Satisfaction Rating	N/A	70%	75%	80%
Process Investments							
	Increase Service Efficiency	Operations	Miles Between Service Interruptions (MBSI); Paratransit Cost per Passenger Trip (PCPT)	6,273 (MBSI) \$42 (PCPT)	8,000 (MBSI) \$40 (PCPT)	9,000 (MBSI) \$38 (PCPT)	25,000 (MBSI) \$35 (PCPT)
	Achieve State of Good Repair (SOGR)	Engineering & Project Management	SOGR Scale 1-5	N/A	Baseline	TBD	> 3.0
	Advance Use of Technology	Executive	TBD	TBD	TBD	TBD	TBD
	Champion Sustainability	Engineering & Project Management	Emissions Reduced	5%	10%	15%	25%
People Investments							
	Achieve a Safety Culture	Legal Affairs	% Improvement of Performance Measures	Baseline	2%	5%	5% Annually
	Improve Employee Engagement	Human Resources & Executive	Engagement Rating	Baseline	TBD	TBD	TBD
	Improve Performance Management	Human Resources	Performance Evaluation Rating (TBD)	N/A	Baseline	TBD	TBD

For TransitStat 2015, the Strategic Plan was used as the methodology for developing the categories, projects, and targets. Project Categories are aligned with the Mission: Reliable, Safe, Courteous, and Clean. Some 2014 projects will continue to be monitored through the TransitStat program in 2015, however, more detail is required regarding the program plan, suggestions for improvements, and implementation of those improvements. Additional projects were identified through a survey of the TransitStat Planning Team. The survey identified the 10 initiatives and the outcomes and activities underneath each. The Planning Team identified which initiatives were most important. Then the Planning Team identified the activities and outcomes that were most important under each initiative. The results were compiled and discussed in January at the planning meeting. The initiatives and activities/outcomes that had the most points were added to the 2015 TransitStat schedule. The other initiatives and activities/outcomes that did not make the schedule will continue

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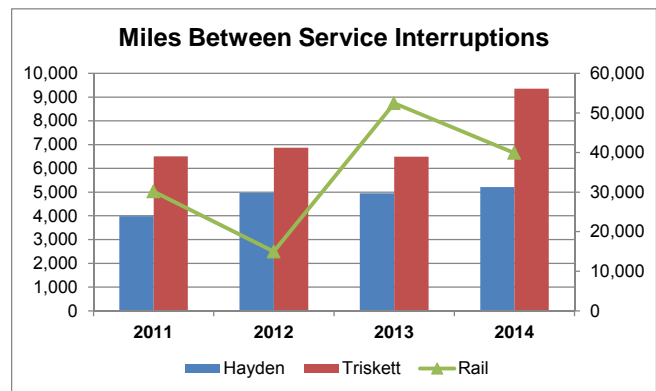
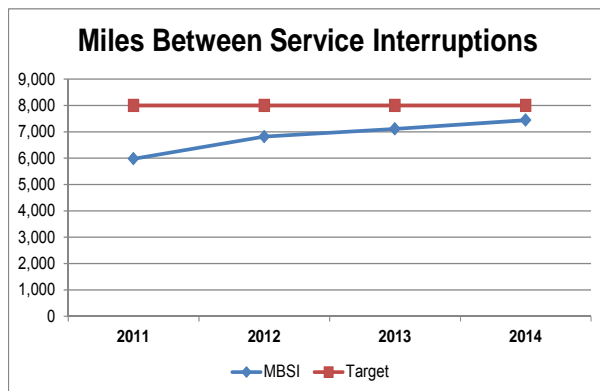
to be improved and monitored throughout the year by the Champions and the team. Updates of the results will be continually added to the document throughout the year.

Successes

In non-operator overtime, the Authority saved \$2.3 million in 2008, compared to 2007. This was achieved through detailed analysis of overtime cost drivers, developing more effective ways to dispense overtime, effectively managing and monitoring the times to complete tasks, and maximizing use of the UltraMain maintenance and material system. Overtime for 2009 through 2011 were maintained at the new levels. Hourly overtime increased in 2012 and 2013 due to maintenance work along the rail lines, yet continued to be monitored throughout each of the years. TransitStat has helped to reduce costs and enhance operational capabilities and has become the scorecard for the Authority. Over the past 7 years, TransitStat has helped to save \$59.8 million.

