



Achieving Customer Experience Superiority

The ACES Model - Beyond the Perfect Order

aces™


$$0 = C + B + A$$



There's no room for guesswork when it comes to knowing how well your organization executes critical customer facing activities. Fail in front of your customers and your business is likely to fail. Every organization wants to deliver superior customer experiences, but quantitative measurements of the overall process of taking and delivering to customer demand have been hard to come by.

Not anymore. The ACES model measures the customer experience you deliver by quantifying the performance of your order taking and fulfillment processes and the enterprise applications supporting them. It provides a framework for rigorous examination of ongoing operations and identifies where to drill down to find the root causes of performance strengths and shortfalls. It allows organizations to review performance the way customers experience it so they can accelerate the kinds of improvements that earn customer loyalty.

ACES Measures Performance Through Three Lenses

Any organization that takes orders and fulfills them can use the ACES model, whether it delivers products in response to call center orders or sells widgets over the Internet from a worldwide inventory. ACES measures the three critical business processes customers encounter every day, quantifying their experience as they deal with you.

- **The Customer Lens** - measures performance of the business processes customer use up to the point where an order is placed. It also measures performance when orders go wrong and customers require additional services, such as a product return.
- **The Fulfillment Lens** - measures business processes from the instant an order is placed until it is delivered to the location the customer designates. It measures the total time customers wait to receive products ordered and your total fulfillment costs.
- **The IT Lens** - measures how effectively enterprise applications support your order taking and fulfillment objectives. IT is a necessary enabler of today's commerce and it requires rigorous measurement, also. Information latency and visibility are huge

contributors to business performance and require ongoing measurement. Orders that require manual intervention point to IT opportunity.

Customer	Order Experience
	Customer Service Costs
Fulfillment	Customer Wait Time
	Fulfillment Costs
Information Technology	Information Process Latency
	Information Visibility
	Manual Order Intervention

Figure 1. The ACES Performance Lenses and Component Measurements

Quantified measurements for each of these ACES lenses come from combining the results of subordinate metrics. For each organization, market dynamics, competitive positioning, process

benchmarks, and any other factors relevant to success will define which subordinate measurements to use and their relative weights. Each ACES measurement considers the multiple dimensions of cost, failures, and customer wait time.

The ACES Spider Diagram

It's easier to understand performance when results are presented regularly and in an intuitive format. ACES uses a spider diagram to display quantified results of customer experiences, your costs of taking and fulfilling orders, and measures of IT performance.

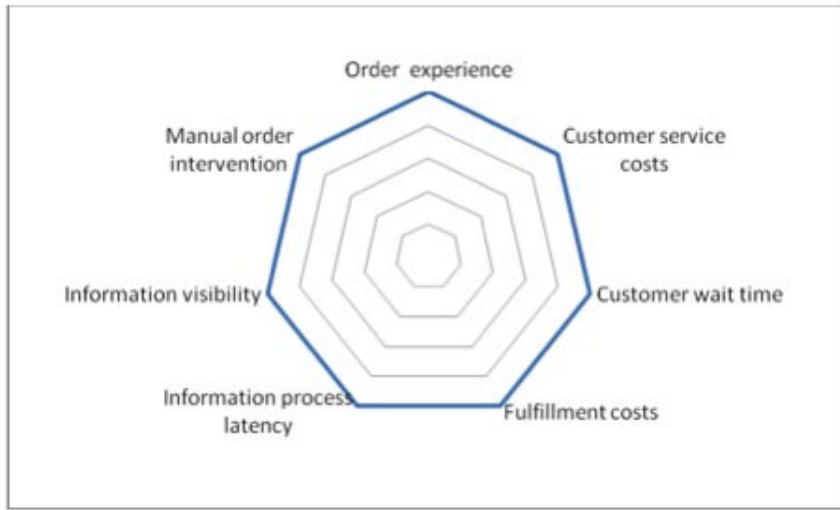


Figure 2. The ACES spider diagram displays performance along performance axes.

