

# Whitepaper: Queuing And The Customer Service Promise

By Lorie Fontaine



# Introduction

Customer satisfaction on the front end is a key contributor to a customer's overall satisfaction with a retailer. In this paper we define queue management, the value it can bring to your business and the steps necessary to effectively manage your queues. We've also provided examples of how Irisys customers have used the system to improve their business and sustain their front end strategy.

## Queue Management and customer satisfaction

In 2015, Consumer Reports polled their readers about grocery store satisfaction; the biggest complaint was 'not enough open checkouts'. In the 2014 ACSI supermarket study[1], customers give their lowest marks to 'speed of checkout lanes'. Another grocery study, conducted this year by Market Force Information, showed that "...the greatest opportunities for differentiation are in operation-related attributes, such as fast checkout, gracious staff and atmosphere." [2] Customers can't be any clearer in their desire for a faster checkout process and the importance it plays in their overall satisfaction with a retailer. By managing check-out lines and wait times, retailers can take advantage of this opportunity to make a positive impression on their customers and differentiate themselves from their competitors.

For retailers, queue management is about understanding when and how many people line up at check-out and ensuring that the customers in those lines are taken care of in accordance with the retailer's service objective. Specifically, if the company's goal is to have no more than 3 people in line at a register, then achieving that service objective requires that someone or something is continuously monitoring and acting to ensure the goal is met.

The first step in managing lines (or queues) is accurately measuring them. Traditional techniques can provide some indication of queue lengths and wait times but don't provide factual, on-going, time-of-day measurement:

- Customer satisfaction surveys are costly and results aren't timely,
- Mystery shopper is also costly and only provides a snapshot of the front end,
- Work sampling studies are labor-intensive and if the retailer doesn't have in-house resources to conduct the studies, they are expensive to conduct, and;
- Store Manager self-reported data may be biased or unreliable.

The Irisys Queue Management system provides continuous, 24-hour measurement of queue lengths, wait times, cashier utilization, under and over staffing and other key metrics. With this information, the retailer can take the essential first step in effectively managing their queues – and that is **'measuring'** them. If customers are basing where they shop on how long they wait in line, isn't it time to start taking this attribute seriously and putting the same level of effort into measuring and managing it as you do other key attributes - like pricing and out-of-stocks?

Using thermal imaging, and a proprietary algorithm developed by Irisys' Lead Software Developer Stuart Holliday, the Irisys system counts customers as they walk through the door and as they approach the queue. He says: 'Our algorithms allow us to provide accurate and consistent measurement of queue lengths, and to determine the optimum staffing levels, which gives store managers and senior managers within the business the information they need to really understand what the customer experience is like in their stores. Our system allows retailers to base their decisions on the best available data.'

Using behavioural analysis, customers arriving at the queues are identified as individuals or as shopping groups. This information provides the arrival rate at registers. In addition to the historical data capture, there is a short-term forecast of arrivals to aid front end managers. With a count accuracy rate of 98% and over 350,000 installations, Irisys is the largest and most experienced people counting and queue management provider in the world.

# Understanding your current service level

Retailers don't want to disappoint customers by having long lines and wait times; that's clear by their advertisements and mission statements – "fastest checkout in town", "one in front", "if there are ever more than 2 people in front of you, we'll open another lane", "unequaled service", "personalized service", "we promise to open all lanes during peak periods" and so on. The intent is there, but it is the rare retailer that consistently delivers on that promise.

A common mistake retailers make in creating and then trying to deliver on a service promise is that they don't have an accurate picture of their current service level. Traditional measurement techniques, such as customer surveys and mystery shopper are a great first step, but they don't provide enough detail or fact-based information. So, when you make a service promise without knowing where you currently stand, you have no idea of the level of effort it is going to take to deliver on that promise – for some, you may have too many resources, for others not enough. As a result, to deliver you either spend too much labor or you don't deliver at all.