7-Year TransitStat Savings												
Year	Overtime	Inventory	Tows	Propulsion Power	Fuel Hedging	W/C Claims, Liabilities, Lawsuits	Utilities	Energy Management	P-Card	Safety Blitzes/ Initiatives	Farebox Defects	Total per Year
2008	\$ 2,300,662	\$ 433,890										\$ 2,734,552
2009	\$ 2,040,147	\$ 1,189,555	\$ 127,102									\$ 3,356,804
2010	\$ 3,380,907	\$ 2,478,111	\$ 188,802	\$1,027,820	\$ 9,894,237	\$ 145,444				\$1,532,000		\$ 18,647,321
2011	\$ 2,396,111	\$ 1,998,846	\$ 152,878	\$1,383,316	\$ 3,691,998	\$ 136,579	\$1,117,359	\$ 716,000	\$238,620	\$1,513,000		\$ 13,344,707
2012	\$ 349,746	\$ 102,417	\$ 206,989	\$2,144,723	\$ 2,108,072	\$1,007,388	\$2,258,017	\$ 316,499	\$132,675	\$1,613,071		\$ 10,239,596
2013	\$ 353,618	\$ (1,310,446)	\$ 204,981	\$2,342,114	\$ 587,769	\$ 352,292	\$3,044,711	\$ 667,501	\$ 94,979	\$ 807,465		\$ 7,144,984
2014	\$ (2,272,262)	\$ (970,365)	\$ 182,897	\$1,371,430	\$ 183,759	\$1,206,120	\$2,592,605	\$ 608,000	\$115,914	\$1,150,313	\$ 164,145	\$ 4,332,555
Total	\$ 8,548,928	\$ 3,922,008	\$1,063,649	\$8,269,403	\$16,465,835	\$2,847,823	\$9,012,692	\$ 2,308,000	\$582,188	\$6,615,849	\$ 164,145	\$ 59,800,519

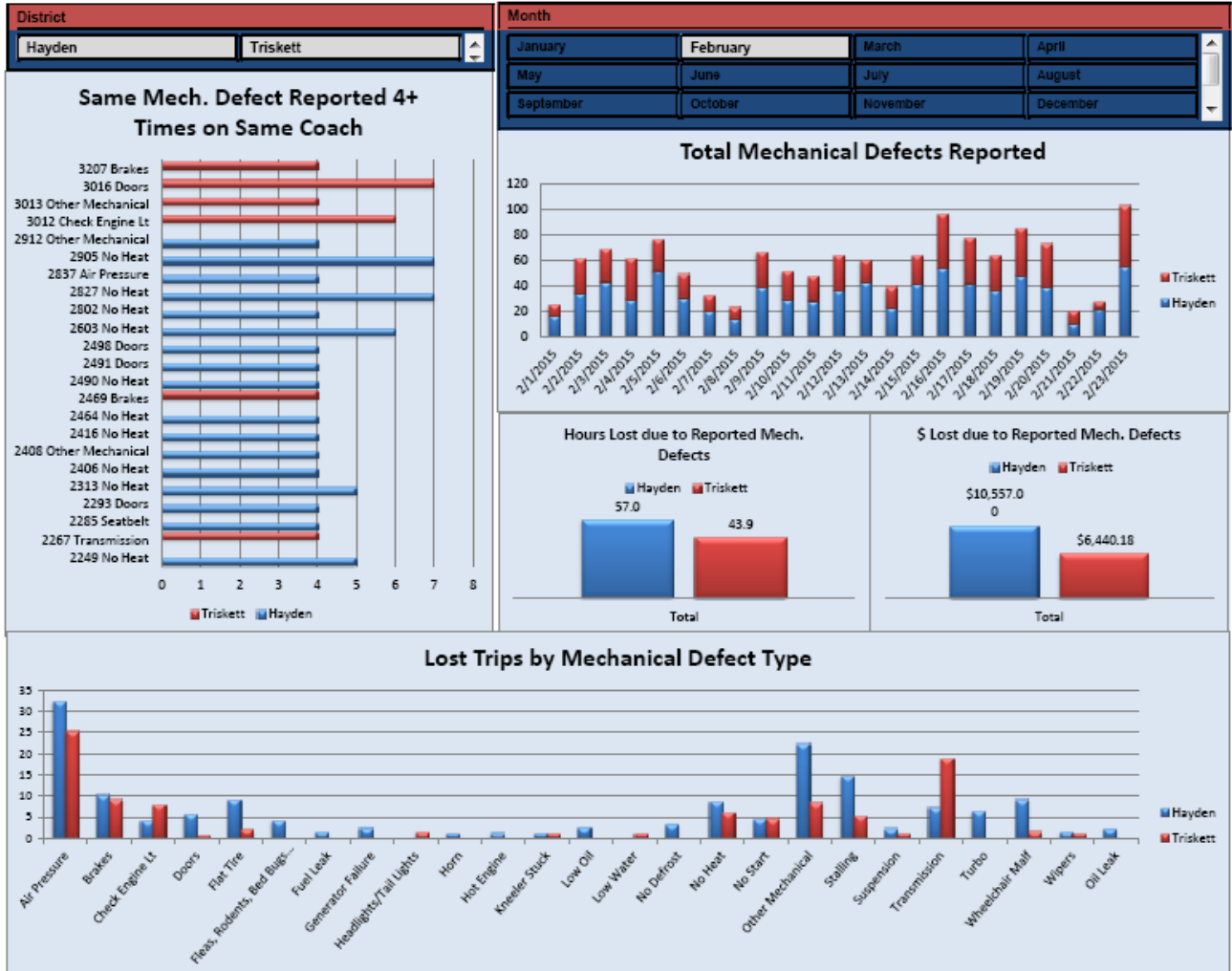
Assurance of quality service delivered is measured by analyzing results of miles, hours, operator and vehicle availability, and maintenance compliance. Analysis of Miles Between Service Interruptions (MBSI) provides feedback on vehicle maintenance practices and response times. Generally, service is interrupted by mechanical or electronic vehicle failures, or unexpected emergencies. Favorable trends would see an increase in miles and a decrease in service interruptions. The target for MBSI has been 8,000 miles or more from 2011 through 2014.



