

Conversational Agents

A Whitepaper on CX Opportunities in Customer Engagement

Brian Ritchie, CEO - kama.ai

There is little doubt on the question of whether to “AI” or not to “AI”; it is clear that organizations must be looking now at how to automate functions to remain competitive. However, there are many considerations regarding exactly what a larger enterprise, or a small or medium-sized enterprise (SME), should be considering. As an indicator of where the value may lie, consumers have become accustomed to a 24/7 service experience; staffing for this may be cost-effective for large enterprises, but it may not be economical for SMEs. However, many other factors may dictate where the best opportunities lie.

Artificial Intelligence means different things to different enterprises and SMEs. This paper is specifically addressing AI opportunities around the automation of customer engagement or what can be typically called “conversational intelligence” or “conversational agents.” Automating customer interaction within consumer-focused enterprises and SMEs, when done correctly, can create positive impacts on the overall customer experience or CX for the business. Furthermore, these new processes can generate cost savings, increased revenue, or both.

Forrester conducted a survey of 100 customer service decision-makers in April 2019. One of the conclusions from this report was that personalized automated conversations were a core strategy. However, only 21% reported that they were ‘highly personalized’ today, while 64% said they wished to be highly personalized within 2 years.

But which technologies are poised to provide the greatest return on investment, and what aspects of customer relationship management (CRM) should be dealt with first?

This paper identifies the opportunities and challenges in automating the customer experience, specifically in the area of digital engagement with customers using conversational agent AI platforms.



Return on Investment

Can investing in an enhanced digital customer experience really pay off? Logic would say it will, but is there tangible proof of this ROI?

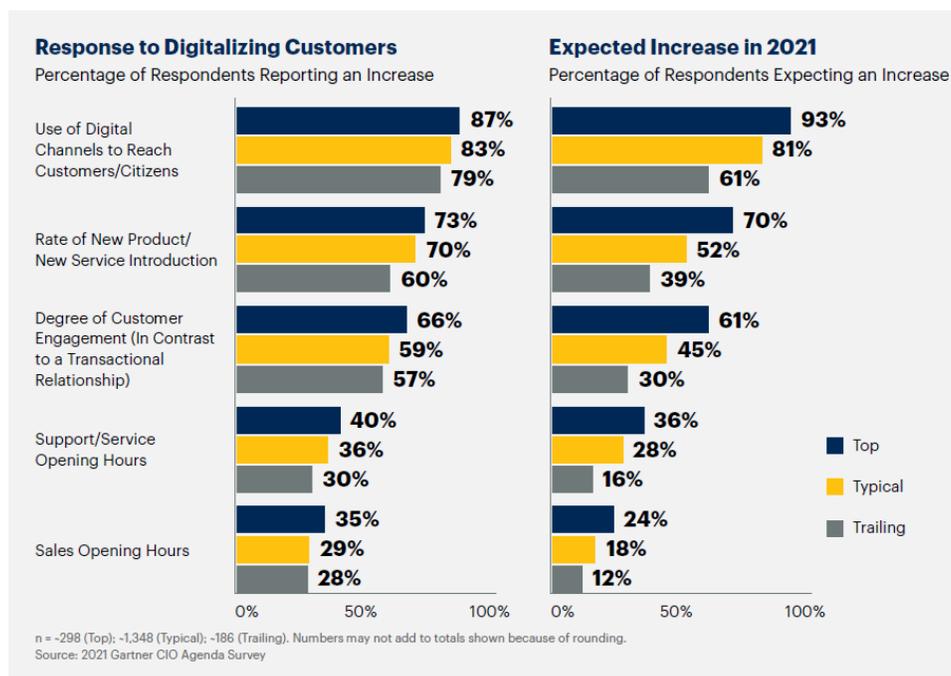
Another Forrester study, [“Customer Experience Drives Revenue Growth,”](#) found that the revenue of leaders in customer experience (CX) outgrew the revenue of their CX laggard competitors by 5 to 1. That sounds pretty promising, but where does one start in trying to digitize the customer experience?

