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INSIGHT REPORT

Making AI Customer-Centric

FIVE INGREDIENTS FOR CREATING SUCCESSFUL AI-DRIVEN CUSTOMER INTERFACES

By **Jen Rodstrom**, CCXP
XM Catalyst

Bruce Temkin, CCXP
Head of the Qualtrics XM Institute

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EXECUTIVE SUMMARY

The use of Artificial Intelligence (AI) – often in the form of chatbots and intelligent virtual assistants – is becoming more widespread in customer experience. However, despite its prevalence, few companies are employing AI in the right scenarios or using it to its fullest potential. In this report, Temkin Group creates a model and shares best practices for *AI-Driven Interfaces* (AIDI), which we define as *digital interactions with customers that are being directly manipulated by machine learning algorithms.* To successfully deploy customer-centric AI, companies need to:

- Integrate the elements of the *Human Conversational Model* into the design of AIDI.
- Bring together Five Ingredients: *Conversational Design*, *Targeted Use Cases*, *Optimized Data Aggregation*, *Responsive AI Engine*, and *Continuous Tuning*.
- Determine Organizational AI Readiness before deployment by tying AI to business strategy, auditing data sources, assessing employee skills, and planning for agent/AIDI interactions.

CURRENT AI EFFORTS MISS THE MARK

Artificial Intelligence (AI) is a collection of technologies, including machine learning and natural language processing, designed to make machines behave in a more human-like way (see Figure 1). It has also become a buzzword that gets thrown around in a wide range of industries and disciplines. While AI promises great opportunities in customer experience (CX), it does not yet live up to the hype as most companies currently:

- **Focus on cost reductions.** Staffing call centers is expensive, and many companies understandably want to minimize the expense of running such labor-intensive departments. However, the reality is that contact center agents are an integral part of the customer experience, and it is neither realistic nor desirable to think that AI can eliminate these critical human interactions.
- **Deploy it thoughtlessly.** Like with many new technologies, companies are very excited about the idea of using AI, but are not being thoughtful about where it might make the most sense to deploy the solution. For example, chatbots and intelligent virtual assistants are not a good fit for some highly emotional situations or for the overly complex or multi-faceted interactions that often occur in sales and support.
- **Lack the appropriate data**. AI solutions are only as useful as the data that powers them. If a company does not have call recordings or chat transcripts, it can be challenging to determine the top reasons customers contact the company. Similarly, if data is scattered across the organization and cannot be coherently brought together, it is very difficult to deploy the machine learning necessary for training the AI on how to respond appropriately to customer inquiries.

- **Deliver dismal digital experiences**. Most companies use AI on their digital channels in the form of chatbots and intelligent virtual assistants, but only 28% of large corporations rate their digital experiences as "good" or "very good." This is a significantly lower percentage than for either in-person experiences (40%) or phone experiences (61%).[1] If companies continue to deliver subpar digital experiences, it will undermine their efforts to roll out AI solutions.

FIVE INGREDIENTS FOR CUSTOMER-CENTRIC AI

While AI is capable of supporting a number of different customer experience activities, for this report, we focused on what we call *AI-Driven Interfaces* (AIDI), which we define as:

Digital interactions with customers that are being directly manipulated by machine learning algorithms

AIDI refers to chatbots, intelligent virtual assistants, and other similar tools that allow the customer to communicate directly with AI using natural language.

To identify the best practices for using AIDI, Temkin Group interviewed a number of companies that either provide or deploy AI.[2] Through this research, we identified five components that companies must have in place to drive customer-centric AI solutions (see Figure 2):

- **Conversational Design.** This is the center of a customer-centric AI model, and it allows companies to deliver an engaging and emotionally gratifying experience for customers.
- **Targeted Use Cases.** Companies must avoid taking a scattershot approach to AI and instead select the appropriate situations for deploying it.
- **Optimized Data Aggregation.** Rather than kicking off a never-ending data project, companies need to identify and pull together the data that's relevant to AI.
- **Responsive AI Engine.** AI requires a machine-learning platform to interpret, anticipate, and respond to customer needs.
- **Continuous Tuning.** AIDI implementations are not meant to be perfect out of the box, which means companies need to commit the resources necessary for it to learn and evolve over time.

Ingredient #1: Conversational Design

An AIDI interaction is only successful if it emotionally resonates with customers. To create these positive, engaging experiences, Temkin Group recommends applying what it calls the

[1] See Temkin Group Insight Report, "The State of CX Management, 2017" (May 2017).
[2] Temkin Group interviewed a number of companies for this report, including [24]7.ai, Aspect Software, Cogito, Creative Virtual, Earley Information Systems, Genesys, Interactions, Jacada, LogMeIn, Mattersight, Pegasystems, Teletech, Verint.

