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Transforming the Customer Experience

Jeanne Bliss
Guest Editor

CUTTER Business Technology Journal

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Opening Statement

by Jeanne Bliss

The customer experience (CX) can make or break a business in this age of digital disruption. Customer loyalty isn't what it used to be. An unhappy customer can jump ship at any moment, resulting in lost revenue for the business and increased costs for new customer acquisition. Thus, creating a positive CX is a critical success factor. It can provide the competitive edge needed not only to survive, but to thrive — and to retain long-standing customers and win new ones.

With the rise of social media, big data, and the heightened emphasis on the customer experience, it is more important than ever to build an organizational leadership team committed and laser-focused on implementing the necessary behaviors and orienting business operations to continuously improve CX. The challenging piece of this objective is that when continuous improvement of CX is neglected, the organization can end up with a program or project rather than a transformation. For example, customer-focused efforts are often initiated in response to survey results, or to an executive getting direct customer feedback, or to criticism posted on some social media site. Information is delivered, the leadership silos react, and the cycle repeats. Sustainable change will occur only when the processes that drive customer satisfaction go from reactive to proactive, are valued and considered critical to driving growth, and become ingrained in organizational culture. Organizations must evolve from project plan movement to customer life improvement.

Therefore, it is essential to develop a customer-driven growth engine that not only shows a clear and simple connection to ROI but requires engagement of both the executive team and the entire organization to make it a success. My Five Customer Leadership Competencies[1] system will help build your customer-driven growth engine. These competencies deliver constantly updated information to keep leaders apprised of the most impactful customer priorities, and they shift attitudes from chasing survey results to caring about and improving the CX journey.

The five competencies define the behavior of organizations focused on customers and employees. The competencies greatly impact how these organizations grow and how they identify and resolve issues, and they unite leaders in investing in the most impactful priorities to drive a "one-company" focus on CX. By engaging the organization in building these five customer leadership competencies, the organization can unite, understand, and care about customers' lives and pool resources to focus on what is most important in creating an outstanding customer experience.

The Five Customer Leadership Competencies

Competency 1: Honor and manage customers as assets. *Know the metrics around growth or loss of customers and care about the "Why?"*

Customer asset management is knowing exactly what the customers do to impact business growth or loss versus what they say they might do via survey results. Examples include: how many new customers were brought in this quarter, by volume and value; how many customers were lost; how many increased their purchases; and how many reduced their level of engagement with you. The key is to express these outcomes in whole numbers, not retention rates, so the full impact is understood. These numbers represent the lives of customers joining or leaving your company.

This information helps executives understand the shifting behavior within the customer base and indicates whether customer loyalty is growing or shrinking. And, importantly, it's about engaging executives in caring about the "Why." Why did customers stay or leave, or buy or actively use products or services more or less often?

Competency 2: Align around experience. *Give leaders a framework for guiding the organization. Unite accountability so customers experience your organization as a whole, not just as silos.*

This competency develops a one-company version of the customer journey. To achieve this, it is necessary to facilitate the framework across silos to unify the leaders and the organization in the development and understanding of the entire customer journey, versus the silo-based processes that dictate the CX (e.g., sales, marketing acquisition). To this end, conversations regarding the CX journey should change from silo-driven to collaborative. This will ultimately help drive performance along the customer journey and associate accountability with the stages of the full journey, not only down silos.

As a result, questions about silo and project performance will shift to include accountability for customer life improvement. Your customer journey framework will provide a disciplined one-company diagnosis into the reasons behind customer asset growth or loss. And it will establish rigor in understanding and caring about priorities in customers' lives (the real power in journey mapping).

Competency 3: Build a customer listening path. *Seek input and customer understanding aligned to critical points along the customer journey.*

This competency enables your organization to build a one-company listening system constantly refreshed to tell the story of your customers' experience, guided by the customer journey framework. Voluntary and survey feedback from customers, social media comments, ethnography, and other sources of gathered input are assembled into one complete picture, presenting customer perception and value, stage by stage. This alignment of feedback galvanizes the organization to focus on key areas of improvement connected to customer growth, moving the company to CX storytelling and prompting caring about customers' lives.

Competency 4: Proactively build experience reliability and innovation. *Know before customers tell you of unreliable experiences. Deliver consistent and desired experiences.*

This competency builds out the "revenue-erosion, early-warning process." Leaders need to care about operational performance in processes that impact priority moments in the customer journey. These are the intersection points that impact customer decisions to stay, leave, buy, and recommend. This is where you build your discipline to know before customers tell you if your operation is reliable or unreliable in experience delivery. It will alert your organization of any interruptions in customers' lives, enabling you to simplify how your products or services are delivered and facilitating a one-company response to key operational performance areas. This will enable you to build a deliberate process for CX improvement that rivals the clarity and processes that most companies have for product development.

Competency 5: Establish leadership, accountability, and culture. *Embed leadership behaviors that steer the company toward customer-driven growth. Enable employees to deliver value.*

This is your "prove it to me" competency. For CX improvement to be transformative and stick, it must be more than a customer manifesto. Leadership must build the consistent behaviors, decision making, and company engagement — the culture — that proves to the organization that leaders are united in their commitment to earn the right to customer-driven growth. That commitment must be translated to actions that people understand and can emulate. Culture must be proven with decisions and operational actions that are deliberate in steering how a company will and will not treat customers and employees. This competency puts into practice united leadership behaviors to enable and earn sustainable customer asset growth and focuses leaders on what they will and will not do to grow the business. Ultimately, leaders must show customers that they have confidence in their own people and trust their decisions (e.g., by giving account managers the authority to make decisions about solving customer issues without having to seek approval from higher-ups).

When these five competencies become embedded into the processes and culture of an organization and are supported and enabled by a committed leadership team, delivering an optimal customer journey becomes second nature. In this manner, there is no difference between "customer" work and "real" work. The five

Upcoming Topics

The Intelligent Edge of IoT
Ron Zahavi

Information Governance
Claude Baudoin

competencies connect to growth, and they shift attitudes to caring about and improving customers' lives.

In This Issue

The elements necessary in creating an excellent CX are changing as rapidly as the context and digital environment in which today's organizations exist. This issue's six articles present varying views on what constitutes CX. Our starting point is with Cutter Consortium Senior Consultant Paul Clermont's exploration of what exactly CX is, the danger of complacency around CX quality, and what organizations, including brick-and-mortar shops, must do to assess and address vulnerabilities. He notes that improving the customer experience requires more than technology and process; attitude is key.

Our second article, from Karlene Cousins, Pouyan Esmaeilzadeh, George Marakas, and Richard Klein, focuses on merchant mobile payment applications. "Frictionless commerce" enables customers to buy products and services on demand, whenever and wherever they wish, with a minimum of clicks or steps, thereby vastly improving CX. The authors examine five factors driving frictionless commerce: context awareness (of the customer's location, activities, environments, and so on, to predict and personalize offerings), utility (the application's ease of use and provision of tangible benefits to the customer), software and UI design (novel and innovative design that works seamlessly and consistently across multiple platforms and locations, including globally), merchant reputation (customer confidence in the trustworthiness and honesty of merchants), and rewards (financial and social rewards for customers using mobile payment).

The inability to predict financial outcomes through CX metrics has long frustrated CX practitioners. In our next article, Luke Williams examines the metrics around the customer experience to deliver financial results. He presents the *Wallet Allocation Rule*, which allows organizations to see how customers spend money at the point of sale. This measure of wallet share goes beyond traditional CX KPIs, which focus on the "home brand," to a customer-centric view that encompasses the number of brands a customer uses for products/services that can be obtained from the home brand (market fragmentation) and the relative rank of those brands (market superiority).

Next, Jaco Viljoen identifies five distinct levels of CX that correspond to digital business ecosystems. As each level progressively improves business capabilities, so too does the customer experience. Viljoen discusses each level, from waterfall to hybrid Agile to regular delivery to continuous delivery and finally to continuous exploration, and the CX that is possible with each level's flow or lifecycle capability and product delivery capability.

In our fifth piece, Vikas Mukhi provides an industry-specific examination of the customer experience. Today's utilities must increasingly deal with distributed energy resources (DERs), such as residential solar, that add cogeneration and two-way power flow to existing electric utility grids. DER systems change the utility-customer relationship, making demand management a priority for utilities and self-service options a key driver of customer satisfaction. Enhancing the CX helps utilities save money, smooth peak loads, and remain competitive.

Finally, Cousins and Esmaeilzadeh return with their take on how the perception of "coolness" drives a user's decision to adopt a mobile app. They analyze the Uber app from the service industry and the Starbucks Mobile Order & Pay app from the retail industry to identify the dimensions of the coolness factor. Incorporating the three attributes of the coolness factor — application design, application symbolism, and application utility — into the customer experience can help mobile apps gain competitive advantage.

As you read through the articles in this month's issue, we invite you to consider the customer experience that your organization provides and what lessons our authors offer for improving CX and making it great.

Endnote

[1]Bliss, Jeanne. *Chief Customer Officer 2.0: How to Build Your Customer-Driven Growth Engine*. 2nd edition. Jossey-Bass, 2015.

Jeanne Bliss pioneered the role of Chief Customer Officer (CCO) and held that role for over 20 years at such companies as Lands' End, Microsoft, Coldwell Banker, and Allstate Corporations, where she moved the customer to the strategic agenda, creating transformational changes to the customer experience. As President of CustomerBliss, she now guides C-suites around the world on improving customers' lives. She is a sought-after speaker and thought leader; the author of four books, including Chief Customer Officer 2.0: How to Build Your Customer-Driven Growth Engine *and* Would You Do That to Your Mother? The "Make Mom Proud" Standard for How to Treat Your Customers*; and cofounder of the Customer Experience Professionals Association. She can be reached at Jeanne@customerbliss.com.*

REMEMBER, THE CUSTOMER IS ALWAYS RIGHT

The Whole Customer Experience:
Competing Beyond Products and Services

by Paul Clermont

About the same time as the solicitation for articles came out for this issue of *Cutter Business Technology Journal*, I saw a new job title pop up: *chief customer experience officer*. Clearly, something is going on when it comes to customer experience (CX).

To someone with only theoretical knowledge of the concept of free market competition, the new need for "customer experience" would be mystifying: hasn't creating the kind of experience that gets and keeps customers always been paramount? How else could you have stayed in business? But those of us with the experience of being customers (i.e., just about all of us) know that the gap between theory and actual practice can be quite large.

This article provides specific ideas on how to improve CX, larded with examples, good and bad, from literature, case files, and first-hand experience.

Why Is Customer Experience Suddenly a "Thing"?

The best definition of "customer" is someone who voluntarily hands over money in return for a product or service. *Voluntary* is the key word; the product or service could be obtained elsewhere or done without.[1]

The big reason why total customer experience has become a "thing" is that it's harder and harder to compete solely on the merits of the product or service. Expectations are a moving target. The quality of mass-produced goods has soared thanks to better materials and manufacturing disciplines originally developed by the Japanese.[2] Moreover, the quality of customer service functions has risen with IT arming staff and websites with real-time information. Nostalgia for the good old days may be fun over a few beers, but would we really want to go back to the day when 10-year-old cars were decrepit relics and we queued up to cash checks at supermarkets instead of ATMs? We've come a long way — just not far enough.

The new frontier for competition is the entire CX — from thinking about a purchase to the renewal (of a service) or replacement (of a product). Factors in competing have become much less tangible.

Understanding the Challenge

Perception of "Good" Is Subjective

Perceived customer experience is subjective. An experience I might consider acceptable, if not great, you might consider a horror show. An experience you might rave about, I could find merely acceptable. As is the case with advertising, it's very difficult to formulate specific rules for doing it right. But there is one overarching rule that would seem intuitively obvious, but which appears to be all too rarely followed. It's a gloss on the Golden Rule: *treat your customers as you would want to be treated as a customer.*

Perception of "Good" Is Situational

Here's an example. You're on the road at lunchtime; the next town is more than two hours away. Passing through an unprepossessing little place you see a sign for Joe's Eats. The building's a bit shabby and it sports neon beer signs, but you're hungry so you go in. You find the soup piping hot, rich, and flavorful. The BLT is on fresh, homemade seven-grain bread, with crisp lettuce, tasty tomatoes, and plenty of lean bacon. The waitress is friendly. The check, including coffee, is only US $10. You just had a great customer experience. You would have been satisfied by just not getting ptomaine, but you ended up with a good lunch at a fair price.

At the other end of the spectrum, a restaurant reviewer at the *New York Times*, Pete Wells, created a stir in 2016 by giving ultra-prestigious restaurant Per Se only two out of four stars.[3] When one spends $3,000 on a meal for four people as he did, everything had better be *perfect* —ingredients, preparation, presentation, timing,

appearance, temperature, service, ambience — but it wasn't. The irony is that a humbler, less pricey place might have garnered at least three stars for providing the exact same experience simply because the reviewer's expectations would have been lower.

General Hallmarks of Good CX

We can't meet expectations without thinking through what they are and could be. What would meet expectations? What might exceed them and delight a customer?

Some aspects are substantive:

- The process of negotiating the purchase is straightforward with no hint of bait-and-switch or nickel-and-diming.
- The product or service is of at least the level of quality you had hoped for. It does what you want it to do. Features work as advertised.
- Ongoing support is rarely needed but if it is, it's easily obtained and helpful.
- Warranties rarely need to be invoked, but when they are, they're not treated legalistically (see sidebar "Warranties, Good and Bad").
- You perceive good value for money.

Some are about feelings:

- You made a wise purchasing decision.
- The seller actually cares that you're satisfied with both the purchase and ongoing support.

Complacency, the Enemy of Improvement

> What, me worry?
>
> — Alfred E. Neuman[4]

It is no secret that many enterprises have survived for decades while seemingly (by their actions, whatever their words) indifferent to the quality of CX. Perhaps they didn't need to think much about it. Historically, there have been several ways to get away with offering a subpar experience. But how much longer will these "good enough" qualities apply? What threats are out there? Table 1 provides some examples where enterprises have gotten away with complacency and what threatens (or has already threatened) their comfortable positions. The remainder this article offers various strategies you can embark on now to improve your enterprise's CX.

Warranties, Good and Bad

Several years ago, I complained about an intermittent problem with a brand-new car every time I brought it in for required service. It was never fixed until the defect finally made the car undriveable and the service shop could see what was wrong — but the warranty by then had expired by a few weeks. To prevent having to pay for the repair, I had to produce all the work orders documenting the problem and get a bit forceful. By contrast, I once had the screen fail on an out-of-warranty Apple laptop. The Genius Bar man did a couple of tests and identified the cause as a manufacturing defect whose repair Apple would cover.

Assess Vulnerabilities

Every touchpoint with end consumers —from considering buying to getting ready to replace or renew — is an opportunity to provide (or not provide) good CX. Where are the weaknesses or problems? What annoys customers? What are competitors doing better? Can you do better?

