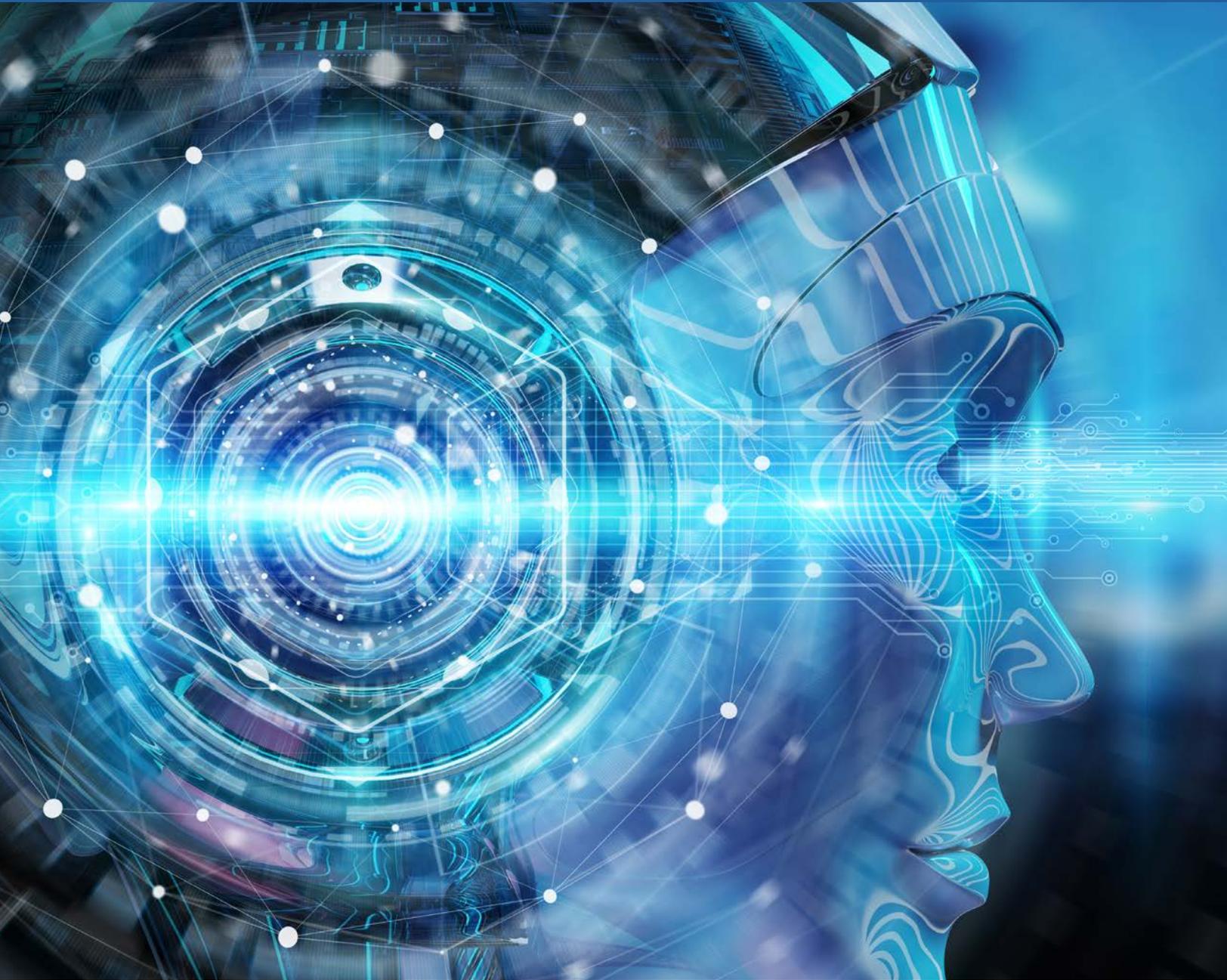


The Role of Artificial Intelligence IN CUSTOMER SERVICE



February 2019

Contents

FOREWORD	2
BACKGROUND: AI AND OUR COMMITTEE	4
EARLY FINDINGS AND OBJECTIVES	5
A DEFINITION OF CUSTOMER SERVICE	6
TRENDS AND TRAJECTORIES	7
AI BENEFITS FOR CUSTOMER SERVICE ORGANIZATIONS	8
AI BENEFITS FOR YOUR CUSTOMER	10
SPEED AND SERVICE	10
PERSONALIZATIONS / PREDICTIONS	12
AI BENEFITS FOR YOUR COMPANY	13
COST REDUCTION	13
CUSTOMER INSIGHTS	??
YOU BUSINESS' EVALUATION GUIDE	15
BUILDING YOUR AI STRATEGY	16
CONDUCTING DUE DILIGENCE	18
EVALUATING RISKS	19
LEVERAGING YOUR PEOPLE	22
CONCLUSION	23
MEET THE COMMITTEE	24
APPENDIX	25
A CONVERSATION WITH YI-MIN WANG, PH.D.	25

TRENDS AND TRAJECTORIES

Those of us who have been in Contact Center management for a while have seen many cycles of change that primarily revolved around human availability and efficiency for Contact Center delivery. In the 1990s, for instance, we saw a wave of massive growth in outsourcing (insert stat on the growth of outsourcing in call centers). In the early 2000s, we saw outsourcing lead to hiring offshore in order to further reduce labor costs. And within the most recent decade, we have been exploring how customers can connect with us via emerging - primarily digital - channels. We are moving into a new AI era of customer service, in which Smart machines can do human work, in some cases replacing humans altogether. Because we continue to value customer relationships, we now turn to find better, more automated, and less effortful ways to serve customer needs.



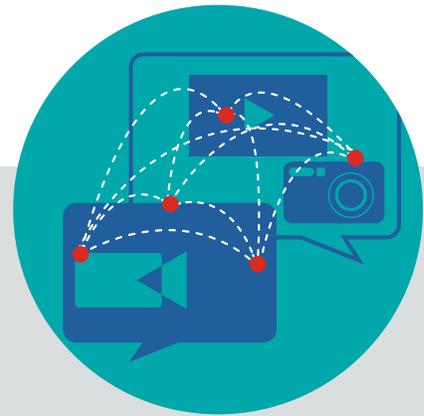
1990's

Massive growth in outsourcing



EARLY 2000's

Outsourcing leads to hiring offshore



2009-PRESENT

Customers are connecting via emerging channels

