Capgemini Consulting

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From UX to CX: Rethinking the Digital User Experience as a Collaborative Exchange

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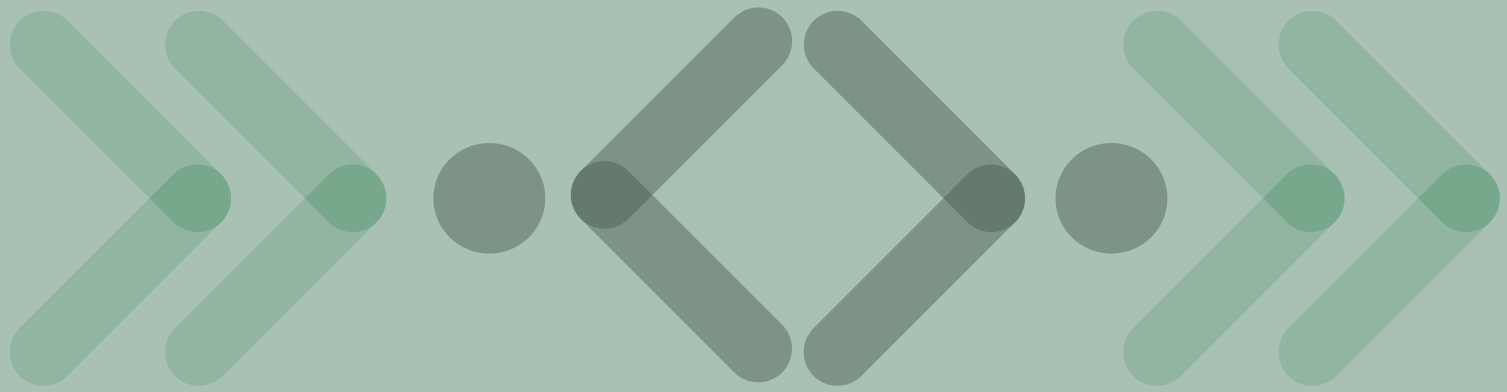

A New Prism for User Experience in a Digital Economy

What makes for a valuable user experience – one where customers extract value and the firm captures profit? Recent research has pointed toward technology as the catalyst for structural changes that allow firms to become more open-sourced via digital platforms, creating a competitive advantage. Indeed, platform structures have brought together producers and consumers in high-value exchanges.[1] Yet there is still much to learn about how customers determine whether they have received value from these exchanges. It's rather obvious why a firm would want its customers to solve their own problems via peer-based support forums, for example (for call-center savings, as in the case of Apple). But why would customers agree to do the firm's work? What kind of value do they receive in return? In a desire to welcome a new age of digital technology and prescient algorithms, we must be mindful of ignoring the human element in the user experience. Firms that successfully create win-win dynamics are well positioned to create customer value and reap rewards like loyalty and efficiency. Yet there remains a relative paucity of discussion about the customer side of the digital economy and how insight-driven design must complement data collection.

We seek to address this gap in knowledge by developing a framework that evaluates the four *kinds of value* – economic, cultural, social, and information capital – that customers expect in their exchanges with firms in a digital economy. Using a multi-method, multi-year approach across a variety of industries, we deepen our understanding of how customers determine value in a manner that is more "predictably irrational"[2] than "homo economicus."[3] The resulting Collaborative Exchange (CX) framework illustrates the importance of viewing the user experience through the lens of two key types of exchanges: participation and information. Therefore, firms doing business in the digital age must view their interactions with customers as embedded in an exchange economy, where both firms and customers seek to extract their own maximum value. We provide an answer to the question posed at the very beginning of this paper: a win-win exchange equilibrium makes for a valuable user experience where both the firm and the customer create and extract "capital" from the exchange.

Redefining the Role of Customers

> Truth is, the locus of control in the digital economy rests neither in the hands of the firm nor the customer — it is negotiated in exchanges.

Digital transformation has shifted our economy from traditional firm structures to more porous organizations. And consumer behavior in this digital age has radically shifted from a passive stance to a much more informed and active role in every interaction with a firm. This is in stark contrast to the controlled "Mad Men" era, when firms appeared to enjoy an "if you build it they will come" influence over the consumer experience. Instead, firms are no longer beholden to their internal workforce to produce content and design the customer experience.[4] Truth is, the locus of control in the digital economy rests neither in the hands of the firm nor the customer — it is negotiated in exchanges. Companies are loosening the reins and letting customers do some of the work when they see a mutual benefit. And customers asked to provide information or participate in a brand's interface want to know what they are getting in return. Much like a negotiation "dance",[5] sometimes one partner leads, sometimes the other. But when these exchanges achieve an equilibrium, they produce valuable win-win collaborations.

Digital technologies have accelerated this exchange by providing a platform for customers to participate and for companies to gather information simultaneously.

Former Senior Vice President of Pricing and Promotions at Staples, Donna Rosenberg reflects on this change over time, *"When I first started in retail, we only had stores and that transaction data and then we added our online business. You are suddenly getting more data and have more access to customers. And then mobile came along and customers are engaging with you at a variety of different access points. Things evolve through people wanting to engage with you more and more. It's a give and take situation and it's accelerating."*

Our research with executives (in-depth interviews) who are intimately involved with their firms' customer strategy, points to successful firms seeking to build user experiences on a foundation of collaborative exchanges. Additional analysis of customer sentiments (quantitative measure of thematic content) and observational case studies demonstrate the increased prevalence of such exchange dynamics (See "About the Research").

Nearly two years of research across industries uncovers how two key dimensions – **participation** and **information** – are the conduits for creating shared value in an exchange between a firm and customers. Rethinking or creating touch points in the user experience is essential for firms that want to identify and generate new opportunities for value creation in these exchanges.

Participation and Information Exchanges

Create Opportunities Across the Value Chain

Companies are using digital technology to engage with their customers in a multitude of ways through new products, services, channels and platforms. These touch points serve as channels allowing the acceleration in participation and information flows. Customers are now able to engage at various levels along a firm's value chain from R&D and product development (e.g. Starbucks' MyStarbucksIdea.com), to content creation (e.g. LinkedIn's Profiles), to logistics (e.g. UPS MyChoice), to services (e.g. iStockphoto inspectors). Concurrently, companies are able to gather information at each point to uncover and infer insights – idea-storming sites have become an impetus for innovation, user preferences have created segment stereotypes, vocal reviewers have highlighted influencers and popular sentiments have prioritized product improvements.

For example, Starbucks allowed customers to submit, view, and track ideas through the site, Mystarbucksidea.com. At its five-year anniversary, the site had generated more than 150,000 ideas and the company had implemented 277 of them.[6] Starbucks provided its customers with a voice to help mold their own experience, while also using the information to foster innovation. Participation and information exchanges can also benefit operations. For instance, at UPS, the most common customer inquiry was tracking the delivery of parcels. By allowing customers real-time access to information on their parcel delivery (logistics), UPS has both decreased customer service inquiries and significantly increased customer satisfaction (service).

In the digital age, this collaborative exchange (CX) between a firm and its customers around participation and information is a two-sided system of value exchanges. (Figure 1)

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Figure 1: Opportunities to Exchange Value Across the Value Chain

Function	R&D	Production	Logistics	Marketing	Sales	Service	Use
Participation Market Value	Customers provide ideas and co-create new products	Customers personalize and customize products	Customers provide delivery preferences	Customers comment on social media and post reviews / recommendations	Customers buy online and share referrals with others	Customers use self-service and post on product forums	Customers track their/others' activities
Information Market Value	Firms collect ideas to create innovation	Firms collect user data to provide insights and preferences	Firms collect delivery preferences to provide real-time updates	Firms collect sentiments to identify key influencers	Firms collect spending trends and demographics to deliver personalized ads and offers	Firms collect customer complaints and provide process improvements and solution expertise	Firms collect customer usage to provide insights
	my STARBUCKS IDEA	LinkedIn	UPS	bravo	CapitalOne CreditWise	giffgaff	Coca-Cola

Company collaborative exchanges left to right: Starbucks MyStarbucksIdea.com, LinkedIn Profiles, UPS MyChoice, Bravo Social Edition, CapitalOne CreditWise, GiffGaff Community, Coca-Cola Freestyle Machine.

The Participation Market:

Making Customers Happier By Having Them Work

The Participation Market centers on how firms can drive value by sharing internal activities, while simultaneously satisfying a customer need.

The Participation Market centers on how firms can drive value by sharing internal activities, while simultaneously satisfying a customer need. Firms that have started to collaborate with customers, have found that customers want to engage, want to provide their expertise, and appreciate being asked — as long as they extract utility in return.[7] As opportunities to engage increase, so does the desire for choice. Paradoxically, **you can make your customers happier by giving them the choice to do part of the work.** Vincent Boon, Head of Community, describes the power of the participation market at giffgaff, *"The value generated by the community is incredible, and means we can take the savings we make from not having a traditional, high cost infrastructure, and pass that directly to our customers in terms of great product value. Everyone wins!"* (Vignette 1) The burden is on the firm to make the process of participation as simple, intuitive and seamless as possible, while allowing customers to benefit from their participation. A good way to start is by focusing on a customer's minimum interaction. For example, an iStockPhoto customer's minimum viable interaction is browsing through stock piles of images. As customers painstakingly look though hundreds of photos, members identify inappropriate images. Instead of hiring employees to monitor their database, the company self-selected members to become 'inspectors' and quickly scaled human inspection services.[8] By focusing on a customer's most basic, foundational action, firms can gain from the majority of their customer-base at the lowest level of burden to them.