Although the target has not been met, improvements in personnel scheduling, maintenance, and inventory have helped to increase the rate from 5,980 in 2011 to 7,443 in 2014.

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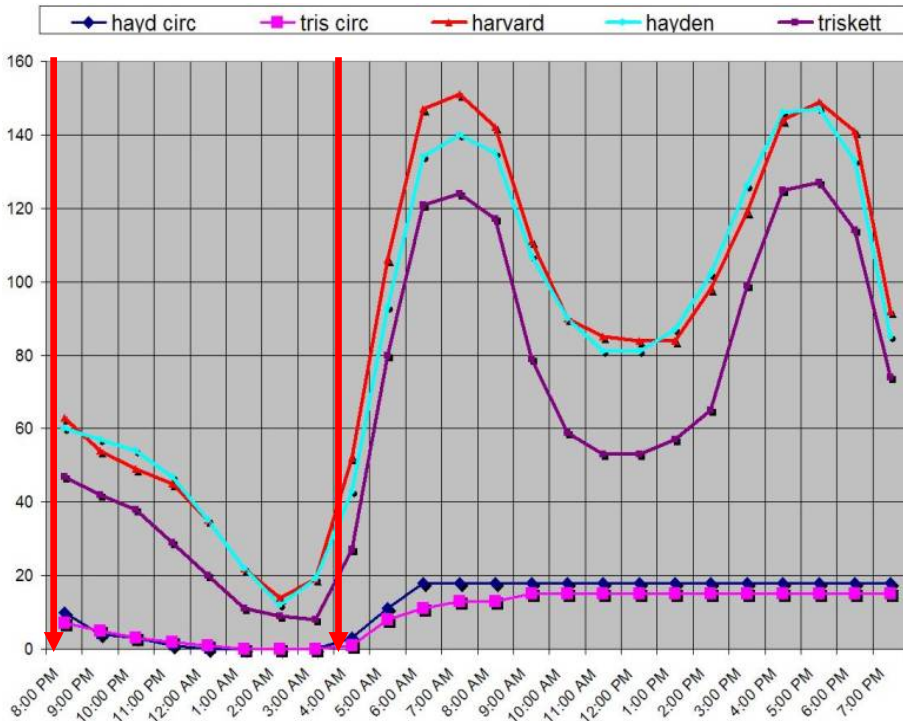
The Department of Service Quality Management created the dashboard below to monitor the mechanical defect calls received on a daily, weekly, and monthly basis. This dashboard is updated daily for the District Directors and Managers, as well as the Executive Management Team.