Perhaps the Gartner prediction we cited previously once seemed like stretch. But we can't deny that such predictions shape research, which in turn fuels innovation and moves organizations to prepare to stay ahead of the curve. *There is no doubt that AI will drive alter the way we work and live for years to come. As we enter this era of technology immersion, we remain focused on how to ensure operational efficiency and real improvements in customer service applications amid all this change.*



PERSONALIZATIONS / PREDICTIONS

Another way to drive customer loyalty is through personalization. The following case study illustrates how AI is using customer data to predict contact reasons, generate new customer and business insights, hyper-personalize service, and overall better serve customers.

CASE STUDY

INSTANT, PERSONALIZED ANSWERS



Since its inception, Square has understood the importance of tagging and quantifying their customers' reasons for initiating contact. However, even they couldn't have predicted that they were by chance creating an incredible, supervised, learning dataset which could open the possibility for creating an expert customer service system. Square ended up combining manually tagged case metadata, customer text about the case, account behavior patterns, and the heuristics (attributes) of an account at the time of contact. They would go on to create a predictive engine which could identify problems and even recommend solutions before the customer even realized they had an issue.

To begin, Square created an Instant Answers product within the contact flow, which examined and compared the visiting customer's account against the millions of records they had amassed over the past several years. By doing so, Instant Answers was able to make predictive, personalized recommendations without any customer effort or input. Instant Answers resulted in a 4% reduction in overall inquiries, and completely resolved some issues automatically.