Vignette 1: giffgaff Leverages the Participation Market to Power its Business

giffgaff, a mobile virtual network operator in the UK, has a business model powered by their member community. The company has no call center and employs less than 200 people. Within a year of starting its community, members asked over 130,000 questions and 95% of those inquiries were answered by fellow members within 60 minutes. As a reward, giffgaff provides its members with cash incentives for contributions and referrals. giffgaff has been able to not only leverage its community for customer service, but it has also served as an engine for marketing and R&D.[9]

The Information Market:

A New Kind of Digital Currency

The Information Market centers on how brands can deliver value by leveraging information that they have directly or indirectly gathered.

The Information Market centers on how brands can deliver value by leveraging information that they have directly or indirectly gathered. (Vignette 2) If the information is used to benefit the customer or offer a personalized experience, customers will be willing to provide personal data. Conversely, if the information is not leveraged accurately or without providing transparent options to customers, this can prove to be off-putting or invasive. Donna Rosenberg, former SVP of Pricing and Promotions at Staples, describes customers' willingness to share information, *"Companies need the data and customers are usually willing to share the data if there is something in it for them. As long as companies have an arsenal of value levers they can give in return, they will be able to connect with their customers. That's where the best exchange happens — when the company is willing to offer a variety of options instead of a one-size-fits-all value, take it or leave it. That will make companies more successful."* Firms have started to extract data and derive insights in the form of micro-targeting for personalized sales. But it feels like they are merely scratching the surface. Most companies acknowledge that they leverage only small amounts of the data they have gathered from customers or external parties and most importantly, many do not have a holistic view of their customer.[10]

Vignette 2: Increasing Information Market Value to Enhance Subscriber Experience[11]

NETFLIX

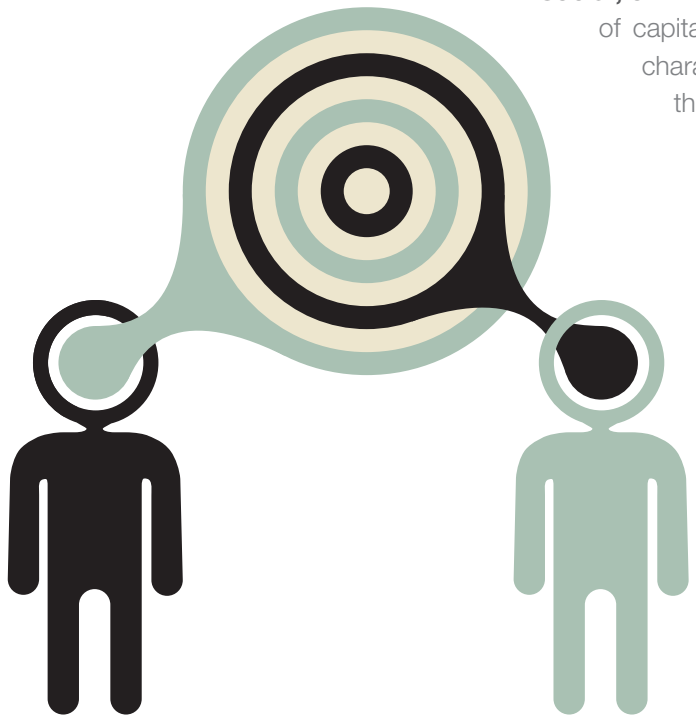
Netflix, an online, streaming service to watch movies and TV shows, gathers activity from users selecting, viewing, and rating their content. Much of their success is due to their ability to easily aggregate customer and content data such as genres, viewing habits, and trends to answer questions including: Are certain customers trending toward specific types of covers? If so, should personalized recommendations automatically change? Is there an ideal cover for an original series? Or should different colors be used for different audiences?[12] Answering these questions using data analytics and visualization has become commonplace for Netflix and has allowed them to benefit from this personalization. For example, most of the company's streaming activity originate from its recommendations, which the company relentlessly adapts to meet each viewer's preferences. This in return, has fostered loyalty and engagement. Based off the information gathered about its customers, Netflix also drives its strategic decisions on what content to offer. For example, they have adapted their purchasing, licensing, and content creation behavior to launch successful series such as House of Cards and Orange is the New Black.[13] As Netflix continues to grow, they continue to see value in developing their information market to benefit both the company and their consumers.

Delivering Value in the Collaborative Exchange:

A Capital Idea

As discussed earlier, value is transferred in a collaborative exchange via two dimensions: participation and information. But what does this mean to the consumer? What makes for a valuable user experience in their eyes? To address this question in a nuanced fashion, we took a quantitative deep-dive into the customer perspective via event analyses, using thousands of consumer-generated sentiments in social media. Each of these events surrounded a change to the user experience and a measurement of the mean resulting change in customer perceptions of value (valenced positive and negative) from a randomly-selected subset of Twitter statements (See “About the Research”).

When do customers extract value from a collaborative exchange of participation and information? Our findings across a variety of industries show that **customers experience greater utility in a user experience when, in return for their participation or information, they receive at least one of four kinds of capital: economic, cultural, social, or information capital**. Perhaps the most obvious form of capital is the economic one: a financial quid pro quo characterized by payment of discounts to customers for their participation or information. We see exchanges based on **economic capital** often, where firms offer coupon codes for participation, or pay customers for their information. However these exchanges, though common in the digital landscape, are not the only kind of value that customers seek. Other forms of capital may come from customers feeling greater value for non-incentive-based rewards: **cultural capital** gains from positive identity signaling via self-expression; **social capital** gains from increased personal status or breadth of networks; and **information capital** gains from access to personal insights or a community knowledge base. (Figure 2)



These forms of capital – economic, cultural, social and information – form the basis of judgments of “good” versus “bad” collaborative exchange experiences.

Customers may, for example, develop their **cultural capital** through involvement as advisors in a firm’s help forums. In these kinds of exchanges, they gain utility from skill development[14]. Customers who solve other customers’ problems on Apple’s forum boards may have no further contact with the beneficiaries of their knowledge, but they gain value from developing and signaling their Apple cultural capital – and the firm saves on its support staff. This type of exchange is a win-win. Customers may also perceive value in exchanges when they develop **social capital**. For example, when users create “fan fiction” in Reddit sub-forums they simultaneously form bonds with other like-minded individuals and increase their social capital, all while production firms are able to leverage user-generated plot lines for inspiration. This exchange is a win-win. Furthermore, customers may extract **information capital** from an exchange when a firm enables them to make better decisions. When a financial services firm like Capital One creates a “CreditWise” program to help customers understand and track their credit ratings, the customer is empowered to analyze her spending habits, while the firm is able to identify customers that are more likely to repay loans or effectively manage their credit. Again, this exemplifies a win-win exchange, based on capital extraction.

Of course, it is unlikely that customers engage in conscious mental accounting of these four types of capital. But they do form judgments of their experiences and whether they are getting something out of the exchanges (or feel taken advantage of). Our analysis of customer sentiments strongly indicate that these forms of capital – economic, cultural, social and information – form the basis of judgments of “good” versus “bad” collaborative exchange experiences.

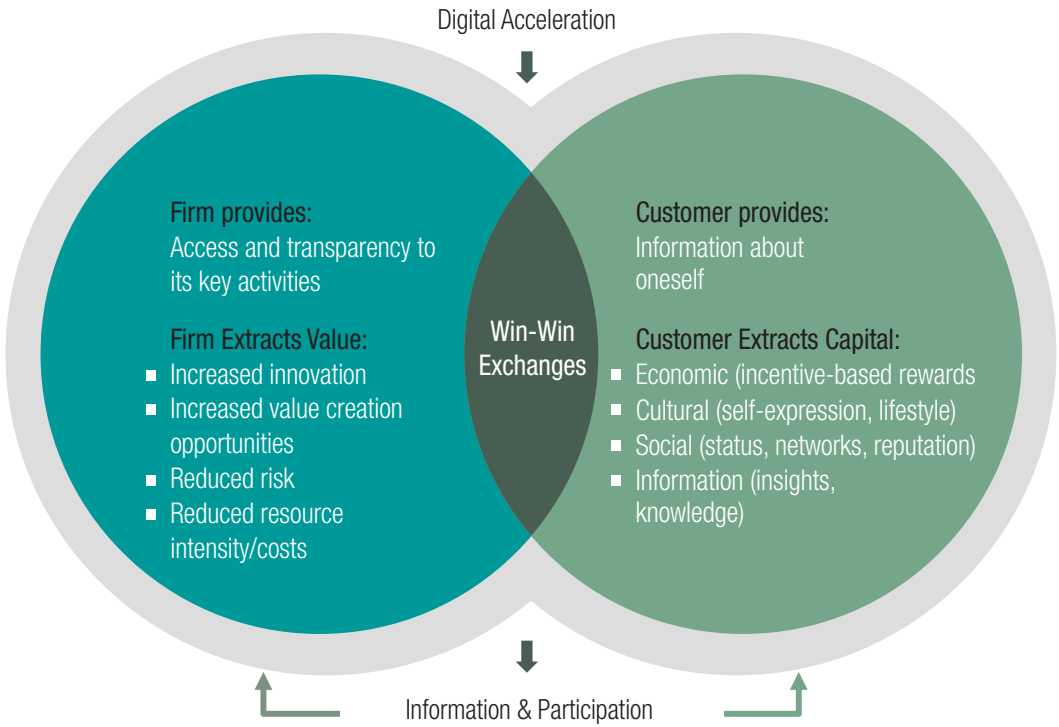
Creating Win-Win

Exchanges Pays Off

Imagine the firm's approach to its user experience as a conversation between people. If you were asked to tell everything about yourself with no real reciprocity from the other conversant, the experience would probably feel like an unpleasant interrogation. It is not only important to understand where to create value for the firm, but also to understand where it is welcomed.

For firms, benefits include: more efficient use of resources, ideas for innovation, or value creation opportunities.[15] For example, allowing customers to participate in other customers' experience like we have seen with iStockphoto or with Giffgaff on reducing technical assistance costs through crowdsourcing.