Shopping

Technology plays a big role here. Websites are de rigueur these days, but quality varies widely:

- Is your website easy to find by search engines?
- Is it effortless to make more than super-basic searches within your website? (You'd be surprised.)
- Is your website well organized with consistent terminology and layouts?
- Do you provide all the information customers need to compare the options you offer?
- Have you anticipated questions? (Too many FAQ pages answer only trivial questions rather than the subtler ones that send people to such pages.)
- Are prices clearly laid out, reasonable, and understandable with nothing smelling of bait-and-switch or nickel-and-diming?

Basis for Complacency	Examples	Threats
Monopoly	Utilities, cable TV	Deregulation allowing competitors; new technology reducing need/desirability (e.g., Internet vs. TV cable)
Oligopoly	Airlines, banks, US auto industry before 1970s	Deregulation; foreign competition
Compellingly differentiated offerings	Lovably quirky cars of the 50s and 60s, designer-label clothing	Changing tastes
Reputation for excellence	Upscale autos	Manufacturing and marketing fiascos[1]
Low customer expectations	Soviet Union, British food before 1970s, discount chains	Customers becoming more sophisticated, expecting more and better

[1]The late 1970s and early 1980s were not good for GM. The Oldsmobile diesel was an engineering disaster. The Cadillac Cimarron was basically a gussied-up Chevrolet at a Cadillac price, a marketing fiasco. Just two milestones on the long road to bankruptcy.

Table 1 — Reasons for and dangers of complacency.

- Do you have enough call center operators to answer questions about the inevitable fine points? Do they actually know more than what's on the website?

All the above points regarding the role of people apply to brick-and-mortar shops, too, where, in my observation, Apple stores set the gold standard, with plenty of well-informed, helpful people who don't bug you but are there when you need them. If you require a specialist who is not immediately available, for example, an Apple employee offers you time to get coffee or run an errand and then simply texts you when to come back.

Introducing Luxury Brands

In the late 1980s, Toyota, Honda, and Nissan all decided to enter the upscale car market with the Lexus, Acura, and Infiniti. They all knew that the quality of many dealers, even those of upscale US cars, was a weak point and were not confident that their existing dealers, oriented toward selling mass-market products, would exude the level of quality (and yes, class) in their sales and service sufficient to compete with the dealers of European luxury brands. These car companies decreed that while existing dealers might be awarded franchises, they would have to apply and meet strict new standards and, if they were accepted, would have to house the luxury brand dealership at a different site. The success is obvious to anyone walking past a row of parked cars.

In a simpler context, my local Ace Hardware does the same. Employees ensure little time is wasted looking for things, and they often provide helpful hints and point out cheaper and easier options for my DIY project that I might not have considered.

Buying

Good website design makes buying easy and making mistakes difficult. One simple idea, amazingly not yet universal, is having all relevant information about the purchase visible on the same page as the "buy" button.

In the brick-and-mortar world, Apple again is the gold standard; the people who make the sale are also the cashiers and those who help you set up your product. In the automotive world, with its thousands of independently owned dealerships, this becomes more complex. Dealers are often the weak link. With a limited choice of convenient dealers, even in large cities, a bad dealer experience can lose a customer to another brand, not just another dealer (see sidebar "Introducing Luxury Brands").

Servicing

The ideal situation is where the product or service is so good and its use so clearly understandable that no special service is needed. When it is, websites should as much as practical enable quick-and-easy problem resolution; however, inevitably some situations require

people. This is a target-rich area for improvement in staffing, process, and technology:

- Are there enough people to minimize on-hold times? (The "unusually high call volume" excuse is so overused that one might think "usual" was based on 5 am Sunday!) The same consideration applies to minimizing response time in chat-based help.
- Are there well-informed and empowered people to deal with the more unusual or complex situations by phone or chat lines?
- Is the information available to enable once-and-done for all but the most complex cases?
- Are employees empowered to make modest adjustments in the customer's favor when requests sound reasonable and there's no record of the customer being a nuisance in that regard?
- Can staff members exhibit empathy and patience with the customer and use everyday language, avoiding condescension?
- Are those who answer the phone able to represent all relevant parts of the enterprise, with access to all relevant information?
- If helping the customer involves the customer taking online action, do call center operators stay with the customer until it's clear the problem has been solved?
- Do staff members actually converse rather than read from scripts that may or may not be relevant?

Address Vulnerabilities

Selling

Waitrose supermarkets in the UK recognize that finding items can be a nuisance, so they train employees to walk customers to what they're looking for rather than just saying "Aisle 7."[5]

Pricing

T-Mobile could not compete with the coverage of AT&T and Verizon, so it eliminated the mandatory contracts that annoyed many customers. The company also created plans suited to international travelers that didn't rip them off for calls to and from the US.

After-Sale Servicing

Apple aggressively pursued the fast-growing population of retirees and work-at-home people who don't have access to an employer's IT staff to solve inevitable tech problems. So not only did Apple make its hardware and software more robust and easier to use, as it historically has, it created a whole international network of stores, adequately staffed with problem solvers. Apple still has independent dealers and authorized service providers but doesn't have to depend on them.

In a personal example, when our Miele dishwasher stopped midcycle with a warning light, I called its service line, expecting a clerk who would schedule a house call. Instead, I got a technician who walked me through diagnostics until I found the problem, which I could fix easily myself, saving probably $150. This is a great example of putting qualified and empowered people where they're likely to be needed.

Take Action

Leverage Technology

Well-designed websites can obviate the need for person-to-person contact but must be designed from the outside in (i.e., from the customer's viewpoint). A large UK bank, for instance, has made online banking very complicated and it's easy to make mistakes, with the result that staff must spend lots of time helping customers navigate the basics instead of being focused on unusual and complex transactions.

Other technology opportunities to improve include:

- Self-checkout reduces the need for checkout clerks, many of whom are overqualified for what has become a mindless job of scanning barcodes; they could be redeployed to the aisles to help customers find and choose products or to pick online orders from the shelves.
- Post-interaction evaluations could be highly valuable and have recently become ubiquitous. Unfortunately, most are too simplistic to elicit useful insights about potential improvements.
- Correctly matching the technology with the complexity of the transaction would mean, as just one example, getting rid of those maddening multiple-option, touch-tone keypad interfaces that greet us when we call a toll-free number.

Know That It's More Than Technology and Process

While well-designed processes and appropriate technology are necessary for good customer service, they're far from sufficient. Improving CX may also require new attitudes at all levels — that is, cultural change. The maxim that "the customer is always right" has been around for ages, and it is far more vivid and compelling than being "customer-focused," a vague term that implies no specific actions and has been drained of meaning through overuse. (Let's hope that fate doesn't befall the term "customer experience"!)

Companies don't just become seriously concerned about CX because their CEOs say so on CNBC. Major shifts in mindset and culture are often needed. This takes total commitment, relentless reinforcement, and time.

> O wad some Pow'r the giftie gie us
> To see oursels as ithers see us!
> It wad frae mony a blunder free us,...
>
> — Robert Burns[6]

Again, the key is looking at the enterprise from the outside in. Executives must emerge from their cocoons of privilege to find out what it's really like to be just an ordinary customer, to see how they're treated, both by their (or their dealer's) employees as well as those of their competitors (see sidebar "Deliberately Wearing Blinders").

Deliberately Wearing Blinders

Midlevel executives at a Big 3 automaker I consulted with several years ago admitted they had problems, but after a while would sit back and say they built the "best damned cars in the world," but those Japanese and Europeans had somehow convinced people otherwise. They themselves were provided meticulously prepared new cars every year that were maintained in a garage a few hundred yards from their offices. What wasn't to like? Too bad if it bore no resemblance to an ordinary customer's experience.

It gets worse. When these executives needed to rent cars on business trips, they weren't reimbursed unless they rented their company's products. A saner policy would have denied reimbursement if they did rent their company's products! Driving a competitor's offerings might provide some clues as to why they were losing market share.

Can executives really be customer-focused if they don't test drive — on their own, without their assistant or a techie nearby — the customer interface for normal transactions and problem resolution? By trying CX processes themselves, they can see how easy (or not) it is to navigate websites and voice commands and how they're treated by call center people if they have trouble explaining their difficulty or misunderstand a question they're asked. And why not check out competitor sites, too? Better still, family members (especially in-laws!) could be enlisted, and they will likely offer candid assessments.

Can executives really be concerned about the customer experience if they rarely or never listen to recordings of phone calls we're always told are being made for training and quality purposes? Better yet, why not act as call center operators (or at least sit next to a servicer) every now and then to get a better idea what it's like to deal in real time with a confused or aggrieved customer, to see how easy or hard it is to retrieve the information they need, how much delay and frustration arise from inadequate processing power or bandwidth, how constraints on call center's discretion get in the way of good service? Fortunate indeed would be the executive who didn't emerge from this with an extensive to-do list. Such experiences would also be invaluable for IT people who design interfaces and processes they expect call centers and customers to interact with.

Never in the history of business have customers of large enterprises wielded more power. They can get instant information on products, services, prices, and even customer feedback of both you and your competition. Moreover, switching to a competitor often comes at a low cost, and if customers do switch, they can cost you far more business when they don't just walk away but also tag you online with uncomplimentary reviews. The challenges posed are not new (just ask a business owner in a small town), but they are new to executives of national and global enterprises whose sheer size and presence once seemed enough to sustain a strong market position.

There are technical challenges to be sure, but meeting technical challenges is a matter of will and money; improving the customer experience is primarily about attitude. At the executive level, for example:

- If providing excellent CX is not the primary behavior-driving goal of the enterprise, what is? If it isn't, the improvement program probably won't take root. The

cost-cutters may win the battle, but the enterprise will lose the war.

- When the only human contact that a customer has with the enterprise is a call center operator, can seeking the lowest-wage people be anything other than penny-wise? (This is not a slam on offshoring. Many developing countries have a surplus of intelligent and personable people who are happy to work in a call center.)
- While computers are great at enforcing standard procedures, people are still necessary to deal with the unexpected or unusual. Constraining staff members' discretion (i.e., making them as much like computers as possible) fails to leverage their value and frustrates them when they can't help the customer. More important, it conveys that management doesn't really care about customers no matter how customer-focused its public image conveys.
- Most employees would rather do good work than poor work, but they need the right tools. Call center operators know first-hand what's annoying and frustrating about their jobs and aren't reticent about describing it — if anybody asks. Almost invariably, it's unavailability of good information (or the discretion to use it if it is available) that would let them better satisfy the customer. Another annoyance is being required to use scripts that don't fit the situation rather than interacting like real people.

Empowering call center staff and mitigating frustrations are not enough without a true service-oriented attitude, remaining courteous and unflappable no matter how ridiculous the request or how ornery and obstreperous (or just plain stupid) the customer. Not everyone can do this; those who can't should find other employment.

Walk the Talk

Employees don't pay attention to external "customer experience" and "customer focus" language when all they hear internally are the relentless "cut costs" messages. Everybody who faces customers must navigate between competing demands: the customer with a legitimate need or complaint versus the boss demanding more productivity and/or sales volume along with minimal refunds and adjustments in the customer's favor.

Words not backed up by action are worse than saying nothing at all. We all know how hard it is to BS our children; it's also hard to BS our employees and, thanks to technology, it's getting harder and harder to BS our customers.

Free market competition has never been easy. "Build a better mousetrap, and the world will beat a path to your door"[7] may once have been sage advice. Today's customers, however, have come to expect not just a better mousetrap but the experience of a mouse-free home!

Endnotes

[1]The recent trend of governments referring to taxpayers or driving license holders as "customers" is a bit of a joke. The term is also misapplied to business processes downstream from yours.

[2]The irony is that, in the years after World War II, the Japanese were noted for cheap, shoddy products before an American, W. Edwards Deming, introduced approaches to ensure consistently high but affordable build quality — approaches that he couldn't sell to US companies at the time.

[3]Wells, Pete. "At Thomas Keller's Per Se, Slips and Stumbles." *The New York Times Restaurant Review*, 12 January 2016 (https://www.nytimes.com/2016/01/13/dining/pete-wells-per-se-review.html).

[4]"Alfred E. Neuman" is the fictitious cover boy of the humor magazine *Mad*. "What, me worry?" was his catch phrase.

[5]At my local Bread & Circus (now part of Whole Foods), I needed a half-pint of heavy cream but none was in the cooler. I asked an employee, who said it would be restocked in a few minutes. I didn't have to go back for it; he tracked me down in another part of the store and handed it to me. I had a similar incident quite recently at Costco.

[6]Burns, Robert. "To a Louse." Poem, 1786 (http://www.robertburns.org/works/97.shtml).

[7]Attributed to Ralph Waldo Emerson in the late 19th century.

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MAKE IT HAPPEN

Frictionless Commerce

by Karlene Cousins, Pouyan Esmaeilzadeh, George Marakas, and Richard Klein

Frictionless commerce promises to use data from the Internet of Things (IoT) to seamlessly integrate buying opportunities into customers' everyday activities, artifacts, and natural environments, thus enhancing the customer experience (CX). Within the frictionless commerce ecosystem, customers can buy a product or service on demand, when and where they wish, with as few clicks or steps as possible.

Merchant mobile payment applications represent a first step toward frictionless commerce but achieving this initial milestone has been challenging in the US. While many countries have migrated toward a cashless society, mobile payment service providers in the US face significant challenges in motivating consumers to adopt mobile payments. The US mobile payment market space is highly fragmented and filled with a slew of competitors — Apple Pay, Samsung Pay, PayPal, and Google Pay. For mobile payments to achieve higher penetration in the US, services must not only deliver the convenience of cash and credit cards but also provide added services that create incentives for consumers to part with old payment habits.[1]

Merchant mobile payment applications represent a first step toward frictionless commerce but achieving this initial milestone has been challenging in the US.

In particular, mobile payment service providers need to offer products that add value beyond payment settlement and integrate mobile payments into the overall CX. Furthermore, the providers must convince the consumer of the safety and reliability of mobile payments in terms of protection of sensitive personal information and identity theft. Only when mobile payments simplify a customer's life and provide a tangible benefit will consumers willingly change their habits and behaviors and adopt mobile payment.

In developing countries such as Kenya almost every household uses the M-Pesa ("M" for mobile, "Pesa" for money [in Swahili]) mobile payment application.[2] M-Pesa's popularity in Kenya stems from sparse banking institutions and prohibitively expensive, limitedly available financial services. Using M-Pesa, Kenyans can secure their money from theft, transfer money to family members in remote areas, carry out business transactions, save funds, and, in some instances, lift themselves out of poverty.[3] In contrast, convincing US consumers of the mobile payment's value proposition has proved challenging given readily available access to financial services with most of the population possessing bank, debit, and credit card accounts. Therefore, demonstrating how mobile payments offer a more valuable payment mechanism than cash or credit cards continues to elude service providers.