Human Conversational Model to these solutions (see Figure 3).[3] This approach incorporates two components:

- **Cooperative Interface.** For a conversation to succeed, both parties need to collaborate with each other to achieve a shared goal, such sharing information. The "Cooperative Interface" piece of the *Human Conversational Model* relates to the observable, tangible aspects of the conversation. So for human-to-AI conversations to work successfully, the AIDI must correctly discern the customers' intent and then use machine learning to either provide them with either a clear response to their query or ask an appropriate follow-up question. Customers will expect the AIDI's response to take into account the broader context of the customer's relationship with the company, such as previous interactions, prior purchases, and defined preferences. As with a human-to-human conversation, customers will expect the AIDI to provide them with feedback that is relevant to their query. Companies need to train the AIDI to not only understand and respond to the customer's needs (or probe further when in doubt), but also to recognize when it is unable to complete the customers' request. In these cases, companies must establish a process for handing the interaction off to an agent. This process should include a complete transfer of the context surrounding the interaction so the customer does not have to start from scratch with a human agent (see Figure 4).
- **Background Mindfulness.** This piece of the *Human Conversational Model* refers to the processes that occur internally within each participant in a conversation and are therefore not observable as part of the dialogue. So for an AIDI to emotionally engage customers, it must embody the brand that it is representing. We call this *Organizational Personality,* which is the set of human-like characteristics intentionally exhibited by a company (see Figure 5).[4] The U.S. Army, for instance, introduced SGT STAR, an intelligent virtual assistant described as the 6'1, "no nonsense and straight-talking," face of Army recruiting (see Figure 6).[5] In addition to *Organizational Personality*, an AIDI can demonstrate "Background Mindfulness" by continuously evaluating what is going on during the interaction, so it can change its approach if necessary. Thanks to its machine learning capabilities, the AIDI can learn from its mistakes, so it knows how to respond correctly the next time it faces a similar question or issue.

Ingredient #2: Targeted Use Cases

Many companies focus their Artificial Intelligence efforts on automating mundane, repetitive, low-risk tasks that can be highly scripted – such as store hours, outage notifications, or account balances. While this can be a good place to start implementing AI, companies need to identify potential use cases that are both high value to the business and in need of a better customer experience (see Figure 7). With this in mind, companies should:

- **Focus on high-volume interactions.** Often company leaders are eager to get started with AI, but do not know where to begin. To help set their AI efforts on the right path,

[3] See Temkin Group Insight Report, "Humanizing Digital Interactions," (April 2017).
[4] See Temkin Group Insight Report, "Emotion-Infused Experience Design" (June 2016).
[5] NextIT. (No date listed). SGT STAR helps potential recruits learn about Army life. Retrieved from: http://nextit.com/case-studies/army

companies need to develop a method for determining the most appropriate use cases for this technology. Identifying high volume interactions is a good place to start. For example, one telecommunications company determined it wanted to automate subscriber contacts, but it first needed to develop a comprehensive list of the reasons why subscribers contacted the company. Further, for each reason or "intent," it needed to decide which ones AI could address. By analyzing chat transcripts, the company identified 150 different intents that drive customers to seek assistance. The telecom then prioritized the intents that drive the most call volume. Often the intents corresponding to the highest call volumes were easy to answer, making them ideal candidates for automation.

- **Support contact center agents.** AI plays an important role in helping agents provide quicker, more efficient responses to customer concerns (see Figure 8). Companies can use AI to analyze the voices of both the customer and the phone representative during a call and then provide real-time guidance to the agent. For example, one regional health plan's call center performed well when it came to providing accurate information to customers, but its satisfaction ratings were flat due to a perceived lack of agent empathy. To help them demonstrate more empathy, the company uses AI to provide agents with visual cues via their computers that advise them on how to communicate better to build rapport. For example, the system notifies agents if they are speaking too quickly or interrupting the customer. As a result, agents connect on a more emotional level with customers, listen more effectively, and feel more confident on calls.[6]
- **Dampen surging call volumes.** Temkin Group research shows that customers prefer self-service for an increasingly wide range of activities.[7] AI is one tool companies can use to help satisfy these growing needs. Salt River Project (SRP), a public utility in Arizona, has seen its call volume spike during peak air conditioner season. To meet these higher volumes, SRP launched two virtual assistants, Rosie (for English) and Ramón (for Spanish). The introduction of these two virtual assistants has led to a steep reduction in seasonal call center hires as customers began using self-service more frequently and could successfully complete their interactions entirely within that channel.[8]
- **Handle uncomfortable conversations.** While companies often avoid automating emotional interactions – assuming they are too complex for Artificial Intelligence – during some emotional situations, customers actually prefer to deal with a machine rather than a human. For example, customers may rather interact with AIDI during potentially embarrassing scenarios, such as when a debt collection agency is setting up a payment plan or when a utility is contacting them about potentially losing service due to non-payment. Some customers also prefer AIDI for awkward human interactions. At Edwardian Hotels, customers ask "Edward," the hotel's chatbot concierge, questions they might be too embarrassed to ask a staff person, such as if in-room coffee/tea makers are complimentary. The hotel has found that even though customers never ask hotel staff this question, they frequently ask Edward about it.

[6] Cogito (no date listed). Case Study: Elevating customer experience with Cogito. Retrieved from: http://www.cogitocorp.com/wp-content/uploads/2017/01/Elevating-Customer-Experience-With-Cogito.pdf

[7] See Temkin Group Data Snapshot, "Channel Preferences Benchmark, 2018 (January 2018).

[8] Interactions. (no date listed). SRP improves self-service rates by more than double. Retrieved from: https://www.interactions.com/library/customer-case-study-srp/

Customers also choose to interact with Edward to avoid uncomfortable situations. For example, Edwardian Hotels has found that customers prefer to share their concerns about the hotel's service with Edward rather than in face-to-face with hotel staff.[9]

- **Respond more quickly and accurately.** One of the oft-touted benefits of AI is its ability to respond 24 hours a day, seven days a week, leading to more timely responses. One bank had a service-level agreement (SLA) promising to respond to customer emails within 48 hours. However, meeting these obligations was a challenge as it meant going through 25,000 emails manually every day to understand each customer's intent. Additionally, 60% of the initial routing had to then be re-routed due to employees misunderstanding the customers' intent, and the bank only resolved 10% of issues in the first email interaction. To solve this problem, the bank automated its email response and routing process so that customers received an instant notification informing them that the bank had read their email, thanking them for reaching out, and verifying the intent of the initial inbound email. By instituting this change, the bank routed 90% of the emails correctly on the first try, which increased the team's efficiency and significantly improved the customer experience.