Figure 2: A Win-Win Equilibrium: Value Extraction for Both the Firm and Customer

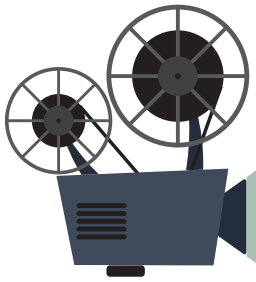


Today, it is all about achieving an equilibrium that allows both the firm and the customer to extract value — a win-win. In order to achieve this, firms have to relinquish some of their control to the benefit of customer engagement, while customers give up control of some of their information for the benefit of better personalization. When both sides exchange value, it can pay off:

Bravo Television Network's Social Edition. Bravo television network leveraged its customer base for content to create a whole new type of show: Social Edition. The network re-aired the same show, but overlaid the screen with content from their social media channels that fans posted during the initial showing. Although it was the same episode, fans felt rewarded by potentially seeing their personal tweets broadcasted. The first social edition episode premiered to 1.14 million viewers, a 67% increase from the average for episode encores and Bravo's Facebook page activity increased more than 200%.[16] Firms gained content for an innovative offering, while creating a new experience for viewers, creating a win-win exchange.

Coca-Cola's Freestyle Machine. Coca-Cola digitized consumption preferences with its Freestyle vending machines. The Freestyle machines created cultural capital by allowing customers to choose their own personal drink from more than 100 different combinations of drink types and flavors. The platform allows Coca-Cola to track what people are drinking and when. This information is then shared with vendors to know which drinks are popular and at what time of day to adjust their marketing accordingly. Within Coca-Cola, this data also allows the retail side of the business to shape their product offerings[17], increasing value creation opportunities for the firm. The consumer can self-express themselves with a curated beverage, while the firm can enhance their product and merchant offerings, creating a win-win exchange.

Understanding the two-sided nature of engagement and how customers perceive the exchange is crucial to cultivating a collaborative exchange.



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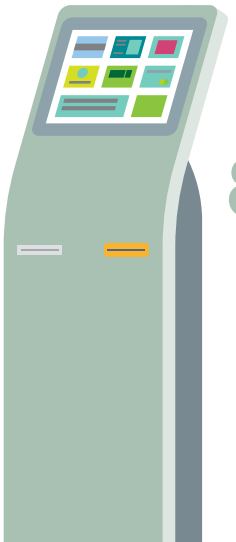
Things Go Wrong

When Customer Perceptions Do Not Match Brand Expectations



The kiosk was designed to process

80% of employee transactions

but, in practice,

only ended up handling **26%**

Customer engagement must be understood not only in terms of amount or value extracted by the firm, but by the lived experience of the consumer herself. Digital-mediated exchanges thus require that firms not rely on data science alone, but develop a parallel arsenal of behavioral science.

For every successful customer engagement platform, there are also troublesome stories of failed exchanges for both firms and customers. When the United States Postal Office first deployed their self-service kiosk, it was seen a confusing form of participation. The kiosk was designed to process 80% of employee transactions but, in practice, only ended up handling 26%.[18] When Chase sent automated SMS alerts regarding account updates or debt collection to customers without consent, it was seen as an intrusive form of information exchange. Because Chase did not give the customers a choice to opt out, the bank was penalized with a $34 million Class Action settlement.[19]

As information becomes more accessible, and consumers more participatory in the brand experience, the answer is murkier than ever. When Facebook first auto-compiled user photos to provide a digital album called “Year in Review”, the feature highlighted unwanted memories such as a daughter who had passed away or romantic relationships that had ended. Once again users did not have an option, leading to a 200% drop in the average customer sentiments before and after the event based on our research. So what is it about engagement that allows firms and customers to mutually benefit in today’s digital age?

“Digital-mediated exchanges thus require that firms not rely on data science alone, but develop a parallel arsenal of behavioral science.”

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Much talk of user experience is dominated by the wonders of new digital technology that appear to give prominence to the firm and its prescient algorithms. The fevered pitch for the development of algorithms that better understand and predict customer preferences seem to suggest that future customer experience will be like an automaton “WestWorld” park. Yet we were recently reminded of how careless it is to ignore the human element in the recent United States election, where data alone miscalculated sentiments of a large portion of voters. Firms would do well to heed this lesson. As companies design new touch points, features or enhancements to their core offering, our research shows the need for careful, human-centric experience design to complement data and insight-driven design.

Individual firms must assess the level of possible participation (ranging from no participation, to an individual level, to mass participation) and the level of information (ranging from gathered to leveraged) and whether the value extracted is mutually beneficial. Of course there are areas where customer involvement does not make sense. The art is to decide where participation needs to be closed or shared across the value chain. As participation is increasingly shared in a digital world, firms will need to decide where to provide optionality. Similarly, firms must assess whether the information they have directly or indirectly collected from customers feels exploitative or dissonant when leveraged. Finding the right balance is the key to defining a collaborative exchange and getting it right requires sensitivity to human emotions.

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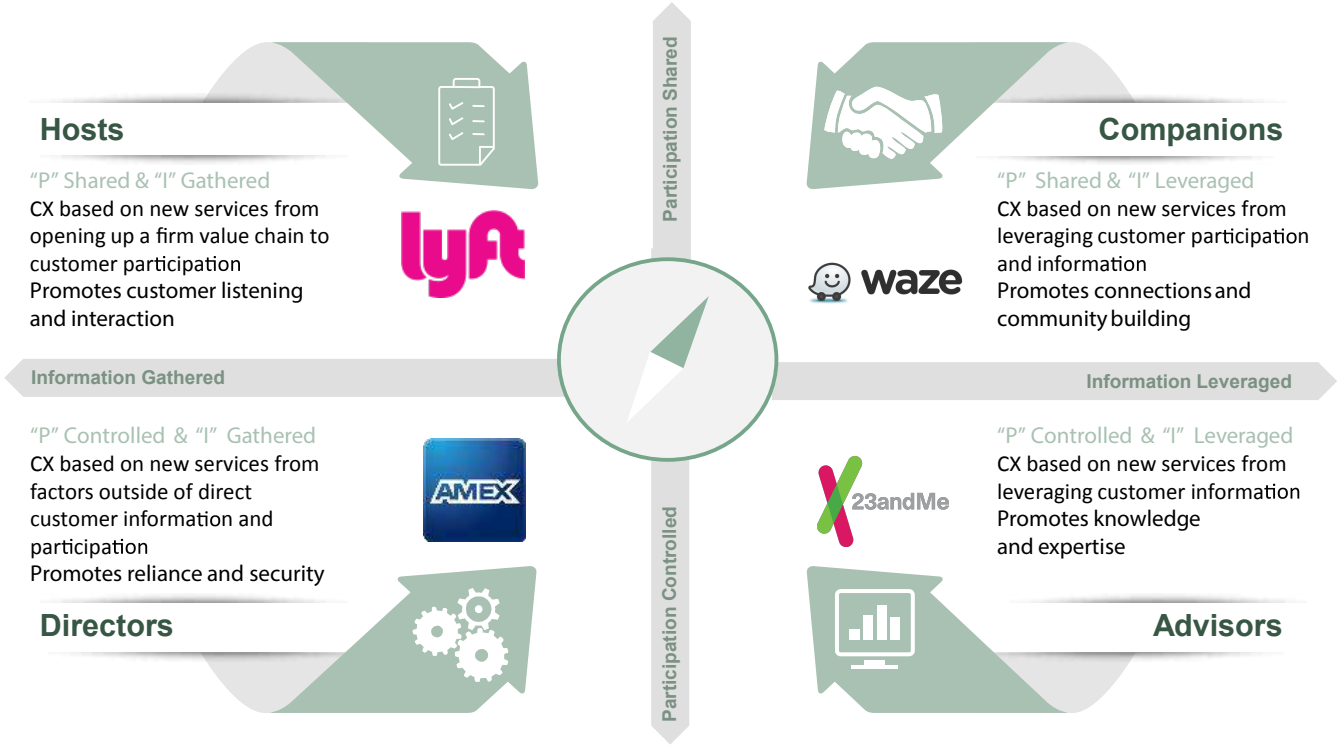
Create Human-Centric Win-Win Exchanges:

Mastering Four CX Archetypes

Creating win-win customer experience is a combination of strategic decisions around the level of participation and flow of information designed into the collaborative exchange. The cross section of the two dimensions uncovers four overarching CX archetypes. By looking at various touch points across the four archetypes, our research has identified common traits that help drive positive customer experiences. Mastering each archetype allows firms to optimize their overall CX value proposition. How is it best done? By running natural experiments using customer sentiment data (social, online, telephony, etc.) to assess if new touch points truly create customer capital for mutual benefit. (Figure 3)

Figure 3: Four Participation (P) - Information (I) Archetypes



Hosts – are firms that *gather information* about their users by opening up their value chain to ***shared participation***. Companies that *promote* ***customer listening and interaction*** *with the brand* are most likely to be successful. Imagine a moderator and panelists. A moderator creates an atmosphere for panelists to respond and in return, listens to the responses and adds to the conversation in an effort to inspire further engagement. For example, Lyft, the ride-sharing platform, mainly hosts a platform that invites participation from riders and drivers, gathering information about a riders' travel, demographics, and hotspots. Users receive information capital from navigating their travels and economic capital from reduced pricing versus taxi cabs. Although Lyft leverages this information to introduce additional services such as Line, its carpooling feature, the company primarily hosts a platform for transportation.

Companions – are firms that work alongside their customer so that the *shared participation* and *gathered information* about users can be *leveraged* to change the customer experience. Unlike Hosts, the firm is actively leveraging customer information to deliver a curated experience in return. Companies that *promote c****onnections or community building*** are the most likely to be successful, building both social capital which can also lead to increased information capital. For example, Waze, the world's largest community-based traffic and navigation app, depends extensively on leveraging information gathered via customer participation. By allowing customers to self-report accidents, road blocks, police traps and more, Waze has enhanced the companionship formed between the brand and those using the platform. These social networks also serve as a conduit for information capital, as people share their experience on the road and use the platform as a primary source for navigation.