Four types of mobile payment applications exist within the US market: (1) financial services applications, (2) proximity payments, (3) merchant mobile payment applications, and (4) consolidated applications. *Financial services applications* facilitate payment services such as person-to-person (P2P) transfers and online bill payments. *Proximity payments* such as Apple Pay and Samsung Pay act as a substitute for credit cards or cash at point of sale (POS) and interface with a merchant's credit card fulfillment infrastructure. Near-field communication technologies enable proximity payments by waving a mobile phone near a merchant's POS terminal. By contrast, *merchant mobile payment applications* such as Starbucks Mobile Order & Pay encompass customized mobile wallet functionality, accepting customer orders and payments, while often providing rewards for increased customer loyalty to a given merchant. Some merchant mobile payment applications make use of proximity payments for in-person transactions and also facilitate purchases outside of physical merchant locations through wallets. Finally, *consolidated applications* such as PayPal integrate merchant mobile payment services and financial services.

In this article, we report on a study of 305 consumers in an effort to understand the features associated with their vision of the "perfect merchant mobile application." From this data, we present a multidimensional framework to guide merchants in determining the characteristics that should be considered in their merchant digital ecosystem when designing frictionless commerce environments.

Background

To better understand the value of merchant mobile applications as well as measurement factors, which inform the value proposition, we studied the Starbucks Mobile Order & Pay app. This application represents first-generation frictionless commerce applications. Customers can use the service to place an order for coffee or food from their mobile device — skipping the line at the register — and pick up their order directly from a barista while payment processing occurs in the background. Starbucks launched this app as a pilot in Portland, Oregon, in December 2014, expanding throughout the Pacific Northwest in March of the following year. In June 2015, Starbucks expanded the service across the southern and central US. Currently, some 4,000 stores, more than half of the company-operated locations across the US, employ the service. Starbucks initially deployed the app to iPhone's iOS platform and later launched it on the Android platform. In Q2 2018, Starbucks Mobile Order & Pay app accounted for 12% of all transactions in its US locations.[4]

To support the application's launch, Starbucks asked customers to share opinions of Mobile Order & Pay and submit ideas on how to improve it via posts to mystarbucksideas.com — a site geared toward open innovation. We collected customer responses to a specific post, which asked users to describe their experiences using the Mobile Order & Pay app and to make recommendations as to how it could be improved. The mystarbucksideas.com crowdsourcing site provided a natural context to collect insights from actual users without the biases typically introduced in research studies. Thus, this approach allowed us to assess what actual users really desired and expected from a merchant mobile app.

We analyzed customer posts from December 2014–June 2015. This approach allowed us to identify the mobile application's factors and capabilities that customers talked about the most on the Starbucks site. We grouped these capabilities into higher-level categories to form five distinct constructs: (1) context awareness, (2) utility, (3) software and UI design, (4) merchant reputation, and (5) rewards.

Using the findings from the analysis of the Starbucks data, we developed a survey to measure these constructs in other contexts apart from Mobile Order & Pay. We adopted some measurement items based on theory from prior research studies while developing others as needed.[5-8] We asked subjects to think about an ideal merchant mobile payment application and to indicate the importance of each feature in such an app in a physical retail environment (e.g., food outlets such as Starbucks and department stores such as JCPenney and Sears). The survey included items that described potential features that the perfect mobile merchant application could have when purchasing either a service or a product. We asked each respondent to evaluate the importance of each item. We measured the importance of each item on a seven-point Likert scale from strongly disagree (1) to strongly agree (7).

In December 2016, we collected data from students at a large southeastern US university. Some 65% of respondents were employed. Most respondents' ages ranged between 18-34 (99.6%), with 48.5% being women and 51.5% men. Participation was voluntary, and responses kept confidential. We offered participants extra credit for participating in the survey. The use of student samples is an accepted approach in online shopping research studies.[9]

Our analysis provided the underlying structure of the value of mobile merchant applications as perceived by the customer. Figure 1 represents a comprehensive model to provide in-depth understanding about what features merchants should consider in implementing their overall merchant digital ecosystem. The unique combination of these features in the mobile payment applications context provides value to users and will motivate users to download and use the app. As shown in Figure 1, the features can guide merchants in evaluating their own applications as part of an overall merchant digital ecosystem, within a frictionless commerce environment. We describe these features in greater detail in the next section.

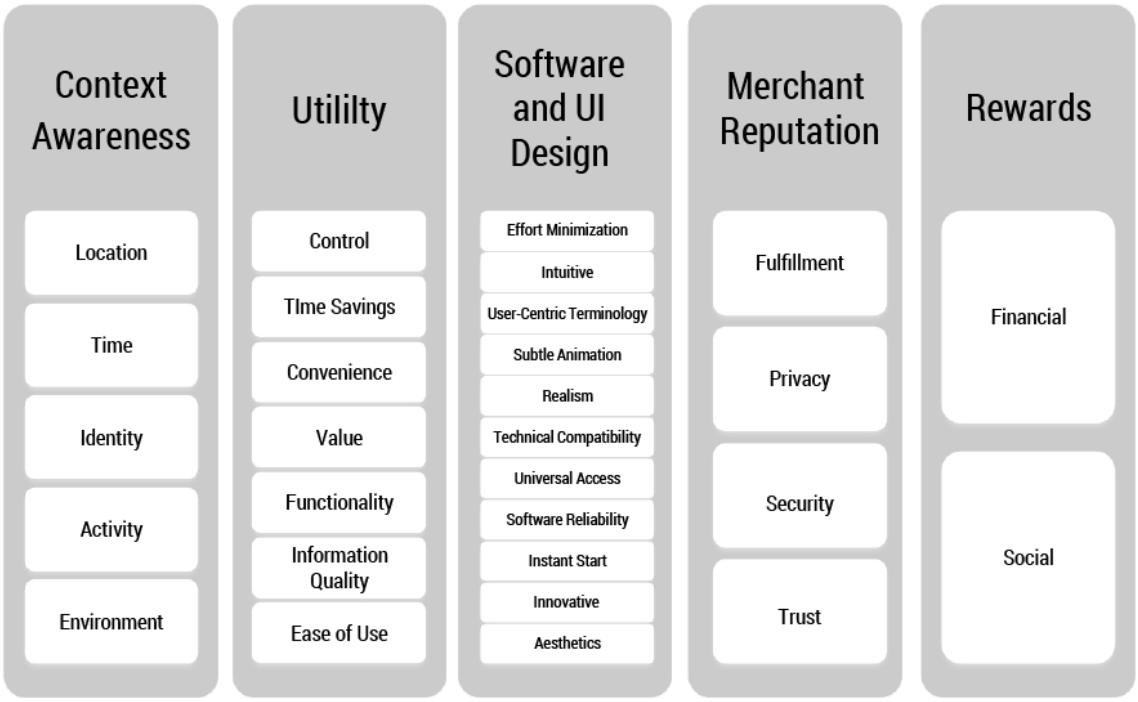

Figure 1 — Frictionless commerce application considerations.

Study Results

Our findings reveal the factors that create value for users of merchant mobile applications. We conclude that the true value of the merchant mobile ecosystem lies in being able to redefine the consumer value proposition and to enhance CX. This approach requires integrating payments seamlessly into the customer experience, thus rendering the payment process invisible. While cash still has its place in society, we cannot ignore the growing digitization of money. If digital forms of commerce simplify users' lives and make it easier for customers to get what they want, when they want it, we can expect to see a much more rapid migration toward merchant mobile applications.

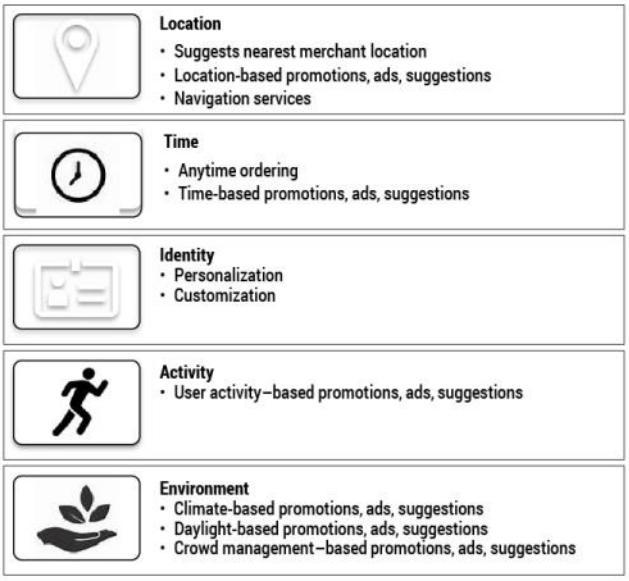

Figure 2 — Context awareness.

Context Awareness

Context-aware applications involve capturing a broad range of contextual attributes, such as the user's current positions, activities, and surrounding environments to understand what the user wants to accomplish and what services the user might be interested in (see Figure 2).[10, 11] If the merchant's digital ecosystem dynamically adapts its behavior according to each individual user's context, then the merchant creates value for customers. The services that customers in the same place at the same time want to receive may be different, so customers value predictive and personalization services based on their identity and preferences.[12,13] The ecosystem should possess the capacity to learn about each customer's behavior and dynamically suggest purchases and offers to the user based on their preferences, past behavior, and current context. The ecosystem should learn about the user's frequent purchase outlets, defaulting to them given the actual location of the user. For example, one user suggested that once a customer places an order, the Starbucks Mobile Order & Pay app should alert the store when the customer is in close proximity, so a barista can prepare the order "just in

time." As a result, ready-made orders at the *right temperature* would await the customer's arrival.

For remote orders, merchants should replicate or exceed the in-store experience with respect to product and service availability and customization. Customers want their preferred orders, products, and services stored and readily available in the ecosystem. Customers on the go expect location-based services to assist them to navigate to the merchant's location and locate and pay for purchases once they arrive. For customers who are shopping within physical outlets, location-based services are also desirable. Customers visiting physical outlets wish to use the merchant's digital ecosystem to locate, interact with, select, and pay for products on site.

The merchant should deliver products and services to anyone/anywhere the customers choose, on demand. As an example, a customer urgently desiring a dress for an important function could use the app to select a few choices that the merchant's app suggested based on knowledge of the customer and the event. The customer could use the app to preview how the dresses would fit based on the app's knowledge of the customer's body type, measurements, and body scan. The merchant could use a self- driving vehicle outfitted with a fitting room to deliver the dresses within a few hours to the customer's location so that the customer can make a choice. The vehicle's departure from the customer's location could trigger payment once the remaining dresses have been accounted for, through sensors embedded in the garments.

The merchant's ecosystem should adjust services and products according to time of day and environmental conditions. For instance, the application might prevent users from placing orders with a store closed due to inclement weather. The ecosystem might also redirect customers to other service channels if their selected channel has long wait times or is crowded. In sum, the ecosystem should provide personalized, customized, environmental, and location-based services, which adapt and predict given the respective user's context.

Utility

Utility describes user perception of ease of application use/usefulness and how well the app performs its intended purpose (see Figure 3).[14] In addition to supporting user activity and making it convenient to purchase products and services as a user moves, the solution must simplify the customer's life while providing tangible benefits. Such benefits must exceed those provided through cash, credit, or other payment mechanisms. For example, people often adopt a merchant's mobile app in an effort to save money; that is, they utilize the app to receive rewards, coupons, or special offers. Taking that a step further, the merchant's mobile app should eliminate the need to carry cash, cards, or coupons, as well as loyalty and reward cards. And the customer's use of a merchant's mobile app should enable skipping the line, procuring prepaid products and services ahead of customers using cash or credit. Time savings can also result from scheduling pick-up and drop-off times. Moreover, the mobile app should give the customer greater control over purchases, order details, payments, and budgets. And it should easily facilitate tracking of gift card balances, rewards, and previous purchases. Overall, the user should seamlessly integrate the use of the app and incorporate the products and services into his or her daily activity and lifestyle.

Some users prefer a single, consolidated application that facilitates purchases from multiple merchants, combining traditional and nontraditional financial

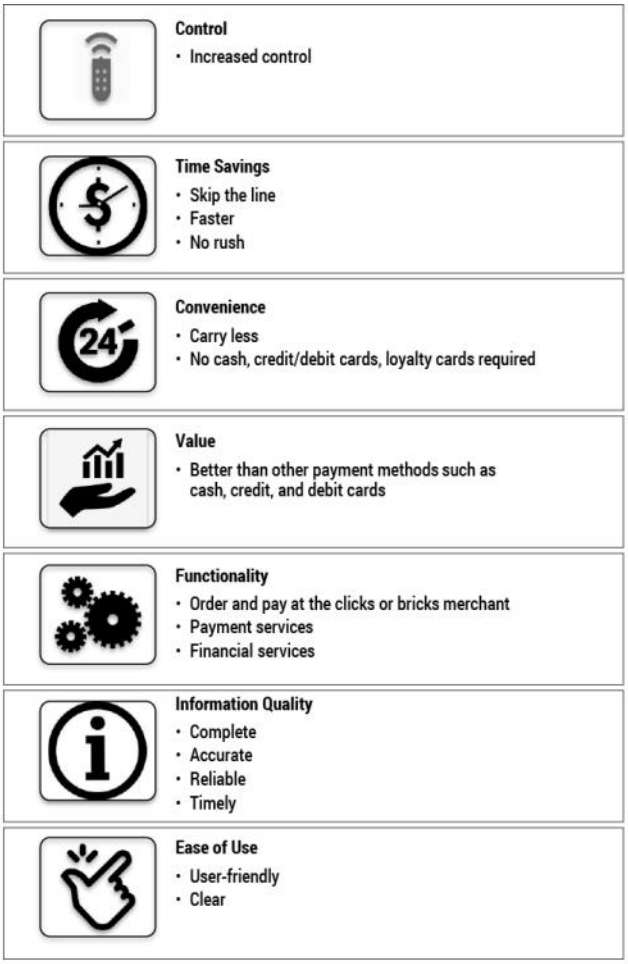

Figure 3 — Utility.

services. These users prefer a single launching pad where they can access a variety of merchant and payment services. Users should be able to use such an application to facilitate mobile proximity payments in a retail environment as well as frictionless online payments to merchants for products and services. Users should have access to traditional payment services such as bill payment, remittances, bank deposits, bank account inquiries, P2P money transfers, and payments to informal vendors, as well as nontraditional services such as donations to charities and social media money transfers. Of note, some users acknowledged a preference for separate applications for each type of service, opting for greater control over banking activities,