In July 2008, the Maintenance Planners conducted a comprehensive analysis on maintenance, productivity, and performance of the bus equipment maintenance sections. They compared the labor scheduled with the availability of the buses. They also analyzed failure modes, labor productivity, shift productivity, maintenance effectiveness, and reevaluated the work processes and shift schedules. What they found was that most of the bus maintainers and supervisors were scheduled during the first shift however, most of the buses were available during the third shift.

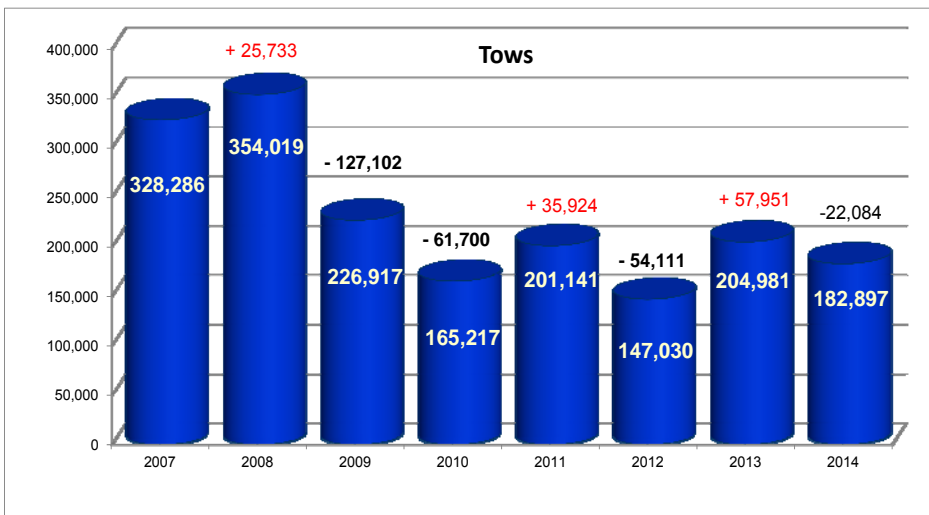
The graph below displays the number of buses per District that are on the road at a given time. Between 8:00pm and 4:00am is the time when the least number of buses are in revenue service and the greatest number of buses are in the garages. This time span is when the most mechanics are needed to schedule, repair, and maintain the vehicles.

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In order to increase wrench time and optimize the performance standards, the shift times were changed and most of the bus maintainers and supervisors are now working the third shift (7:30pm to 4:00am). This ensures that the mechanics and supervisors who maintain the buses are working at the Districts when the buses are available. These new shifts were implemented mid to late 2009 among all the bus districts.

Starting in 2013, the three shifts were redefined and the vehicle maintenance employees were divided among the three shifts, with the majority of the workers and supervisors on nights and weekends. Measurements and goals for Miles Between Service Interruptions (MBSI), absenteeism, and Preventive Maintenance (PM) compliance were communicated, explained, and being monitored. This project will continue through 2015 with emphasis upon solutions and strategies for implementation.

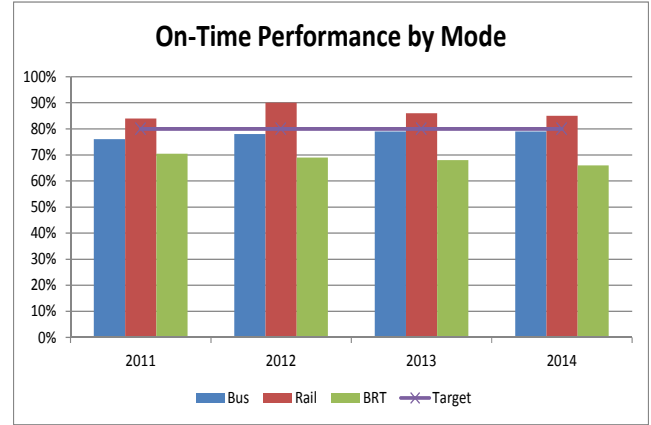
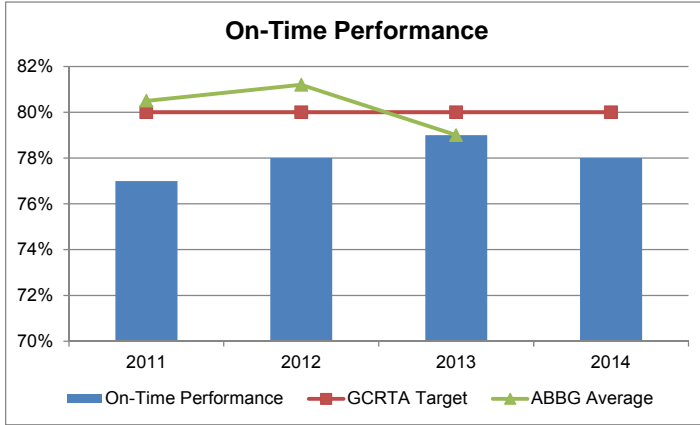