Directors – are firms that provide services and offerings based on *controlled participation and gathered information* by the firm. Unlike Advisors, firms gather information from their customer, but do not tend to leverage it to provide a personalized customer experience. Imagine a conductor leading his orchestra. The musicians rely on the conductor's hand gestures for tempo, entry, and overall direction. Firms in this archetype *promote* ***reliance and security***. For example, American Express' customers rely on the company for trust and security to make daily transactions and ensure they are not being overcharged. Customers provide highly personal, secure data from each transaction to their social security number with minimal participation in return. We find a great emphasis on utility in these exchanges, often in the form of economic capital extraction by the customer.

Advisors – are firms that *leverage information* about their customers to further develop and refine their services. Unlike Companions, Advisors keep participation controlled by the company. Imagine a pilot communicating with air traffic control. The pilot leverages information shared by air traffic control but ultimately, is in control of the commands. Similarly, although 23andme, a genomics company, gathers immense amounts of data to provide personalized health risk reports, the ultimate decision on what to do with that information is up to the customer. In each of these instances, customers derive utility via information capital and cultural capital (the development of skill and expertise). Strategically, creating Advised exchanges makes sense when a company is trying to promote ***knowledge or expertise***.

Some industry sectors exhibit a natural affiliation to a dominant CX archetype. Sectors that trade on security or that are highly regulated have a higher cost of failure when translating data into insights or opening their internal activities to participation. Therefore, firms such as banks or pharmaceuticals may more likely be Directors. Conversely, sectors that are known as knowledge providers such as healthcare organizations are predominantly Advisers because they rely on leveraging data to create insights, while keeping their expertise internal.

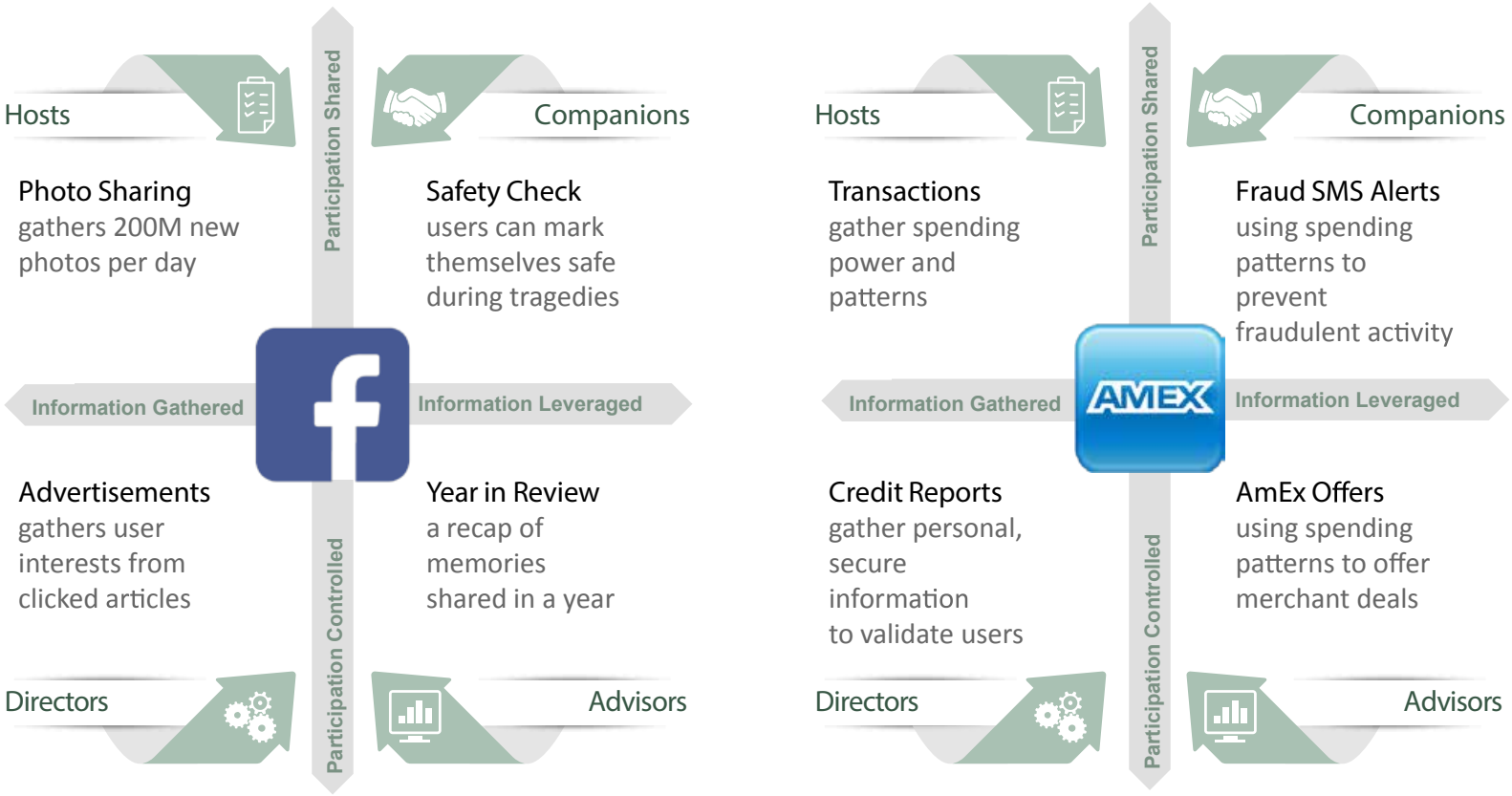
> Mastering each archetype allows firms to optimize their overall CX value proposition.

Managing Collaborative Exchanges Dynamically

Our research shows that, generally, firms have a dominant CX strategy, favoring a clear positioning along the participation and information dimensions for their core offers. However, as it innovates new touch points, features, or enhancements, a firm will naturally venture into new collaborative exchange territories. Care is needed to ensure that these new exchanges add rather than detract value from the overall experience. Facebook, a digital-born firm with an overall "Companion" CX strategy cultivates different forms of capital than American Express, a non-digital-born firm with an overall "Director" strategy, but both have extended touch points across all four archetypes. (Figure 4)

Human sentiments are notoriously hard to predict. In our research we have looked at customer sentiments before and after a CX event (product launch, new feature, etc.) to identify if customer capital has been created in the new exchange or not. By mastering the CX archetypes firms can test and understand how new touch points are perceived and thus, calibrate their experience strategy.

Figure 4: Facebook and American Express' Customer Touch points across CX Archetypes



Hosted Exchanges

Firms that have dominant CX strategy as a Host embody experiences that are inspired from gathering of customer needs and wants. These exchanges mostly attract customers to take part in the product or service as an optional activity and refrain from making it a requirement especially at the beginning. Our research showed that, on average, customer sentiments shared about touch points in this quadrant were positive. As one of the safer archetypes, experiences here tend to follow an industry's best practice, but have yet to reap the full potential of the information that is gathered to deliver additional insights. (Vignette 3)

Vignette 3: Orient Insurance's Added Touch points within the Hosted Archetype[20]

Orient Insurance PJSC, the second largest insurance company in the UAE, does not customize its products at the individual level, but instead gathers information about its customers to design new offerings for a particular segment. Xavier Arputharaj, the Chief Operating Officer, reflects on this approach: *"We are not in the market to create customized individual solutions because what is good for a few should be good for many… Within the product, we make changes to suit the individual's requirements such as enhancing the cover or diluting the cover or adding more features, but the product is created having a particular segment of the market in mind."*

Despite Orient Insurance's overarching "Directed" CX strategy when curating product offerings, the company has developed a mobile app to share participation, creating touch points within the "Hosted" archetype: *"The apps that we are developing would have the benefits listed out for the customer. She keys in her personal information and then she can choose the type of plan that she wants. She doesn't need to have a sales person explain it to her. This works well for the younger and lower middle-aged segment. They want to feel that they are choosing the offering and that they are not being enticed or influenced by anyone to make a decision."*

As a part of their dynamic CX strategy, Orient Insurance is also planning on recognizing messages and scanned documents sent via a company WhatsApp account.