Ingredient #3: Optimized Data Aggregation

Successfully deploying AI requires data from a wide variety of sources. Yet companies' data is often messy, incomplete, and confined to organizational siloes. Companies need to bring these relevant data sources together to train the AI to understand customer intent based on previous interactions, bring context to a customer query, and connect employees to the knowledge resources necessary for accurately responding to a customer's needs. To aggregate this disparate data in a meaningful way, companies should:

- **Structure content for machine learning.** Data comes in many different formats and structures, ranging from an abundance of small bits of transactional customer data to knowledgebases full of extensive technical documentation. Getting these reams of data into a usable configuration requires a significant investment. When Allstate Insurance upgraded its commercial line for small businesses, its 10,000 agents jammed internal call centers with questions about how the policies worked and how to accurately produce customer quotes. To help meet this volume, the company developed a virtual assistant called "ABIe" (pronounced "Abby"). To prepare ABIe for the influx of questions, Allstate Business assigned a team of managers and subject matter experts to create the taxonomy of the words, phrases, and data required to power potential responses. To do this, the team chopped, chunked, and tagged the company's policies, processes, and documents so that ABIe had the necessary information to respond to agents. ABIe handles more than 100,000 queries per month from agents and internal employees.[10]
- **Include contextual data.** When customers contact a company for assistance, they rarely articulate the nature of their problems as clearly as an AIDI solution needs them to. For example, if a customer contacts a credit card company and only cites a "credit card problem," it's challenging for an intelligent virtual assistant to know how to

[9] Weston, Sam. (2017, June). Happy Birthday, Edward! Edwardian Hotels' Virtual Host Turns One. Hotel Speak. Retrieved from: http://www.hotelspeak.com/2017/06/edwardian-hotels-edward-one-year-service

[10] Earley, Seth. (2018, July). How companies are benefiting from "lite" artificial intelligence. Harvard Business Review.

respond correctly – did the customer lose the card? Did the card not come in the mail? Is the chip malfunctioning? Or did a retailer deny the card? Companies can combine this nebulous intent with the customer's actual behavioral and interaction data to quickly and accurately decipher the customer's true intent. This data could, for instance, show that the customer spent time on a website page about fraudulent charges or visited a page about how long it takes to get a new card. AIDI could also guide the customers who remain on the website while interacting with it to the appropriate place on the site, helping them find information themselves rather than waiting to speak with an agent.

- **Start with smaller datasets.** While long-term plans for AI will require extensive preparation and large volumes of data, companies can derive fast value from AI by starting with a smaller dataset. One airline wanted to have a narrow focus for its AI initiative so it reviewed customer query logs to uncover use cases from phrases customers frequently used and from agents' disposition codes. After the airline identified the top ten most common intents, it presented the AIDI to customers when these use cases appeared in the queue. Though the airline started with a small amount of data it had to manually tune, through machine learning it was able to understand synonyms and to disambiguate customer intent by asking, "I think you mean this," allowing it to become smarter over time. Similarly, when one US telecom provider was faced with the task of improving customer retention, it opted to take a small data approach. When it identified a customer at risk of leaving, the AIDI would make that customer a relevant offer. This tool – which took the telecom about 10 weeks to implement – used about 30-40 pieces of data per customer to build machine-learning recommendation algorithms that dramatically improved retention rates. This eliminated the need to sift through billions of pieces of information, allowing the company to focus on a much smaller subset of their customer data.

Ingredient #4: Responsive AI Engine

Data alone is not beneficial; it only becomes valuable when it is used to drive action. In the case of AI, data is essential as it uses machine learning to teach the system to think and react like a human. Companies must determine how their AI platforms will engage with customers through scripted or free-form responses, devise a well-thought-out training and testing methodology, and plan for how it can scale across different channels. To successfully build an AI engine, businesses need to:

- **Connect intent to content.** At the heart of any AI lies the ability to understand the customer's intent – what he or she needs or requests – and then connect that intent to a relevant response. To do this well, companies must carefully consider and anticipate likely customer queries during the setup phase and then ensure that the AI is prepared to answer those questions. When ANZ Global Wealth Group developed AIDI to support its financial advisors, it took two parallel paths, one path involved narrowing down a list of thousands of potential questions customers might ask advisors, while the second involved feeding relevant product data into the platform. The company then connected the 14,000 potential questions it identified to the appropriate responses from sources such as product disclosure statements, market data, financial statements, and research information in the AI engine. After going

through this process, ANZ realized it did not have documented responses for some of the questions, so it created new collateral to answer these queries.[11]