Vehicle Reliability was added to the TransitStat program in July 2008. The Central Bus Maintenance (CBM) District monitors the number, cost, and reasons for revenue vehicles to be towed. Since the onset of this program, towing charges have reduced over 31% each year. Towing charges for 2010 were reduced nearly 56%, compared to the total

charges for 2008. In 2011, towing charges were reduced 11.4%, over \$27,700, from 2009 levels and -43.2% from 2008 levels. For the month of November 2014, the Authority had only 54 tows, an all-time low for the Agency.

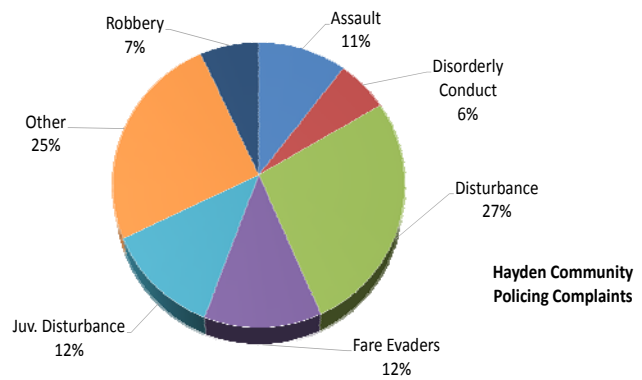
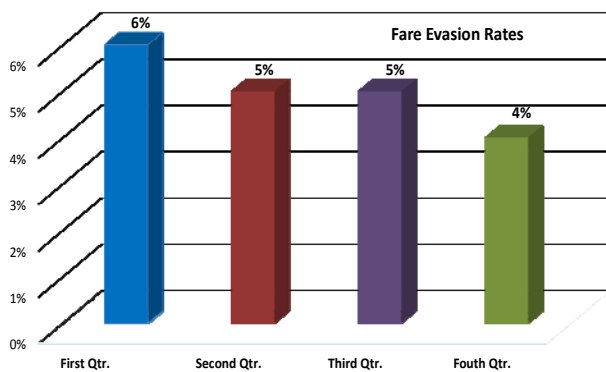
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As Miles Between Service Interruption (MBSI) increase and the numbers of tows decrease, On-Time Performance should also increase. On-Time Performance is defined as a bus or train arriving anywhere from 0-5 minutes after the scheduled time to depart. The Authority has set a goal of 80% or above. The Authority benchmarks performance against other Agencies in the American Bus Benchmarking Group. The average On-Time Performance for ABBG Agencies is between 80-82%.



Rail has been consistently above the 80% target level. As efficiencies and improvements are made in the schedule, timepoints, and database, as well as improvements in MBSI, the average On-Time Performance for Buses has been increasing.

The Transit Police Department continues to review the fare evasion on the Red Line and the HealthLine based on citations given. The number of citations are presented by month, time of day, and location and compared to the prior year, as seen in the graph below.



In 2013, Transit Police received an increase of theft reports automobiles, smart phones and tablets, and bicycles. Through data-driven analysis, they were able to pinpoint the times of the thefts, catch the crooks, return the property to the owners and decrease the number of these crimes and providing a safer transit system for the customers. To keep Operators safe, Transit Police started a program called "Community Policing" where officers are located at the different Districts to assist Operators.