The Customer Lens - Customer Experiences and Your Costs

The two ACES customer axes measure what customers experience as they place orders and your customer service costs, factors any organization that sells and delivers products wants to control tightly. The performance score of each axes is calculated from the underlying

metrics the organization decides are most important to performance.

An example helps clarify the ACES concepts. Suppose one consumer goods manufacturer uses its website as its primary channel for selling products but offers customers a choice of several communication channels, including calls to a service center. It uses e-mail surveys for customer feedback and on-line opinion polling. It also deploys a loyalty club and distributes newsletters and e-mails to customers who sign up for them.

After reviewing its marketing position and strategy, operational factors that have strong customer experience implications, and its budgets, the company identified the most important factors to measure. These relevant sub-measures are listed in figure 3. Next, it assigns a weight to each statistic to designate its importance to the ACES axis measurement (e.g. order experience) making sure the total for each axis adds to 100%. In this example, getting a higher percentage of visitors to buy and having a high rate of shopping carts go all the way through checkout are considered the best indicators of overall customer order experience and are therefore given higher weights. Similarly, for the customer service cost axis, the company decided the total cost of each order was the most important factor in determining the cost of serving customers and gave it the highest weight.

Figure 3. Sample ACES Customer Lens

Lens	Measurement Focus (Spider Axis)	Examples of Relevant Sub-measures	Definition/Example	Statistic	Weight
Customer	Order Experience	Website conversion rate	% of website visitors that buy	Conversion rate percentage	30%
		Abandoned shopping carts	% of shopping carts that do not complete the checkout process	% of shopping carts that complete checkout	20%
		Repeat buyers	% of orders from buyers that are not new or unique and have purchased before	% of repeat orders	20%
		Customer surveys/Opinion polls	"Would you recommend" statistics; ease of use survey	% of customers reporting they would recommend you to others	10%
		Loyalty programs participation	% of buyers who join loyalty club; Percentage of buyers who sign up for e-mails	% of customers participating in the program	5%
		Customer problem calls	% of orders that lead customers to call in problems (Call or report through any channel, such as a call center or e-mail)	% of orders not leading to problem calls	5%
		Order cancellation rate	% of orders customers cancel	% of orders not cancelled	5%
		Problem resolution wait time	Incremental wait time due to post delivery problem resolution	% of problems resolved with less than n days of wait time	5%
		Customer Service Costs	Headcount	Service events per headcount	Service events per headcount
		Cost per order	Total cost of operations divided by number of orders	Cost per order	50%
		Re-ships/returns	Cost per return	Cost per return	10%

There are many other measurements our example company could have chosen to include in its lists, such as adding in a cost per call center incident metric. Other organizations might not need some of the measurements the example company uses, maybe they don't implement loyalty programs, so they would choose a different set of measurements. It's up to each organization to define and weight the relevant factors that comprise order placement and customer service costs so they can be monitored on the ACES spider diagram.

The Fulfillment Lens - How Long Customers Wait and Your Fulfillment Costs

As it was with the customer view, the focus through the fulfillment lens concentrates on two primary measurements. The first is an objective measure of customer wait time, the time it takes for a customer to receive your products once he orders them. The second fulfillment axis measures cost.

Customer wait time begins at that instant when an order is placed, whether it's a mouse click an online customer makes confirming his order or the click a call center agent makes to complete it. It ends when your shipment is delivered to the location the customer designated.

Order accuracy is an obvious factor in how long a customer waits - inaccurate orders don't flow through the fulfillment process automatically and usually require special handling to resolve. There are many reasons for inaccuracies, including outdated or inconsistent catalog product listings or pricing, credit holds, and shipping address errors. If not caught before the order is placed, the customer's expectation clock ticks while the order waits for resolution.

