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WHITE PAPER

Reducing Return Rates on Consumer Electronics Products

Identification of High Propensity-to-Return™ Customers Must Supplement Product Design, Documentation and Technical Support Improvements

Table of Contents

"Accenture research estimates U.S. consumer electronics manufacturers, communication carriers and retailers spent an estimated $16.7 billion in 2011 to receive, assess, repair, re-box, restock and resell returned merchandise."

Accenture Report—"A Returning Problem: Reducing the Quantity and Cost of Product Returns in Consumer Electronics," by David Douthit, Michael Flach and Vivek Agarwal, 2011.

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Executive Overview

For many years, product returns have persisted at alarming rates across the entire consumer electronics industry. With razor-thin margins and intense competition, solving the challenge could pay huge dividends—not only in reducing costs associated with unnecessary product returns, such as those products with no trouble found, but also in improving brand loyalty and customer referral rates that lead to future revenue generation.

Just how big is the product return problem? Accenture research[1] estimates U.S. consumer electronics manufacturers, communication carriers and retailers spent an estimated $16.7 billion in 2011 to receive, assess, repair, re-box, restock and resell returned merchandise. Accenture also surmises manufacturers spend 5-6 percent of their revenue to manage customer returns while retailer returns represent approximately 2-3 percent of sales. Numbers such as these could mean the difference between profitability and loss for a product, and they could materially impact market share as well.

A second area of concern identified by Accenture is the return rate for consumer electronics devices, which falls between 11-20 percent of all products sold and continues to rise. In addition, approximately 58 percent of consumer electronics retailers and 43 percent of OEMs now experience higher return rates than in previous years.

Of all returns, a staggering 68 percent are labeled as no trouble found (NTF). Another 27 percent are associated with buyer's remorse, which can occur for reasons similar to NTF, such as sub-par customer education or improper expectation-setting at the time of the sale. When adding these figures together, **95 percent of consumer electronics product returns are initially attributed to something other than defects.**

This white paper from OnProcess Technology examines the causes and the impact of product returns, particularly NTF returns. We also discuss why the problem is so acute within the consumer electronics industry that includes smartphones, tablets, laptops, desktops and other personal devices as well as home entertainment systems.

We then provide an overview of the unique approach we have developed that enables consumer electronics firms across the entire supply chain to identify and proactively reach out to those customers most likely to submit returns. This capability reduces product return rates as well as the high levels of customer frustration that lead to the most undesirable outcome of all—customer churn.

1. Accenture Report—"A Returning Problem: Reducing the Quantity and Cost of Product Returns in Consumer Electronics," by David Douthit, Michael Flach and Vivek Agarwal, 2011.

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Product Returns Erode Profit Margins and Impact Entire Supply Chains

As the research presented indicates, the product return problem continues to grow. Multiple factors create this situation such as a proliferation of features and functionality, insufficient usability education on how to access features, and the complexity of the consumer electronics supply chain.

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New product models and upgrades are introduced at an increasingly faster pace. There are also ever-increasing new product functionalities. In the wireless industry for example, Bluetooth pairing, near field communication, MiFi, WiFi, e-mail, push-to-talk, texting, Skype, navigation, music, apps, cameras, and video cameras all contribute to product returns by making it more difficult for consumers to understand how functions operate and how to properly access the functions. Many other electronics products also create user-interface challenges for customers.

Eliminate Unnecessary Players

Complex supply chains, which include OEMs, distributors, carriers, retailers and outsource contract firms, might all play a role in managing returns and interacting with customers. In some cases, multiple players handle the return of a single product. This, along with the changing technology, exacerbates the product return issue by creating even more confusion among consumers.

Some returns occur because of genuine "buyer's remorse," but many more returns occur due to poor documentation, the improper setting of customer expectations, insufficient customer education, and inadequate after-sales support. The effects of these causes are felt throughout the supply chain.

Costly Customer Support

When a product return occurs, the firm within the supply chain that handles the product incurs a series of costs that hamstring product profitability. This includes the resource and communication costs of the technical support team that tries to resolve the problem with the customer—whether it's over the phone, via a remote connection, or in-person at a retail location.

Customer aptitude and the ability to communicate the specifics of issues also play a major role in whether or not tech support calls are resolved successfully. But because of the unpredictable and somewhat unmanageable behavior of customers, this variable is difficult to control. When companies handling product returns are unable to capture customer issues within their many systems the situation is aggravated further; due to their inability to efficiently resolve issues once devices are sold.