There is another way to ensure your service promise is delivered, and that is to have a measurement system in place that consistently monitors performance and provides guidance to the front end – ensuring you have just the right amount of labor. Three steps are involved:

- Accurately measure the service level you are providing
- Determine the service level you want to provide, and
- Calculate the effort required to deliver that level of service

The Irisys Queue Intelligence™ management system provides continuous, 24-hour measurement of queue lengths, wait times, cashier utilization, under and over staffing and other key metrics. The system gives you a fact-based picture of your current service level (queue lengths and wait times). This allows you to establish your service baseline. Once this baseline is established, you can determine the level of service you want to target.

One of the benefits of the queue management system is that it enables you to calculate the effort required to deliver your desired service level. For example: if you find that your average queue length is 3 and you want customers to experience a queue length of 2, the system will estimate the labor hours required to deliver that level of service. Service and labor have to be balanced; by having this data, you can determine what you are willing and able to deliver. The system then allows you to monitor store operations to ensure that service level is consistently delivered.



When measuring companies' current service level, we frequently find that their overall budgeted labor hours on the front end is close to what they need, but they are applied on the wrong day of the week or wrong time of day. Their workforce management system does a great job of forecasting based on historical transactions but doesn't take into account the customer demand behind those transactions. The Irisys Queue Intelligence™ management system can help you determine your current service level, decide the service level you want to achieve, calculate the effort required to achieve it, and provide 24-hour monitoring to ensure it is delivered all the time.

# Putting the right processes in place to support and deliver your service promise

## Steps to delivering a front end service strategy

Whether the retailer's service promise is a commitment to a specific wait time or queue length, or is more vague – like 'fastest service in town', a support system must be put in place to ensure that promise is consistently delivered. Our experience has shown that 3 basic components are required:

1. On-going communication to all associates (not just those at the front end) of the service strategy, how they are performing against the service objective, and each associates' role in delivering on that promise.
2. A measurement system that provides continuous monitoring of the service level being delivered – one that can be used by Store Management and Front End associates to proactively manage the front end, identify issues, take any needed corrective action, and optimize cashier labor.
3. Implementation of certain Front End Best Practices.

