Conversational Agents

A Whitepaper on CX RPA 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 7x24 service experience; staffing for this may be cost-effective for enterprises but it is not necessarily economical for SMEs. However, many other factors may dictate where the best opportunities lie.

Artificial Intelligence or Robotic Process Automation (RPA) 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 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 April 2019. One of the conclusions from this report was that personalized automated conversations was a core strategy. However, only 21% reported that they are 'highly personalized' today while 64% said that said they wish 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?

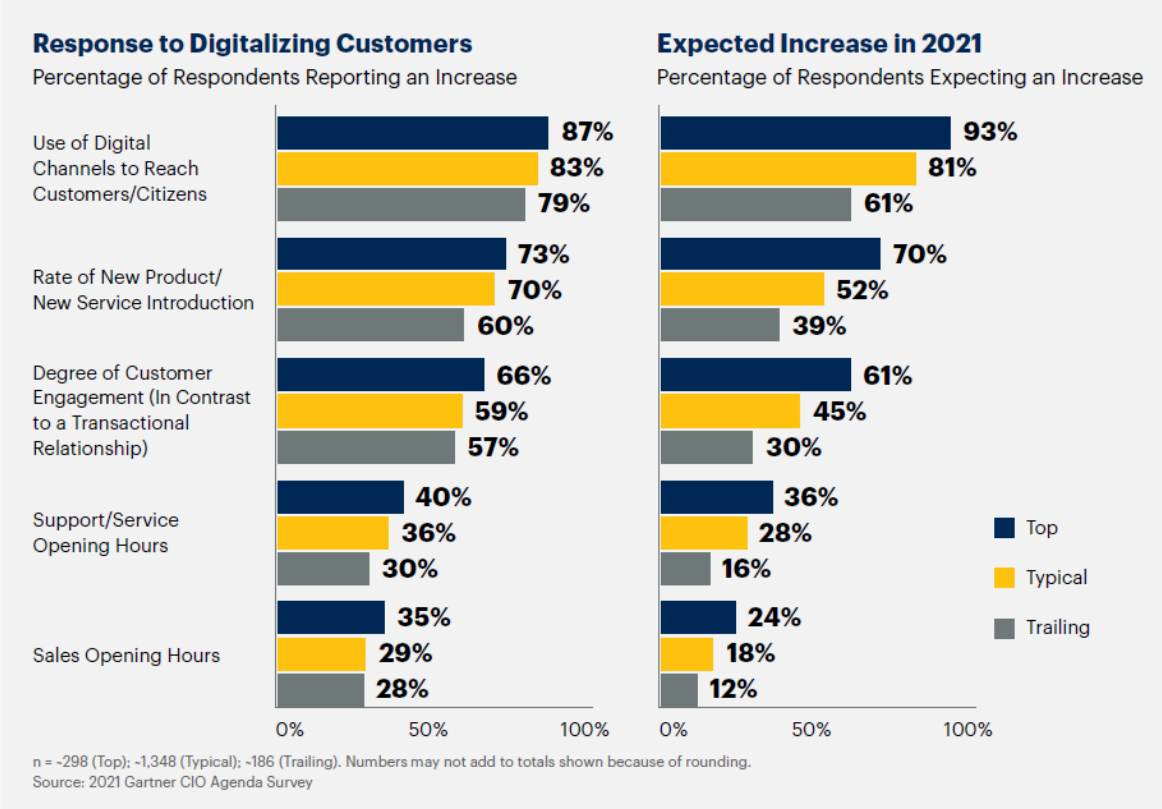
Another Forrester study *"Customer Experience Drives Revenue Growth"* found that the revenue of leaders in customer experience (CX) outgrew the revenue of their CX laggard competitors by 5 to 1. That sounds pretty promising, but where does one start in trying to digitize the customer experience?

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 will be in increase in digital CX engagement in 2021 due to the global pandemic.



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

The next question that may come to mind *after* where to look for RPA 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 the statement 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 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 to 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.

Our recommendation, depending on the particular RPA project you are considering, is that you look for capabilities in your RPA enablement platform to achieve rich levels 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 RPA solutions require extensive data acquisition, research and conditioning to support the RPA 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 RPA goals?

Some RPA 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 talent are a sought-after community and can command large salaries so budget considerations are also part of the puzzle.

Another class of solutions come 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 RPA 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 RPA objective or solution.

Lastly, there is yet another class of solutions that operate on more of a knowledge-base concept. These solutions too may come with valuable data already populated in the enabling technology to produce some functions or support some conversations. These types of solutions also allow for the build-out of the knowledge base (KB) to solve particular RPA objectives specific to the enterprise or industry. Knowledge-based systems can also incorporate their own class of ML techniques to form a hybrid knowledge-base-ML solution which can be very effective in RPA projects.

The advantage of the knowledge-based approach is that they do not require vast repositories of training data to initiate a solution. The KB or hybrid KB-ML solutions can be populated with specific industry or enterprise knowledge that can facilitate a more rapid deployment of an RPA 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 for some RPA cases.

Our recommendation is that you research the data dilemma closely before undertaking an RPA 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 capability within the solutions you are considering to onboard or curate 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 time-line. In business RPA, and in technology development, the concept of rapid deployment and gaining experience with a goal, succeeding, pivoting or failing *quickly* is becoming a way of doing business. We can no longer afford multi-year technology projects; the pace of business evolution and competition is just too fast for this out-dated 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 RPA. 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; if not, learn from the experience and use that experience to move on 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 a attempting large integrated solution that can increase investment and time-line 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 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.

Build-in Feedback Loops:

Any RPA should be designed to 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 a better and better customer experiences. In the case of conversational agents, early and consistent logging and monitoring of online chat experience needs to be performed so that the service can rapidly be expanded or evolved to cover gaps that disappoint users.

We recommend that your project incorporate feedback and improvement loops at the onset. Ensure that there is ample logging and customer survey tools. Also, prepare resources to analyze gaps early and fill them in to avoid repeating negative experiences. Social media feedback on a poor quality or poorly executed RPA initiative can damage your reputation before it has a chance to wring the bugs out.

In Summary:

When your enterprise is ready to tackle an RPA project, consider the following:

- Look for opportunities with the larger return and manageable risk;
- If your project involves conversational agents, ensure that the Natural Language Understanding module you choose 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 project timeline, cost and resourcing requirements
- Begin by picking a manageable process to automate and avoid a big-bang approach. Set your strategy and architecture so that in can grow efficiently in a building-block 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 be 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 an 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 'Persona's') 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 Chatbot API allows integration to a current chat facility that you may already be using for live chat and it can also power other channels such as Messenger, SMS text or WhatsApp.

For more information on kama DEI, please chat with "Kady" on our website at kama.ai or fill out an inquiry form on our site.