As business and technology leaders begin to consider which areas to automate first, two different approaches might be considered:

1. investigate the highest-cost processes that hold opportunities for automation and
2. investigate items that can have the greatest effect in expanding your business.

General business wisdom states that top-line growth is more beneficial than bottom-line savings. At least with respect to corporate valuations, growing sales to develop a profit increase is often more valuable than increasing profit by the same amount through cost reductions. Cost savings towards a specific profit metric is a valid endeavour but achieving sales growth to get to the same profit increase is more indicative of a healthy and vibrant company.

In [Gartner’s 2021 CIO Agenda](#), they found that of the ‘leading’ or ‘typical’ IT maturity organizations surveyed there was a reported increase in the use of digital channels to engage customers. Both the leading and typical organizations reported that there would be an increase in digital CX engagement in 2021 due to the global pandemic.



Our recommendation on ROI for consumer or client-based organizations is to choose opportunities that can automate and enhance customer acquisition and marketing engagement as a priority to customer support functions. While savings on support is valuable, providing accurate automated dissemination of consumer or client-focused product and service information in a natural and engaging way is an extremely valuable area for enterprises and SMEs to grow their business, especially since the shift to online business created by the pandemic.

Customer support automation may very well be advantageous, but the variability of customer support issues and the risk of creating negative customer experiences with your product or service may create larger challenges for automating customer service integration, meaning that these areas may not be the 'low hanging fruit' that bears the best initial ROI opportunities.

The next question that may come to mind *after* where to look for conversational automation opportunities is, "Are the solutions in the market adequate for automating consumer engagement?"

Seek First to Understand...

If the task at hand is automating customer engagement in natural language, regardless of the medium or the industry, Natural Language Understanding or NLU must be a cornerstone of any vendor's conversational intelligence solution. There are so many ways that an inquiry can be made or that an issue can be raised; a best-in-class NLU processor is a must for any automated customer engagement solution. This, on its own, is a high bar to set, and it will weed out the 'ready for prime-time' offerings versus the not-so-ready.

As an example, consider a statement like *"My rugs are still dirty"* captured by a home services company chatbot. This statement looks much like *"My rugs are dirty,"* and a Boolean search might determine that this inquiry should be offered a response like *"Sure, we can help with that! Would you like us to quote you for a rug cleaning service?"*. However, as you may guess, this would be a gross error in customer experience management.

Any human could likely detect from a statement like *"My rugs are still dirty"* that there is an inference of a quality issue of some sort. But for a machine, this requires the detailed NLU of this sentence as well as some analysis of a larger context to create the proper quality inference.

Leading NLU solutions can break this utterance down to particular factoids or session facts to understand the true context of the situation. Only with advanced NLU to determine context will the automated system be able to comment on the key issues inferred by particular input statements.

The point being, language is tricky; making a wrong inference can be very frustrating to consumers. If a customer of the home services company had paid for a rug cleaning service, and such a service was delivered, but their rugs were *"still dirty,"* AND we passed them our sales pitch or quote for rug cleaning, that would be the absolute wrong thing to do.

The issue of “Subjectivity”

Beyond just natural language understanding and the inference detection of finding the needle in the haystack as it were, there is the issue of subjectivity and personal preference. If a consumer was looking to do more than clean their rugs, like buying a new SUV, the problem gains many more dimensions. What does the consumer want to do with their SUV; feel safe on winter city streets or carry a canoe and camping gear into the outback? Is it an SUV for a retired empty-nester couple or a young family of 4 or 5 people? Is the primary driver more concerned with fuel economy, performance, luxury or safety, or worse yet, all of the above to varying degrees?

A seasoned salesperson can navigate this subjectivity quite effectively but give this problem to an automated agent and let's see how it performs. Of course, no automated agent or seasoned sales professional, for that matter, can navigate the issue of subjective consumers without proper training and 'knowledge' of the enterprise's products or services.