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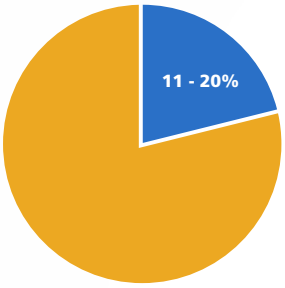

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Figure 1 Sample Incremental Costs of Returns: Wireless
(Source: OnProcess Technology Proprietary Research)

When the frontline technical support team cannot resolve the issue and the product is returned, the lab testing team then incurs the cost of trying to duplicate and diagnose the issue. In many cases, the reported problem cannot be reproduced. The majority of cases are thus labeled as NTF.

If the device is returned to inventory, by law it can no longer be sold as a new product. The product must be labeled as such with a corresponding lowering of the price. The combined cost of technical support, retail sales handling, returns processing, logistics, depot, lab testing and other administrative resources that support all the return-process functions as well as the inventory reclassification add up. The company loses its entire profit margin on the device and takes a loss.

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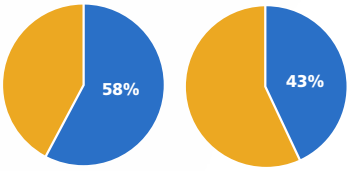

"Approximately 58% of consumer electronics retailers and 43% of OEMs now experience higher return rates than in previous years."

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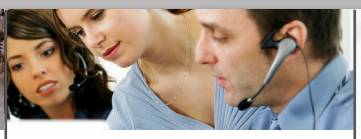
Looking Beyond Product Returns as a Cost of Doing Business

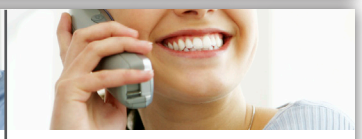
Although the consumer electronics industry is keenly aware of the product return issue and just how much the cost for these returns impacts the bottom line, many firms have reluctantly resigned themselves to consider product returns as a cost of doing business that can't be changed. But taking a new perspective on the challenge is critical since successfully addressing the product return challenge enables consumer electronics firms to realize three significant benefits:

Benefits of Efficient Product Returns

Decreasing inventory expenses linked to product returns



Reducing costly customer technical support interactions and incident administration



Improving brand loyalty among customers, which increases new customer referrals

To take on the problem, the consumer electronics industry has employed many process improvements: easier-to-read documentation, changes to product designs so screens are easier to interpret and keypads are easier to manipulate, and education combined with the proper setting of expectations at the point-of-sale. Perhaps the area in which the industry has invested most heavily to resolve product returns is technical support.

The proficiency of phone and in-store support personnel to interface with customers and diagnose problems goes a long way towards resolving issues, especially when tech support can take over device control remotely or physically touch the device. But despite the efforts in all these areas over the past 30 years during which the consumer electronics industry has exploded, entire supply chains continue to wrestle with product returns. Not only do they suffer from reduced margins due to the cost of returns, they also suffer in terms of brand reputation.

Customers that return a product with an assumed defect rarely recommend that product to friends and business colleagues. And even though NTF product return customers may actually be wrong in their interpretation, the situation is a fact the industry must face. In these cases, perception is reality.

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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.

A Transformational Approach: Identifying Customers with High Propensity-to-Return™

To effectively address the product return issue, firms in the consumer electronics supply chain must first comprehend the severity, complexity and the scope of the problem. Improving product return rates does not occur overnight. It requires a carefully planned approach and the application of ongoing system improvements. After a company begins to understand the causes of returns to a greater extent, only then can the necessary process improvements be applied to reduce the return rate.

Improving the Product Return Rate

Because of the dynamic characteristics of new products and the way customers interact with products, return rates can never be reduced to zero. But with the correct approach, the rate can be lowered significantly so firms that handle returns can improve support and inventory costs while also enhancing brand reputation. To supplement efforts in improving documentation, product designs, education at the point-of-sale and technical support, a critical first step in improving the product return rate involves identifying those customers with a propensity to submit returns.

To provide the consumer electronics industry with this unique capability, OnProcess Technology has devised a proprietary scoring algorithm with statistical modeling that predicts the likelihood of customers to enact a return. To create the Propensity-to-Return™ algorithm, we relied on our internal expertise in advanced data-analytics and post-sales service processes within the consumer electronics product industry.

When working with customers, we also apply a Six Sigma data-analysis approach in assessing customer demographics along with customer product interaction history, the attributes of the purchased product, and the attributes of the internal support team that handles returns. This overall approach has given us the ability to create an entirely new paradigm that transforms how consumer electronics firms can address the challenge of product returns.

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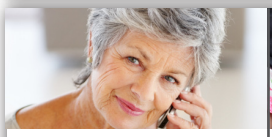
Almost 60% of organizations list "Improve Customer Satisfaction" as their primary objective for 2012.