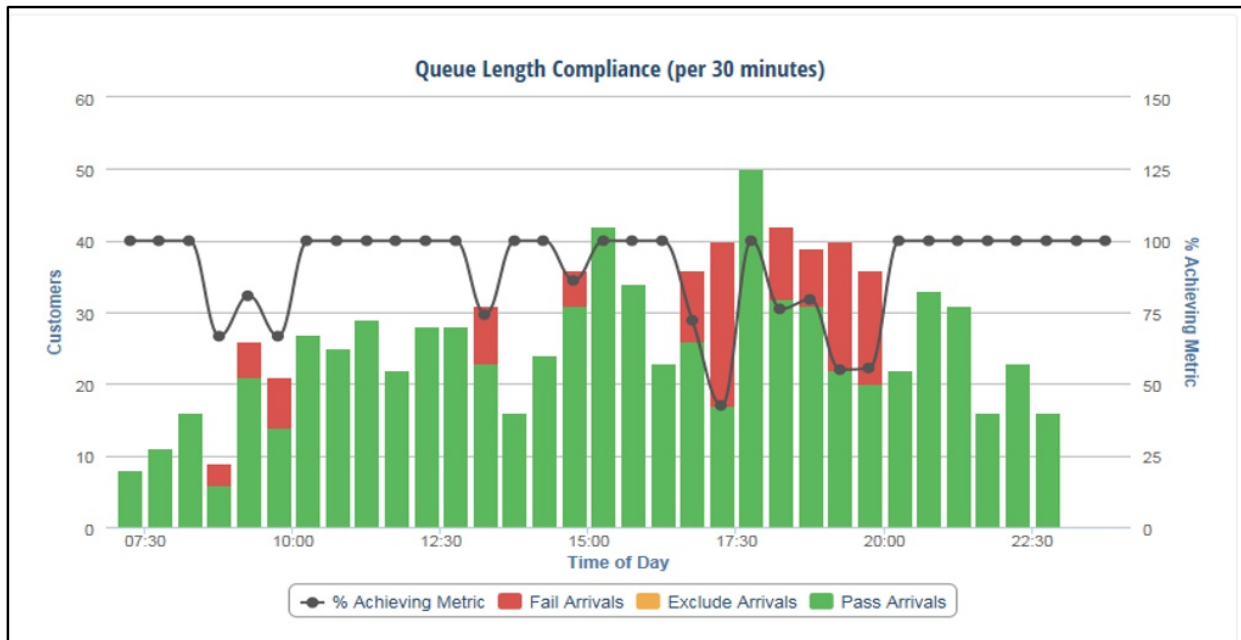
## Communication of the service promise

A check-out service strategy can only work if associates are aware of it. Communicating the strategy to associates takes planning and on-going training. Continuous reinforcement is required in order for it to stick. Retailers known for great service generally have spent many years building a 'culture of service'. Associates are indoctrinated into this culture from day one of their employment, and it is incorporated into all aspects of their training and daily communication with management.

Once the check-out strategy is determined, a communication plan is needed that clearly states the strategy and clarifies how each associate's role contributes to executing that strategy. It is also important to regularly communicate to all associates how they are performing against the service objective.

## Measurement System to monitor delivery of the service promise

The Irisys Queue Intelligence™ management system provides continuous, 24-hour measurement of queue lengths, wait times, cashier utilization, under and over staffing and other key metrics. The system has a real-time dashboard that shows the status of the front end. It provides end-of-day reporting that shows service levels by time of day, which can be used to identify trends, adjust labor schedules and train Front End associates. There is also a Till Profile that can be fed to the retailer's workforce management system. The profile provides a forecast of the number of registers needed by time of day to meet the service objective.



This is one output of the Irisys system. It shows:

- the arrival rate of customers at checkout by time of day
- the number and percent of those customers that received service according to the retailers promise (green) and
- the number of customers that didn't receive service according to the promise (red)

## Front End practices to support the service promise

As we worked with retailers around the world, we identified several key practices that support delivery of the service promise without using excessive labor. They are listed here; see our Customer Service Lessons white paper for additional detail [3].

1. Assign someone to manage the Front End and make sure that this person is properly positioned:
  - Physically positioned to properly monitor the Front End
  - Having the 'positional' authority to call for relief cashiers from other departments
2. Have a documented plan for handling unexpected peaks and troughs in customer traffic:
  - A prioritized list of associates that can be utilized as cashiers during peak traffic
  - A list of value-added tasks that cashiers can perform when not needed on the registers
  - A daily list of fixed tasks that the Front End Manager is required to complete during his or her shift
3. Make providing good customer service on the Front End the responsibility of the entire store. Make sure labor contracts are flexible enough to permit various job roles to fill the cashier role as needed.

4. Ensure that policies and practices don't allow or encourage sick call abuse and are designed to minimize the impact of unplanned absences on customer service.
5. Keep the Store Manager involved and responsible for meeting the customer service objective:
  - Tie the objective to the Store Manager's performance review and/or compensation
  - Require a daily meeting to review yesterday's results and today's challenges and plan
6. Design self-check-out practices to improve customer satisfaction on the staffed check-out lanes

Keeping your service promise takes communication, on-going measurement and correction, supporting processes and continuous reinforcement. The benefits, however, are tremendous and have been proven by the success of retailers known for reliably delivering great customer service.