LinkedIn's All-Star Profile Status grants curators a status if they complete building their profile. LinkedIn's dominant Companion CX strategy depends on customers participating by creating content and then sharing that content with its community. With the All-Star Profile Status, a Hosted exchange, LinkedIn lets users know where their profile stands relative to other users. Although some lack of clarity exist on how to achieve the status and its true customer benefits, regular users expressed positive social capital. (Figure 5 & 7)

Figure 7: Average Customer Sentiment for Hosted Exchanges

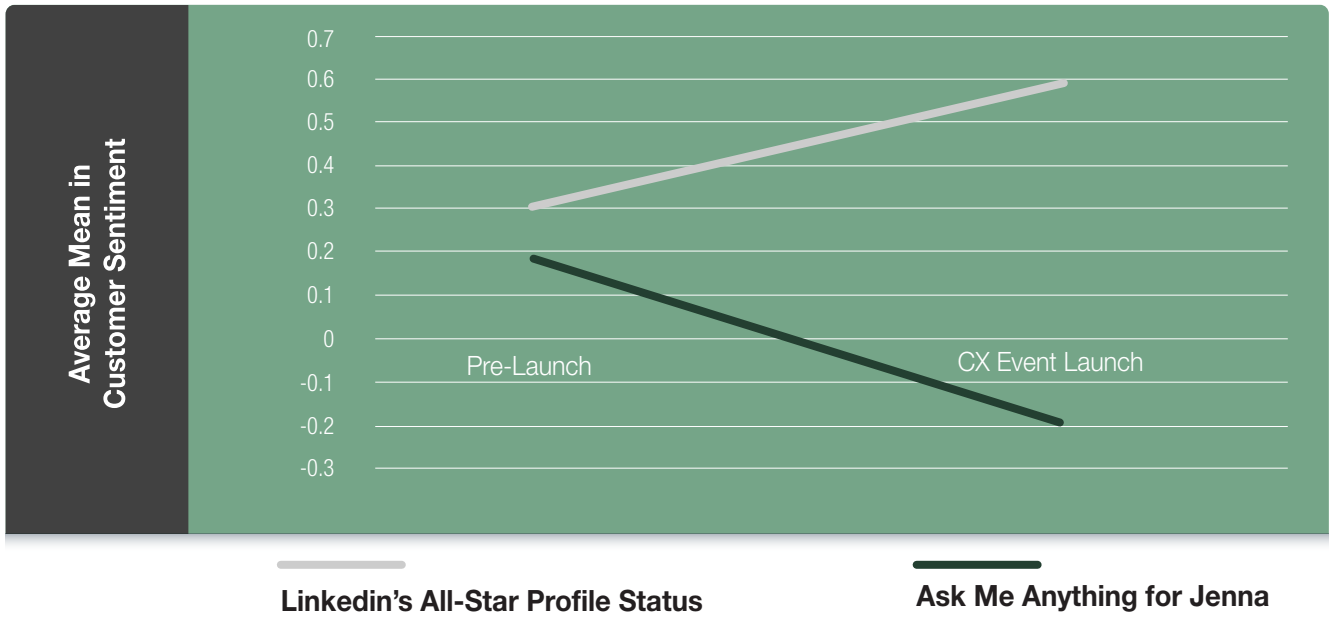


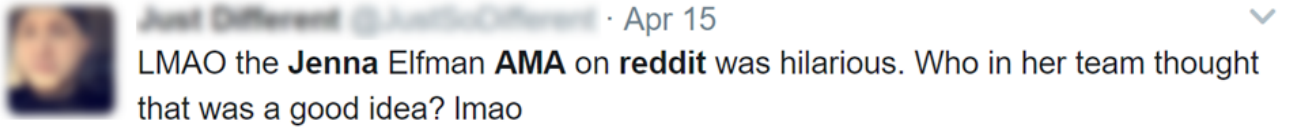
Figure 5: LinkedIn's All-Star Profile Update

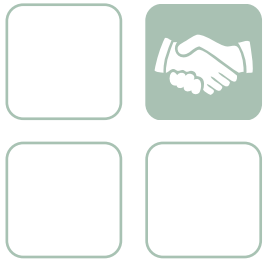
Positive Social Capital: Status

Reddit, a social news aggregator in the United States, created Hosted exchanges when they expanded their service to include AMAs (Ask Me Anything). AMAs are forums for celebrities, politicians, and more to answer questions asked by users. Jenna Elfman, the main actress of sitcom, Imaginary Mary, hosted an AMA in an effort to promote her new show on ABC. However, instead of the new show being widely discussed, users quickly jumped on the opportunity to question the actress on her Scientology beliefs. Reddit, the Host of the exchange, had opened up AMAs to create an avenue of self-expression. Although the AMA exchange between users and Jenna Elfman led to negative customer sentiments, we consider this to be a win-win exchange for Reddit as it was able to successfully Host a platform that opened and engaged its users to participate. (Figure 6 & 7)

Figure 6: Reddit's AMA for Jenna Elfman

Negative Social Capital: Status





Companion Exchanges

Dominant CX strategies based on Companion exchanges can command greater rewards, but with higher risk. In this archetype, control over the customer experience is distributed to multiple parties, creating the possibility for variable experiences. Our findings show that the biggest volatility in overall brand sentiment (versus individual touch points or features) was found in this quadrant. By opening up the participation market and simultaneously leveraging information from the engagement, firms are able to gain insight from an external perspective and at times, additional resources as mentioned earlier with iStockphoto's inspectors. This approach can expand an organization's contributors, but also makes firms vulnerable to a positive or negative opinion of their brand. (Vignette 4)

Vignette 4: Designing a Companion CX Strategy with Farmers on the MyYara Platform[21]

Yara, the largest nitrogen fertilizer producer, is innovating its customer experience with a farmer-first mindset to bring value to both the firm and its end-users. MyYara, a digital platform to connect with their farmers, is creating an experience based on Companion exchanges.

MyYara hosts all the tools and services provided by the firm. In the past, farmers had standalone systems with a number of apps. However, MyYara provided farmers with a one-stop engagement portal to be able to access real-time recommendations for crop nutrition and for Yara to gather information in return.[22] By having a farmers logged into the platform, Yara can pair their applications with harvest information. Together, Yara is able to recommend the right amount of fertilizer to use to optimize the application or improve efficiency rations. Terje Knutsen, Head of Crop Nutrition at Yara, describes how this bring economic and information capital to a farmer: *"A farmer growing tomatoes might be able to sell tomatoes for a higher price if the skin finish is really, really high quality. He could take a soil sample, send it to us and we would give an analysis: Are there the right nutrients in the soil to give him the right quality of skin? If so, the farmer gets a higher price. This is an example of where we can get the shared value: we give the farmer a product that helps him sell more so he keeps buying our product."*

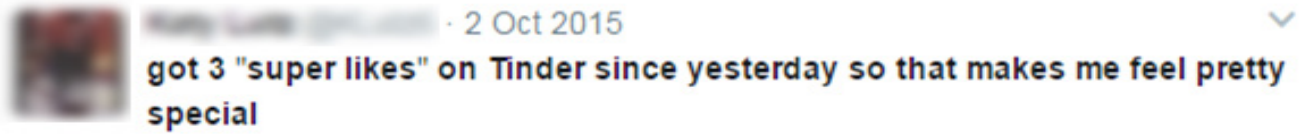
By using the platform, Yara is able to gain immense amounts of information from the farmers, and strengthen relationships. Using this information, Yara is starting to implement a Farm Relationship Management system (FRM) to manage end user information, *"This is something we emphasize a lot right now because we recognize that unless we can do this in a systematic, analytical way, we will not be able to leverage it successfully."*

MyYara, the digitally-mediated engagement platform between the company and its farmers has opened Yara's value chain to participation and information markets to enhance their value proposition and experience. Terje reflects on this transformation, *"With the technology, it strengthens our relationship with the farmer and also makes it less likely that the farmer can leave because they have their data with us…It enables us to communicate much more directly with the end users, and also be more visible as a knowledge provider. What I think is quite exciting is that it's more towards the sharing economy for value, which you don't see in some other industries."*

Sometimes an exchange is inside the dominant CX strategy and sometimes they venture to other archetypes. Tinder, a dating application, has a dominant Companion strategy. Tinder's Super Like feature allowed users to express more admiration instead of just a simple swipe to the right. Before this feature enhancement, users could only see if others had liked them if both parties swiped positively. Super Like let users share their feelings from the start; hence, opening up an additional aspect of its value chain to participation. When looking at tweets two weeks after the feature release, the majority of customer sentiments expressed positive social capital (recognition status) by expressing their social standing with the number of Super Likes they had received. (Figure 8 & 9)

Figure 8: Tinder's Super Like Feature

Positive Social Capital: Status

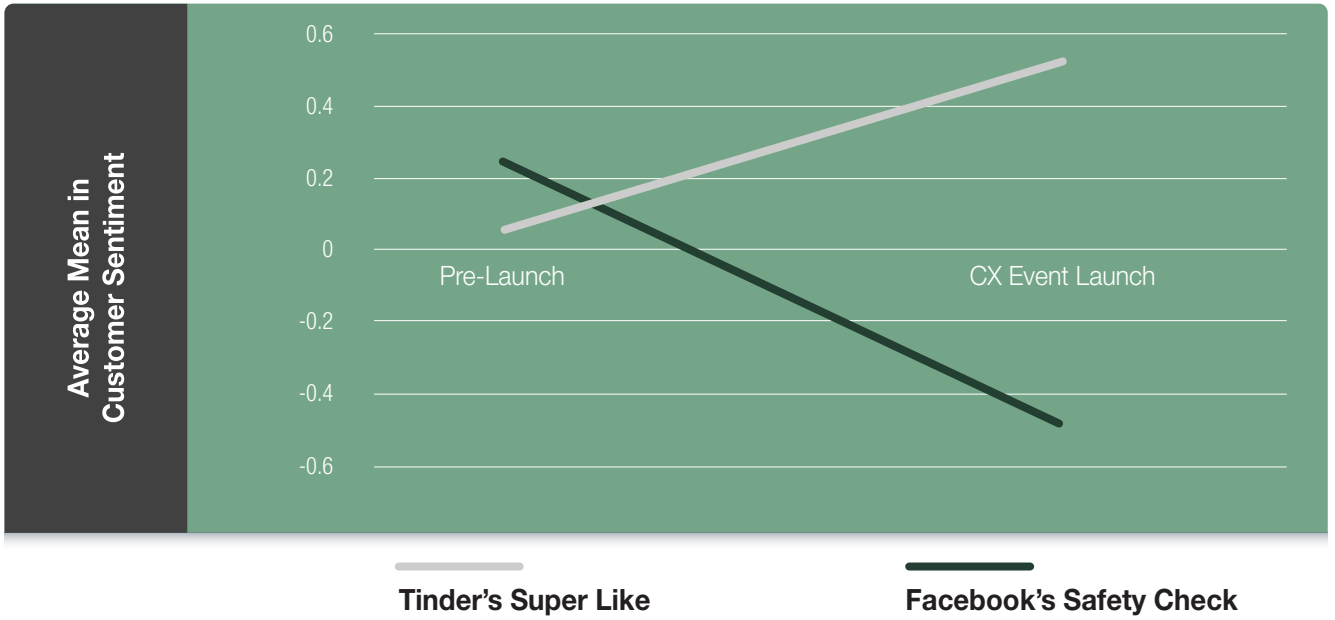


Unlike Tinder's Super Like, Facebook's Safety Check feature attracted negative cultural capital at the outset. Safety Check, which allowed users to mark themselves and others as safe in the wake of tragedies also made itself vulnerable to the public eye. Although users could personalize or update their pages, Facebook still controlled which regions the Safety Check feature would be available. Hence, the feature attracted negative sentiments from users when it was not enabled in Beirut, which faced terrorist attacks one day prior to Paris. Users who wanted to share support for Beirut were not able to self-express themselves as they were for Paris. (Figure 9 & 10)