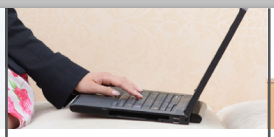
Aberdeen, January 2012, Customer Experience Management, Using the Power of Analytics to Optimize Customer Delight

Depending on the customer base, the product, and a firm's support attributes, the OnProcess Propensity-to-Return algorithm potentially takes into account dozens of factors to determine the likelihood of customers submitting returns. Following are a few examples:

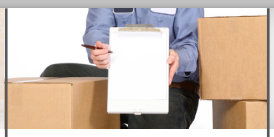
Factors Leading to Returns



Customer age and location

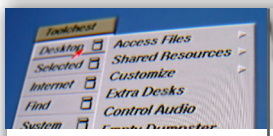


Customer experience with consumer electronics



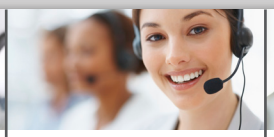
Past customer return history

Type of product service plan



The complexity of the product

Average length of tech support time for the product



The experience of tech support agents and their skill set

Customer, product and internal support attributes

Many other customer, product and internal support attributes can also be factored into the algorithm depending on the product and the firm's business objective. What shapes the algorithm depends highly on the market and target customer for the business.

As a brief, simplified example, the algorithm can consider that a person purchasing a smartphone for the first time is more likely to run into a "set" of particular user issues based on certain demographics versus another person. Another customer may purchase a smartphone for the second time but the prior device was of a different OS and therefore runs into a most likely "set" of usability issues leading to buyer's remorse.

A second area that the OnProcess approach analyzes is the product features that most often lead to returns. This analysis produces a measure of the top causes so that pre-sales personnel and technical support personnel can be aware of them when interacting with customers. They can then follow scripts to deliver education on those features at the appropriate time and according to customer usage tendencies.

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Applying the Propensity-to-Return™ Algorithm

The OnProcess algorithm that measures propensity to return can be applied to a population of customers that purchase a particular product. The resulting database factors in the applicable attributes and then ranks customers according to their individual return tendencies. The algorithm then divides the customer list into segments and creates an average return propensity for the customers within each segment.

For example, a listing of 100,000 customers that purchased a particular smartphone model could be divided into 10 segments of 10,000 customers each. The resulting segments would then be placed on a spectrum, with Group 1 being most likely to submit a return and Group 10 being least likely as illustrated in the diagram below:

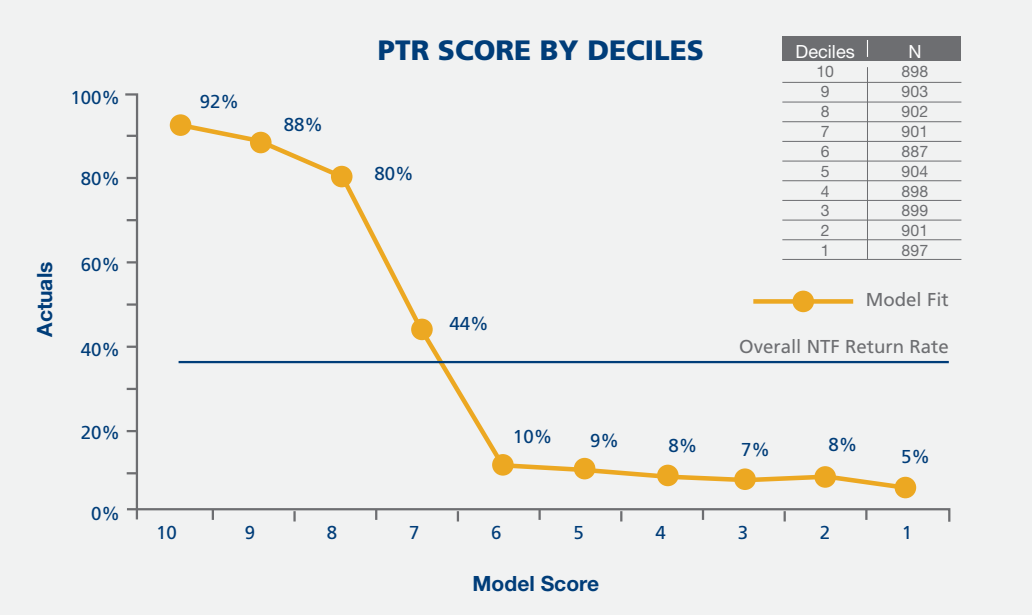

Diagram 2: The output of the OnProcess PTR Scoring by Deciles model is validated with historical data and control groups.