# Key metrics for measuring front-end customer service

## Identifying the right KPIs

Once the front end service promise has been communicated and the supporting processes are in place, routine monitoring of KPIs is required to ensure that service is consistently delivered. Monitoring the correct metrics ensure that meeting the goal of one objective does not negatively impact others. This can be a balancing act as objectives may appear to conflict. An example might be a retailer that wants to improve their reputation for fast service and plans to open all registers during busy periods. This will likely reduce wait time at the registers, but it will also likely increase their labor percentage if the additional registers opened don't result in a proportional increase in sales.

Following are some of the key metrics we have found to be the most insightful in ensuring the appropriate balance between service and labor is maintained. The data source for these metrics comes from the Irisys Queue Intelligence™ management system, and from the retailer's own systems.

## Irisys system metrics

A few of the key metrics the Irisys system provides are listed below:

- Queue Length and Wait Time
- Actual Hours cashiers are at their registers available to service customers
- Cashier Hours Required to meet the service objective

Queue Length and Wait Time measure the customer's experience - how long they waited and how many people were in line in front of them. Actual and Required Hours show how well the store utilized cashiers – did they use more than, or not enough of the labor required to meet the queue length or wait time goal? Because all of the Irisys data is available by time of day, the retailer can see when labor should be moved to a different day or time of day. Our extensive experience has been that most retailers have sufficient labor scheduled to meet their goal, but that labor needs to be reallocated throughout the week and throughout the day.

## Retailer system metrics

Below are some of the key metrics the Retailer may need to monitor alongside the Irisys metrics:

- Labor % (cashier labor dollars as a % of sales)
- Store and Front End % Effectiveness (actual vs. earned labor hours)
- Cashier Relief Hours (hours used from other departments when front end cashiers aren't available)
- Demand (or Earned) Cashier Hours from the workforce management system

## Labor KPI's

Depending on the current state of the business, the Labor % goal may need to be adjusted to allocate more or less hours for service. Once the goal is determined, it is a good indicator of the balance between service and labor. Monitoring both Store and Front End % Effectiveness helps ensure that the effort to improve service on the front end doesn't negatively affect other departments. When the queue management system is initially implemented, we've found that stores tend to rely heavily on Cashier Relief Hours from other departments. As they work with the system and reallocate labor to the times where it is needed, the need for cashier relief from other departments decreases.

## Workforce Management System

The **Demand Hours** from the Retailer's workforce management system should be close to the Irisys **Required Hours**. When they aren't, we've found the following issues:

- Labor standards are outdated and don't accurately reflect Front End processes,
- Stores aren't following the Front End processes that the labor standards are based on, or
- Labor standards aren't aligned to the Retailers service promise – either the system doesn't allocate enough time to meet the service promise or the system allows too much time and there is wasted labor on the Front End.

Integrating the queue management KPI's into your daily and weekly reporting will keep the focus on service while making sure that the proper balance between labor and service is maintained. Please contact us for more information about other data the Irisys system provides and the insight it can bring into your business. The Irisys team has the expertise and experience to help you improve your service and optimize labor by monitoring the right data.

# Benefits of Queue Management

The primary function of the Irisys system is to track how many customers are waiting in line, how long they are waiting and to provide a real-time prediction of how many registers should be open to meet the retailer's service promise. This allows the retailer to continuously monitor and deliver their front end service promise.

Another major function of the system is to provide the required register staffing by time of day. This information is used to ensure that only the labor required to provide the desired service level is used, and that registers aren't being over or understaffed.

While these are the obvious benefits of the system, our customers have found lots of other ways to use the provided data and tools to better understand and improve their business. The following section describes a few of these uses.

## Additional uses of the system

### Door Count Data

The system provides a real-time and an end-of-day report of the count of people walking in each entrance. Our customers have used this information in a variety of ways:

- **Merchandising** - One of our retailers discovered that she was placing her featured merchandising units near the store entrance with the lowest customer traffic. She began placing the merchandising units next to the entrance with the highest traffic thereby increasing the number of shoppers that would see the units.
- **Store Entrances** - One of our retailers had coffee shops in several of their stores that had entrances from the outside. The coffee shops opened up into the store. They thought customers were using the coffee shop entrances; however, the door count data showed that these entrances were rarely used. The retailer made the decision to lock these entrances. This data-based decision relieved the store from having to monitor the entrance and possibly prevent loss from theft.
- **Shopping Carts** - Some of our retailers use the door count data to determine which entrance shopping carts should be staged by time of day for incoming customers.