Figure 9: Facebook's Safety Check Feature

Negative Cultural Capital: Self-Expression

Figure 10: Average Customer Sentiment for Companion Exchanges



Advised Exchanges

Dominant CX strategies within the Advisor archetype reflect experiences that are based on a firm's data-driven decisions. (Vignette 5) Because it is easier to forget the human element when making data-driven decisions, Advisor exchanges is one of the riskier quadrants. In a Companion exchange, customers participate willingly and often take accountability if things do not go as expected. Here, the overall brand is held accountable and therefore, is more likely to be blamed if the information that was leveraged is seen as dissonant to a customer's expectations. However, if done well, firms are perceived as having a certain expertise in an area or as a knowledge provider, creating additional customer stickiness.

Vignette 5: Leveraging QR Codes to Build Advised Touch points from Tire Usage[23]

Michelin, one of the largest tire manufacturers in the world, has been able to promote knowledge sharing by creating 'Advisor' exchanges from its tire usage. This past year, Michelin China started to label its tires with a unique QR code. The company can now understand the flow of the tires across the entire country. When retailers scan the QR code upon arrival and sale of the tire, Michelin identifies the retailer stock level in real-time, informing forecasts for production and imports. Using this information, Michelin is also able to trace its tires to quickly course correct. For example, Matthew Ye, Marketing Director from Michelin China describes a scenario if one of the tires had a defect: *"You need to be able to know where these goods are flowing in case if you are facing a product claim and there is a need to trace products sold. In the past, it was a bit messy for us, but after the QR code system implementation we did some tests and we know how it flows now."*

This has also benefited the customer. The QR code not only helps consumers be more informed about the tire performance and how to best maintain their vehicle, but also confirms the authenticity of the tire: *"The fact is in China, there are a lot of websites that are not controlled by the Michelin network and hence, have issues from people selling tires that are not proper."*

This comes at a time when the company also launched WeCare, a customer relationship management tool to send out service reminders, an 'Advisor' touch point. *"For example, if you had a tire changed in our shop last July, we will be able to - based on your mileage, your car model, and your spare part changes - to predict next time your service item will be due for another maintenance."*

According to Matthew Ye, information from tire flow, usage and performance not only brings Michelin closer to its end customer, but has brought value to the company across the value chain, *"This helps a lot to create new products/services. All this data helps Michelin make better decisions to inform marketing, distribution, communication and the sales planning."*

Ancestry.com, the world's largest consumer DNA network, hosts information from more than 3 million people. AncestryDNA is a report that provides information about one's ethnicity across 26 regions and identifies potential relatives through DNA matching with other participants.[24] Ancestry.com not only advises on the makeup of a customer's genealogy, but also has identified unknown siblings, parents, and distant relatives based on information collected from participants. Promoting the company as a knowledge provider, AncestryDNA was able to provide cultural capital and information capital for its customers. Hence, customer sentiments shared two weeks after the features global rollout were significantly positive. (Figure 11 & 12)

Figure 13: Average Customer Sentiment for Advisor Exchanges

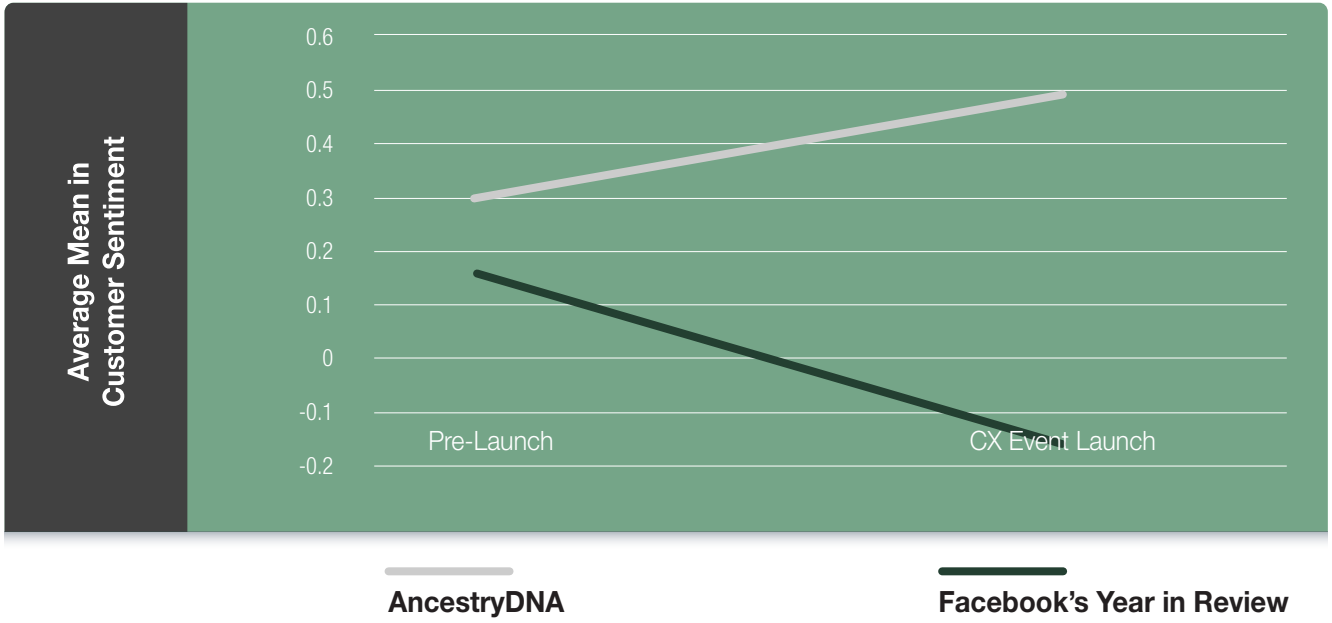
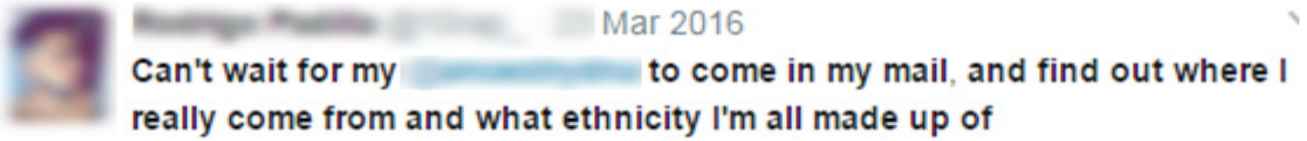


Figure 11: Global Rollout of AncestryDNA

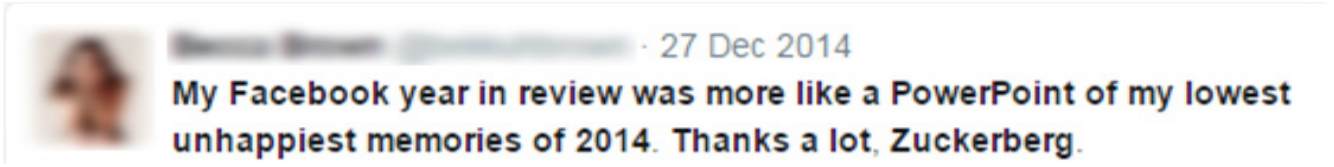
Positive Cultural Capital Self-Expression/Identity and Positive Information Capital: Insights

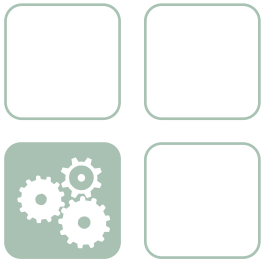


Facebook's Year in Review is a compilation of a users' already Hosted photo memories. Facebook used users' photos to showcase their year by creating a digital photo album based on existing data. Although users had the option to share the Year in Review with their social network, Facebook controlled the content. On average, users did not feel that the Year in Review accurately reflected their experience, leading to a negative sentiment within two weeks of the launch. (Figure 12 & 13)

Figure 12: Facebook's Year in Review Feature

Negative Cultural Capital: Self-Expression





Directed Exchanges

Directed CX strategies are characterized by consistent experiences controlled almost entirely by a firm. This is a classic pre-digital archetype, where decisions and product/service curation are typically made by the firm. (Vignette 6) Although experiences here can be positive or negative, customers are less likely to speak about how they may feel because there is a lower perception of choice and expectation of engagement and personalization.

Vignette 6: An Insurance Company's Directed Approach to CX[25]

One of the oldest insurance companies in the United States maintains an overarching Directed approach for their dominant CX strategy that was ranked #1 for overall customer satisfaction by J.D. Power.[26] As a part of the company's "go-forward business strategy, 2021", the firm has created a division called "Agency Markets" that combines their commercial, middle market and personal lines. Although branded as a new division, the company will continue to provide their network of agents with products and services directed by the brand.[27]

The insurance company acts as a facilitator between agents within their network. Based on information gathered from agents, the firm shares insights across the network to improve their end customers' experience. According to a senior executive at the firm, *"We're hopeful that if we provide both services and those types of consultative insights to agents that they will make the company a preferred carrier for customers. We're trying to create partnership with mutual outcome."* The company hopes that this approach of information gathering and controlled participation continues to maintain their customer experience standing and create a win-win exchange between all parties.