Regarding conversational agents, this issue of subjectivity puts significant requirements on the overall intelligence platform. Some questions for savvy buyers to consider are:

- Does the platform allow for various dimensions of selection or evaluation criteria for the enterprise products and services?
- Does the platform allow for the subjectivity of these dimensions across the targeted demographic profiles, or ideally down to the individual consumer level?
- Is the 'AI' itself able to use the above two capabilities to provide the right information to the right person for the right reasons?

Only with these capabilities as foundations within a platform can the issue of subjectivity be properly dealt with by an automated agent.

Depending on the particular customer engagement project you are considering, our recommendation is that you look for capabilities in your conversational AI platform to achieve rich levels of personalization. Customer experience is not a one-size-fits-all issue; different customers, or potential customers, value different things differently. That's a significant amount of 'difference' to manage, but there are solutions on the market that can achieve this.

The Data Dilemma

Some conversational AI solutions require extensive data acquisition, research, and conditioning to support the platform. Sourcing and conditioning data brings with it 3 key challenges:

1. Where is the data? Do we have it? Can we get it?
2. How much effort is there in conditioning data and building models?

3. Do we have the resources to condition the data and build the training models to align it to support our customer engagement goals?

Some conversational intelligence solutions have tools that allow you to acquire and configure data for the data models and allow the tuning of data models or the AI technology platform itself. These tools can require data scientists or engineers to operate; be aware of who in your organization will use these tools. AI talents are a very sought-after community and can command large salaries, so budget considerations are also part of the puzzle.

Another class of solutions comes with their own curated data and/or their own Machine Learning (ML) tools that can learn from activity occurring on the platform to train the various natural language and problem-solving functions of the solution. These types of solutions can reduce the overall data science, data sourcing, and data management effort required to implement a given solution.

Lastly, there is yet another class of solutions that operate on more of a knowledge-based concept. These solutions too may come with valuable data already populated in the enabling technology to produce some functions or support some conversations. More importantly, these types of solutions also allow for the rapid build-out or curation of the knowledge base (KB) to solve particular conversations or FAQs for the enterprise. Knowledge-based systems can also incorporate their own class of Natural Language Understanding (NLU) techniques, such as synonym setting, categorization of topics, and others to form a hybrid knowledge-base and NLU (KB-NLU) solution that can be very effective in handling consumer inquiries, or utterances, as they are referred to in the conversational AI industry.

The advantage of the knowledge-based approach is that it does not require vast training data repositories to implement a project. The KB or hybrid KB-NLU solutions can be populated with specific industry or enterprise knowledge that can facilitate a more rapid deployment of a conversational intelligence project. The added benefit of some KB-based systems is that they can require a lower level of data science experience, thereby reducing the talent and budget requirements in many cases.

Our recommendation is that you research the 'Data Dilemma' closely before undertaking a conversational intelligence project since this problem also largely dictates the resources and timeline dimensions of the project. Try to capitalize on existing data that may come with the solution or otherwise be available in sources either in-house or accessible online from an open-source or commercial service provider. Also, look for capabilities within the solutions you are considering to onboard or curate with your own enterprise data or knowledge because your staff knows your products and services best, especially if your products or services are new to the market. Having said that, the platform should benefit from user activity on the platform regarding how the market is using, or even inquiring about, your products or services.

From Design to Implementation

Not unlike the Data Dilemma, business leaders looking at CRM automation must closely consider the project effort and implementation timeline. In conversational intelligence and technology development in general, the concept of rapid deployment and gaining experience with a goal, succeeding, pivoting or failing *quickly* is becoming a way of doing business. Many enterprises are no longer pursuing 6 to 18-month technology projects; the pace of business evolution and competition is just too fast for this outdated approach.