- **Ask questions to clarify intent.** A company does not always need to rely on data it has previously collected to predict a customer's intent – sometimes it can just ask the customer directly. Then, based on the customer's answers, the AIDI can narrow down the range of options it presents, helping the customer reach her goal more directly and efficiently. For example, The North Face uses an AIDI to help customers find their perfect jacket. When customers arrive at the site, they are greeted with a message saying, "Hi! Can I help you shop for a jacket today?" and if they click, "Let's start," it kicks off a series of questions about where exactly the customers plan on wearing the jacket, when they plan on wearing it, and what specific characteristics they'd like in the jacket (see Figure 9). The North Face's tool uses natural language processing capabilities to understand customers' answers to its questions, and then it presents and refines products based on these answers.[12]
- **Integrate across channels.** Companies need a plan for how they want to deploy Artificial Intelligence across channels. Ideally this means that customers have the option to interact with the AIDI through either voice or text in any environment, be it a contact center, a web page, or a mobile application. To successfully integrate AIDI across channels, companies must be able to seamlessly transfer customers to agents when needed. Ally Assist, Ally Bank's virtual assistant, makes it possible for customers to perform tasks, such as making deposits, checking account balances or paying bills, via speech or text. But the bank also recognizes that there are times when customers need human interaction, so it also employs hundreds of contact center agents who are available to step in and assist.[13]
- **Script AIDI conversations.** While some AIDI tools use natural language processing, which allows customers to use free-form text or standard speech, all AI tools ultimately need some level of scripting to guide the conversation. To create effective scripts, companies must do more than simply take the frequently asked questions (FAQs) and put them into a chatbot format. Instead, the response process should recreate the back and forth format of a conversation, with well-designed follow up questions and prompts. 1-800-Flowers' Gwyn (Gifts When You Need) engages mobile users in a conversation using a WhatsApp-like messaging platform that asks them questions about what they are looking for, shows them results, and then enables them to select and order products from inside the interface. So, if a customer tells "her" that he is looking for a birthday gift, Gwyn will ask a series of qualifying question – about age, gender, occasion, etc. – and then suggest appropriate product offerings.[14]

Ingredient #5: Continuous Tuning

It can be natural to think that once the AI is up and running, all the heavy lifting is done. Yet given that by its very nature, AI will continue to learn and improve over time, it will always

[11] Coyne, Allie. (2016, February 22). How ANZ bank is expanding its use of cognitive computing. itnews. Retrieved from: https://www.itnews.com.au/news/how-anz-bank-is-expanding-its-use-of-cognitive-computing-415402

[12] See Temkin Group Insight Report, "Humanizing Digital Interactions," (April 2017).

[13] Aquino, Judith, (2016, May 23). Automate or humanize? The great customer service debate. 1to1media. Retrieved from: http://www.1to1media.com/technology/automate-or-humanize-great-customer-service-debate

[14] See Temkin Group Insight Report, "Humanizing Digital Interactions," (April 2017).

require human supervision to verify that its responses remain correct and that it still meets both the customers' and the company's ongoing needs. To make sure the technology continues to provide the desired cost reductions, efficiencies, and improvements in customer satisfaction, companies must commit to having resources available for long-term AI monitoring and training. To keep the AI current, companies must:

- **Monitor performance.** Even though AI improves its responses through machine learning, companies must monitor it very closely to avoid introducing bias or unwanted responses into the solution. Such issues can lead to companies misunderstanding intent, providing incorrect responses, or deploying AI during the wrong part of the customer journey. When one large credit and identity management company found their AI algorithm performing sub-optimally, it looked for ways to improve the virtual assistant's understanding of customer intent. The company had initially designed one intent as, "I need to reset my password," but customers meant the same intent when they said, "I need to reset my web account." When the company noticed this linguistic difference, it quickly adjusted the algorithm for grammar and language modeling to accurately reflect the multiple ways customers state their intent to reset a password, thereby enabling the virtual assistant to respond appropriately.
- **Onboard the AIDI as a digital employee.** To ensure their AIDIs act in a manner consistent with their brand, companies can treat virtual assistants or chatbots like new hires and create a hybrid workforce comprised of human agents and AIDIs. Companies should train these AIDIs in the same way they train new hires, giving them human supervision and mentors who are responsible for guiding them and making sure they provide the appropriate level of service. The AIDI can either provide input to an agent interacting with a customer or it can serve customers directly. Edwardian Hotels trained its digital concierge, "Edward," as a hospitality employee, and he demonstrates a "Yes I can" attitude, the same as a human employee. When Edward is unable to answer a customer's question, he sends the query to guest relations, they reply, and he adds the answer to his learning. In this way he continually updates his knowledge base, much like a human concierge would, but with the added benefit of machine learning.[15]
- **Test and iterate the user experience.** Companies rarely design the perfect interface for their AIDI on the first try. That's why organizations need to plan for multiple user experience design iterations. For 1-800-Flowers digital concierge Gwyn, it took several betas to nail the experience. During its first beta, the chatbot only showed one question at a time, which the customers found confusing as earlier questions and answers would disappear as the conversation progressed, leaving them unable to look back at something they had typed previously or change their preferences. Its second beta solved this issue by structuring the interaction like a text message conversation, with a back-and-forth style that allows customers to see the conversation in its entirety.[16]
- **Identify and measure desired outcomes.** To get the most out of their AIDI, companies must clearly identify what outcomes they expect from it. While cost-savings is an obvious one, expected outcomes also can include increasing self-service

[15] Weston, Sam. (2017, June). Happy Birthday, Edward! Edwardian Hotels' Virtual Host Turns One. Hotel Speak.