JetBlue's Mint Offering is a new premium class that improves on the service of its current business class. The new service attracted a positive sentiment, appealing to their customers' economic capital by providing the best domestic business class option. With a lower price relative to competitors, Jetblue Mint offers flat seats, closeable suites for privacy, a superior dining experience and much more. When comparing customer tweets about JetBlue versus sentiments specifically about the Mint Offering, our findings show that there was a 46% increase in average sentiment. (Figure 14 & 16)

Figure 14: JetBlue's New Mint Offering

Positive Economic Capital: Incentive-based Rewards

Apple's decision to remove the headphone jack from its new iPhone 7 was not as well received within two weeks from its release. In fact, the average sentiment between Apple and the new feature showed a 119% drop. Customers expressed negative sentiments as they felt that they were no longer getting the same amount of value in return when upgrading to the new iPhone. (Figure 15 & 16)

Figure 15: Apple's Elimination of Headphone Jack

Negative Economic Capital: Incentive-based Rewards

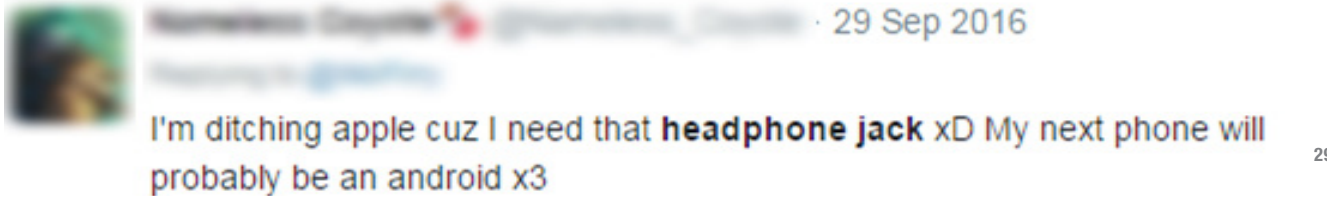
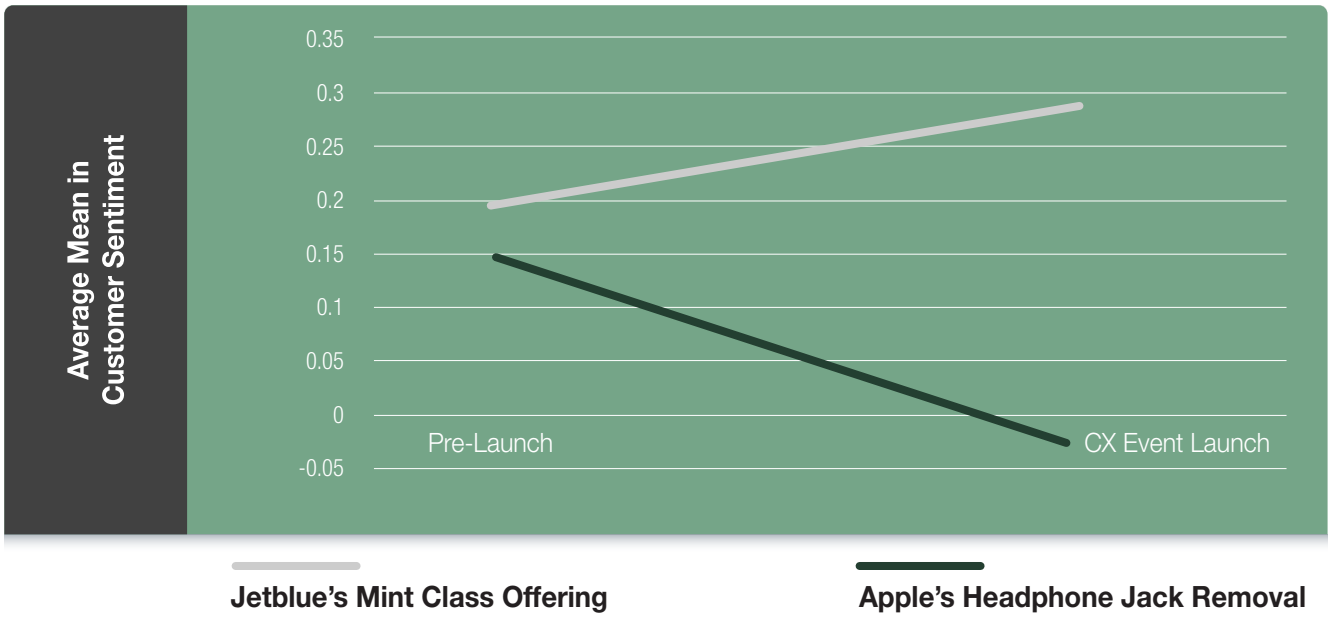


Figure 16: Average Customer Sentiment for Director Exchanges



Shaping your customer experience with new touch points or enhancements outside of a firm's dominant CX archetype requires careful risk management, experimentation and sentiment analysis. However, even when things do go wrong, our research shows that companies can put in place successful remedial strategies.

Can You Turn Around

a Negative Situation?

160% drop in average sentiment after the event

increase in average sentiment after the expansion. **170%**

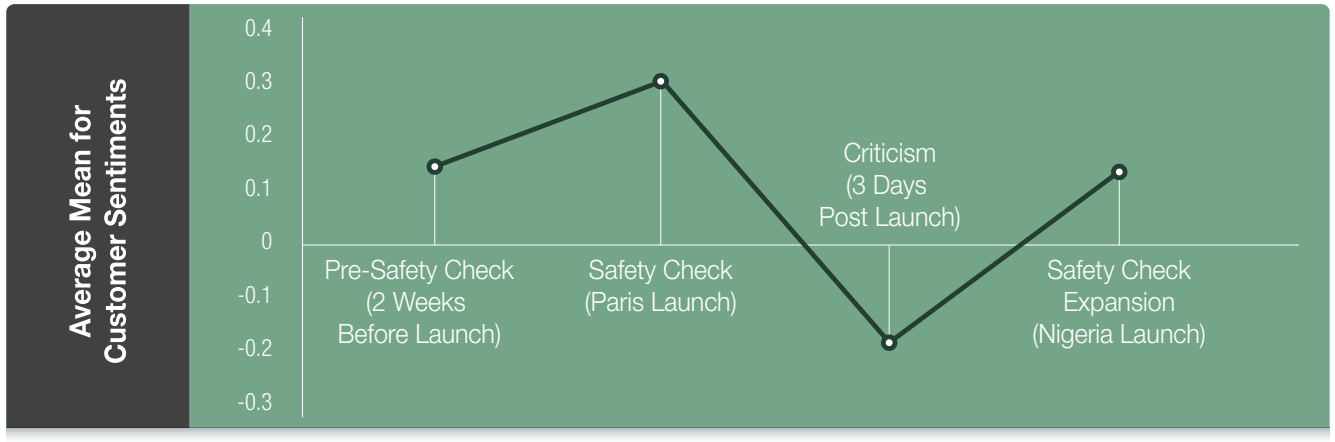
Yes, is the answer. The trick: analyze customer sentiments and act quickly to course correct. The more participatory an exchange, the more likely the first two weeks of sentiments shared about a CX event positively correlate with sentiments about the brand after the event unless a firm intervenes to course correct. In most of our cases, if people shared positive sentiments in the first two weeks, the overall sentiment after the event would still be positive. Similarly, if people shared negative sentiments in the first two weeks, the overall sentiment towards the brand would also be negative. However, in the case of Facebook's Safety Check launch described earlier, the negative sentiment about the brand after its launch significantly improved.

Immediately after the Paris bombing users complimented Facebook, "Hats off to #Facebook for creating their #SafetyCheck feature", "I learned a friend was safe in #paris last night via a #facebook feature, #safetycheck", or "#prayingforparis never realized just how many #friends I had in the #Paris area last night until FB's #SafetyCheck notifications came in". However, this was short-lived when people came to realized that the feature had been enabled in Paris during the terrorist attacks, but not in Beirut the day before where bombings also took place. Many people on social media were upset. This feature, which leveraged a users location felt biased and left many people unable to self-express, leading to 160% drop in average sentiment after the event.

Facebook's CEO responded quickly[28,29], stating that Facebook would immediately put plans in place to expand the feature. Within three days, when bombings occurred in Nigeria, the company did just that. Safety Check was expanded as promised and the average customer sentiment increased by nearly 170% after the expansion. Facebook was quick to listen to their users and reconnected with human empathy. (Figure 17)

> The ability to experiment and build the capabilities to quickly course correct is crucial to maintain a win-win customer experience and protect a brand.

Figure 17: Facebook's Safety Check Course Correction



Safety Check CX Timeline

As companies open new touch points and/or enhance their product and services, they venture into new participation and information archetypes from their dominant strategy. The ability to experiment and build the capabilities to quickly course correct is crucial to maintain a win-win customer experience and protect a brand.

Embrace the Next Generation of CX

or Risk Being Left Behind

The digital economy has accelerated the proliferation of digital touch points. This will not stop. Navigating and designing sticky customer experiences has become more complex. Advances such as artificial intelligence or deep learning are creating unprecedented new opportunities. These technologies have seeped their way into our daily lives from AI bots in our home like Amazon Echo and Google Home to Facebook's facial recognition with DeepFace. However, the new exchanges they create can lead to positive or negative customer sentiments as a comprehensive understanding of human behaviors, values and sentiments is still required to build win-win experiences.