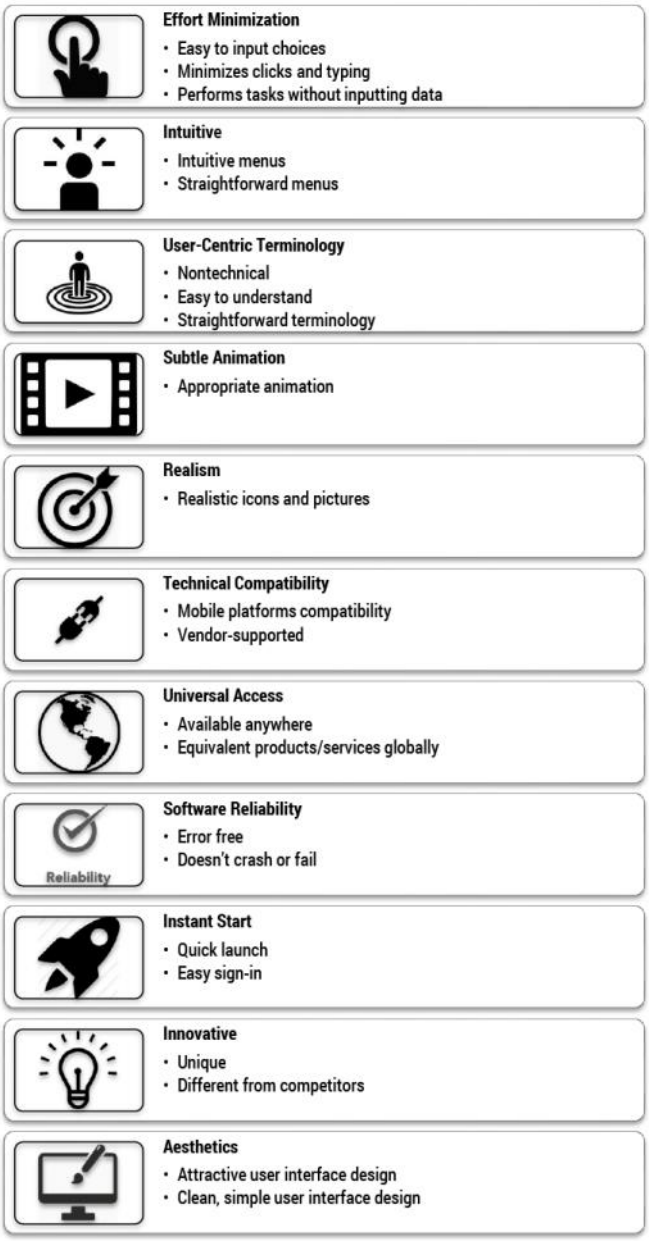

Figure 4 — Software and UI design.

purchases, and financial information. Therefore, the merchant's challenge is to design novel business models and underlying business processes such that the customer experiences high levels of utility. This may entail creative ways to provide high utility by making the merchant's products and services digitally enabled.

Frictionless commerce can even be applied to healthcare. For example, novel ways to provide utility while payment services remain in the background can be applied to the retailing of orthodontic services. Customers are often inconvenienced by long wait times for appointments and travel to doctors' offices. So, for example, orthodontists can set up a network of retail locations (even in popular shopping destinations) where technicians can carry out remote 3D scans and examination of a patient's teeth. Using the app, orthodontists can remotely determine and provide long-term orthodontic treatment for minor cases without a patient visiting the doctor's office. Based on these remote 3D scans and examination of a patient's teeth and access to patient's dental health information, the orthodontist can develop a treatment plan and schedule and deliver orthodontic treatment trays embedded with sensors, so that orthodontists can monitor treatment progress remotely. The app can then process scheduled payments in the background over the treatment period and apply relevant discounts and rewards. In this model, once the initial scan is completed, the patient is never required to visit a physical location.

Ultimately, the merchant ecosystem's facilitation of a unique and useful CX by supporting purchases across an amalgamation of products and services is important. However, building such an ecosystem requires open systems and a high level of interoperability.

Software and UI Design

To enhance ecosystem usability, design features should deemphasize payments and emphasize CX optimization. Customers tend to migrate to innovative applications that support unique business processes and incorporate a user interface (UI) design distinct from those of competitors (see Figure 4). The key is to think of novel ways to design the digital ecosystem to transform services and products while keeping in mind desirable design attributes.

Effort minimization constitutes a valuable feature to customers.[15] Merchants should design mobile ecosystems requiring minimal user effort. Applications

should exhibit ease of navigation when browsing and selecting products and services with as few clicks as possible required to complete orders. Menu options and navigation should be intuitive. Ideally, seamless payments should result. Consider the ridesharing app Uber, which captures payment details when the user enters them for the first time with initial use. Users receive notifications upon arrival at their destination, detailing charges for products and services, with payment processed automatically in the background. Because there is no need to reenter payment details for future services, using the app to initiate and pay for a ride becomes frictionless.

Merchants should also ensure application compatibility across multiple platforms and consistent feature behaviors across diverse global markets.[16] For example, the Starbucks Mobile Order & Pay originally launched exclusively on the iPhone platform. Loyal Starbucks customers on Windows and Android platforms threatened to switch to competitors given the limited availability. Customers also complained when the app did not work the same way outside the US. Merchants should make sure that all locations universally support their mobile payment app as a payment mechanism, as customers loading funds to a merchant's wallet expect all locations to accept it as payment. Customers also view reliability as a critical factor driving continued use.[17] Therefore, applications must work seamlessly at all times without failure during payment processing. Other desirable design features[18] include fast startup times; accurate, realistic photos and icons representative of products and services; creative but subtle use of animation; user-centric terminology; and availability when desired or needed. UI design aesthetics should be attractive, simple, and clean.

Merchant Reputation

A positive merchant reputation derives from the ability to fulfill the order paid for by the user, protect user's privacy, guarantee the security of user financial and personal information from security breaches and identity theft, and prevent fraud (see Figure 5). This requires implementing industry standard security and privacy protection mechanisms and using artificial intelligence (AI) to learn about user behaviors and build fraud detection and prevention capabilities.

Trustworthiness and honesty are important merchant characteristics. Therefore, merchants must carefully use AI to price products and services as customers have reservations patronizing merchants they perceive as

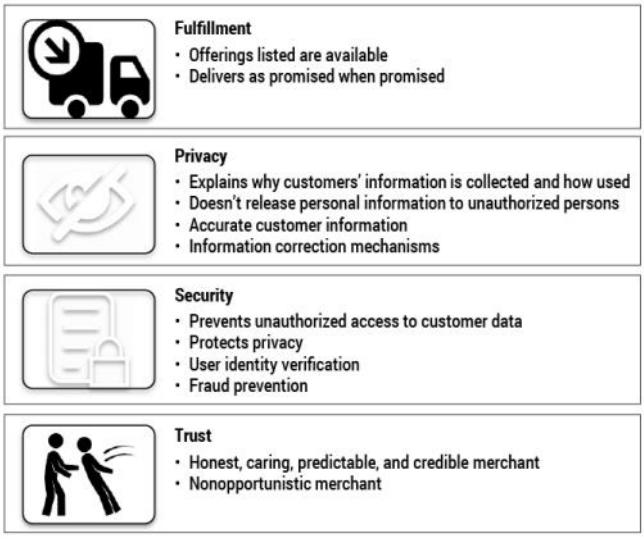

Figure 5 — Merchant reputation.

opportunistic. For example, Uber's price-surging mechanism, where prices increase based on customer demand and driver availability, remains controversial.

While existing merchants may easily leverage their reputation in the marketplace, new startups often lack an established reputation when launching an initiative. However, startups can build their reputation by designing business processes aimed at fostering customer confidence in the merchant. For instance, Uber does not charge customers for services until they have been dropped off at their destination. Customer reviews also help in developing a merchant's reputation by providing opinions of the merchant and the quality of products or services.

Rewards

Users expect financial and social rewards with patronage of a merchant's mobile app (see Figure 6).[19] Financial rewards that yield monetary savings, such as discounts, coupons, freebies, and referral fees, among other financial benefits, increase customer loyalty.[20] Social rewards that result in preferential treatment and special service also help in building customer loyalty.[21]

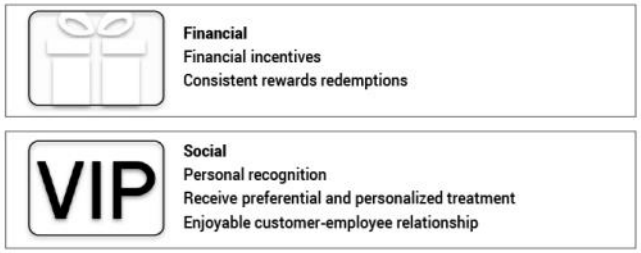

Figure 6 — Rewards.

Many users look forward to the social prestige that using the merchant's mobile payment app brings. And customers expect recognition and VIP services from the merchant's staff. One way to facilitate superior employee-customer social interactions is to provide features in the app that help employees learn about customer preferences over time and how to cater to customers through thoughtfully curated, personalized products and services. Ultimately, merchants should design features to provide customers with increased financial benefits, faster service, preferential treatment, and personal recognition by service staff when using a merchant's mobile app. Furthermore, the merchant should consistently provide and honor financial and social reward systems across all channels.

By and large, frictionless commerce can reinvent CX by allowing a merchant to better understand customer needs and create a unique, personalized, and adaptive CX.

Conclusion

The study presented in this article provides a framework that merchants can use to evaluate their mobile merchant digital ecosystem. The results suggest five important factors driving frictionless commerce: context awareness, utility, software and UI design, merchant reputation, and rewards.

The technology drivers of frictionless commerce will include open standards, cloud-based technologies, IoT, location-based technology, AI, robotics, big data, and analytics. Should merchants succeed in leveraging such technologies to provide a superior CX, biometrics, sensors, beacons, and displays embedded in everyday artifacts will support interactions between merchants and customers. The cloud will host data related to customer payment information, order history, personalization, customization, and preferred merchants, products, and services. An open technical infrastructure with modular as well as plug-and-play capabilities will afford merchants the ability to add their services seamlessly to this environment. Customers may configure their profiles by selecting preferred interactions with merchants to suit their lifestyle, connecting their devices to preferred products and services. Every user will further possess the capability to become a merchant through the sharing economy and other emerging marketplaces. The transformed CX within the store will find staff recognizing customers whether onsite or remote — and anticipating purchases given most recent purchases, inquiries, and searches. Using this information, merchants can create a better shopping experience and offer superior customer service.

By and large, frictionless commerce can reinvent CX by allowing a merchant to better understand customer needs and create a unique, personalized, and adaptive CX. However, customers must trust that the merchant will fulfill their order, protect their privacy, and secure their personal information. In such a scenario, context awareness, utility, software and UI design, merchant reputation, and rewards remain relevant to optimizing the customer experience.

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[11]Emmanouilidis et al. (see 8).

[12]Hong et al. (see 10).

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[14]Hoehle and Venkatesh (see 5).

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[17]Hoehle and Venkatesh (see 5).

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[20]Lee et al. (see 6).

[21]Lee et al. (see 6).

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THE NEW METRIC IN TOWN

The Wallet Allocation Rule: CX as Value-Creation Strategy

by Luke Williams

The customer experience (CX) metrics that most firms track do not have a *direct* relationship to the customer-level financial metrics that most firms care about. Thus, the experience of CX program managers is fraught with difficulty explaining the ROI of customer experience in terms their C-suite will accept. The competitive landscape, it appears, is simply too complex to be predicted through simple scores and anachronistic platitudes.

But a new breakthrough discovery — the *Wallet Allocation Rule* — is solving the CX metric and ROI problem and opening the door to strategic advances that elevate the role of CX for leading companies by changing the way we track metrics, understand key driver analyses, define marketplace differentiation, and develop strategies to win share of wallet. Though the methods of delivering on these grand promises are significantly more complex than current methods, they are far more scientific and predictive of the outcomes about which firms care most.

Market Differentiation and the Origins of CX

CEOs are obsessed, above all, with two simple metrics: *profitability* and *growth*. The former is a requirement for firm viability and the latter is a necessity for long-term success in markets. Profitability speaks to how money and operations are managed, but growth is a function of what the company produces and how it produces it relative to customer expectations and market competition.

Creating market differentiation has long been the North Star toward which firm activities are oriented, as differentiated products and services enjoy greater price inelasticity, greater brand efficiency, and decreased costs to acquire customers. One of the most complex management aspects of mature markets, however, is the consistent parade of newly differentiating activities emerging, being optimized, and then being retired as the enveloping market consumes and adapts those same practices, nullifying their differentiation. Inevitably, as markets mature, this is a cyclical and predictable outcome.

Particularly in post-industrial and service-driven economies, the CX movement has emerged in the past 15 years as the latest approach to sustaining a variety of competitive advantages, especially differentiation. Given that CX is both process- and personnel-dependent, firms see compound CX strategies as form-fit to the organization and can therefore achieve a unique and indomitable point of differentiation.

Customer experience has a combined lineage from both service and marketing origins. The service lineage was traditionally focused on micro-views: fixing customer issues as they arose and dealing in transactional terms with an emphasis on operational metrics. The marketing lineage was focused on a broader impact on customer perception: customer loyalty and willingness to forgive mistakes and accept new products, promises, and services. This latter origin, until only recently, was traditionally less focused on hard-and-fast metrics.

During its infancy, customer experience faced obstacles as a viable market strategy because, being interdependent on various entities throughout a firm to deliver, it was difficult to measure and evaluate its value-add independently in the dollars-and-cents terms that the C-suite typically requires. It was reasonable to assume that such a strategy was delivering great value, but without metrics solidly linked to CX, gains created by CX programs were often claimed by myriad departments seeking to stake their own value claim.

Share of Wallet as the Go-To Financial Metric for CX

Finance, sales, marketing, and others all have acceptable ROI metrics by which their groups are evaluated, but, until recently, customer experience was often seen as too focused on the "soft numbers" around the customer.

Given the intense focus on measuring customer loyalty and the service delivery aspects of a business, the

majority of headline CX metrics are derived from survey-based methods used in relationship and transactional research programs. The KPIs from these metrics are commonly attitudinal: customer satisfaction, likelihood to recommend, likelihood to repurchase, customer effort, and others. Certainly, CX programs do attempt to relate their efforts to specific nonattitudinal outcomes, such as customer retention, customer recovery, customer spend, and customer lifetime value. But these multivariate metrics often prove too difficult to deconstruct and influence for many CX practitioners.

Among all metrics, share of wallet has evolved into the go-to financial metric for customer experience because it is a true measure — relative to alternatives — of how customers spend their money at the point of sale. In addition to this "measure of true loyalty," share of wallet is also a foundational variable in a firm's market share:[1]

$$\text{Market share} = (\text{Penetration Share}) \times (\text{Share of Wallet}) \times (\text{Heavy Usage Index})$$

While "penetration strategies" are indeed effective, these remain the domain of many marketing and strategy teams. "Usage strategies" require a firm to convince a customer to spend more on the entire category than they typically do (e.g., influencing a decision to spend more on high-end food and groceries than we may have done a year ago, while spending less on entertainment to compensate) and often require a fundamental shift in marketplace thinking about customer priorities. Share of wallet, however, remains an effective relative measure that CX teams own.

