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WHITE PAPER

Using Advanced Analytics and Innovative Resolution Techniques to Reduce Truck Rolls and Related Support Costs

Identifying Customer Incidents with High Propensity for Remote Resolution Allows Cable and Broadband MSOs to Cancel a Greater Percentage of On-Site Visits

> "OnProcess is 'good on purpose'"
>
> SVP Major Broadband/ Cable Client

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Executive Overview:
Reducing Unnecessary Truck Rolls with Advanced Analysis

While methods for providing remote cable and broadband support have become more sophisticated, many multiple-system operators (MSOs) continue to wrestle with the cost of truck rolls and the deployment of field technicians. Truck rolls represent one of the largest chronic costs in the operations of cable and broadband service companies. Any time that service dispatches a truck, the company incurs a significant expense. Often, multiple truck rolls are required to resolve a single issue.

To the extent that a greater proportion of truck rolls can be avoided through an intelligent analysis process, broadband and cable companies can generate major savings. When on-site service calls are avoided, not only do service costs go down, it also translates into better customer experiences as problems are resolved more quickly. Furthermore, on-site resources free up for new equipment installations, thus increasing revenue opportunities and starting customer subscription plans sooner.

But truck rolls can't be eliminated simply by throwing more low-cost labor resource at the problem or by just working harder. Service firms require business intelligence to address the problem effectively.

The unnecessary truck roll challenge has grown more acute in recent years with converter boxes and modems constantly growing more sophisticated and delivering a wider range of services to home consumers. DocSys modems are evolving rapidly and consumers are quickly migrating to HD digital converter boxes with DVR functionality. Converter boxes will soon transform into data modems communicating to TVs from the cloud as consumers begin using television smart devices for loading pictures as well as accessing social media such as Facebook and Skype.

The good news is that with all this sophisticated technology, many new revenue opportunities abound for MSOs. According to Broadbandtrends.com, global fixed-broadband subscribers are expected to grow from 642 million at the end of 2012 to 859 million by the end of 2018, and global penetration of households will reach 45 percent during this period—up from 34 percent at the end of 2012. Optical fiber will offer the strongest growth opportunity as subscribers are expected to nearly double from 2012.[1]

According to Wintergreen Research, dedicated device markets in the set-top box sector that reached $8.7 billion in 2011 are anticipated to nearly double to $15.6 billion by 2018. Next-generation gateways and cloud computing will lead the way by managing Internet connectivity to HD TV devices in the home.[2]

With the increasingly-faster arrival of more sophisticated equipment, connectivity and device interaction has thus become quite complex. Along with the new market revenue opportunities, cable and broadband MSOs face the challenge of more service calls as customers struggle to make the new technology perform as advertised.

This white paper from OnProcess Technology examines the challenges cable and broadband MSOs face while trying to reduce truck rolls and how the success of current techniques has reached its maximum potential. The paper also presents a unique new methodology for proactively identifying conditions that indicate when truck rolls can be prevented—an approach that requires advanced data analytics as well as leveraging innovative customer-interaction techniques.

1. Global Fixed Broadband Subscriber Forecast (2013-2018), Broadbandtrends.com. Report No. 13-1090, March 2013. http://broadbandtrends.com/yahoo_site_admin/assets/docs/BBT_GlobalBBOutlook2013_131090_TOC.9143355.pdf

2. Set Top Boxes: Market Shares, Strategies, and Forecasts, Worldwide, 2012 to 2018. Wintergreen Research, May 23, 2012. http://www.marketresearch.com/Wintergreen-Research-v739/Set-Boxes-Shares-Strategies-Forecasts-6968637/

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> “Truck rolls can’t be eliminated simply by throwing more low-cost labor resource at the problem or by just working harder. Service firms require business intelligence to address the problem effectively.”

Eliminating Unnecessary Truck Rolls While Reducing Related Support Costs

The broadband and cable industry has battled the challenge of reducing truck rolls for as long as customers have subscribed to these technologies. Many MSOs base manager bonuses on how much the service department lowers the truck roll rate for service incidents, and in some cases, managers are penalized for high truck-roll rates. MSOs thus constantly seek ways to avoid the expense of truck rolls whenever possible.



