Using People Counting and Conversion Rates to Increase Sales

Envysion®

What is People Counting?

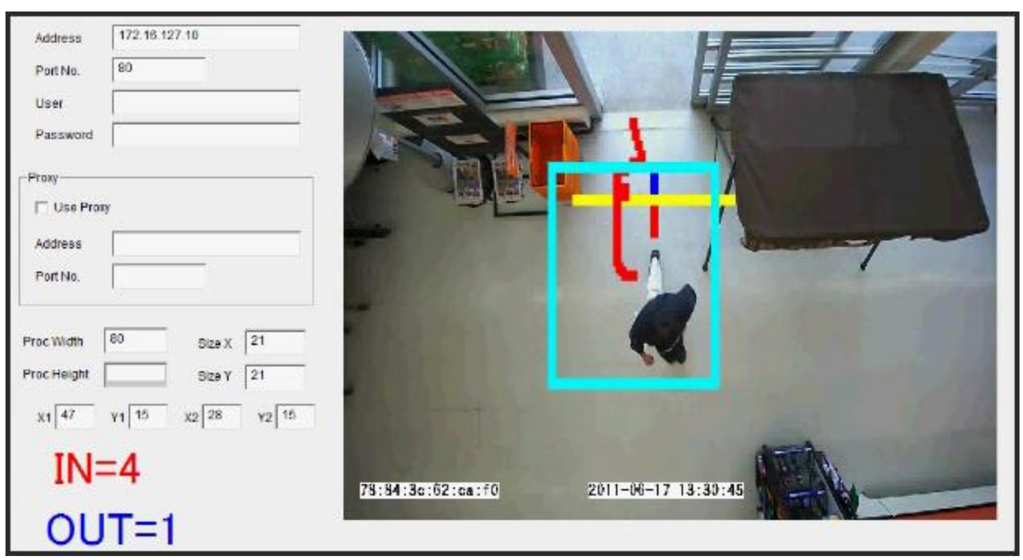
People Counting is, quite simply, counting people entering and exiting your store locations. People Counting gives retailers a critical view into the dynamics of their operations. Without it, retailers can find themselves making uninformed decisions in the absence real data.

People counting data becomes substantially more powerful when combining it with other data sources – specifically, POS data. By combining People Count data with POS data, retailers can compute conversion rates. As we will see, Sales can be broken out into its various components, one of which is conversion rate and different actions taken with regards to the various components.

People Counting can be performed with various technologies including sensors that merely detect a threshold being crossed without regard to direction to high-end cameras that detect direction, to infrared systems that detect direction and eliminate false positives from inanimate objects such as shopping carts. Using cameras for People Counting straddles the line of cost efficiency and accuracy. Additionally, by using cameras, retailers can also review video to gain insights to operational processes to assess changes required.

Why is People Counting important?

As previously mentioned, People Counting is important because it gives retailers the visibility into their operations required to have a full picture of factors behind sales *and* where action should be taken to address opportunities to improve sales. People Counting is also necessary to compute Conversion Rates, which retailers need to fully understand whether prospects are being converted to customers effectively. Without People Counting, retailers are missing the complete picture and making



Example of high-end camera equipped with video analytics decisions based on gut feelings.

What is Conversion Rate?

Conversion represents how well a store is executing – converting would-be, prospective customers into paying customers. Conversion Rates are possible to compute for retailers only when combining two otherwise disparate data sources: People Counting and the POS. Conversion is simply the number of transactions divided by the number of people.

Conversion is, of course, dependant on a number of factors, including having a good sales staff, the right prices for the perceived value, the right selection and the right selection in stock, but knowing the conversion rate is half the battle. If you can recognize across your stores' outperformers and your underperformers, you can study both – compare and contrast – identify what one does well that the other doesn't. Evaluating conversion provides a strong feedback loop from which to take action. Review, take action, re-evaluate (did your tactic have an effect?), rinse and repeat.

$$\boldsymbol{Conversion\ Rate} = \frac{\boldsymbol{Transaction\ Count}}{\boldsymbol{People\ Count}}$$

The Complete Picture: How to Evaluate Sales

When you evaluate stores sales, there are four factors you should consider:

1. People Count (customer traffic into your store)
2. Conversion Rate (the transaction count to the people count – converted prospects)
3. Average Dollar per Transaction (how much customers spend when they do buy)
4. Shrinkage (how much revenue is lost from extraneous causes – e.g. employee theft)

These four factors combine to create the below equation for sales. People Counting gives you visibility into the first two components – customer traffic into your store and Conversion Rates. Without it, any analysis you do to analyze sales is incomplete.