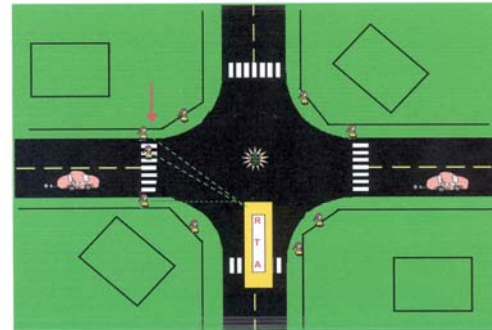
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The Safety Department has developed a Stat-format in their Executive Safety Committee (ESC) meetings. They updated TransitStat on one of their safety campaigns, Left Hand Turn Safety. The Safety Department analyzed the number of left-hand turn accidents, the procedures for making a left-hand turn, and Operator's knowledge of these procedures.

They concluded that 98% of Operators scanned the road curb to curb before making a left-hand turn; 99% of operators correctly identified the number of customers on the right-hand corner; 85% of Operators correctly identified the number of customers on the left-hand corner; and 94% of Operators waited 2 seconds before making the left-hand turn.

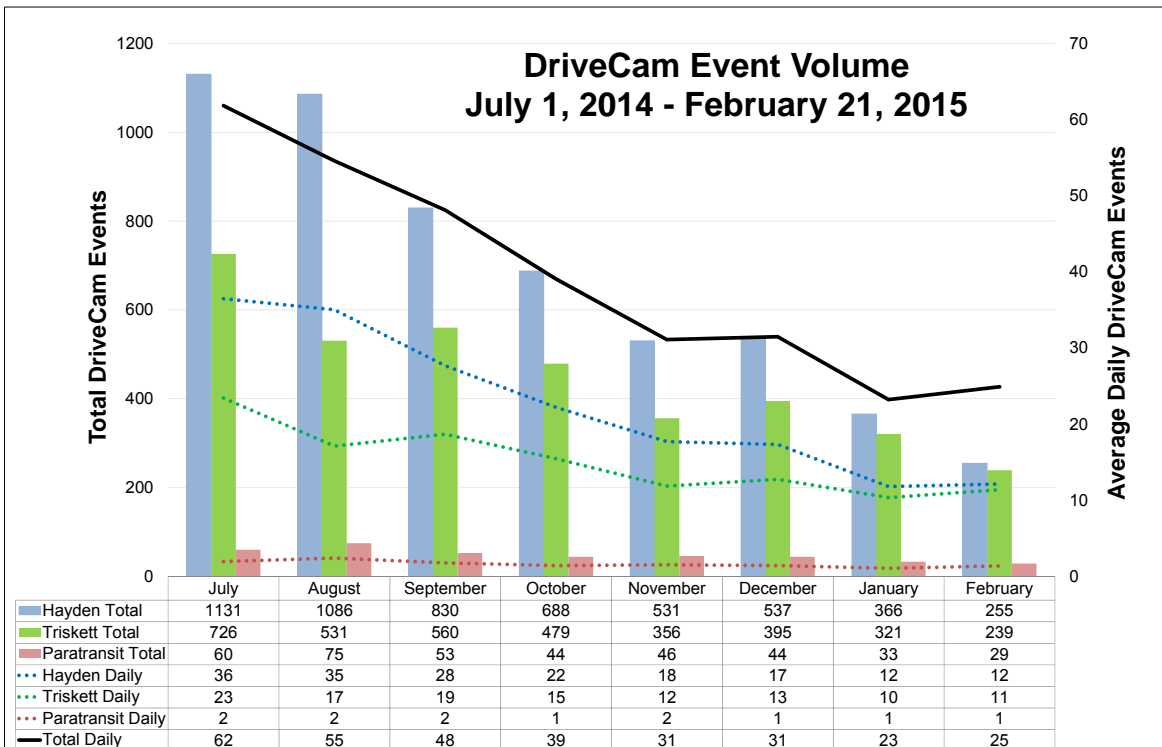


2nd Chance
2nd Glance
Watch for Pedestrians

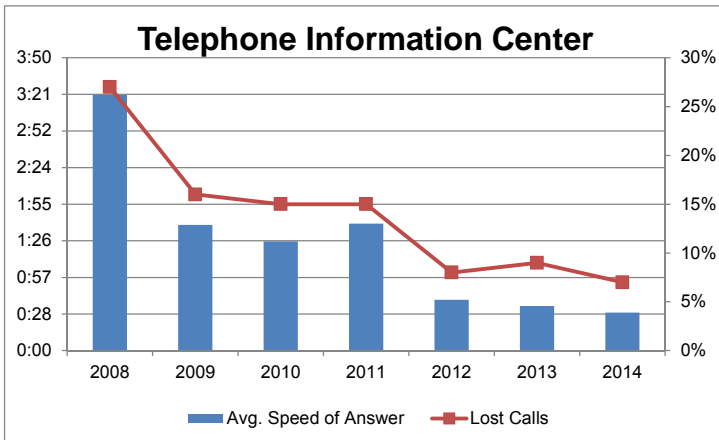


Search and Count Pedestrians... the Street Corner and in the Crosswalk
Approaching the Crosswalk When Making a Left Hand Turn
Scan Early and Scan Often While Turning

Another Safety Initiative that was implemented in 2014 was DriveCam. DriveCam is a program offered by Lytx to record driving data and provide continuous feedback. DriveCam installation has allowed for review of accidents and near accidents on all buses, and is now being added to rail vehicles. Managers are able to review video of the incident, evaluate the severity