

AI Solutions for Customer Management

September 20, 2022

Presenter:

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AGENDA

The Challenge



Potential Solutions and Trends



Creating a Human Experience



Benefits and Ongoing Evolution



THE CHALLENGE

What We Heard

High Call Volume

Call centers experience a high call volume relative to the number of call center agents able to take the calls.

High Employee Turnover

Burn out and employee dissatisfaction leads to high employee turnover.

Continuous Need for Workforce Training

High employee turnover, coupled with frequent changes to employee protocols require frequent training.

Customers Have New Standards when Engaging Customer Service

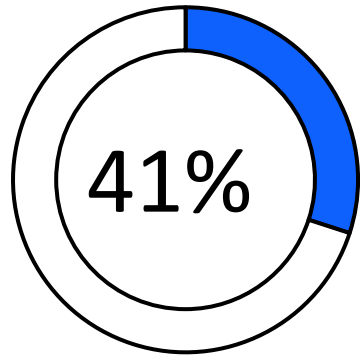
Customer's needs and expectations have changed over time as more and more services are built with the customer's needs in mind.



Increased Operating Costs

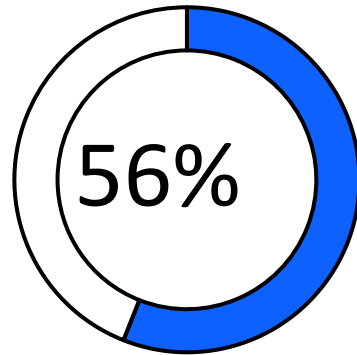
Customers Needs

Customers require more empathy and attention when reaching out for support



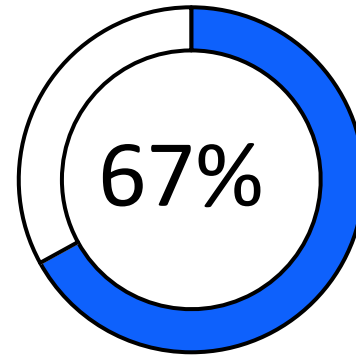
Shame & Anxiety

CGS Survey reports 41% of respondents find that account inquiries are one of the most stressful/anxiety inducing scenarios.



Increasing Preference

56% of customers prefer to message rather than call customer service, projected to further increase moving forward.



Human Factor

67% of respondents, if unable to reach a human agent, would be unlikely to use or would never use a brand.

Bringing it together

- Customers need to feel **seen, heard,** and to **have their concerns resolved immediately.**
- Chatbot platforms must listen, take in visual and verbal cues, and **empathetically respond to their needs in a judgement-neutral way.**

Potential Solutions and Trends

AI CHATBOT

AI-enabled chatbots have demonstrated the ability to **reduce call center operating costs by deflecting and avoiding calls.**

They can also **improve the experience for employees and customers by increasing self service and overall availability.**

This will empower users to solve for their own needs when they feel comfortable while also taking some of the workload off call center employees.

ADDITIONAL AI USES

In addition to chatbot capabilities, AI can help with:

- Predictive analysis to optimize call center employees' time, tasks, scheduling & training.
- Increased insights into personalization to understand customer behaviors and predict the Next Best Action (NBA) to help upsell & cross-sell products & services
- Developing a better understanding of customer's preferred interaction channels.
- Automatic call and email routing.

There are three primary types of bot technology on the market today

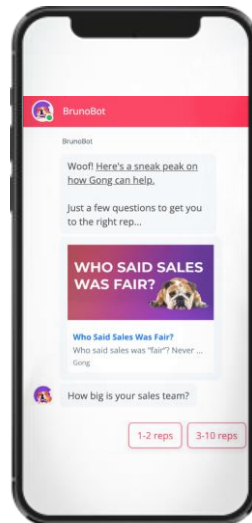
RULE-BASED CHATBOT



What is it?

Software that performs automated tasks, with the purpose of human conversation.

There are a limited number of actions and outcomes. Users are typically prompted with choices for next steps.