Results: More Availability at Lower Costs

This approach has allowed Symantec to scale up support during peak periods and unpredictable marketplace events, without significantly impacting their labor force. It also has resulted in improved member NPS scores while achieving cost efficiencies, including a 20% decrease in agent calls.



Symantec can **SCALE UP SUPPORT** during peak periods



20%

DECREASE IN AGENT CALLS



Your Business' Evaluation Guide

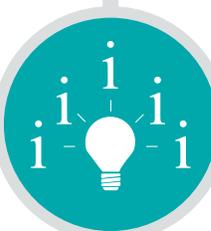
BUILDING YOUR AI STRATEGY

Our experience has found that the companies most successful at implementing an AI strategy get a solution off the ground quickly, start small, and take a focused approach. In this section, we offer expert guidance and recommendations for streamlining implementation and avoiding pitfalls as you plan and build your own strategy.



USE A THIRD PARTY

We recommend working with a third-party solution provider who can provide the technology and bring you expert and experienced best practices, rather than doing it all yourself. An outside expert will save you time, offer high quality options, and allow you to move through the process more quickly.



FIND A REACTIVE SOLUTION

Deeper integration requires longer implementation periods, so we recommend starting with a *reactive* solution to see quick results. A reactive solution is one that utilizes customer input to make decisions, as opposed to one that requires deep historical context and access to internal databases in order to personalize, predict, or move proactively.



ASSIST YOUR AGENTS

Agent assist technology solutions provide front line agents with superpowers, augmenting their abilities by providing insight, classification, and recommendations on resolutions, with much lower risk of impact to customers if the AI solution misses the mark.



KEEP HUMANS IN THE LOOP

Quick implementation with lower risks of unintended consequences can also be achieved with Augmented Intelligence - a solution that doesn't aim for 100% automation, but instead involves some sort of human-in-the-loop validation.



DATA HEALTH

If you plan to leverage collected data, ensure that you are logging and tracking the data you will need for the necessary amount of time. Work with your Data Analytics or Business Intelligence teams to ensure the data's integrity, internal and external access, and that data in disparate sources can be brought together in real time. If any of these areas are not yet in place, you'll likely need to do some work before implementing complex applications of artificial intelligence.

EVALUATING RISKS



DATA SECURITY

Ensuring secure data access can slow down executing AI solutions. You'll want to work closely with your Information Security team to understand which information your company is willing to share with third parties, evaluate third party security practices, and review the most recent penetration test report to ensure you are not at risk of compromising your customers' data.



DATA PRIVACY

If you are currently or planning to conduct business in Europe, it's critical that you take into account privacy regulations, including General Data Protection Regulation (GDPR) in particular when evaluating potential solutions. If your partner or solution will be processing or storing customer data in any way, you must ensure all activity is compliant with relevant data protection and privacy regulations.



PROGRAMMING BIAS

AI and machine learning systems are only as good as the people who design and train them, and will inherit any implicit human biases. For example, if everyone who trains the model are like-minded, or share the same background, culture, expectations, and assumptions, they may inadvertently impose biased results that adversely affects certain groups of people.



ETHICS

More broadly, you'll want to make sure that every automated decision-making system follows ethical principles and practices regarding design, training, and deployment--the key ones being fairness, accountability, and openness.

FAIRNESS refers to having taken the utmost care in reducing biases (e.g., not using protected classes as features in your model), ensuring that the model outcomes do not exhibit a so-called disparate impact on protected classes, and generally making sure that the model provides equal opportunity for the population it serves.

ACCOUNTABILITY refers to being able to interpret a model's decisioning path and provide a human-readable explanation for why a particular outcome was reached (e.g., "your loan application was denied because you have not been with us long enough"). This is easy to accomplish when the model is a simple decision tree, but there are techniques to provide explanations for any kind of model (essentially by determining which input feature would have to change the most to achieve a different outcome).

Finally, **OPENNESS** refers to the acknowledgment that, given how fast AI is evolving, we can't quite fully grasp all the potential social and legal implications of any particular model or application, and thus we must maintain an open dialog with its users--and society at large--to ensure we're building a future we'd all want to live in.