Cloud-Based SaaS Service Model:

Fortunately, the industry's move towards cloud-based solutions can allow for rapid deployment and hedging an investment into conversational intelligence. Depending on the set-up effort, SaaS solutions can allow enterprises or SMEs to test a technology to automate a CX function with limited investment. If it works, great; leave it running and enhance it over time. If it does not work, learn from the experience, and use that experience to move on to the next opportunity.

Integration – Consider a Phased Approach:

Often, integration to legacy systems or other vendor solutions can be a significant investment. Business and technology leaders are encouraged to consider a phased approach to launching particular CX automation that can provide timely ROI on its own versus an attempted large integrated solution that can increase the investment and timeline significantly. Consider a smaller project scope that can potentially operate in a stand-alone capacity initially, thereby providing early benefits to the customer experience and the business overall.

To identify a smaller scope project, consider a solution that has adequate stand-alone capabilities allowing you to minimize initial deployment time and budget. However, the solution must also have APIs or other tools that can allow integration to a larger architecture as success is realized and further automation or integration benefits are justified. For example, an enterprise may wish to implement conversational intelligence for 24/7 customer interaction on its website, but also want to automate some functions such as quotation processing or appointment booking using Robotic Process Automation (RPA). A phased approach could mean addressing the 24/7 customer interaction opportunity first to generate more leads and digital customer engagement around its products and services. However, the same enterprise should ensure that the chosen solution has the capability of providing RPA integration to achieve its future objectives in this area.

Build-in Feedback Loops:

Any conversational intelligence project, or solution for that matter, should incorporate measurement and improvement processes so that the customer service experience can be examined, almost in real-time, and the service can be enhanced based on early feedback to evolve into increasingly better customer experiences. In the case of conversational agents, early and consistent logging and monitoring of online chat experiences need to be performed so that the service can rapidly be expanded or evolved to cover gaps that disappoint users.

We recommend that your project incorporates feedback and improvement loops at the onset. Ensure that there are ample logging and customer survey tools. Also, prepare resources to analyze gaps early and fill them quickly to avoid repeating negative experiences with your conversational agent. Social media feedback on poor quality or poorly executed customer engagement projects can damage your reputation before it has a chance to wring the bugs out of your solution.

In Summary:

When your enterprise is ready to tackle a conversational agent project, consider the following:

- Look for opportunities with the largest return and manageable risk;
- Ensure that the Natural Language Understanding capability of your solution is best-in-class
- Seize the opportunity to personalize your conversational agent service to build better automated engagement with prospective or repeat customers
- Consider the issues of training data or expert knowledge early as it will have a high correlation to the timeline, cost and resource requirements for your project
- Begin by picking a manageable area of customer engagement to automate and avoid a big-bang approach;
- Develop a strategy and architecture that allows you to grow a stepwise approach
- Ensure that the project incorporates monitoring, customer feedback and continuous service improvement functions from minute (not day) one; consider internal trials or a soft launch to reduce exposure to negative social media impact with a poorly performing solution.

About [kama.ai](#) and the [kama DEI Solution](#)

[kama.ai](#) is the creator of the Designed Emotional Intelligence® platform kama DEI that allows curated information to be rated and distributed through a conversational agent based on personality value profiles. This allows a level of personalization between the consumer and an enterprise's product and service information that has not been achieved previously. The result is an automated consumer engagement service that works around the clock to address consumer inquiries with the right information, for the right reasons, for each customer.

kama DEI has an underlying knowledge base that unifies common information and a 'zero code' Enterprise Portal that allows non-technical users to curate and rate product and service information in simple natural language methods. The platform also allows for the setup of various target market demographic profiles (kama DEI 'Personas') to form the basis for various consumer/customer personality types.

kama.ai also offers a rapid launch front-end chatbot that can be configured and integrated within hours to your enterprise's web and mobile web pages. As an alternative, the kama DEI omni-channel chat API allows for integration to a current chat facility that you already have, integration to live-chat, and it can also power other channels such as FB Messenger, smart-speakers, or mobile phone applications.

For more information on kama DEI, please chat with "Kady" or fill out an inquiry form on our [website](#).