based on the video evidence, and take the appropriate follow-up action. This can include verbal coaching, training, and recognition. DriveCam has 48 standard behaviors, all of which are currently active and triggering events. Additionally, the Authority has 5 customer behaviors based on RTA policies. Operators can also manually trigger the event recorder if they feel there was something they wanted to capture on camera. Two-thirds of our Operators have never had a DriveCam incident. One Operator, Winston Borders, finished 2nd Place, out of over 400,000 Operators, in the Nationwide DriveCam/Lytx safe driving competition.



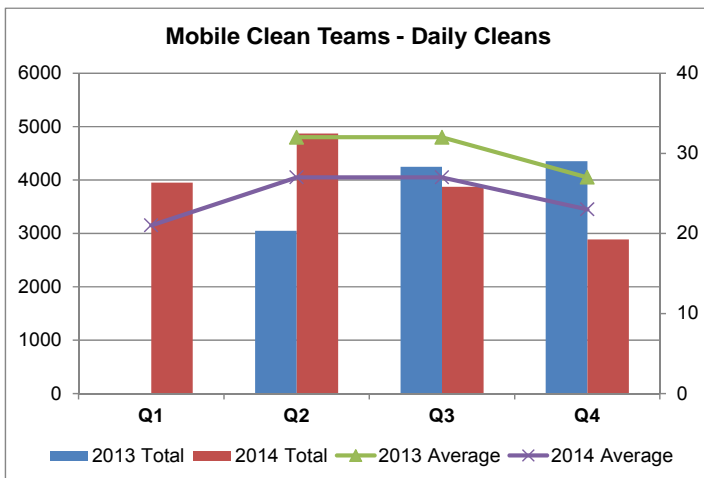
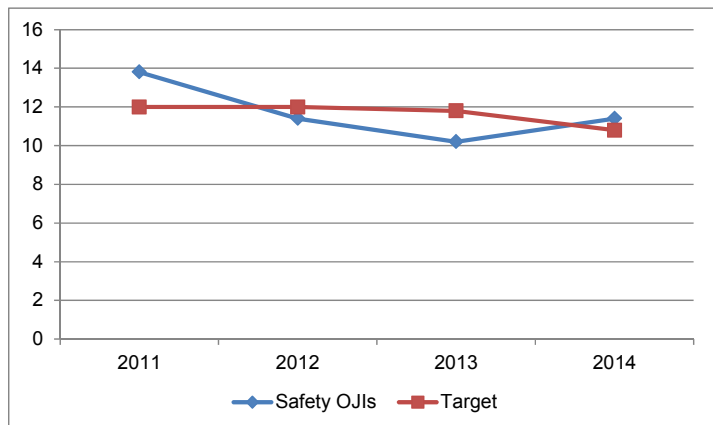
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The Telephone Information Center (TIC) is a section within the Marketing and Communications Department. Since 2008, the Telephone Information Center has been monitoring their performance. They have significantly decreased their Average Speed of Answer from a high of 5 minutes in 2008 to 0:30 minutes average in 2014. The goal was to answer every call within 1:30 minutes and they have consistently met their goal. As the Average Speed of Answer continues to stay within goal, the number of lost calls continues to decline, therefore, increasing the number of

customers helped. This project has “graduated” from the TransitStat forum but is continually being monitored by the Department.