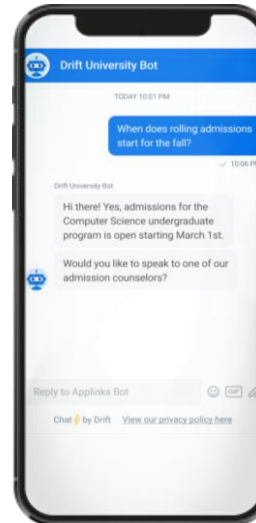
AI CHATBOT



What is it?

An augmented chatbot powering conversation through artificial intelligence and natural language processors.

Users have more freedom and can type in responses, There isn't a specific user flow they must follow



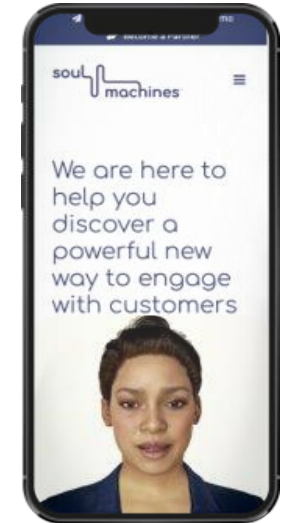
PERSONIFIED AI CHATBOT



What is it?

Realistic and expressive digital human facade overlayed onto an AI chatbot.

Users can converse with the chatbot like a normal person. The chatbot will have personality traits and expressions.



Chatbot Customer Trends

A majority of users want self service and prefer to use virtual assistants over calling customer service themselves. Many younger users expect companies to have virtual assistants for customer service experiences.

56% of users prefer to use chatbots than call customer service¹

81% of customers try to self-serve before reaching out to a live representative²

60% of millennials have used chatbots, **70%** of which report positive experiences³

75% of people under 39 (Millennials and Gen Z) expect a company to have a chatbot⁴

69% of users prefer chatbots because they provide quick answers to simple questions¹

90% of respondents indicated that customer service is important to their choice of and loyalty to a brand⁵

Sources: 1. [Outgrow](#) 2. [Harvard Business Review](#) 3. [Forbes](#) 4. [Customer Communications Review](#) 5. [Microsoft](#)

Chatbot Benefits and Savings

Virtual assistants have been shown to decrease a customer's need to contact a company via other means, therefore lowering operational costs.

38% average containment rate for calls⁴

38% more expensive per contact center call over the past 5 years to an average of \$10 per call²

30% savings on operational costs for companies¹

70% reduction in call, chat, and/or email inquiries after implementing a chatbot³

Sources: 1. [Outgrow](#) 2. [Harvard Business Review](#) 3. [Gartner](#) 4. [IBM](#)

Creating A “Human” Experience

SOUL MACHINES

Working overtop of a traditional AI chatbot, Soul Machines allows you to create a fully custom digital person to resound to call center needs.

EMPATHY DRIVEN

Build an empathetic and responsive digital person to ensure that your customers are getting the same level of care when they contact customer service as they would if they were speaking to a human.

Key Elements of Digital People

Digital people help to enhance the customer experience by focusing on empathy and human characteristics



Hyper Realistic

Digital People are realistic, creating a more human, relatable and engaging interface to connect with



Autonomously Animated

Digital People are based on a Human OS and have a Digital Brain to respond naturally, in real time