### Door Count Data

The system provides a report that shows queue lengths at each lane by time of day. We have seen this information used several ways. A few of these are described below:

- **Register type** - The lane report clearly shows congestion at each register by time of day. With this information, one of our retailers was able to determine that they didn't have the proper mix of regular and express registers, and made the decision to convert some of their regular registers to express.

- **Problem registers** – because this report clearly shows lane congestion, several of our retailers have used it to identify and address issues pertaining to cashier speed, lane opening sequence and register visibility.
- **Validate** mystery shopper results and investigate customers complaints – because 10 weeks of lane report history is easily accessible, our retailers are able to go back and determine what was happening on the front end at the time of the report or complaint.

## Lane Scheduler

The Lane Scheduler is an Irisys tool that is used to build checkout opening schedules at the store level that align with the retailer's service objective. Two of our current customers that don't employ a workforce management system – one with several hundred stores and one with under 20 stores – use this tool exclusively to build their front end till opening schedules.

The above are just a few examples of how our customers use the data, tools and reports from the Irisys system. For a more complete list, see the Irisys Queue Management System Benefits document. This provides additional detail on system benefits and describes the Enterprise Reporting, Till Profile, Lane Scheduler and Predictor tools. Please contact us for more information on how the Irisys Queue Intelligence™ management system can help you improve your business.

# Sustaining your front-end strategy

How putting the right steps in place can ensure you sustain the benefits achieved with the Irisys Queue Intelligence™.

## Sustaining the change

At the start of any new system or process change there is a lot of attention and personnel around to make sure that everyone is using the new system or following the new process. However, the true test of a successful implementation comes long after the project has concluded, the hype is over, and the focus has moved on to the next project. Working with our customers across the globe, we have found that the key components to sustaining the queue management strategy are Training, Visibility and Accountability. The following paragraphs explain each of these components.

## Training

Training is expensive; however, our experience has been that the most successful retailers are those that invest this time in their associates. Each retailer's plan should consider all job classes that will be using the system, will be affected by the system, or be questioned about the system by customers. When creating the training plan, things to consider include:

- Promotions within the store that move an associate into a job class that is impacted by the system
- New hires – from outside the organization
- Transfers into retail from other divisions of the organization
- Transfers from stores that don't have the system into stores that do
- Turnover rate
- Periodic refresher training

After the initial change training is delivered, the following should be planned to sustain the use and effectiveness of the system.

## New hires and newly-promoted associates

Training on the Irisys system should be added to the training checklist of all job classes affected by the system. For most grocery retailers this means the Store Manager, Front End Manager, Department Managers and Cashiers. The amount and type of training will vary for each job class. For example, Cashiers may only need to understand the purpose of the system and how to respond to customers should they ask about the system. Department Managers (outside of the Front End) may only need to understand why it is important that their associates respond quickly to a call for cashier relief to the Front End.



The Front End Manager and Store Manager will likely need more detailed training on the reporting and use of the system. The specifics of the job classes and the training needs of each will be particular to each retailer. What's important is that training needs are carefully considered and delivered

### **Transfers from other divisions of the organization**

These associates will likely be trained as a new hire or newly-promoted associate

### **Transfers from stores that don't have the system**

Transfers between stores are common. These are the associates that are typically missed and the largest issue retailers have in sustaining the system, as placing the mechanisms in place to ensure that these associates are trained is not easy. Missing these transferred associates can quickly deteriorate use and effectiveness of the system.

### **Turnover rate**

Understanding turnover in your stores is necessary to calculate the cost and effort required to keep associates up to speed on the system.