Risk Management has been monitoring the number of On-the-Job Injury (OJI) claims submitted each month, by the reason and type of claims. GCRTA encourages a stay-at-work culture, which has helped to decrease the lost time and medical only claims. Risk Management created a Transitional Work Program that helps employees to return to work sooner by providing opportunities for work outside of the employee’s normal work capacity and decreasing lost work time.



In 2013 and 2014, two projects in the CLEAN area were Mobile Clean Teams (MCT) and Bus Detailing Products. These two projects worked hand-in-hand throughout the year. Customers were complaining about riding on filthy buses, both inside and outside. To help with the fight against filthy buses, Mobile Clean Teams were established to work at the busiest bus stations and Park-N-Ride locations and clean the inside of the buses.

The Bus Detailing project researched the different types of cleaning products, solvents, and machines available. This team worked with the Hostlers to compare the usefulness of these products and which types worked best with the least amount of time and energy needed. An expert in the field was contracted to help with creating standard operating procedures for all of the Districts. These products, solvents, and machines were then distributed to the Mobile Clean Teams and the District Hostlers to ensure consistency throughout the Authority.

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Energy Price Risk Management

Due to high costs of diesel fuel in 2008, GCRTA positioned itself to mitigate the risk of the volatility through an Energy Price Risk Management Program. This program enabled GCRTA to reduce its diesel fuel costs from \$17.4M, in 2009, to \$10.4M, in 2011. In 2008, RTA experienced record highs in fuel cost as well as extreme volatility. The cost per gallon for diesel fuel ranged from \$2.54 to \$4.18. As a result of the high costs, our total diesel fuel expense increased by nearly \$7.4 million, compared to 2007. This amount was \$3.6 million above RTA's 2008 budget. With this as the new reality for fuel, the Authority sought to use tools to ensure better performance in the management of its fuel costs, which resulted in the creation of an Energy Price Risk Management program (Fuel Hedging program).

The Fuel Hedging program's strategy uses a process that:

1. Addresses market opportunities and market risk.
2. Holds the risk of exceeding budget at or below an acceptable level.
3. Uses historical pricing ranges as pricing parameters.
4. Is continuous.
5. Uses a dollar cost averaging tool.
6. Mitigates transaction-timing risk by making numerous smaller volume transactions (i.e. 42,000 gallons per transaction).

The strategy was accomplished with an Advisor, who is responsible for daily execution of the program, including the execution of transactions, generating reports on the program's status and results, and monitoring the program and energy markets. The hedging instruments include purchases of home heating oil futures (the diesel fuel correlate) traded on the Exchange, as well as, purchases of derivatives with financial institutions that are certified by the International Swaps and Derivative's Association (ISDA). RTA's policy dictates that the maximum hedge ration will not be more than 90 percent of the forecasted consumption and that hedges can only extend 36 months in advance.

The Authority began positioning itself in the first quarter of 2009. By April, the Authority had nearly 3.9 million gallons of the 5 million gallon usage, purchased for 2010. The performance objective was to establish a 2010 fuel cost at or below \$2.20 per gallon. Regular reports and tracking were included in the 2009 through 2011 budget execution. The overall objective of the program is to decrease energy volatility, increase the certainty of future fuel costs, stabilize and control the budget and finally to lower overall long-term energy costs. In 2008, fuel costs were \$19.4 million. Using a firm fixed price contract for 2009, those costs were reduced to \$17.4 million. For 2010, the budgeted cost for fuel was \$9.39 million. Factoring in the shares of home heating oil that was sold, net cost of diesel fuel was \$8.0 million. Total diesel fuel costs in 2011 were budgeted at \$11.0 million and ended the year at \$9.9 million. The fuel costs for 2012 were budgeted at \$12.8 million and ended the year at \$12.6 million. For 2013, the budget was \$13.8 million and the net costs were \$14.0 million, about \$192,000 over budget. The system is working exactly as it was designed and is protecting the Authority against any dramatic rise in fuel prices.

As crude oil prices dropped in 2014, the Authority bought fuel hedges. The Authority is fully hedged for 2015 and 2016 and has 31 contracts for 2017.

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