Legacy service models typically treat every service event the same and apply the same response methodology. Most approaches merely involve calling every customer to confirm service visits—with the hope some calls actually reach customers and that some issues can be resolved prior to truck rolls. Some MSOs also rely on techniques, such as IVR call-classification, to route calls to specific support personnel and additional pre-visit troubleshooting. These current methods have reached a plateau in terms of the level of improvement they can offer in cancelling truck rolls.

Adding to the challenge are the equipment incident volumes that typically overwhelm the resources of most MSO staffs or their outsource service provider. The extreme pressure to keep call durations to a minimum—along with the inability to classify service call-types and the absence of well-constructed troubleshooting techniques—prompt many call centers to simply resort to the path of least resistance: scheduling truck rolls to address customer service incidents in person. Unfortunately, this approach also generates the path of greatest cost to the service center.

To reduce truck roll costs and improve customer experiences, cable and broadband companies must elevate their approach with analysis that identifies the type of service incidents most likely to present opportunities to cancel a truck roll, and then apply the appropriate methodology to resolve the issue. Doing so allows MSOs to proactively identify significant groups of customers who if contacted by phone, are most likely to have their problems solved—without a single truck roll.

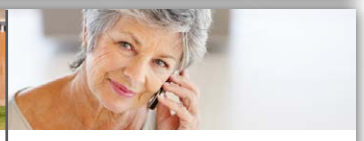
Reduction of Service Costs in Three Ways



Identifying customer service issues with a high propensity for remote resolution lowers the number of proactive outbound calls companies make.



Avoiding truck rolls more frequently lowers overall service expenses.



Improving perceived levels of service to customers generates higher satisfaction rates, which leads to longer-lasting revenue streams.

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> "The collected analysis data improves effectiveness by identifying a smaller pool of customers with pending service events. Companies thus will not need to make as many outgoing calls since they can focus on the 30% of customers with incidents more likely to initiate onsite visits that can be cancelled."

Despite the many programs employed by cable and broadband companies over the years to reduce truck rolls, our interactions with numerous clients shows that the industry continues to find 25-30% of all truck rolls could have been cancelled with the correct pre-emptive triage and phone troubleshooting techniques. As truck roll rates continue to persist while customer bases grow, the high rate of unnecessary truck rolls hamstrings many MSOs.

Costs Related to Service Events

ACTIVITY	AVERAGE COST
In-Bound Service Request/Troubleshooting	$8 per call
Initial Truck Rolls	$50 per truck roll
Post-Incident Calls	$8 per call
Repeat Truck Rolls	$50 per truck roll

Leveraging Data Analytics to Identify Opportunities for Cancelling Truck Rolls

The key to addressing the truck-roll-cancellation challenge lies in applying data analytics that allow cable and broadband MSOs to better identify which service incidents lend themselves to eliminating the need for a truck roll as well as which incidents clearly require truck rolls. Ranking customer incidents according to their propensity for resolution by phone or remote-access support allows service to focus resources on the customers more likely to present truck-roll-cancellation opportunities. Such analytic capability also allows phone-support personnel to spend minimal time on those incidents that definitely require truck rolls.

As an example, a cable or broadband company can leverage advanced analytics to identify a higher percentage of customers with issues more likely to be solvable by phone or remote-access troubleshooting—30% of all scheduled truck rolls, based on the industry average. The analysis can then drill down further into that 30% to create key customer sub-segments.

The top segment of customers may actually represent a 50% likelihood of solving their issues by phone while the bottom segment may represent a much lower concentration, with only a 15% chance. With this information, service personnel know which customer incidents to focus the most time on. The analysis can also create profiles of each customer segment with attributes that indicate how the customer segments differ from each other.

After applying analytics to identify service incidents more likely to be resolved over the phone or by remote access, service personnel then leverage advanced troubleshooting techniques to actually solve the customer issues. This resolution component requires trained personnel with appropriate skill sets to work effectively with customers who may be technologically challenged and/or may create a stressful call environment due to dissatisfaction with their equipment or service. Generic outsourced call-centers generally do not have this specialized experience and expertise.

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OnProcess Technology develops true solutions to our clients' challenges using our combined strengths in People, Process & Technology as no other company can.