Connecting Traditional Metrics to Share of Wallet

Given that foundational teachings of luminaries like Peter Drucker focus on the creation and service of a customer as a premise for existing as a business, it is easy to presume the connection between customer experience and firm outcomes.

There is some scientific evidence of customer satisfaction metrics directly linking to company performance, such as the ASCI claim that a subset of its metrics can predict cumulative stock performance.[2] However, despite an assumed connection between CX and the outcomes it is purported to deliver, many of these connections lack uniform scientific underpinning to declare any real victory. For example, Bloomberg has reported on the utter lack of a relationship between customer metrics and firm performance on stock returns.[3] In the case of predicting stock market returns, of course, much noise can influence outcomes: market perception, investor preference, macroeconomic effects, stock buybacks, and multidirectional influences stemming from profit management or sector shifts.

> *It is best to reduce the relationship between CX and outcomes to its simplest part — the customer — with a hypothesis that the more positively customers view a firm, the better off the firm will be.*

Seeking to reduce this noise, then, it is best to reduce the relationship between CX and outcomes to its simplest part — the customer — with a hypothesis that the more positively customers view a firm, the better off the firm will be. However, in a seminal, award-winning piece of scientific research by Keiningham et al., there is clear demonstration that common CX metrics — specifically satisfaction, recommend intention (and net promoter score [NPS]), and purchase intention — have less than 1% explanatory power in the variance around share of wallet.[4]

These findings shed light on difficult truths around customer experience; specifically, the apparent lack of a direct correlation between satisfaction, customer spend, and firm performance. In most everyday experiences of CX leadership, this is often evident in the rise and fall of "soft" customer-tracking metrics with no apparent relationship to how well the firm does from quarter to quarter.

The Wallet Allocation Rule

The inability to tightly predict financial outcomes through CX metrics has sat poorly with many expert practitioners because it defies an obvious logic that happier customers are better for mature businesses. This conundrum has led to a multiyear investigation into these metrics and their outcomes. The result of this investigation — which was then replicated and confirmed globally by several leading universities — was the discovery of a formula that clarified a definitive, predictable, and meaningful relationship between

CX metrics. This discovery is known as the Wallet Allocation Rule.

The Wallet Allocation Rule — first unveiled as the subject of a *Harvard Business Review* article[5] and later a *New York Times* bestselling book[6] — is an elegant mathematical formula that allows CX teams to accurately predict share of wallet at the individual customer level; this, in turn, can be rolled up to an increasingly accurate prediction at the firm level. The scientific formula for the Wallet Allocation Rule, to be applied at the individual level (not aggregate level) is:[7]

$$Share\ of\ wallet = \left(1 - \frac{rank}{number\ of\ brands+1}\right) \times \left(\frac{2}{number\ of\ brands}\right)$$

where

Rank = the relative position that a customer assigns to a brand in comparison to other brands also used by the customer in the category

Number of brands = the total number of brands used in the category by the customer

This rule produces an estimate of individual share of wallet, which is then aggregated to the brand level. The correlation of wallet allocation prediction and actual brand share of wallet typically exceeds r>.90 and has validated at this level in dozens of sectors over the past eight years.[8] Considering this pivotal discovery, the disconnect between traditional metrics and predictive metrics is obvious: traditional metrics fail to adopt the view of the customer, especially most customers who solve their category needs through multiple firms.

This fundamental shift in thinking was apparent from the Wallet Allocation Rule's inception: if a customer uses you and some of your competitors, they are not simply *your* customer … they are *everyone's* customer. The choices a customer makes are made in the context of alternatives and must be measured as such. This applies to metrics and analytics alike.

While the predictive formula of share of wallet is foundational, the true value of the discovery is in the identification of the two active metrics that generate the prediction: the number of brands used and their relative rank. The single biggest impact of the Wallet Allocation Rule is that practitioners will see that simply increasing absolute satisfaction won't necessarily change behaviors; instead, it is the relative rank of the brand that is important.

How to Deploy the Wallet Allocation Rule

The metrics used by the Wallet Allocation Rule are derived from survey-based information. To use the Wallet Allocation Rule effectively, two to three minor changes need to be made to a standard CX program's relationship study of customers, though these changes can also be applied to market-level studies measuring customers and non-customers alike. The changes to be made are as follows:

1. Add a question that asks what other firms customers use for the types of products and services they obtain from the "home brand." (This metric is already collected by many relationship studies but add it if it does not exist.)

2. Instead of asking the KPI questions (e.g., satisfaction, recommend [including NPS]) only of the home brand, ask the KPI questions for all brands used for each respondent.

3. Replace standard scale-based ratings — used frequently for key driver analyses — with individual questions for each attribute, asking the respondent to indicate which brand is "best" for each attribute; the respondent may check more than one if he or she feel brands are tied for best.

These simple survey changes unlock an entire suite of analytics and competitive KPIs that contextualize data and provide strategic information necessary to win share of wallet through CX strategies.

Wallet Allocation Rule Tracking Metrics

Traditional customer experience KPIs — such as NPS, satisfaction, and others — are trended on the singular basis of your home brand's rating. In some instances, benchmarking of other brands also occurs, but with the same method applied: looking only at a single brand. The Wallet Allocation Rule adopts a customer-centric view of the world with its KPIs and helps firms see their customer experience in the same context in which customers make purchase decisions. Therefore, firms must adopt two new tracking KPIs if they aim to measure meaningful changes in the administration of their CX programs: *market fragmentation* and *market superiority*.

Market Fragmentation

Market fragmentation is simple to measure. To track this metric, we simply measure the number of active brands used by a single customer. We then aggregate this result to see what percentage of customers use a varying number of competitors for products and services they could acquire from their home brand.

Consider the following analogy to demonstrate the importance of this metric:

> If 400 people show up to a birthday party, you will only get a small sliver of cake; if four people show up, you're going to get a lot more cake.

Figure 1 illustrates an example of a market fragmentation tracking metric.

Market Superiority

Market superiority is slightly trickier to measure and requires a customer-level transformation of how customers rate each of the brands they use into a corresponding rank. To demonstrate the importance of this metric, consider that some customers will never rate a brand a 9 or 10, while other customers will only work with brands they rate a 9 or 10. A firm can never know whether an 8 or a 9 rating wins them share without seeing how that individual customer rated the other competitors they use. Figure 2 illustrates an example of different customers rating brands they use, which are then converted to ranks.[9]

This process of rank transformation is a simple process where ratings of "used" brands for each individual customer are converted into a simple ranking on the customer level. An example of the original brand ratings looks like Table 1. With the corresponding rank transformation shown in Table 2.[10]

To have a more significant seat at the table, CX leaders must orient their roles around the development and execution of strategy to drive the financial outcomes the C-suite covets. When tracking market fragmentation and market superiority metrics over time, trends that drive share of wallet will be simpler to track and will be devoid of the meaningless fluctuations that typically occur, while also avoiding the cultural scale bias or other metric-specific biases that create more curiosity about score changes rather than leading to action plans.

Most CX practitioners will also note from the Wallet Allocation Rule that it is possible (in fact, it is common) that changes in a traditional metric's absolute scores will not necessarily result in changes to the rank used in the Wallet Allocation Rule. Using our example from Table 1, if Supra were to improve the experience it provides Mary and her score rises from a 5 to a 6, her ranking of Supra (third of three) — and therefore her share of wallet — would remain unchanged.

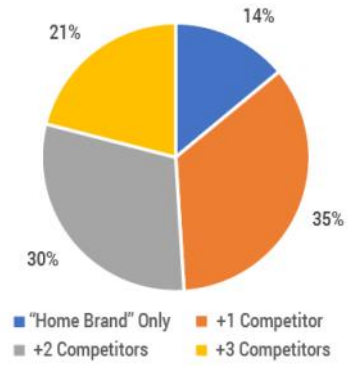

Figure 1 — Market fragmentation helps CX leaders understand what percentage of their customers have split loyalty and to what extent that may affect their share of wallet.

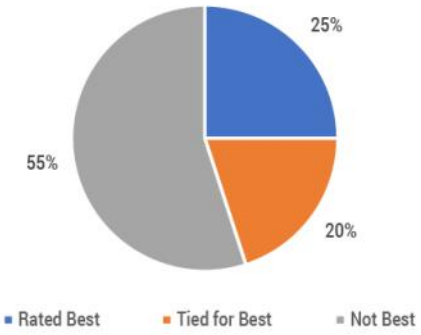

Figure 2 — Measuring market superiority allows firms to understand what percentage of their customers view them as best versus their specific alternatives. Firms rated as "best" gain outsized share of wallet.

	Supra	Apex	Summit
John	8	9	10
Jane	7	7	9
Mary	5	8	7

Table 1 — Many firms make the mistake of simply averaging the score of varying competitors. However, this poorly links behavior and spending patterns of their customers.

	Supra	Apex	Summit
John	3	2	1
Jane	2.5	2.5	1
Mary	3	1	2

Table 2 — Transforming ratings into rankings at the customer-level will provide significantly more predictive data while eliminating common scale biases (e.g., cultural scale bias).

Wallet Allocation Rule Tool 1: Driver Analyses

CX practitioners commonly manage metrics and determine priority of change initiatives through methods such as regression-based driver analyses. This approach has not only been beneficial in understanding what drives customer satisfaction, but it can also be useful to estimate the expected percentage change in satisfaction if one or more of the influencing variables is adjusted through initiatives.

The Wallet Allocation Rule requires practitioners to examine two key outcomes — brand usage and brand rank — to optimize share of wallet for current and potential customers.

With a shift to wallet allocation tracking metrics, CX teams will discover that these metrics are often much more difficult to change. However, when changes to these KPIs do occur, managers can be assured of real-world benefits that are measurable by both the CFO and at the market level. To achieve these outcomes, the Wallet Allocation Rule requires practitioners to examine two key outcomes — brand usage and brand rank — to optimize share of wallet for current and potential customers. Each requires its own driver model.

In practice, however, it is extremely difficult for competitors to be removed from a usage set once being entered. This is frequently because competitors are used for a reason — often owing to a product or service attribute that customers cannot receive from the home brand. To remedy these issues may have significant cost implications (e.g., fighting competitors with more convenient locations requires a real estate–based strategy and capital to make a meaningful impact). Therefore, the most frequent application of the Wallet Allocation Rule is to determine and evaluate drivers of rank to win share through customer experience.

Drivers of rank are critical in understanding share of wallet. The higher a brand's rank, the more share that brand gets. Thus, knowing what drives "best" or "tied for best" rankings (using ordinal logit models) will establish critical drivers that can really move metrics that matter. Often, the drivers of rank will differ from drivers of satisfaction[11] — meaning that drivers of sentiment and of behavior may be two distinct things — so it is the latter we must depend on to improve the customer experience in ways that increase share of wallet.

The output of drivers modeling is typically a list of varying aspects of the customer experience — such as store cleanliness, products available, product variety, pricing, experience with a staff member, and so on — and a percentage of variance explained is calculated. This information is used to rank-order the drivers from most important to least important, and the amount of "variance explained" can be split into three tranches:

1. **Primary rank drivers** — variables that explain 20% of variance or more
2. **Secondary rank drivers** — variables that explain between 10% and 19% of variance
3. **Tertiary rank drivers** — variables that explain less than 10% of variance

The order of these drivers clarifies how it is that a business drives its competitive rank. This precise method can be replicated for all competitors as well. The result is a deep understanding of what drives share of wallet for home and competitive brands and often reveals that firms earn their share in some similar (and differing) ways.

Wallet Allocation Rule Tool 2: Driver Differentiation

Surprisingly, though, knowing drivers of customer spending alone is not enough to understand what to do next. For example, Walmart may owe its share primarily to the presence of a huge variety of products at a low cost, but this doesn't mean that Walmart has more share to gain in the market by pricing products even more cheaply.

To create a nuanced understanding of where firms must go, they must first understand where they are relative to both their size and to the market they occupy alongside their competitors. To create this understanding, we statistically control for the market penetration of a brand as well as how often that brand is rated "best" on varying aspects of the customer experience. This technique, known as successive normalization,[12] allows us to understand how well a brand is performing on each driver of share relative to its competitors and its own size in the marketplace.

The result of this analysis is that each CX driver is designated one of three grades:

1. **Positive differentiation** — when a driver of a brand's rank is rated "best" more than we statistically expect
2. **Negative differentiation** — when a driver of a brand's rank is rated "best" less than we statistically expect
3. **No differentiation** — when a driver of a brand's rank is rated "best" equal to what we statistically expect

By controlling for firm size, we achieve the truest measure of market differentiation.

Wallet Allocation Rule Tool 3: Strategy Grids

The natural, final step before developing CX strategies to win share of wallet is to combine our rank drivers with our driver differentiation results. The composite of these values is a simple 3x3 strategy grid, such as the one shown in Table 3.

Within this strategy grid, CX practitioners can easily plot the drivers for their brand according to each axis. In repeating this process for top competitors in their own separate grids, we can then create CX strategies that drive differentiation, drive share, or both. Relying on CX strategies — even if not always obvious — will deliver maximum ROI. These strategies will take one of two paths:

1. **CX increases differentiation.** When a primary or secondary driver of a brand's share is either not differentiated or is negatively differentiated, brands have significant opportunities to gain outsized share if they can improve on their differentiation. This is commonly achieved through two methods:
   - *Accelerating efforts to be "best" more frequently on a specific driver.* Like traditional CX initiatives, which target one or more metrics for improvement, these efforts are often coupled with communications, advertising, or branding support to draw attention to the change and highlight the experience.
   - *"Managing evidence" of how good a brand really is at certain activities.* Sometimes, a firm needs to remind customers of how exceptional its service is, especially when high-end experiences are becoming increasingly expected by customers.
2. **CX changes driver power.** When a firm evaluates its drivers of share, it may determine that it doesn't necessarily like how it's making its money; it may also envy its competitors' share-drivers. An opportunity exists for a firm to reevaluate how it wishes to compete in current markets or prepare to compete in future markets. To develop a secondary driver into a primary driver of share requires significant examination of the firm's own capabilities, as well as the traffic in the marketplace.

Of these two strategies, the differentiation strategy is more commonly used, as it typically requires lower investment and has more predictable gains at a lower point of risk to deliver versus the alternative.

Conclusion

In practice, the Wallet Allocation Rule can help companies achieve success with CX strategies by providing a consistent, scientific approach that delivers financial results in competitive markets. While the fundamental approach of adopting a strategy-driven

	Negative Differentiation	No Differentiation	Positive Differentiation
Primary Driver			
Secondary Driver			
Tertiary Driver			

Table 3 — Visualizing drivers in a simple strategy grid is an effective method for identifying which strategies are more germane to brands, are unique to their market position, and share acquisition methods.

vision is more complex — compared to the tactically focused approaches in current, prolific use — the value it delivers to the firm will always be outsized gains. However, while the correlation between the complexity of the approach and its rewards is obvious, markets are simply too complex and too mature for simple tricks to deliver "whizz-bang" results.