By recognizing the four factors independently, retailers have a starting point from which to dissect sales, evaluating and identifying across locations where there may be opportunity to improve across any of the components contributing to the top line.

A retailer may start with a scorecard highlighting first three components

$$\boldsymbol{People\ Count} \times \boldsymbol{Conversion\ Rate} \times \overline{\boldsymbol{Dollars\ per\ Transaction}} - \boldsymbol{Shrink} = \boldsymbol{Sales}\ (\$)$$

of sales: People Count, Conversion Rate and Average Dollars per Transaction – across comparable stores – e.g. mall locations to mall locations; stand alone stores to stand alone stores – to evaluate which metrics to focus on for a given underperforming store. The metric will guide the tactic:

People Count will largely be the marketing department's responsibility – *How to build awareness and drive demand in order to get more prospective customers through the doors.* This could entail a regionally focused campaign or promotions to lure customers into the store.

Conversion Rates will largely be the domain of operations, and to a lesser extent, loss prevention. If Conversion Rates are low, operations will need to do a serious evaluation to figure out why. Reasons could include:

- Staffing levels
- Customer experience (a derivative of sales tactics and/or a consequence of staffing levels that are too low)
- Selection and inventory
- Price and promotions
- Shrink

Average Dollars per Transaction will be the domain of operations. Often this simply comes down to sales tactics used to cross-sell and up-sell. *These wicking socks will keep your feet cool in your shoes. Would you like to purchase an extended warranty for your new TV?*

The beauty of using video for people counting is that you can use the same video to review operations and gain insight into where the issues may lie – *Are salespeople standing around when they should be helping customers or are they overwhelmed and running around because they are understaffed? Do customers see and respond to promotions?*

These reasons are not mutually exclusive. If the intent is to measure the effect of changes, only a minimal number of variables should be changed at one time – e.g. a retailer may focus on adjusting staffing levels and training on sales tactics first, capture feedback in terms of shifts in conversion, then begin to adjust product selection and pricing.

Shrink

Finally, shrink may cause Conversion Rates to be artificially low due to skimming. Identifying and eliminating shrink will require coordination between operations and loss prevention.

Who should be using People Counting across the organization?

By looking at the Sales equation, one can surmise that People Counting data is valuable for different functions across the organization. First, let's consider those who should be interested in People Count numbers are:

- Marketing
- Operations
- Loss Prevention

Marketing should be interested in raw People Count numbers to see whether they are effective in driving customers into the store. Operations should care about conversion rates – how many would-be customers in their stores are actually buying, and average dollars per sale – are salespersons taking opportunities to cross- and up-sell. Loss prevention should also be concerned with conversion rates and average dollars per sale, if either of those metrics are inexplicitly low, this may be an indication of shrinkage issues.

Functional Ownership of Sales Equation Components

	People Count	Conversion Rate	Average Dollors per Transaction	Shrink
Marketing	X			
Operations/Sales		X	X	
Loss Prevention				X

A strong argument could be made for operations to own People Counting. Operations will be the first to take action on the data by adjusting staffing levels and (re)training to ensure sales processes are being followed. However, it is critical that there is strong culture of cross-functional communication and data sharing. If the operations spots that overall People Counts are low, marketing may need to engage to drive more customers into stores. If operations witnesses that conversions or averages dollars per sale are low, but there is no obvious culprit, Loss Prevention may need to be engaged to perform a deeper investigation.