We start with deep subject matter expertise focused exclusively on the service supply chain. Supported by our proprietary technology platform, our strong data management and process methodology, optimal mix of proactive outreach technologies and media, and data-driven analytics and reporting, OnProcess Technology gives its clients unprecedented insights into their service supply chain operations and customer service experiences. With OnProcess, you'll be able to better plan your new product and service launches, make smarter and more efficient parts purchases and distributions, link all of your disparate systems, vendors and locations together to drive a fast, efficient and accurate service operation.



The combination of advanced analytics with innovative troubleshooting techniques and trained personnel presents a stark contrast to firms that simply throw more resources or low-cost resources at every service incident. Because the advanced data analysis approach identifies customer cohort groups with service incidents that carry the highest likelihood of eliminating truck rolls, service incurs lower costs. The time to place outbound customer calls is reduced, and the total number of truck rolls grows smaller.

Additional analytics and voice-of-the-customer initiatives allow MSOs to identify reasons why a particular customer segment runs at high rates of service that require a call but don't require a truck roll. The MSO can then consider product issues as well as sales and education processes that lead to service incidents and apply improvements to reduce overall service incident numbers for a particular customer segment.

The data intelligence also delivers additional benefits that accrue in relation to the reduction in truck rolls:

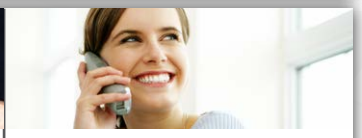
Benefits That Accrue in Relation to the Reduction in Truck Rolls



Improved optimization of workforces and increased revenue by creating more time for field technicians to handle new installations.



Distribution of workloads more evenly across technicians since the overall load to handle customer service incidents grows smaller.



Improved phone call efficiency with a reduction in the number of inbound calls and shorter call durations.

Data analysis backed by advanced triage tools also leads to improved diagnosis, so truck roll onsite times can be reduced as technicians become more efficient in fixing problems by leveraging the diagnosis information. The diagnosis is also likely to identify situations where only replacement parts need to be shipped.

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Delivering Appropriate Communications Based on Unique Customer Needs

OnProcess Technology has developed an analytical solution specifically for cable and broadband MSOs that segments customer incidents ranging from those with highly-avoidable truck rolls to those where truck rolls are likely unavoidable. Drivers of the data model include a variety of factors that create a final score for each customer segment:

- **Type of service call**
- **Customer truck roll history**
- **Type of device**
- **Overall customer history**
- **Customer demographics**

For customer interactions attempting to eliminate the need for a truck roll, OnProcess develops custom scripts and tactics for troubleshooting technical issues; fixing account set-up errors that did not provide the correct set of services; and customer education on how to use services and/or devices. All three areas improve customer satisfaction by solving issues sooner and by preventing truck rolls that take additional time to schedule.

The OnProcess solution also features flexibility to tailor the model according to the unique aspects of a company's service operations as well as unique customer aspects. The end result is a range of customer segments that show which customers are over-served by unnecessary truck rolls as well as those under-served by delayed truck rolls that turn out to be absolutely necessary. This creates a triple-win scenario:

Triple-win Scenario



In addition to providing data analysis that creates different customer segments, OnProcess also provides a range of technical support actions that can be applied to each customer segment based on its profile. While the segment that represents the highest likelihood of preventing truck rolls receives the greatest focus of support intervention, the segment that represents the least likelihood of preventing a truck roll may receive no intervention at all. Service simply schedules the truck roll.

For customer segments that fall in between the two extremes, OnProcess develops action plans on a sliding scale of support activity.

For example, all of the in-between customer groups may receive phone calls attempting to solve issues, but the duration of the call and/or the number of attempts to solve the problem by phone will be dictated by the each customer's likelihood of solving the problem over the phone or through remote access.

The overall objective is to maximize phone and remote access time while reducing the number of truck rolls—by delivering the appropriate communications to each customer segment at the right time based on each customer's unique needs.

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The OnProcess Approach for Helping MSOs Avoid Truck Rolls and Reduce Service Costs

1. Apply advanced data management to identify priority cases followed by outreach techniques using sophisticated, multi-channel processes to ensure high customer-contact rates.