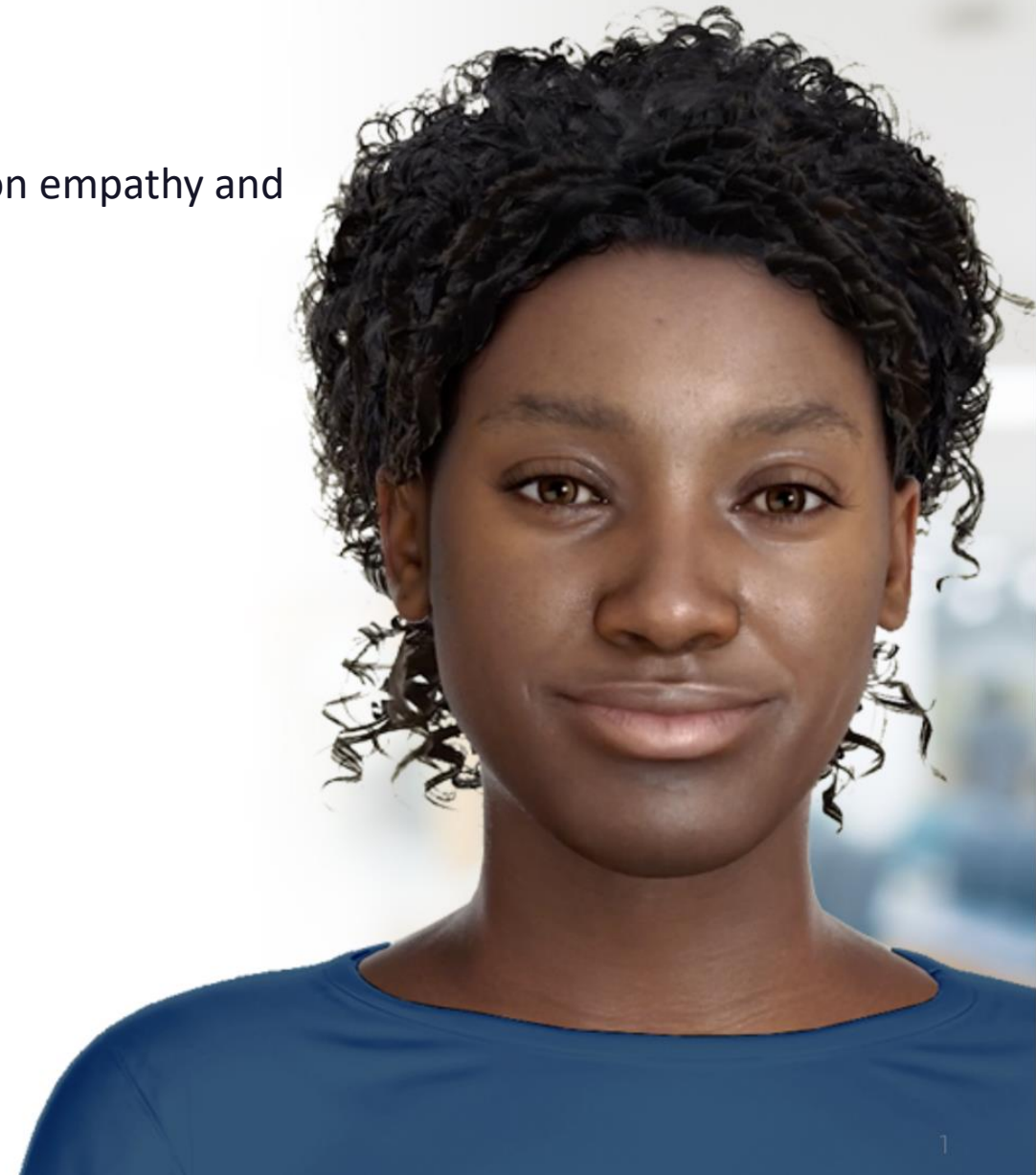
Emotionally Responsive

Digital People provide a personalized, empathetic and judgement free interactive experience



Customizable

Select a digital person and customize their features to fit your brand and use case



Enhanced Customer Experiences



Effective

Increase self-service engagement with access to relevant and trusted information and services.



Accessible

Available 24/7, in 12+ languages where the customer wants on any internet connected device.