In opting for strategy *in addition to* tactics, CX teams will come to fulfill their goals of a bigger seat at the table with operational and financial outcomes to call their own. These exact qualities — strategic, tactical, operational, and financial — will deliver customer experience as a bona fide path to market gains in ways that simple, traditional CX approaches simply cannot.

Endnotes

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The Digital Enterprise: Business Ecosystems for Great CX

by Jaco Viljoen

Businesses must focus on delivering a great customer experience (CX). If they don't, they risk alienating customers at an increasingly rapid rate, which will lead to the eventual collapse of their enterprises — an outcome that will occur with greater certainty now than has ever been the case before.

The more large enterprises adopt digital practices, the more they will interact with customers, or potential customers — and at a progressively faster rate. Their audiences will be much larger and their interactions far swifter the more they digitalize, leading to historically unmatched volumes of people impacted by their interactions. It stands to reason then, that if those interactions are of poor quality, the enterprise will alienate people faster than ever before.

To avoid that, large enterprises must know that CX no longer hinges on the quality of interactions between its employees and its customers or potential customers. Interactions in the digital world occur between customers and the enterprise's customer-facing systems, which will be linked to processes made entirely digital.

This is an important departure from business strategy of days of old. In the past (or the present for most businesses today), enterprises have most likely automated only parts of systems or discrete processes. Seldom are entire processes or entire systems linked digitally so that they are completely automated from one end to the other. At some point, there's typically a level of human interference or interaction in the process that ultimately makes it slow, costly, cumbersome, inflexible, and prone to failure, error, and disruption.

Eradicating human interference from our enterprise processes gives us the opportunity to present streamlined digital processes that expedite valuable customer activities related to our business that ultimately delight customers. *That's the goal of the digital enterprise*. Knowing this elevates the role of the common product development team to assuming responsibility for the quality of customer interactions and ultimately brand experience, with all the implied impacts.

It's a brave new world for the enterprise pioneers that have already embarked upon the journey to digitalization and those that have been left looking longingly from the sanctuary of the familiar. Whether having departed on this journey or not, few enterprises today will argue against the fact that it is imperative that all organizations undertake the journey at some point if they wish to remain relevant in a world moving swiftly onward. Armed with this knowledge — but with little experience and running adrift in an ocean of messengers proclaiming digitalization as imperative — most enterprises must try to discern the sightless navigators from the perceptive pilots.

It is also important to remember that, in seeking great customer experience, you are not en route to a final destination, but rather determining a preferred means of travel. Customers are constantly changing their minds as they realize what is possible and what others are doing. Therefore, the ultimate goal of great CX is holding continuous conversations with customers, held by various means, with only a few of them taking place in person. Done correctly, organizations should incorporate a program of continuous improvement to creating a solid enterprise capability that continuously strives to build great CX.

The Problem of Transforming the Enterprise to Improve CX

Digital enterprises must reimagine their business processes or value streams to be, by default, fully online and fully automated. They must offer a seamless process from the end user to the back office. And, as indicated earlier, they should eradicate human interaction.

Many businesses still have employees who interact with customers to capture requests into business systems. Amazon, for one, no longer does that. Its customers use the Web, its app, or even its proprietary hardware device. No bank that aims to successfully exist tomorrow forces customers to talk to employees for familiar activities. Every relevant consumer financial services

firm employs an app for handling common customer functions. The app is the entry-level platform today. How connected that platform is behind the scenes, however, is what distinguishes one digitalized enterprise from another. That means smartphones, tablets, laptops, and PCs are the foundational interaction platforms. How good these platforms perform relies on the ability to serve up functionality via the tight integration of back-end systems and the dynamism of the enterprise's continuous conversation process with its customers.

That's why enterprises must reimagine their business processes as they digitalize. Their legacy processes are either irrelevant in this new world or they are cumbersome, which makes them inflexible and unable to positively respond to continuous customer conversations. Either way, enterprises with legacy processes are most likely to automate a bad customer experience.

It is crucial, then, that good CX embraces change since it is a given that customers will change as they learn more and continue to engage. This implies the need for a continuous conversation with customers that is more of a continual interaction rather than a face-to-face conversation. It is a *way of doing things* rather than a thing itself.

One of the major caveats to achieving this idyllic vision is that enterprises must simultaneously strive to achieve what appear to be two mutually exclusive goals. First, they must respond more quickly to urgent customer needs. Second, they must provide a stable, secure, and predictable service to the customer. The problem with achieving stability and predictability in the desired future world of great CX is that the experiences are led by the customer interactions with software systems made by developers, continually improved based on continuous customer conversations, and therefore infinitely dynamic.

We overcome this challenge by developing our capability to delight customers through a developmental progression from the current state to the desired state. This realization led me to identify five distinct levels of CX (each with its own set of capabilities that build on top of one another) as digital business ecosystems that, once understood, enable a roadmap[1] to a great CX capability (see Figure 1). The five levels are:

1. Waterfall/traditional (the lowest level of CX)
2. Hybrid Agile (a combination of waterfall and Agile)
3. Regular delivery
4. Continuous delivery
5. Continuous exploration (the highest level of CX, which hints at that moving goal mentioned earlier)

Each level progressively improves business capabilities, resulting in a better chance of developing a great customer experience.[2] Each successive level of CX capability must be underpinned by the transformation to a digital enterprise. Moreover, each of the five levels of transformation, from waterfall to hybrid Agile, regular delivery, continuous delivery, and finally continuous exploration, rests upon seven capability clusters. The lower the organization's overall Agile capability, the lower you can consequently expect the capability level of each cluster. The seven clusters are:

1. Business agility mindset
2. Collaboration
3. Flow/lifecycle
4. Delivery
5. Adaptation (meaning responsiveness or sense and respond)
6. Value
7. Continuous improvement

Just as enterprise capability in each of these clusters is an indication of the organization's overall product development capability — highlighting specific areas that require improvement — enterprise capability in each cluster also highlights the organization's capability to delight customers.

The Five CX Levels of Digital Business Ecosystems

The five levels of CX delivery are closely linked to the enterprise's software development way of working, made possible by the flow or lifecycle capability (see Figure 2) and the delivery of the product (see Figure 3).

CX Level 1: Waterfall

The initial state of most organizations is a situation where a few smart people perform heroics to deliver

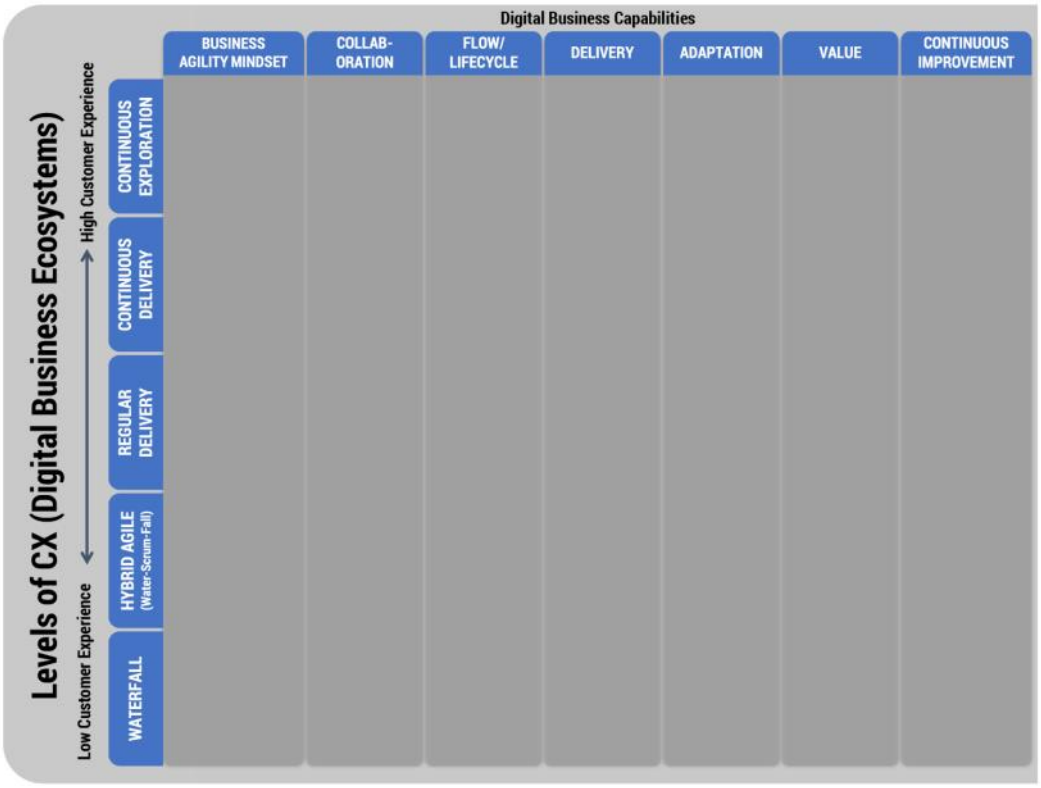

Figure 1— Five levels of customer experience (CX) as digital business ecosystems.

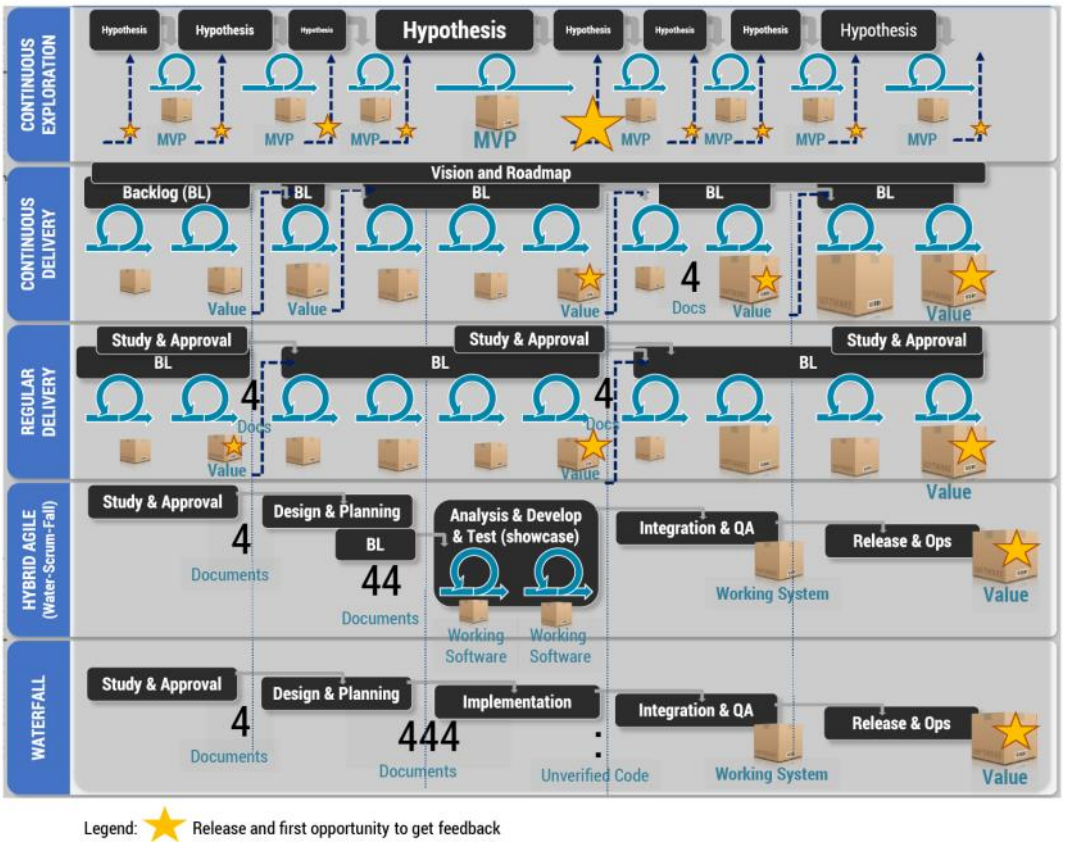

Figure 2 — Mapping the five levels of CX to the flow/lifecycle business capability.

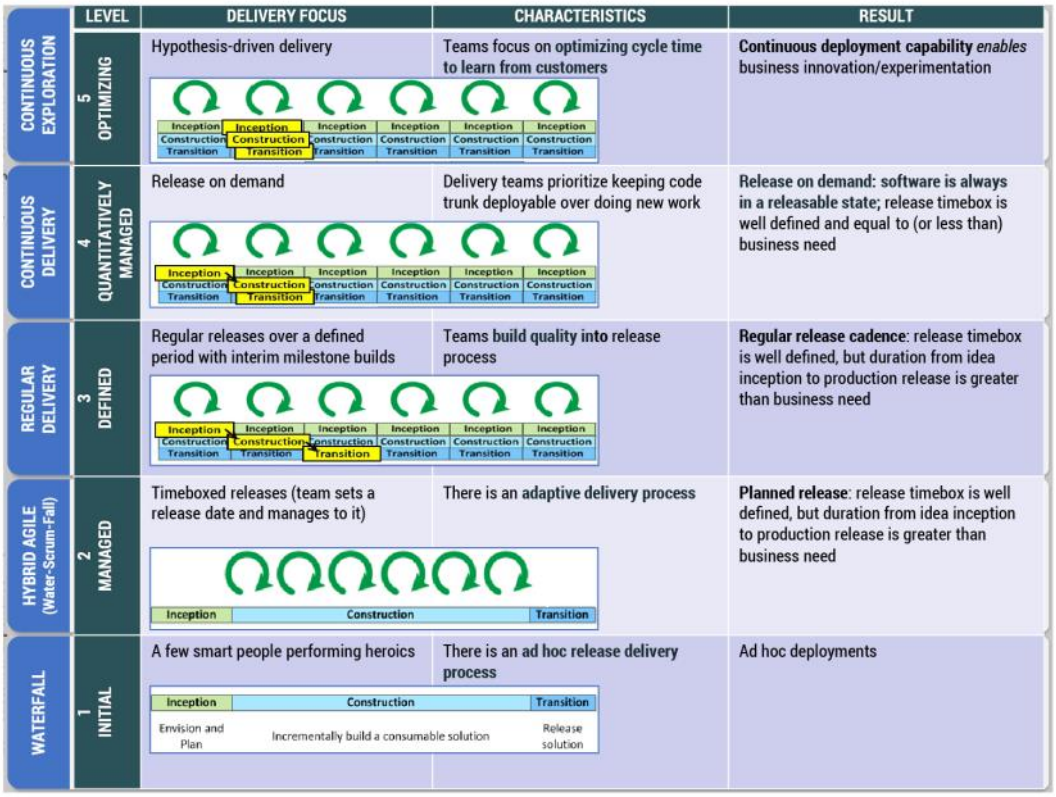

Figure 3 — Mapping the five levels of CX to the delivery business capability.

what customers need or want. This provides ad hoc delivery, at best, and irregular quality. It falls under the umbrella of hit-or-miss for CX and is usually far from delighting customers.