On time shipment measures operational ability to ship orders within quoted time parameters, but it does not measure transportation time. For many organizations elapsed wait time, which measures the span across the entire fulfillment cycle, is a more important measure because understanding it and its component metrics can identify improvement opportunities important to customer experience and loyalty.

Fulfillment costs measure the efficiency of fulfillment operations, transportation delivery methods, and inventory. Determining costs usually involves standard budgetary reporting and might include labor for pick, pack and ship activity. Optimizing inventory and transportation costs, however, often involves modeling tradeoffs between inventory and transportation delivery service options and negotiating with suppliers.

Figure 4. Sample ACES Fulfillment Lens

Lens	Measurement Focus (Spider Axis)	Examples of Relevant Sub-measures	Definition/Example	Statistic	Weight
Fulfillment	Customer Wait Time	Order accuracy	Valid product/models; pricing, credit, shipping addresses and terms accurate	percentage of orders captured that can be sent for immediate fulfillment	30%
		On time ship	Shipment within quoted lead times	percentage orders shipped within quoted lead times	30%
		Elapsed wait time	Order placement to receipt at customer site	optimal vs. actual elapsed wait time	30%
	Fulfillment Costs	Operational costs	Costs of warehouse operations; depreciation; 3rd party warehouse costs	actual vs. optimum	20%
		Transportation cost	Optimal cost using defined premium transportation services vs. cost for faster service using optimized order distribution	actual vs. optimum	60%
		Inventory value and holding costs	Total cost of inventory; cost of holding inventory	actual vs. optimum	20%

The IT Lens - Information Visibility and Latency; Manual Order Intervention

Exceptional customer experiences require systems that transfer information without delay, making it available for transactions and inquiries at all times. Robust systems automate more process steps cutting errors and the energy spent resolving exceptions. When looking through the ACES IT lens, companies focus on information visibility and latency and on how

much of the business must be done outside the system.

When they measure the latency in information systems, companies come to grips with the inherent time delays their systems impose. Often these delays are pushed out to customers - overnight batch processing may cost a full day of customer wait time. Latency erodes performance in other ways as well - the inability to automate global performance dashboards can routinely cost weeks or months of accounting labor.

The information visibility axis measures the depth and breadth of information available to the people or systems that need to use it. It includes linkages to internal enterprise applications, owned or third party warehouses located worldwide, carrier services, credit authorization agencies, selling channels, and product suppliers. This axis also measures how much information about specific process steps, such as warehouse order fulfillment, is available and how it is used.

The manual order intervention axis measures orders that cannot flow through order taking or fulfillment processes unassisted.

Figure 5. Sample ACES IT Lens

Lens	Measurement Focus (Spider Axis)	Examples of Relevant Sub-measures	Definition/Example	Statistic	Weight
IT	Information Process Latency	Time from "buy" action (order capture) to order available for fulfillment at the fulfillment site	Delay due to batch processing; complicated integration and translation, data inconsistencies, and stock allocation process latency	Range: Seconds to Days	25%
		Product data update frequency/currency	Sequential, overnight or batch product/pricing updates	Range: Seconds to Days	25%
		percentage system uptime	percentage of time system is available for use	percentage uptime	25%
		Data aggregation: Time spent developing KPI's, Dashboards	Time spent entering data, analyzing spreadsheets, and preparing summary statistics and graphics for presentation	months to hours	25%
	Information Visibility	Order status	Trigger automatic e-mails at each stage e.g. order acknowledgement, released in warehouse, ready for shipment, shipped, carrier picked up	percentage of fulfillment stages that are immediately visible	15%
		Order tracking	link to carrier tracking websites	percentage of carriers linked	10%
		inventory	ATP, inventory at each stocking location	percentage of distribution network linked	20%
		warehouse activity	warehouse stage/status	percentage of distribution network linked	15%
		invoice on line	shipping cost calculation; credit card approval	Range: linkages to providers	30%
		percentage of all channels with real time integration	percentage channels receiving the appropriate customer/product/pricing information immediately	percentage of channels with real time information	20%
	Manual Order Intervention	percentage of orders that require manual intervention	Range of orders that require intervention, from all to none	percentage of orders that require manual intervention	100%

Adjusting the ACES Axes to Match Your Goals

When an organization defines the measurements that comprise each ACES axis and assigns weights to them, it starts with an assumption that perfect scores lead to 100%. In practice, that's not practical or even desirable. Some examples illustrate the point.