[16] Caffyn, Grace. (2017, February 20). What 1-800 Flowers has learned from its Watson-powered concierge. Digiday. Retrieved from: https://digiday.com/uk/1-800-flowers-learned-watson-powered-concierge/

usage, getting agents up to speed more quickly, and making measurable improvements to the customer experience. Some businesses may also identify desired outcomes like increasing call deflection or boosting the percentage of calls or chats answered directly through automation. When TXU Energy deployed Ivy, an automated customer care AI solution, the company wanted to improve contact center efficiency and deliver an easier customer experience. To ensure it met these goals, the company measured the AI's impact and found that CSAT had increased by 11% and call containment had improved by 18%, which allowed TXU to reach its business case run rate in 40 days.[17]

DETERMINE ORGANIZATIONAL AI READINESS

Building a successful AIDI is a significant undertaking. To prepare for deploying it, companies should (see Figure 10):

- **Tie AI to business strategy.** AI should not be a standalone "project" completely separate from the overall business strategy and goals. While companies may start with a smaller initiative to pilot an AIDI, they need to have a clear understanding of why they want to use Artificial Intelligence and how it will help their customers and the company. This means thinking through short- and long-term objectives for the technology and the role it plays in supporting customer-facing interactions. For example, if a bank sets a goal of improving its overall digital customer experience, it might include its plan for rolling out an AIDI alongside other planned digital enhancements. Companies need to clearly link the role of AI to their larger organizational strategy, or they will find it extremely challenging to successfully deploy the solution.
- **Audit data sources.** Artificial Intelligence is only as good as the data behind it. Companies need to review the data sources they currently have to determine if they are sufficient for powering machine learning. Without the appropriate data inputs, the AI engine will not be able to identify intents, deliver the right content for responses, or provide relevant context. Before taking on an AI initiative, an organization needs to fully evaluate what data it has, whether that data is readily accessible and in the right format, and if it's not, how best to capture the necessary information.
- **Assess employee skills**. Building, deploying, and continuously managing AIDI requires significant resources that cut across various internal departments. Often companies initially will assign employees responsibilities that they know will change over time, but it allows the organization to at least get started with the new technology (see Figure 11). Other companies find that they are better off working with an AI vendor who has the appropriate human and technical resources on staff. For either approach, companies need to determine if they have the people, knowledge, and skills in-house to support an ongoing AI initiative.
- **Plan for agent/AIDI interactions.** Agents are particularly affected by the deployment of AIDIs as they often work directly with them or hand off work to them. Thus, a company needs to think carefully about the role of the agent in relation to the

[17] Interactions. (No date listed). TXU Energy improves call containment by 18% sees 11% lift in CSAT. Retrieved from: https://www.interactions.com/library/customer-case-study-txu/

AIDI to determine how involved they want the agent to be in the development and support of the technology. While some organizations have agents tagging and labeling data to drive the AI engine, others wants to focus on moving agents into roles where they provide support for more complex customer interactions.

Artificial Intelligence Terminology

Terminology	What is it?	Benefits/Examples
Artificial Intelligence (AI)	A collection of technologies to make machines think and act more like a human. It is comprised of neural networks, machine learning, natural language processing, and other technologies.	• Spell check programs • Search engines • Self-driving cars
Neural Networks	A computer system based on a set of algorithms that recognizes patterns and classifies information in a similar way to how the human brain accomplishes these tasks.	• Recognize and classify images according to certain elements that appear in images (e.g. faces, street signs)
Machine Learning	A method computers use to learn on their own based on data they are given. It incorporates a feedback loop that helps the computer learn when it's been right or wrong, allowing it to make necessary modifications for the future.	• Identify patterns in user's browsing and purchasing history to suggest next best offer • Read unstructured text and determine customer sentiment
Natural Language Processing	A computer program that understands natural human communication (written or spoken) and responds using similar language.	• Route calls to the right agent based on the tone or vocabulary of the customer
Chatbot or Intelligent Virtual Assistant (IVA)	Software that runs automated tasks based on machine learning and, in some cases, natural language processing.	• Respond to human requests or queries via chat • Assist call center agents by serving up appropriate content for customers

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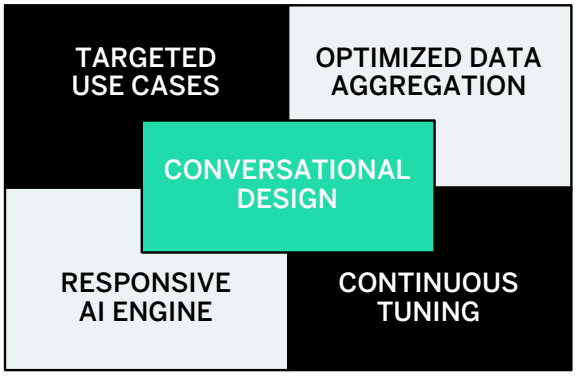
Figure 1

Five Ingredients For Customer-Centric AI



Ingredients	Best Practices
CONVERSATIONAL DESIGN This is at the center of a customer-centric AI model, and it allows companies to deliver an engaging and emotionally gratifying experience for customers.	• Cooperative Interface • Background Mindfulness
TARGETED USE CASES Companies must avoid taking a scattershot approach to AI and instead select the appropriate situations for deploying it.	• Focus on high-volume interactions • Support contact center agents • Dampen surging call volumes • Handle uncomfortable conversations • Respond more quickly and accurately
OPTIMIZED DATA AGGREGATION Rather than kicking off a never-ending data project, companies need to identify and pull together the data that's relevant to AI.	• Structure content for machine learning • Include contextual data • Start with smaller datasets
RESPONSIVE AI ENGINE AI requires a machine-learning platform to interpret, anticipate, and respond to customer needs.	• Connect intent to content • Ask questions to clarify intent • Integrate across channels • Script AIDI conversations
CONTINUOUS TUNING AIDI implementations are not meant to be perfect out of the box, which means companies need to commit the resources necessary for it to learn and evolve over time.	• Monitor performance • Onboard the AIDI as a digital employee • Test and iterate user experience • Identify and measure desired outcomes