The flow or lifecycle comprises three phases (and activities) starting with *inception* (study and approval, design and planning), moving to *construction* (implementation, integration, and QA), and then *transition* (releasing it to operations). Work is organized in big batches called *projects* that deliver intermediate artifacts, such as documents, unverified code, a working system, and, lastly, value to the customer.

It is only upon release (shown as a star in Figure 2) that it is possible to get CX feedback. This is typically when angry customers call the contact center to complain; you rarely get positive feedback (if ever) about what customers like. Customer surveys sometimes provide useful feedback. The problem is that most of the useful feedback is lost somewhere between the contact center and the product or software development team. That means action is seldom taken to remedy the customer experience.

CX Level 2: Hybrid Agile

The next level seeks to manage the customer experience and offers some improvement. Teams set release dates and manage them, so delivery becomes regular, if infrequent. This level provides an adaptive delivery process and planned releases, but the time from inception to delivery exceeds business needs.

For all practical purposes, the flow or lifecycle is the same as CX Level 1 from the CX perspective. The only thing that changes is that the development team is more adaptive to changing business needs, which is great but rarely positively impacts the customer's product experience. The problem is that the business is still trying to predict good CX and feedback suffers the same dysfunctions as in the waterfall level.

CX Level 3: Regular Delivery

The defined regular delivery capability further removes inter-team barriers, especially between development and operations, to provide regular releases. Teams

concentrate on building quality into the development and release process and on achieving a regular release cadence. The time from concept to release, however — although shorter — remains too long to satisfy customers.

The process at this third level of capability has the same phases as previous levels. The phases offer all the same length and they overlap. Figure 3 illustrates this as inception, construction, and transition, where in one segment of time we conceive of the product, construct it, and transition it to operational for three different releases. This approach enables a release at the end of each segment of time, if and when it makes sense.

At this level, you could potentially get CX feedback much sooner than the previous two. Indeed, DevOps teams typically do not rely on customer surveys or contact center feedback to understand how to improve the customer experience. They prefer to look at digital options to understand the software's real-world usage patterns. One such tool is Google Analytics. This enables the DevOps team to gain insight about visitors currently on the website. The team can, for example, review online campaigns by tracking landing page quality and conversions (goals).

CX Level 4: Continuous Delivery

By the time enterprises reach the fourth level, they release on demand, their delivery teams prioritize keeping trunk code deployable over doing new work, and the software is always in a releasable state so that it's on time for customer needs or released even faster than when customers anticipate. The Level 4 process shifts from three distinct phases to a process where activities in construction and transition are completed in the same segment of time, thus becoming one phase (depicted in Figure 3). This enables the team to get new features into users' hands quicker so that CX feedback can be obtained commensurately faster.

At this level, teams think smarter about how they release features to the user community. *Feature toggles* is a mechanism that enables developers to give new or additional features to only a subset of users. This is called a *canary release* and allows the team to manage the risk, for example, of releasing features that could damage the company's reputation.

CX Level 5: Continuous Exploration

Optimized CX capability is driven by hypothesis rather than features. Teams at this level focus on optimizing the cycle time to learn from customers. The continuous deployment capability actually enables business innovation via experimentation. The Level 5 process is the desired state of bliss. It melds inception, construction, and transition into a single segment of time (or timebox). Ideally, the team can use the feedback from the previous timebox to determine what to do next.

Teams at this level must innovate how they gather feedback from customers. They would, for example, use feature toggles to perform A/B testing. They would turn the feature on for a reasonably large cohort of users, then study how those users behave compared to a control cohort. This approach enables the team to resolve contentious product debates on customer experience based on data, rather than HiPPOs (highest-paid person's opinion).

> *Enterprises will discover they must continuously adapt the way they work. This is a serious management challenge for many businesses.*

Management Challenges in Improving CX Capability

In progressing from one level to the next, without skipping steps, enterprises will discover they must continuously adapt the way they work. This is a serious management challenge for many businesses. Currently, they must try to unite the silos of their functional organization. As they become more capable at delivering great CX, there will be many more cross-functional teams exploiting the benefits of their product development capability, and they will be faced with uniting cross-functional teams toward a common goal. It sounds like a straightforward issue with an equally straightforward resolution. But organizational culture and a willingness to change and adapt, or the lack thereof, can be powerful hurdles. This is where the five CX levels can help in understanding the roadmap

required for change. The good news is that these changes will not be sudden. Just as enterprises must follow a progressive developmental process to improve their Agile capability, they must also follow a similar process to develop a robust capability to delight customers through great experiences.

Conclusion

Businesses can successfully reimagine their processes by understanding what makes customer experience "tick" in the context of digitalization. They can embrace change, make it part of their way of life, and ensure they automate more positive customer experiences. And they can effectively cope with the mutually exclusive forces of rapid and dynamic flexibility versus the desire to deliver a stable, secure, and predictable CX. The progressive development of CX capabilities thus ultimately attracts customers over alienating them.

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Endnotes

[1]This same roadmap can be applied to many variations of digital transformation, including business agility. See my recent *Cutter Business Technology Journal* article "Business Agility: A Roadmap for the Digital Enterprise" (Vol. 31, No. 3).

[2]The levels of capability collected into this roadmap are not entirely new. They are based on patterns from various models for improving organizations.

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GIVING CONTROL TO THE CUSTOMER

The Customer Experience Matters:
Utilities and Distributed Energy Resources

by Vikas Mukhi

The proliferation of distributed energy resources (DERs) is adding cogeneration and two-way power flow to existing electric utility grids. DER systems — installed in consumer homes and businesses — generate and return power to the grid using solar, wind, or other renewable energy sources. Today, myriad energy sources capable of reliably producing at least some of the current power demand have emerged in the consumer sector. The goal is to achieve a two-way flow of electricity through the grid that, theoretically, matches the total electricity volume previously provided solely by a single utility entity.

Consequently, utility companies must now manage the impact of DERs on their present business and operational models. Complications posed by fluctuating load growth, voltage excursions, and varying supply-demand gaps make the need for "demand management" programs increasingly critical to maintaining a healthy utility service.

Technology offers a response to this situation, providing utility customers with better tools, such as customer self-service capacities, to help manage the DER supply they generate for the grid. By encouraging their customers to use a self-service option, utility companies can gain the cooperation they need to maintain control over their demand management capacities. And studies show that utility customers using utility self-service programs enjoy a higher level of satisfaction with their power product and service.

This article explains why DERs are making demand management a priority and how customer self-service options improve customer satisfaction while helping utilities manage their systems and save money.

Drivers of Change in the New Utility-Customer Relationship

One reason for the shift to DER systems is the rise in importance of environmental concerns among consumers. They want to consume less carbon by trading out current practices for "greener" options. Aging utility infrastructures add reliability concerns to those pressures. Moreover, increasingly affordable technological options are opening more doors to technology-based solutions, even to industrial-sized problems. In this section, we consider the realities in today's utility market.

> *By encouraging their customers to use a self-service option, utility companies can gain the cooperation they need to maintain control over their demand management capacities.*

Consumers Want Control

Unlike other consumer sectors, the utility industry has been slow to view "customer satisfaction" technology as a driving element of its practices. Many utility-based programs are industry-facing, such as smart meters that gather usage data without the need for human meter readers. Thus, adoption of consumer-focused software has proceeded at a slower pace.

However, consumers are enjoying the increased control over their lives that technology facilitates, and more of them are seeking the same control over their utility services that they now have over their televisions and furnaces.[1] As a result, many utility companies are looking to improve consumer relationships by providing their customers with better control through enhanced customer-facing programming.

Consumers Want Clean Energy

Consumer sentiment was also the number-one reason for utility investments in clean energy, according to Utility Dive's "2017 State of the Electric Utility Survey":[2]

- For 20% of respondents, it was the main driver behind their business cases.
- Nineteen percent named sustainability as their top reason for investing.
- Thirty-eight percent of electric cooperatives cited consumer sentiment as their number-one motivator.

Consumers Want to Participate in DER Options

Similar metrics are being seen throughout the industry. Last summer, in Fremont, Nebraska, the demand to invest in a 500-kW solar farm was so strong, the utility expanded the solar array to 1.55 MW (4,928 panels) and the site still sold out within six weeks. Fremont is now planning a second site, for which there's already a long waiting list.[3] No wonder Greentech Media (GTM) Research predicts community solar systems as DERs will become a 500-MW annual market by 2019.[4]

Solar Growth Continues

GTM Research also predicts prices for photovoltaics (PV) will drop some 4.4% annually, or 27% by 2022. As for installed capacity, PV will double over the next five years, reaching nearly 15 GW by 2022.[5] Worldwide, solar is now the leading type of new capacity. According to GlobalData researchers, 2016 saw 72 GW of new PV, while wind energy added 53 GW (1 GW more than coal). Gas ended the year with 41 new GW of generation, and hydro added 31 GW.[6]

While the growth is great news for the environment, it's bad news for utility load profiles, as is illustrated by the California Independent System Operator's now famous "duck curve."[7] As shown in Figure 1, the mismatch between variable generation and load makes the curve look like the outline of a duck, with the y-axis representing electricity demand.[8] During the day, solar power oversupplies customers, so demand for utility-supplied electricity drops. In the evening, demand rises as solar-generated power wanes. The answer to the duck curve conundrum is to increase storage of daily-generated DER power for use at a later time.

Power Storage Capacities Improve

Battery storage capacities continue to improve, particularly for customer-sited storage. Since 2012, lithium-ion prices have dropped 70%, and that price decline will drive the global uptake of energy storage to reach 52 GW — up from around 4 GW today — by 2025.[9] Those improvements are a primary driver of the growth of the electric vehicle (EV) industry, which, because of battery-stored energy, now has a reliable and readily available fuel substitute for gasoline.[10]

Another benefit of battery storage (whether installed for pure energy storage or for use by an EV) is that it can respond to grid operator signals "almost instantly,"

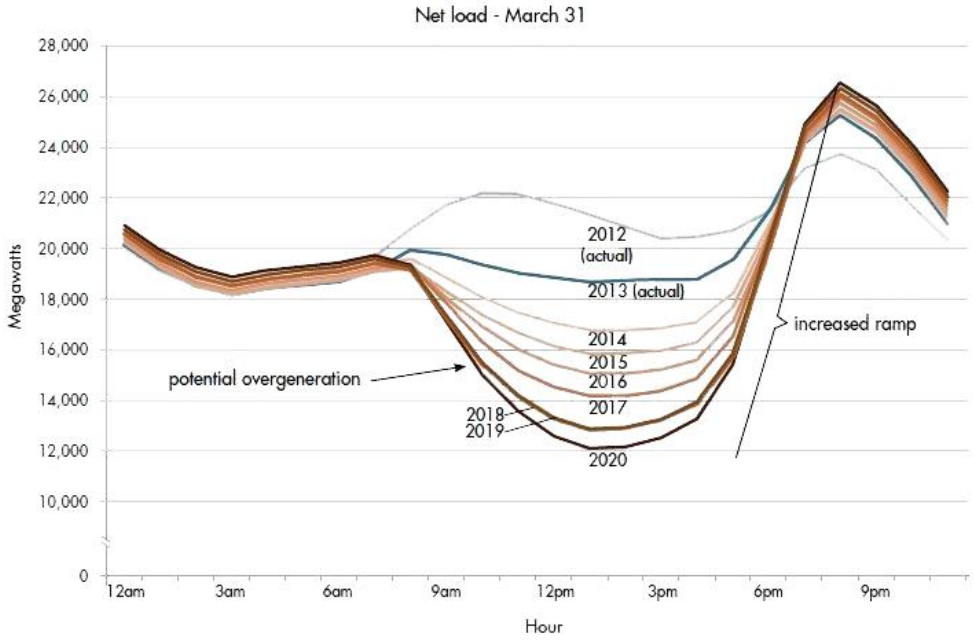

Figure 1 — Duck curve net load, 31 March. (Source: Energy.gov.)

notes researcher Darlene Steward.[11] That speed means these fast-ramping resources can be used to compensate for fluctuations in variable generation from renewables, support load shifting, and provide grid services like reserve operations to keep the North American grid frequency at 60 Hz. However, such uses of these DERs are only possible when customers participate in utility demand response programs.

Building a Digital Bridge Between Utilities and Their Customers

So how does a utility company connect better with its customers? Utility companies must consider strategic investments in all available tools — including software dedicated to the purpose — to increase customer engagement in and control of their products and services. Research suggests that the updated processes will also improve the utility's capacity to meet its own contractual requirements.

In June 2017, an article from Utility Dive proffered that successful customer engagement "helps utilities meet energy efficiency mandates, smooth peak loads, and implement new rate designs."[12] In that piece, Navigant Principal Analyst Neil Strother described tablets and smartphones as a "mobile front door" to services, and websites as an "online front door" for customers. With self-service portals, once through those doors, customers can find answers to their questions without having to wait for a call center to open or a representative to help them.

Self-Service Software Rises in Popularity with Customers …

According to *Forbes*, the customer self-service capacity arose out of a company's increasing need for call center responses without also absorbing an equal rise in HR costs.[13] The technical response was digitally programmed chatbots, automated messages, and other DIY solutions that provided additional support resources through less expensive, automated processing.

What was unexpected was the public's appreciation of the "no hands on" approach. A 2016 survey by Aspect,[14] makers of call center software, found that most customers feel better about managing at least part of their concerns through their own efforts:

- Sixty-five percent of all survey respondents said they were more satisfied with a company when they could answer a question or solve a problem through a self-service portal without having to talk with a customer service agent.
- Seventy percent of millennial respondents said the same thing.
- Seventy-one percent of respondents said they "want to" solve most customer issues on their own (up from 64% in 2015).

Conversely, responses to queries about accessing customer services were less complimentary: more than a third said they'd "rather clean a toilet" than contact customer service.[15]

… And with Companies

There's also more value to be found on the corporate side with a self-service customer support option. In addition to responding to a consumer's desire for autonomy, self-service capabilities also save utilities money.[16] Two recent examples in the industry illustrate the point:

1. A large Canadian utility launched a highly functional customer self-service portal that provides 24/7 access to the information and services customers need, including payment history, billings, and account details. Call center data was used to target specific customer needs and expectations, and the self-service portal's functionality and ease of use were prioritized for the customers' benefit. Customers now handle most of their concerns through the DIY portal, ultimately reducing the call volume considerably.

2. A North American transmission and distribution (T&D) provider serving both businesses and residential customers had only a small percentage of its large customer base sign up for e-billing when it first introduced the option. A new customer-centric portal provided the customer base with an easier sign-up option that proved immensely popular; the resulting increase in e-billing customer sign-ups captured significant savings for the provider.