### **Refresher training**

It is ideal if a retailer is able to deliver refresher training periodically on key practices. There doesn't have to be a separate effort for each application. For example, refresher training on delivering front end service could include several aspects of the front end strategy such as when to greet customers, walking them to a product they are looking for, thanking them for shopping and how queue management helps deliver great customer service.

### **Visibility**

To ensure that a retailer's front end strategy is supported, maintained and protected from budget cuts, there must be a champion at the highest level of the organization. This is someone that understands how important delivering great customer service is to the long-term success of the organization and how customer service is a differentiator. This is also someone that will hold retail management accountable for achieving the service metric goals.

There should also be an easily-accessible 'expert' or 'champion' for store managers. This should be someone that retail managers are comfortable calling if they have a question about the system or need help applying the data. We have found this handled in a variety of ways:

- Some of our customers have field associates that are assigned to each retail department. These associates are responsible for staying current on processes and systems for their respective departments and are the 'go to' people for any questions.
- Some of our customers have chosen to assign one Store Manager from each district to be the 'go to' person for all of the stores in their district.
- One of our larger customers felt that the system was so integral to their front end strategy that they created a new position for each division to be the 'expert' or 'champion' for the queue management system, and a resource for all stores in their division. This position was in addition to the field resources already in place for the front end department.

Another way to keep the focus on delivering great customer service is to share the company's performance regularly and prominently. Several of our customers send the prior day's front end performance metric to their stores each day. One of our customers displays this information prominently in their headquarters lobby. These tactics emphasize to store management the importance of achieving their service metric and allow them to compare their store's performance with the total company.

## Accountability

The best way to hold retail managers accountable for achieving their service metric goals is to incorporate the queue management metrics into the financial report. If a retailer is truly committed to delivering great customer service, their retail management team will be held accountable for these metrics. One of our most successful customers also ties achieving the compliance metric to their Store Managers performance appraisal and bonus.

To be truly sustainable, queue management performance needs to become a standard metric for every store in the enterprise - measured, monitored and reported every day along with other key metrics such as sales and labor.

# Final Thoughts

There is a considerable effort required to achieve and maintain great customer service. The benefits, however, are tremendous and have been proven by the success of retailers known for reliably delivering great customer service. The Irisys team has the expertise and experience to help you improve service, optimize labor and put the right processes in place to ensure that improvement is sustained. Please contact us for more information on how the Irisys Queue Intelligence™ management system can help you improve your business.

## About The Author and contributors

Lorie has a background in Industrial Engineering and Strategic Project Management and a Master's Degree in Operations Research from Ohio State University. She has 20 years of experience in Grocery Retail, spending the past 4 years at Irisys working with retailers in North America implementing the Irisys queue management system and Front End best practices.

Stuart Holliday is Irisys' Lead Software Developer. He has a Master's Degree in Computer Software Engineering from the Imperial College London and has developed for Irisys for the past 14 years. Over that time Stuart has worked with multiple retailers, enhancing the Irisys system to meet the specific needs of each retailer.

## References:

1. ACSI Retail report 2014
2. Janet Eden-Harris, Chief Marketing Officer, Market Force Information
3. Customer Service Lessons: Sharing best practice, Irisys 2014



**InfraRed Integrated Systems Limited**

Park Circle, Tithe Barn Way, Swan  
Valley, Northampton, NN4 9BG  
United Kingdom

T +44 (0)1604 594 200

F +44 (0)1604 594 210

E [sales@irisys.co.uk](mailto:sales@irisys.co.uk)

[www.irisys.net](http://www.irisys.net)

**IRISYS Americas**

One Glenlake, Parkway, Suite 700  
Atlanta, GA 30328  
USA

T +1 678 638 6248

E [sales@irisys.co.uk](mailto:sales@irisys.co.uk)

[www.irisys.net](http://www.irisys.net)