People Counting and MVaaS

Using a Managed Video as a Service (MVaaS) provides an end-to-end solution to review and manage each variable of the sales equation. Cameras equipped with video analytics technology perform People Counting. The People Counting data is integrated with video in the MVaaS platform, which also integrates point of sale (POS) data. The MVaaS system can easily compute Conversion Rate using the POS and People Counting data for users. The POS data is also used to compute Average Dollars per Transaction and is used by loss prevention for other exception-based reports to identify possible shrink, which the loss prevention team can rapidly investigate via the corresponding video.

As previously mentioned, a big benefit of a comprehensive solution is that as you decide how to act on your people count and conversion data, you can form more intelligent hypotheses to test because the video provides insight behind the data where you would otherwise be (literally) blind – e.g. you can review whether poor conversion rates are a function of a problem with complacent sales staff who are adversely affecting customer experience or whether you are under staffed during peak hours.

At the end of the day MVaaS is a single, easy to use solution that is leveraged across all functions of your organization to have a more profound impact.

Limitations of People Counting

Though technology continuously improves, there will invariably be some false-positives in your People Count data. Sources of these false-positives are store employees entering and exiting the store through the main doors, inanimate objects such as shopping carts being counted and multiple people who ought to be counted as one – e.g. a husband and wife couple who buy everything on a single transaction. When counted as two people, the couple causes a conversion rate of 50% when it should technically be 100%.

Some environments will be more prone to false-positives than others. These are primarily environments where there is an unavoidable amount of traffic through store entrances by employees or inanimate objects. For example, this could include any store where shopping carts are used and employees are collecting shopping carts, such as grocery stores and big box retailers, or stores where the merchandise is outside and salespeople go through the doors to meet the customer, such as car dealerships.

Don't fret. There are ways to address inaccuracies. For one, if there are side doors that are appropriate for employees to use when coming and leaving, you could instigate a new policy for employees to use these doors whenever possible. For environments where employee usage of the front door is unavoidable, after reviewing a sample of video, you can determine an adjustment factor to apply to count numbers by looking at the ratio of employee counts to true customer counts in order bring them into line.

With regards to conversion rates, the trend is the most important. This assumes that on a day-to-day basis, the bias introduced by customer units – e.g. the husband and wife couple – remains relatively constant.

Lastly, retailers should periodically audit their data. Especially if there is a drastic, anomalistic change in data on any given day, someone should be in charge of reviewing the video to make sure there was no extraneous factor, e.g. a new product display, introduced into the view of the People Count camera.

Conclusion

Without People Counting, retailers have an incomplete view of their operations and sales. Conversion rates are born out of the synthesis of otherwise disparate data sources. Insights gleaned from conversion rates are some of the most important data a retailer can acquire and use to improve store performance. People Counting and Conversion should be used to measure store performance on an on-going basis to continually identify areas for improvement.

People Counting and its applications are valuable to different functions across the organization. Because some functions need to own capturing and reporting on the data, this raises the need for effective cross-functional collaboration.

In evaluating store sales look at comparable stores. Measure them in a scorecard along the factors that make up sales and determine where improvements need to be made. Use benchmarks. Dissect what your best stores do well and what your worst stores don't do so well. Implement changes and monitor improvements across the metrics for continuous feedback to elevate store performance to the next level.

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About Envysion

Envysion enables businesses to increase profitability 10-15% by putting easy-to-use, video-based business intelligence into the hands of the entire organization. Envysion's Managed Video as a Service (MVaaS) solutions transform traditional video surveillance and enterprise business intelligence from niche applications used by a handful of users into a strategic management tool that provides instant and unfiltered business insights to users across operations, loss prevention, marketing and human resources. Envysion created the MVaaS model, which brings the Software as a Service (SaaS) approach to video and disrupts the traditional video market. The MVaaS model enables Envysion to accelerate development and innovation cycles by making new capabilities immediately available to all users and eliminates the technology obsolescence that comes with the model year development cycles of traditional video providers. Envysion's highly scalable and easy-to-manage MVaaS platform reaches across departments to 1000s of users and trusted third party partners without straining the IT department or network. Today, Envysion's solutions are driving bottom line profitability improvements for large, national retail, restaurant, cinema, hospitality and convenience store operators. For more information, visit www.envysion.com or call 877.258.9441.