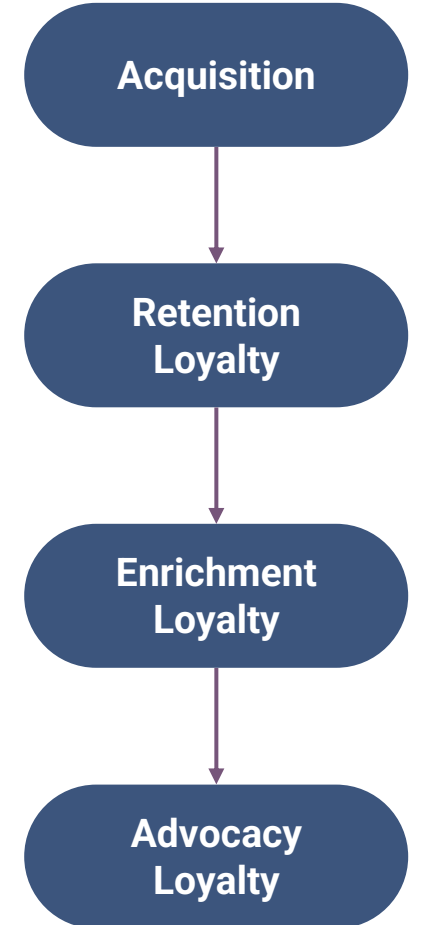
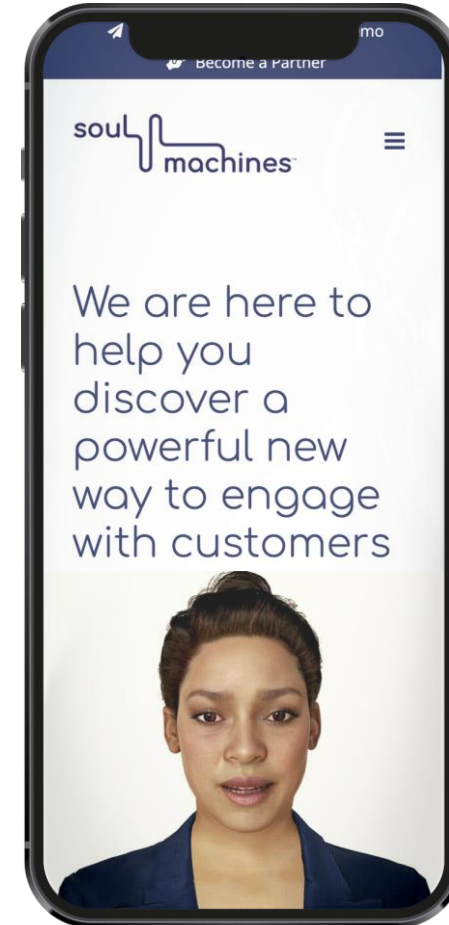
Personal

Understand customer's preferences, values, and history with the brand, suggest proactive actions.



Empathetic

Deliver interactive and personalized experiences without bias or judgment, and with empathy, and compassion.



Customer Reactions to Soul Machines

A majority of customers report positive experiences when using Soul Machine products

3X more users choose to speak to a digital person over waiting to speak to a human

37% of conversations between customers and Soul Machines' Digital Person take place outside business hours

85% of customers have reported that they trust Soul Machines Digital Person

81% of customers reported that they found Soul Machines Digital Person likeable

Sources: SoulMachines

Soul Machines Vs. Traditional Chatbots

Soul Machines Digital Person received **27%** higher customer satisfaction score than a chatbot equivalent

Soul Machines Digital Person is **92%** more effective than the chatbot

Soul Machines Digital Person is **85%** more engaging than the chatbot equivalent

Soul Machines Digital Person is **40%** higher achievement of goals than the chatbot equivalent

Sources: SoulMachines

BENEFITS

Benefits of Digital Assistants

FOR THE COMPANY

Digital assistants can lead to cost savings by reducing the number of employees needed to address customer service inquiries.

FOR THE CUSTOMER

Digital assistants can provide a consistent and self-driven experience for customers. They will receive the same level of care and attention as a human customer service agent can provide while also being able to know what to expect when contacting a call center.

BENEFITS

Benefits of Digital Assistants

01 – Reduced Costs

The Digital Assistant becomes more cost efficient than human agents – especially when factoring in attrition and training costs.

02 – Continuous Learning

The Digital Assistant has the ability to learn from previous interactions. Analytics will flag areas for improvement.