- While a 100% website conversion rate sounds great - everyone who visits a website buys something every time they visit - it just won't happen. Depending upon the products sold, a much smaller target is more realistic, say 20%.
- Even if it receives only perfect orders, the warehouse can't guarantee that every order will ship on time. Inaccurate inventory counts, damaged goods, late carrier pick up, power failures, an influenza outbreak, the weather, and many other obstacles can all get in the way.
- It may be impractical or even inadvisable to link every order source to your systems. If a channel delivers only a trickle of orders, it may be better to enter them onto your system manually than to take on the work of linking to their systems. Especially if the systems are ancient and orders come from a handful of A-list clients.

Figure 6. Normalize each ACES axis for goals and weighting

Measurement focus (Spider Axis)	Examples of Relevant Sub-measures	Statistic	Weight	Goal	Weighted Goals	Normalized for Axis Scale
Order Experience	Website conversion rate	Conversion rate percentage	0.30	20.0%	6.00%	0.109
	Abandoned shopping carts	% of shopping carts that complete checkout	0.20	70.0%	14.00%	0.255
	Repeat buyers	% of repeat orders	0.20	50.0%	10.00%	0.182
	Customer surveys/Opinion polls	% of customers reporting they would recommend you to others	0.10	100.0%	10.00%	0.182
	Loyalty programs participation	% of customers participating in the program	0.05	50.0%	2.50%	0.045
	Customer problem calls	% of orders not leading to problem calls	0.05	99.9%	5.00%	0.091
	Order cancellation rate	% of orders not cancelled	0.05	99.5%	4.98%	0.091
	Problem resolution wait time	% of problems resolved with less than 2 days of wait time	0.05	99.0%	4.95%	0.090
		Total	1.00		57.42%	1.000

To accommodate practical considerations like these, adjust each ACES axis for the goals you set. In our example we assumed a theoretical B2C company and applied weights accordingly. In practice, you would adjust the weights for your own business goals.

Using the customer order placement axis as an example, determine the weighted value of each statistic by multiplying the goal by the weight assigned to it. In this example, the goal is a for 20% of web visitors to place orders and an importance weight of 30% (.30) has been assigned to the measurement, giving a 6% weighted goal figure. The sum of the weighted goals for the order placement experience axis is 57.42%. Normalizing these weighted goals to 100%, (or 1) resets the axis so that reaching every goal, in other words, reaching the level your organization defined as perfect performance for each component measurement, lets you reach the end of the axis.

Figure7. Compare actual performance to goals

Measurement Focus (Spider Axis)	Statistic	Weight	Goal	Weighted Goals	Normalized for Axis Scale	Actual Performance	Goal Achievement Divide Actual/Goal	Normalized achievement Multiply Normalized X (actual/goal)
Order experience	Conversion rate percentage	0.30	20.0%	6.00%	0.109	13%	0.6250	0.068
	% of shopping carts that complete checkout	0.20	70.0%	14.00%	0.255	55%	0.7857	0.200
	% of repeat orders	0.20	50.0%	10.00%	0.182	44%	0.8800	0.160
	% of customers reporting they would recommend you to others	0.10	100.0%	10.00%	0.182	92%	0.9200	0.167
	% of customers participating in the program	0.05	50.0%	2.50%	0.045	15%	0.3000	0.014
	% of orders not leading to problem calls	0.05	99.9%	5.00%	0.091	98%	0.9810	0.089
	% of orders not cancelled	0.05	99.5%	4.98%	0.091	90%	0.9045	0.082
	% of problems resolved with less than 2 days wait time	0.05	99.0%	4.95%	0.090	20%	0.2020	0.018
Total		1.00		57.42%	1.000			0.799

The ACES model delivers a powerful tool for understanding business performance. Comparing actual performance scores to the goals that were set produces fresh information, your performance score for each ACES axis. The measurements point to processes working well and opportunities for improvement.