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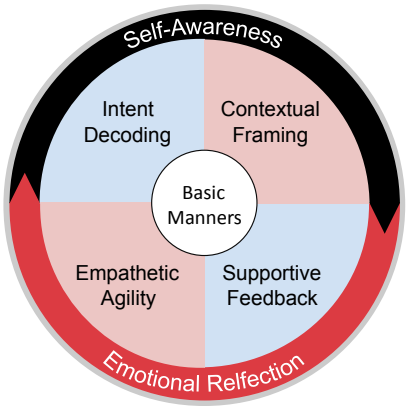
Figure 2

The Human Conversational Model



	Human Interactions	AI Interactions
COOPERATIVE INTERFACE		
Intent Decoding	Detect what partner hopes to achieve from the conversation (e.g. small talk, knowledge, bonding, etc.) based on context, content, and shared history.	Identify customer intent through natural language processing of customer's question or comment (speech or text).
Contextual Framing	Tailor conversations according to partners' traits (e.g. appearance, age, comportment, interaction history, etc.).	Include current and historical customer data when responding to customer queries.
Empathetic Agility	Interpret verbal and non-verbal clues to deduce emotional state of partner and then alter behavior to keep conversation positive.	Escalate requests to a human agent when the customer expresses frustration or a similar emotion during the interaction.
Supportive Feedback	Give partner feedback that they are being heard and understood through both verbal and non-verbal cues (e.g, head nodding, asking questions, etc.)	Ask relevant follow-up questions, and let customer know when there is insufficient information to complete the request.
Basic Manners	Cooperate with partner by demonstrating good manners and adhering to social norms.	Design interactions to feel like customers are interacting with a polite, knowledgeable, friendly agent.
BACKGROUND MINDFULNESS		
Self-Awareness	Arrive at conversation with clear understanding of own personality, feelings, motivations, needs, desires, beliefs, strengths, and weaknesses.	Tell customers upfront that they are interacting with a chatbot or virtual assistant, and make it easy for them to reach a human when needed.
Emotional Reflection	As you learn more about partner during the conversation, apply learnings to that partner and future partners in general.	Use agent feedback and continuous machine learning to train AI for ongoing improvements.