Despite the increased innovative opportunities that digital technology creates, human connections still need to beprioritized. Xavier Arputharaj, COO of Orient Insurance, a UAE-based insurer, emphasizes the importance of the human element: "Man and machine have to work together. We have become more and more technology driven in terms of touching our customer to constantly interact with them via email, text messages, developing a good app. However, a human touch is always necessary. I will never belittle the importance of human touch." To derive maximum value for firms and customers, leaders need to prioritize activities using the CX framework and principles. (Figure 18)

> A human touch is always necessary. I will never belittle the importance of human touch.
>
> - Xavier Arputharaj, COO of Orient Insurance

> Start by addressing a pain point where customers interact with the firm at the most basic, foundational level.

Part 1: Optimize Win-Win Exchanges with a CX Strategy

EXPLORE:

Participation and information are the linchpin of experience design and value-creation opportunities across a firm's value chain. Firms need to decide where participation needs to be closed or shared. As participation is increasingly shared, firms should ask themselves if they are giving their customers the right amount of agency of control to drive engagement. Similarly, they must assess whether the information they have directly or indirectly collected can bring benefits to customers or feels exploitative or dissonant when leveraged. Start by addressing a pain point where customers interact with the firm at the most basic, foundational level. By focusing on a customer's minimum viable interaction, firms can gain from the majority of their customer-base at the lowest level of burden to them.

ASSESS:

Value is created and most welcomed when customer expectations match customer perceptions. Each CX archetype promotes different characteristics. Firms can map their existing and new touch points against the archetypes and assess their CX value proposition. This can be done with sentiment analysis from public or propriety engagement content such as social media, public forums, and customer service content. By understanding customer sentiments, firms can test if the touch point is delivering gains in economic, cultural, social or information capital to promote the right archetype. For example, if your touch point is an Advisor-based exchange, do you offer customer capital to promote knowledge sharing?

Part 2: Prioritize Human Empathy throughout your Organization

EQUIP:

Win-win CXs require balanced capabilities between data science and behavioral science. Firms should have methods and capabilities in place to advocate for human empathy when design changes are made to the customer experience. For example, Facebook has built an 'empathy team' to ensure they treat their customers not as users, but as 'people'.[30,31]

ALIGN:

Human sentiment cannot always be predicted. When firms emphasize human empathy and have the ability to quickly course correct brand images can be protected. Firms should ask themselves if they have processes in place to assess the impact of design changes and when and how to course correct.

Figure 18: Designing Win-Win Collaborative Exchanges

Stage	Description	Guiding Principles & Key Questions
Key Principle: Win-Win exchanges are optimized when both firm value and customer capital are maximized.		
Part 1: Optimize Win-Win Exchanges with a CX Strategy		
EXPLORE	Common **practices** when extracting value at various points in a firm's value chain	Guiding Principle: Participation and information will be the linchpin of experience design and value-creation opportunities across a firm's value chain **Participation: Should participation be closed or shared?** ▪ What is the minimum customer participation across the value chain? ▪ Can we drive engagement by giving customers some control? ▪ How can we make it easy for customers to participate? ▪ Can this participation address a pain point at any stage in the value chain? **Information: Should information be gathered and/or leveraged?** ▪ What is the minimum customer information gathered across the value chain? ▪ Can we gather more information and bring utility to customers without seeming exploitative? ▪ How can we make it a win-win for the customer to provide information? ▪ Can this information address a pain point at any stage in the value chain?
ASSESS	A **framework** to understand how participation and information markets can work together to create win-win customer exchanges	Guiding Principle: Value is created and most welcomed when customer expectations (customer capital) match perceptions (customer sentiments). **Do customer sentiments for each offering match our respective archetypes?** ▪ Hosts: Does our CX promote customer-brand interaction? ▪ Companions: Does our CX promote community? ▪ Advisors: Does our CX promote accurate knowledge sharing? ▪ Directors: Does our CX promote security?
Part 2: Prioritize Human Empathy throughout your Organization		
EQUIP	Tested **methods** to equip for dynamic successful CXs	Guiding Principle: Strong CXs require balanced capabilities between data science and behavioral science ▪ Do we have the right methods and capabilities to help us understand customer sentiments and perception of the experience? ▪ Do we have formal human checks and balances against design and algorithmic changes to the customer experience?
ALIGN	Next **steps** for firms to align internally and course correct, if required	Guiding Principle: Human sentiment cannot always be predicted, but a brand image can be protected when firms prioritize human empathy and quickly course correct when required ▪ Are our customers central to our decision-making across the organization? ▪ Do we have the processes to allow us to course correct and make our customers know we prioritize human empathy?

Conclusion

We need to fundamentally rethink the customer experience in the digital economy, from merely a “UX” (user experience) to a “CX” (collaborative exchange). As digital technology progresses and open ecosystems become more complex, organizations will increasingly become porous. Designing highly participative customer exchanges with mutually beneficial information flows is the key for firms to survive in the next phase of digitization.

We propose a framework for deciding when and how consumer experiences can transform into collaborative exchanges (CX) across all touch points in a firm’s value chain. This framework, based on quantitative and qualitative analyses, identifies when CX will create value for both the firm and its customers.

The participation and information markets serve as value levers to help firms create win-win exchanges based on human-centric experiences. By increasing or decreasing access and transparency to internal activities, firms can find ways to innovate that maximize firm value and customer capital. In this way, we argue for a more customer-centric understanding of digital transformation. Assessing each touch point in a firm’s value exchange from a customer’s standpoint requires an honest assessment of the capital that they will receive in return for their participation and information: economic, cultural, social and information. Whether community participation helps with a firm activity or provides insight, companies need to constantly assess sentiments and follow CX guiding principles as they innovate their experiences. **Data scientists will need to work in lock step with behavioral scientists to bring value to both parties, leading to the next wave for the war on talent: the demand for behavioral scientists.** Understanding the importance of humanized engagements within digitally enabled experiences is becoming a management imperative. Blending customer analytics and behavioral science is the future of CX in a digital world. In order to fully leverage the opportunities offered by digital transformation, firms need to embrace the principles of Collaborative Exchange or fear behind left behind.

> “Data scientists will need to work in lock step with behavioral scientists to bring value to both parties, leading to the next wave for the war on talent:
>
> The demand for behavioral scientists.”

Executive Summary

1. Firms doing business in the **Digital** age must view their interactions with customers as embedded in an **Exchange** economy, where both the firm and the consumer seek to extract maximum value from the level of **participation** and **information** exchanged.

2. These digital exchanges are not merely passive on the part of the firm or the consumers, but characterized by co-creation of value along the value chain. Value creation occurs through **customer capital**: economic, cultural, social, and information.

3. From a behavioral perspective, the stronger the **perception of capital** by the customer, the greater the value of the information and participation markets. These perceptions are not merely “rational” but subject to the heuristics highlighted by **behavioral science**.

4. A **win-win exchange equilibrium** can be achieved when both the firm and the customer create and extract capital from the digital collaborative experience. Customer satisfaction hinges on ongoing expectations of the brand.

5. Firms can create value by playing **four kinds of roles**, based on the amount of participation and information shared in the collaborative exchange: Host, Companion, Advisor, and Director.

6. Successful firms will not only leverage data scientists in their arsenal, but also **behavioral scientists** who can design human-machine interface platforms that leverage human empathy and create a win-win CX.

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About the Research

As organization boundaries are becoming more porous in a digital economy, the role of the consumer is also changing. Customers are more willing to share personal information or partake in firm activities and at times, with no cost to the firm. Our research set out to explore the rational and emotional drivers underpinning the acceleration of the participation and information markets in the digital economy and how both dimensions can work together to bring shared value between a firm and a customer.

This framework, combining both quantitative and qualitative analysis, is based on findings from event and sentiment analysis (involving over 40,000 of customer comments and tweets), executive interviews and observational case studies. We analyzed over 70 collaborative customer experience events across industries and extracted data from 50 cases for sentiment analysis. These events included changes or launches in loyalty programs, self-service platforms, features, offerings and more. For each event, we measured: (1) the degree of firm-consumer participation and information exchanged on a 56 point scale and (2) sentiment analysis of tweets before and after a collaborative customer exchange to assess which events had positive or negative experience and the type of capital that drove customer value. Our analysis of the customer-generated content involved a triangulation method: tweets were randomly selected around the focal event timeline by BrandWatch, a social media monitoring software and then thematically analyzed via LIWC, a natural language processing tool, for valence, sentiment, and meaning. Our team of researchers then analyzed the randomly selected customer sentiments for thematic validity. The timeline for each event comprised of a two, two week periods: (1) Pre-Event and (2) Event Impact. Sentiments two weeks before an event about the brand provided a control period and two weeks after an event about the brand and the event assessed the event launch. We complimented our research with 15 in-depth executive interviews with leaders intimately involved in customer strategy and experience design e.g. C-level executives, Heads of Marketing, Ecommerce, Social Media etc. These interviews gave us an understanding of the participation and information markets across a firm's value chain and across industries. In addition, we have incorporated content from observational case studies including studying published case studies and response times and experiences from online user registrations, mobile applications, and self-service kiosks to illustrate our findings.

Our research uncovers a framework for deciding when and how consumer experiences can transform into collaborative exchanges (CX) via digitally-mediated touch points in the firm's value chain. This framework identifies when CX will create value for both the firm and its customers as firms continue to mold their experiences. We've developed this framework based on data from domains as varied as finance, healthcare, food, service, and entertainment, from platform-based businesses to packaged goods.

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About the MIT Initiative on the Digital Economy

The MIT Initiative on the Digital Economy (IDE) is a team of visionary, internationally recognized thought leaders and researchers examining how people and businesses work, interact, and will ultimately prosper in a time of rapid digital transformation.

The IDE is part of the MIT Sloan School of Management. With its core strengths in technology and innovation, no institution is better equipped to examine the digital economy. No other initiative or center in the world is exploring the effects of the digital economy with the same determination, focus, perspective or purpose as the IDE.

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