In our example, although the conversion rate goal was 20%, the company only saw 13% of web visits convert to orders, so it achieved 62.5% of goal. By normalizing the achievement, (multiplying the score it would have received for achieving the goal by actual achievement, in this case $0.109 \times .625 = .068$) we determine contribution to performance on the order placement experience axis. To determine overall performance, the company uses similar calculations for each measurement and found it scored 0.799 on the axis scale of 1.

When the example company reviewed each ACES performance axis, it developed the ACES spider diagram shown in Figure 8. A glance shows how well the company is doing. It has work to do to reach goals along each dimension, and although it is near its fulfillment cost goals, its customer service costs are far too high. Armed with that information and customer experience detail, the company can explore corrective actions.

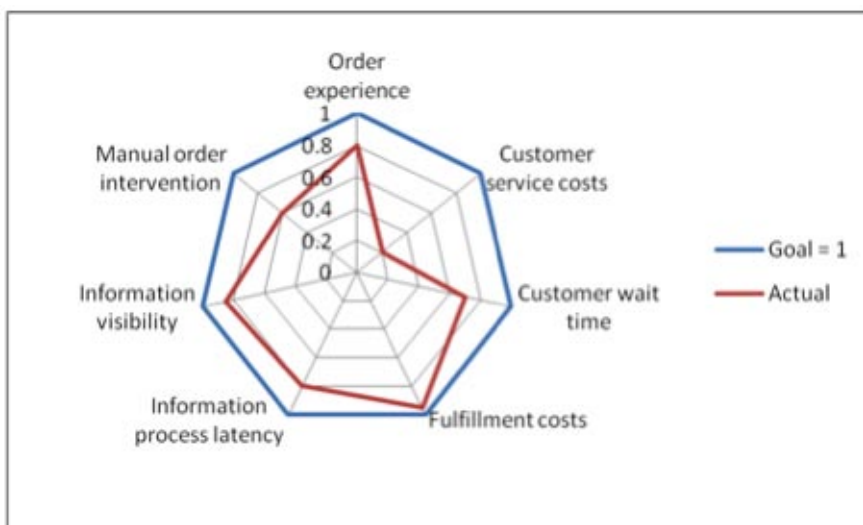


Figure 8. The ACES model compares actual performance to goals, highlighting strengths and shortfalls.

With ACES in place the entire management team can monitor at a glance what customers experience as the organization takes and fulfills their orders. It can also visualize IT performance, transitioning an illusive concept to quantifiable fact. ACES spider diagrams direct attention to the right performance areas and pinpoint where to drill down into the details.

Jagged Peak's EDGE Order Management Applications - The Proof Behind the Model

At Jagged Peak, we know the ACES model is no theoretical concept - it's a highly effective tool we use ourselves. We crafted the model over time using real data, working with our own clients as we measured operational performance and the service delivered to their customers.

Jagged Peak uses the ACES model as a way to measure the results our EDGE order management platform delivers. EDGE implements leading order management processes, managing orders taken through any order channel, fulfilled by any internal or external operation, using any delivery carrier. EDGE is constructed from leading technologies and standards. It also produces the detailed analytics companies need to understand and improve the experiences their customers encounter as they place orders and have them fulfilled.

EDGE and the ACES model are powerful tools for improving customer experiences. ACES, an effective, intuitive way to quantify your strategies for achieving customer experience superiority and to measure progress against your goals. EDGE is a highly effective order management system that gives you the operational platform for executing your strategies and making your goals reality.

For more information, contact us at: 1.800.430.1312

<http://aces.jaggedpeak.com>