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Figure 11

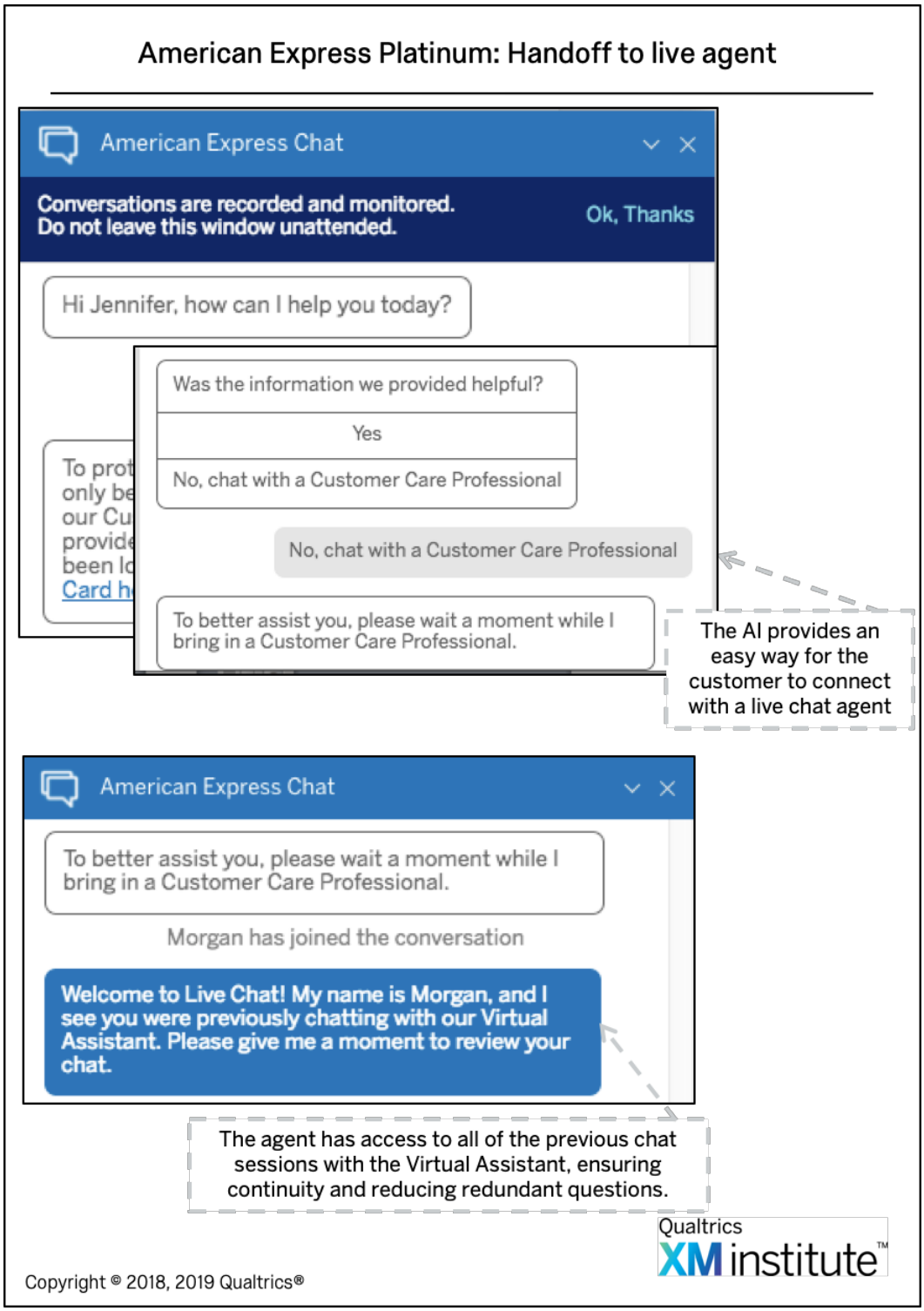

Figure 4

Organizational Personality

Attribute	Description	Examples
Appearance	How company's products, environments, advertisements, website, etc. look.	• Colors • Logos • Fonts • Shape of products • Brand characters/mascots
Behavior	How a company behaves towards customers.	• Response time • Ease of communicating with company • Living up to promises
Tone	The tone of voice in which a company communicates with customers	• Attitudes • Writing style • Taglines • Call center agent scripts (or lack thereof) • Greetings (both in person and digital)
Beliefs	A company's guiding philosophy and principles that inform its decisions	• Brand values • Mission statement • Corporate social responsibility

To be successful, an organizational personality must be:

- **Compatible** *(congruent with target customer's personality)*
- **Distinctive** *(easily recognizable and distinguishable from competitors)*
- **Authentic** *(used to inform all company decisions and responses)*
- **Consistent** *(infused throughout the entire organization)*

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Figure 5

Organizational Personality: U.S Army's SGT STAR

The face of U.S. Army recruiting is SGT STAR. His appearance, behavior, tone, and beliefs align with the military institution.

Understanding its target customer, the U.S. Army made SGT STAR available via Web, mobile, and Facebook,

SGT STAR is described as "non-nonsense, straight-talking" and is designed to provide personal and accurate responses, even to awkward personal questions.

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Figure 6

Attributes Of Good Initial AI Use Cases

Attribute	What it is	Examples	
		Good	Bad
Low to moderate complexity	Typical or frequent requests from customers that can be easily answered, and can be learned quickly.	• Finding a store location near your home	• Seeking advice on diversifying a stock portfolio
High volume	Large quantities of transactions that provide data to drive machine learning to ensure the AI learns over time	• Changing the password for an online account	• Resolving an uncommon billing error
Strong knowledgebase	Sufficient content to provide the appropriate responses and solutions to customer questions	• Looking for attractions near a hotel	• Requesting information about a rarely used product feature
Singular user intent	A single, straightforward question that can be easily understood	• Checking a credit card balance	• Comparing auto insurance prices and submitting an application for approval
Low risk	Interactions that do not have a significant positive or negative impact on the company or the customer	• Changing billing address on an account	• Disputing a health care denial of service

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Figure 7

How AI Supports Contact Center Agents

Type of Support	Description	Examples	Benefits
Contact Center Routing	Determine the best agent for a customer.	Connect customer to an agent with a similar personality or other behavioral traits.	• Improves customer satisfaction • Decreases talk time • Increases first call resolution
Real-time feedback	Monitor real-time customer/agent conversations and advise agents on more effective ways to interact with the customer.	Analyze agent voice – speaking too quickly, interrupting, pitch, tone – and then suggest improvements.	• Live measure of customer experience based on perception of call • Identify patterns in calls • Share conversation analysis with agents • Monitor proposed improvements in real time
Assign a virtual assistant	AIDI assists agents by surfacing relevant information to respond to a customer's query.	While answering the initial question, the agent can look further into understanding root cause.	• Improved resolution rate • Improved handle times • Onboard new agents more quickly • Lower agent attrition
Eliminate mundane tasks	Have AI respond to easy, high volume questions.	Respond to requests for store hours, locations, account balances.	• Move agent into more of an advisory role • Agents handle more complex tasks • Agents focus on emotionally-charged interactions • Increase agent job satisfaction