2. Leverage the OnProcess proprietary triage solution starting with MSO questions supplemented by ongoing acquisition of response data to create a predictive model and knowledge-base that quickly provides a solution to avoid costly truck rolls and improve customer experiences.

3. Analyze data to drive continuous improvement over time to further predict the most important service incidents and those most likely to be resolved without truck rolls.

With the OnProcess approach, MSOs realize significant benefits in multiple areas:



Increased truck roll avoidance rates as more on-site service events are cancelled.



Decreased outreach efforts.



Reduced lead time for service-event requests and reduced resolution times.



Minimized need for rework.



Improved visibility into resolution issues to identify process-improvement opportunities.



Improved customer experiences.



Accelerated revenue generation as more resources are diverted to new-equipment installs.



Enhanced capability to utilize data intelligence to implement a predictive approach toward service incident trends.

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Increasing Market Share as Demand for New Technologies Surges

As discussed earlier, the promising market outlook for cable and broadband MSOs in the coming years presents both tremendous revenue opportunities as well as significant service challenges. As consumers subscribe to advanced television and Internet capabilities, they will also require greater levels of service.

To profitably capitalize on the revenue opportunities and generate competitive differentiation, MSOs will need to reduce truck rolls as much as possible. In addition to lowering service operation costs, the reduction in truck rolls synchronizes with improved customer experiences as more issues are solved more quickly by phone and remote access—rather than forcing customers to wait for on-site visits. MSOs can also divert more resources to new-equipment installations to accelerate revenue generation.

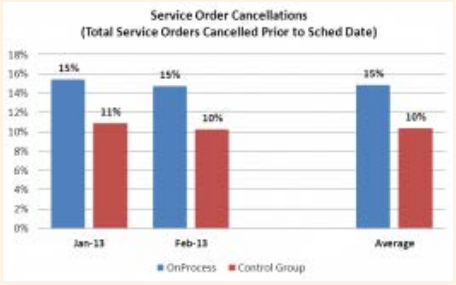
Reducing truck rolls first requires advanced analytics—to identify the 30% of all customer incidents the cable and broadband industry has historically serviced with truck rolls that proved unnecessary. MSOs then need to apply innovative resolution techniques based on proven methodologies while utilizing personnel trained to help customers under duress and quickly resolve their issues by phone and remote access.

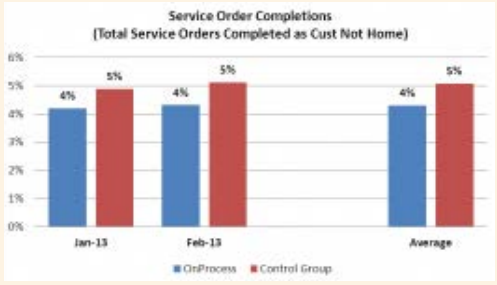
When executed effectively, MSOs can position their company to earn greater market share as consumer demand surges for advanced technologies in the home.

For more information on the content and concepts presented in this white paper, please contact Scott Gregorczyk: sgregorczyk@onprocess.com or 508.520.2711, ext. 2014.

MSO Truck Roll Reduction: A Mini Case Study

Within 45 days of implementing an OnProcess truck roll reduction program for a test group of customers, a large MSO benefited from significant improvements in overall service-order cancellations prior to scheduled service dates. The test group experienced a five-percentage-point improvement compared to the MSO's other customers. Raising the group's cancellation rate from 10% to 15% represented a 50% improvement. In addition, the OnProcess program provided a one-percentage-point reduction in the number of customer-not-at-home service calls for the test group. This represented an improvement of 40% versus the MSO's overall customer base.





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> As more OEM's narrow their focus on core products they need a solid partner like OnProcess to take over their aftermarket product and customer service functions with no dip in the customer experience. OnProcess is well positioned in this "sweet spot" as evidenced by their growing list of clients.
>
> **Dr. Bruce C. Arntzen,**
> Executive Director, MIT Supply Chain Management Program, MIT Center for Transportation & Logistics

Contact OnProcess Technology

For more information on how OnProcess can help optimize your service supply chain operations, contact our corporate sales team at 508.623.0810 or sales@onprocess.com, or visit www.onprocess.com.

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