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Expanded Methodology to Reduce Product Returns

Admittedly, there is more to the process than identifying segments that demonstrate high potential for improvement. Impactful results will also be realized through a number of avenues, including, but not limited to these activities:

Identifying Impactful Results

Identification of value-added drivers	Root-cause analysis leading to continuous process innovation	Optimized, proactive customer outreach/blended communication	Designed, randomized control trials to demonstrate cause-and-effect	Workshops on benchmarking and best practices

For example, customers in segments that demonstrate the highest potential for improvement through randomized trials could be proactively contacted and educated on the top features that result in product returns. The same script can also be applied to incoming support calls and pre-sales interactions to further reduce product returns. Additionally, it is essential to determine the point-in-time that outreach should occur:

- First customer inquiry
- Sales transaction date
- Date of first use
- A specific amount of time after the purchase, such as 24-48 hours, or one week
- Date product is returned

Consumers interact with electronic devices in a highly dynamic and fickle manner. As a result, knowing **when** to contact customers becomes an increasingly complex decision. It is imperative that high-propensity to return customers are considered for contact at each of the aforementioned stages in addition to other customer touch points.

It is also important for there to be a designated point-in-time when the primary outreach effort occurs. This can vary depending on the product and the customer. As the OnProcess approach is applied over time, firms gain visibility into how and when to best interact with product return customers.

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How Do Your Service Supply Chain Operations Measure Up?

According to Aberdeen in its January 2012 report—Customer Experience Management, Using the Power of Analytics to Optimize Customer Delight—best-in-class businesses achieve these levels of success within their customer service supply chain operations:

- **82%** customer retention rate
- **34.7%** average year-over-year improvement in response to customer inquiries
- **21.4%** average year-over-year increase in customer lifetime value
- **19.8%** average year-over-year increase in customer satisfaction[4]

Aberdeen, January 2012, Customer Experience Management, Using the Power of Analytics to Optimize Customer Delight

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The Payoff for Reducing Product Return Rates

Conducting proactive outreach to customers with a high propensity-to-return rate and taking them through the features that most often cause returns is a big first step in reducing the product return dilemma that has plagued the consumer electronics industry for many years.

The Accenture research referenced earlier also presented that in some cases, returns can be reduced 20 percent[2] by identifying and contacting high propensity-to-return customers within 24 hours of their purchase. The script that support personnel rely on during these calls does not necessarily need to be detailed. The simple fact that customers identified with a high propensity to return are contacted, is a good first step that can reduce the return rate appreciably.

In addition to having a positive impact on customer perceptions of the product, the outreach generates valuable feedback on the changes necessary to reduce returns even further. Manufacturers and their supply chain partners will better understand which product design changes to make as well as which changes to apply to product documentation, customer onboarding processes, and education programs.

Projected Return Rates

By employing the OnProcess Propensity-to-Return approach, all companies within the consumer electronics supply chain—manufacturers, contract manufacturers, distributors, carriers, and retailers—also gain visibility into specific product lines and models. This new business intelligence helps determine in advance which products and which processes are more likely to produce the highest and lowest return rates.

Given the unpredictability of how products perform and how customers interact with products, the return rate may never reach zero. But targeting a 20 plus percent reduction is within reach for many products over time. This level of success pays major dividends in reducing product return support costs as well as improving brand reputation. With the proper tools and processes, as well as improvements through feedback the OnProcess approach naturally generates, firms can then reduce return rates by even greater percentages.

The key is to create an environment where product returns can be managed and brought under control. The OnProcess Propensity-to-Return algorithm helps in this endeavor by creating business intelligence so that companies can identify customers most likely to return products. This drives visibility into understanding return tendencies and improves the ability to forecast return rates. It's an ongoing process that continually improves as companies begin to understand their customers and their product return habits to an extent previously not thought possible.

For more information on the content and concepts presented in this white paper, please contact:

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2. Ibid.

Reducing Customer Remorse Returns:

A Product Return Case Study

A leader in the wireless market partnered with OnProcess to reduce remorse returns for a networking device. We devised a campaign to provide customer education targeted at the point-of-first-use.

During the communication, customer service agents walked customers through the product set-up and then provided instruction on basic features and functionality. The agents then performed any necessary tier-1 troubleshooting.

The OnProcess campaign activities reduced the remorse return rate from 20% to 15%—an overall improvement in the return rate of 25%. The approach also reduced the amount of product detractors by from 16% to 8% and increased the amount of champions from 58% to 66%.

Aberdeen, January 2012, Customer Experience Management, Using the Power of Analytics to Optimize Customer Delight

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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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