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Figure 8

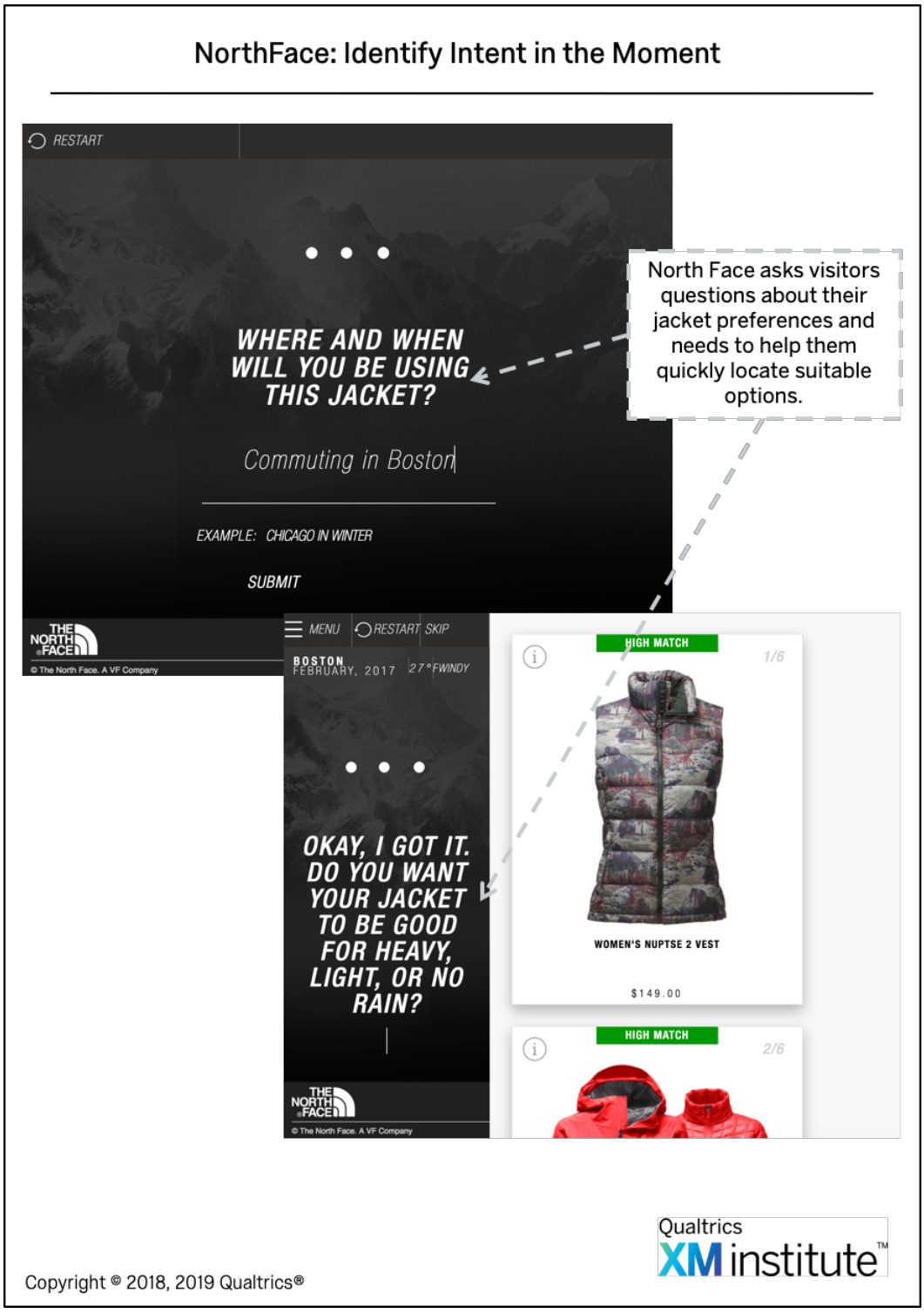

Figure 9

Questions For Determining Organizational AI Readiness

How does AI fit in with our overall business strategy? Have we identified:

- ❑ Business challenge(s) we need to solve?
- ❑ Specific use cases?
- ❑ If our customers would be open to using an AIDI?
- ❑ How AIDI fits into our customer care objectives?
- ❑ What channels we want to use? (e.g. Voice, SMS, online chat)

What data do we have available to support an AI deployment? Do we have:

- ❑ Chat or phone transcripts to identify intents?
- ❑ Sufficient knowledgebase resources to respond to customer queries?
- ❑ CRM and other customer/transactional data to provide context?
- ❑ Other data sources that we need to consider?

What roles/skills do we have on staff to build, manage, and support AIDI? Do we have:

- ❑ Business Analysts to develop use cases?
- ❑ Information Architects to set up a data structure and tag the data?
- ❑ Data Scientists for developing algorithms?
- ❑ UX Designers to create interfaces?
- ❑ Developers to code scripts?
- ❑ Engineers to test and monitor the tool's performance?

How do we envision the AIDI and human agents interacting? Do we want agents to:

- ❑ Assume a key role in tagging and labeling data for the AI engine?
- ❑ Have an AIDI that assists with surfacing responses to customer queries?
- ❑ Update the AI in real-time when the AIDI makes an error in intent or response?
- ❑ Only get involved when the AIDI makes a handoff to a human?

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Figure 10

Changing Responsibilities for AI Development

Role	Current AI responsibilities	Future AI Responsibilities
Front-line Agent	Use answers surfaced by AIDIs to respond to customers.	Assist with training and maintaining machine learning by flagging incorrect responses and updating the AI in real-time.
Business Analyst	Make changes to AIDI based on front-line agent input.	Identify and build business cases for potential AI deployments.
Data Scientist	Data cleaning to eliminate bad or incomplete data, and data preparation to tag, link, and categorize data.	Building algorithms that drive machine learning.
Information Architect	Create the structure for the AI engine to capture, relate, and retrieve information.	Data cleaning to eliminate bad or incomplete data, and data preparation to tag, link, and categorize data.
User Experience Designer	Script chatbot or virtual assistant responses for specific intents.	Design paths and responses that support natural language processing and understanding, including probing for more information.
Software Engineer	Design initial interfaces from a software perspective.	Work closely with User Experience to create customer-centric interfaces.

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Figure 11