For both utilities, adopting self-service software resulted in reduced costs, but the real value was

found in the enhanced customer/company relationship. For utilities, early interactions with customers can open the doors to conversations around possible participation in demand response programs.

Enhancing CX to Power the Future

The rise in customer engagement in utilities' activities couldn't come at a better time, as utilities search for alternatives to doing business in the traditional way. According to a 2017 survey conducted by the Smart Electric Power Alliance (SEPA), utilities, "especially in areas with high load growth expectations or infrastructure constraints," are "increasingly looking to target demand response in specific distribution-level areas."[17] In layman's language: the use of technology promises increasing consumer involvement in the demand management of energy and electricity.

The rise in customer engagement in utilities' activities couldn't come at a better time, as utilities search for alternatives to doing business in the traditional way.

Some companies are already on their way to developing the T&D sector. SEPA researchers found that 10% of utilities with demand response programs have leveraged locational programs as energy resources, while another 60% are planning or researching such an approach.[18] Moving forward, it will be easier to engage customers in these utility-based demand management programs when those entities already have strong customer ties. Self-service customer care technology is one way to develop them.

Other Complications of DER Management

Customer engagement is only one part of the challenge utilities will face as they integrate DER into their existing resource portfolios. A multitude of technologies and systems are also coming online to add further confusion to the mix.

In 2017, Powerwall battery maker Tesla and Green Mountain Power (GMP), a US State of Vermont utility, offered Powerwall 2 batteries to up to 2,000 customers for no money down and monthly payments of US $15 or a one-time $1,500 charge (roughly half the regular cost of the Tesla product).[19] Both companies are banking on the success of their partnership: Tesla's energy storage batteries can provide round-the-clock electricity for its solar voltaic power customers, and GMP wants to access those batteries to reduce its peak loads by up to 10 MW, the equivalent of removing 7,500 homes from the grid.

With a solar/battery option, customers can also generate and store their own energy and power their homes during outages, another win for improved customer experience (CX). Both companies are using consumer education programming to bring their current and future customers up to speed and to facilitate online sign-ups. The partnership aims to reduce rates for all New Englanders if it wins its bid to bring the reduced-cost DER system into New England's wholesale energy markets.

Monitoring Energy Consumption

Internet of Things (IoT) devices are sprouting up all over the place, monitoring energy usage and automatically powering down when demand slumps. Google's DeepMind technology has saved that company millions by reducing the energy consumption of its data center cooling systems by 40%.[20] The UK's National Grid is investigating DeepMind programming for its own use.[21]

DER Monitoring

In Australia, a country with 26% of its homes sporting solar arrays,[22] utility companies are exploring the use of low-cost IoT sensors and wireless communications gateways to monitor electricity flow and collect data. The smart devices can distinguish between significant events and warnings, so controllers can readily see which circumstances are cause for concern and which are just business as usual.[23] IoT controls are also being considered as monitors for electric vehicle use, alerting drivers to nearby charging stations and automatically recording and billing for that power boost. Back in 2015, technology writer Jared Newman predicted:

> Smart homes and other connected products won't just be aimed at home life. They'll also have a major impact on business. And just like any company that blissfully ignored the Internet at the turn of the century, the ones that dismiss the Internet of Things risk getting left behind.[24]

Helping Customers Make the Change

There are many computer, phone, or tablet channels through which utility companies can connect with their customers to provide the data they need to make self-service decisions and help them sign up for the services options that are right for them.

DER Management

Online resources can facilitate a significant percentage of the consumer-based demand management process, such as:

- The initial phases of interconnection requests
- Promoting and providing sign-up capacities for programs like the GMP Powerwall offering
- Informing people about programs for selling aggregated DER capacity into the market
- Education and sign-up opportunities for special rates that may be the incentive needed to entice people with available energy resources, such as onsite solar and storage, to join self-service demand management efforts

Sharing Successes

Customers can also benefit from learning how other communities are growing their DER capacities. Examples include:

- The Sacramento (California) Municipal Utility District leverages the data drawn from its existing utility infrastructure to track power usage by its electric vehicle customers, and its predictive analytics capabilities identify the location for future system developments based on current customer-sited DER systems.[25]
- On its customers' rooftops, the Arizona Public Service company has installed utility-owned solar and smart inverters with voltage- and frequency-sensing terminals to record and transmit operations and usage data that informs the company's planning engineers.[26]

The research clearly shows that technology is facilitating the transition to two-way power flows using consumer-sited DERs. Consumers increasingly are demanding more control over their utility services, especially those with installed DER capacity. With improved CX, utilities will retain customers, save on costs with self-service options for customers, and remain competitive as the industry undergoes changes.

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PLAY IT COOL

Cool Retail and Service Mobile Apps:
Enhancing the Customer Experience

by Karlene Cousins and Pouyan Esmaeilzadeh

Mobile applications are a critical mechanism for connecting customers, employees, and business partners to the organization. However, it is costly to acquire mobile app users, and adoption and post-adoption use are not guaranteed.[1] Once organizations acquire mobile app users, it is even more difficult to keep them. Indeed, a 2018 study shows that 80% of users on average discontinue using a mobile app within 30 days of download.[2] Thus, improving the customer experience (CX) would assist with both acquiring and retaining users. So what motivates users to adopt mobile apps, and what will make them continue to use them?

Mobile applications are a way to connect customers to organizations and for organizations to deliver products and services to customers. Indeed, in some scenarios, mobile apps serve as the competitive differentiator of the organization's business model. Those apps used in a retail or service context usually include functions that allow customers not employed in the organization to research, buy, and pay for a product or service without the assistance of the organization's employees. Therefore, adoption motivation for this class of mobile app usage would be different than that of employees using the mobile app in the organizational work context to carry out a task. One such motivation could be the customer's perception of the "coolness" of the mobile app.

Customers perceive certain cars, shoes, and even hardware and software applications as being "cool." As a result, designing for coolness has become increasingly important. For instance, the Centre for Brand Analysis in the UK publishes an annual list of 20 cool brands based on the collective opinion of consumers and experts.[3] The judging criteria for brand coolness, to be selected for inclusion on this list, comprises four broad categories left to the judges' interpretations: originality, authenticity, desirability, and uniqueness.[4] The judges apply these categories uniformly across products from multiple industries without considering the purpose of the products or the peculiarities of their industry.

Among the list of 20 top-ranked, coolest brands for 2016-2017 were Apple, Netflix, Instagram, YouTube, Spotify, Google, and Airbnb.[5] The prevalence of technology products in this ranking demonstrates the immense power the concept of cool has attained across industries, and technology companies are on the hunt for "the next cool thing." The ambiguity and looseness of the judging criteria also demonstrate the extent to which it is assumed that most people understand the contemporary meaning of the concept of cool.

The coolness factor as it relates to mobile apps is more complicated than the four categories used in the rankings imply. Over the years, researchers have conducted work in the human-computer interaction (HCI) community to understand the coolness of interactive and technology products, focusing primarily on devices.[6] This work reveals that the concept of coolness is multifaceted, and the term is used differently depending on the situation at hand and how a technology product is used. Coolness can also mean different things to different people.

With respect to the impact of cool products on customer behavior, anecdotes suggest that users may be drawn to certain apps and motivated to use them because they are cool, which might lead to loyalty and continued usage over time. This is a concept that needs to be confirmed empirically, however, so businesses can recognize the importance of the coolness factor when building mobile apps.

In this article, we describe studies we carried out to identify the dimensions of the coolness factor for mobile apps. In our research, we sought to learn whether this coolness factor has implications for building customer loyalty in the retail and service contexts. Businesses must comprehend the concept of cool because many consumers seek to achieve a cool lifestyle largely

through the selective consumption of goods and services[7] — and mobile apps can be essential tools to support that pursuit.

The Dimensions of Mobile App Coolness

We began with a focus group study in which we asked participants to describe specific cool retail and service mobile apps they use daily and to explain why they believe these mobile apps are cool. In our analysis, we identified three categories that contribute to user perception of mobile app coolness: application design, application symbolism, and application usability.

We then conducted a pilot test with 131 users of the Uber and Starbucks mobile apps. The Uber app is a ride-sharing service mobile app that connects drivers to riders — a mobile app in the service industry. The Starbucks Mobile Order & Pay app allows customers to purchase food products by selecting a location, customizing and placing their order remotely, and receiving priority service when they arrive at the store to pick up their purchases. It is an example of a mobile app in the retail industry. We used the results from this research to refine our survey instrument and dropped items that were not important for explaining mobile app coolness.

In our final study, we used the refined survey and collected data from 340 users of the Uber and Starbucks mobile apps. The respondents were mainly students in their early 20s (75%) or late 20s (19%), and they used the Uber and/or Starbucks mobile apps on average three times per day. We found that our conceptualization of mobile app coolness (i.e., application design, application symbolism, and application utility) was a significant predictor of mobile app loyalty. We define mobile app loyalty as the degree to which a user has a deeply held commitment to rebuy or reemploy a mobile app.

Overall, customers perceive that a cool mobile app in the retail or service context should have a clean, attractive, innovative design and provide users with a distinctive image and a high degree of utility. Thus, a cool mobile app with these characteristics that relate to application design, application symbolism, and application utility can increase switching costs and motivate customers to continue to use it.

In the following sections, we break down the three dimensions of mobile app coolness and the considerations to keep in mind when developing mobile apps.

Application Design

Important aspects of a well-designed app typically focus on visual and performance features such as orientation, branding attributes, and effort minimization.[8] For the purpose of cool mobile apps, the newest trends in fashion, electronics, music, art, and color may influence the design attributes in the graphical user interface (UI). The UI aesthetics should be attractive, simple, and have a clean, uncluttered look and feel. For example, Uber's mobile app has a clean, simple, dynamic, interactive mapping interface, which allows customers to seamlessly hail a ride, view prices, identify the driver, track their journey, and pay for their trip. The Starbucks Mobile Order & Pay app has a unique, attractive, and intuitive design with realistic images of products, allowing customers to customize food and drinks, pay for them, and select the nearest location for picking up the product.

Cool app design should be unique enough to give the organization strategic differentiation, presenting a UI that is substantively different from competitors' interfaces. The design should be eye-catching, creative, original, and sophisticated. As such, organizations may choose to use patents and trademarks to protect design elements from imitators. For example, since Apple's products have long been held to be cool, app designers often try to imitate the company's design elements to extend that perception of coolness in their own apps. Apple uses intellectual property protection, including design patents, and continuous innovation to protect and maintain the uniqueness of its app designs. Table 1 shows the design properties of a cool app and considerations that companies should keep in mind.

Application Symbolism

Symbolism in this context is the extent to which users perceive that using the app communicates their distinctiveness to others in their environment. An individual's self-concept is linked to the symbolic value of goods they purchase in the marketplace.[9] Normally, a person's mobile app use is not obvious to onlookers unless there is some physical manifestation of use through body language or interactions with people and artifacts in the environment. Where certain mobile apps are used in public, and usage is conspicuous and observable by others, users may use these mobile apps as a way of distinguishing themselves from others. By using cool mobile apps to acquire products and services, users may achieve social differentiation as such use may convey to others that they are different from the crowd.

Using the mobile app also makes users look smart, as onlookers may perceive that users possess an advanced level of knowledge, expertise, and skill to leverage the features of the mobile app to access products and services. As an example, the act of using the Uber mobile app to secure transportation is very observable and is currently viewed as innovative. Similarly, using the Starbucks Mobile Order & Pay app to preorder and pay for products and pick them up in the store makes users stand out, as they skip the line and receive preferential treatment once they arrive at the store.

To enhance the customer's desire to be and feel unique, we recommend a strategy to build customer intimacy. Big data, machine learning (ML), artificial intelligence (AI), and location services can be used to learn about customers and to provide them with a unique and personalized CX with VIP services and rewards. Table 2 illustrates the properties of a cool mobile app with respect to its symbolism and offers considerations for incorporating these properties into the app.

Application Utility

The functional aspects of mobile apps are important indicators of coolness.[10] A cool mobile app supports novel, unique, and distinctive business processes that deliver products and services to the customer efficiently and conveniently. The mobile app's ease of use and user friendliness reduce the effort required to use the mobile app and are critical to using it effectively to achieve user goals. A fast mobile app that helps users save time as they perform a task increases the mobile app's usability. Effort minimization — reducing the number of clicks and the data entry effort to purchase products and services and eliminating redundant steps in the product and service delivery process — increases the perceived coolness of mobile apps. For example, users of the Uber and Starbucks mobile apps have to enter payment details only once. Subsequent uses focus on delivering the product or service and optimizing the CX, while payment services operate in the background. However, if too many apps provide the same functionality, these apps may lose their coolness and, subsequently, their value.[11]

As the state of being cool is temporary, the organization should continually innovate on the application's features and functionality over time to maintain an app's coolness. This requires that the organization focus on the product or service process and technology innovation. Table 3 shows the properties of a cool mobile app with respect to its utility and considerations to keep in mind.

Cool Dimension	What to Deliver	Considerations
Application design	Using an interactive, eye-catching, clean, attractive, simple, innovative graphical UI design enhances CX.	Use intellectual property protection and continuous innovation to deter imitation.

Table 1 — Application design of retail and service mobile apps.

Cool Dimension	What to Deliver	Considerations
Application symbolism	Using the mobile app provides users with a novel experience that fulfills their need to achieve social differentiation.	Build customer intimacy; use big data, ML, AI, and location services to provide a unique and personalized CX.

Table 2 — Application symbolism in retail and service mobile apps.

Cool Dimension	What to Deliver	Considerations
Application utility	Applying unique functionality with easy-to-use, fast, effort-minimizing processes enhances CX.	Recognize need for continuous product/service process and technology innovation.

Table 3 — Application utility of retail and service mobile apps.

Study Limitations

Although studying two different types of mobile applications (product retail and service) adds to the generalizability of our research model, we did not examine the coolness construct in the context of more complex and sophisticated organizational systems. We also focused on a single demographic: students who, for the most part, are working adults. Therefore, we must acknowledge that the importance and dimensions of the coolness construct may differ across different user segments and different types of information systems.

Conclusion

The desire to be perceived as cool is one of the driving forces behind a user's decision to adopt a mobile app. Since mobile applications are often revenue generators for organizations, mobile app developers can leverage this aspect of user behavior — the desire to be cool — to design apps in such a way so that they appeal to customers, thereby expanding the customer base and increasing sources of revenue. Organizations may impart the coolness factor to mobile apps used to deliver products and services using a range of tactics based on the attributes we have identified: application design, application symbolism, and application utility.

However, coolness is temporal and a function of time. Mobile applications can gain competitive advantage, market share, and loyal customers if they can sustain their coolness factor over time. To do so, organizations should develop approaches that incorporate all three attributes of the coolness factor into the CX, as all three dimensions may be necessary for a mobile app to shine in the turbulent retail and service markets.

Endnotes

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