03 – Free Agents

The Digital Assistant will free up agent time so they can focus on more meaningful tasks that require human intervention, which will improve employee morale.

04 – Consistent Interactions

Customer interactions don't vary based on the agent's mood or based on call center volumes. The customer knows what to expect when contacting customer service.

05 – Sentiment Analysis

A digital agent will track verbal and visual information to help determine how customer's feel about the experience, allowing continuous improvement.

06 - 24/7 Service

The Digital Assistant can be accessed anytime, from anywhere. Customers can reach out when they encounter a problem and receive help.



Improving Operations with AI

Improve Workforce Scheduling

Understand call trends based on historical data and build models to predict call volumes and improve staffing levels.



Cost Saving Opportunities



Improve Call Resolution Rates

Improve agent and chatbot training by identifying intents and isolating topics which topics need to be enhanced. Reduce call times and improve resolution rates thanks to more adequate training.

Increase Personalization

Gain a better understanding of customers based on interaction insights. Develop 360-degree view of the customer to determine the Next Best Action (NBA).



Revenue Generation Opportunities



Increase Engagement

Choose the best channels and best content to use to engage customers. Developed a personalized communication approach that will lead to better upsell and cross-sell opportunities.

AVOIDING UNFAIR BIAS IN ACTUARIAL APPLICATIONS OF AI

September 20, 2022

Presenter:

Robert N. Bernard, PwC

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AGENDA

Project Overview



Actuarial Applications of AI



Unfair Bias in AI



Mitigation Methods and AI Governance



Project Overview

Purpose & Definitions

Purpose	To identify methods to avoid or mitigate unfair bias unintentionally caused or exacerbated by the use of AI models.
Defining AI	Computer systems that perceive the digital or physical world, process this, & take action that may normally require human intelligence or reasoning
Defining Unfair Bias	Unexplained adverse outcomes for marginalized communities
Recommendations	This presentation covers one possible framework and approach for insurance carriers to consider when looking to reduce unfair bias in their AI

Actuarial Applications of AI

Overview

CONTEXT

The adoption of AI has enabled industries to redefine the way they do business, and the insurance industry is no different.

SITUATION

The emergence of new forms and combinations of data raises questions on data quality, privacy, and usage. The complexity of AI systems raises concerns of a lack of transparency and explainability.

IMPACT

As the insurance industry increasingly relies on AI models to make or recommend such decisions, the risk of unfair bias is being shifted away from human decision-making and to the AI models and the algorithms that underlie them.

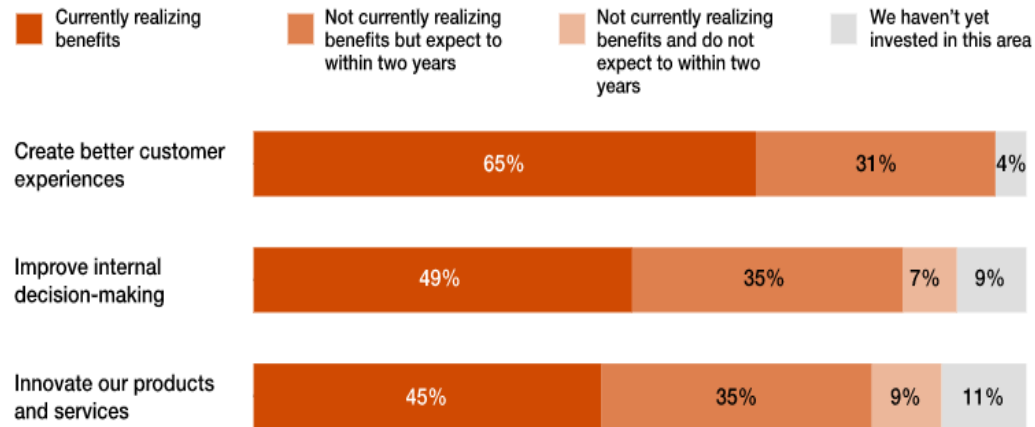
Real World Examples

Home > Blog > How AI is helping to prevent healthcare fraud

Blog

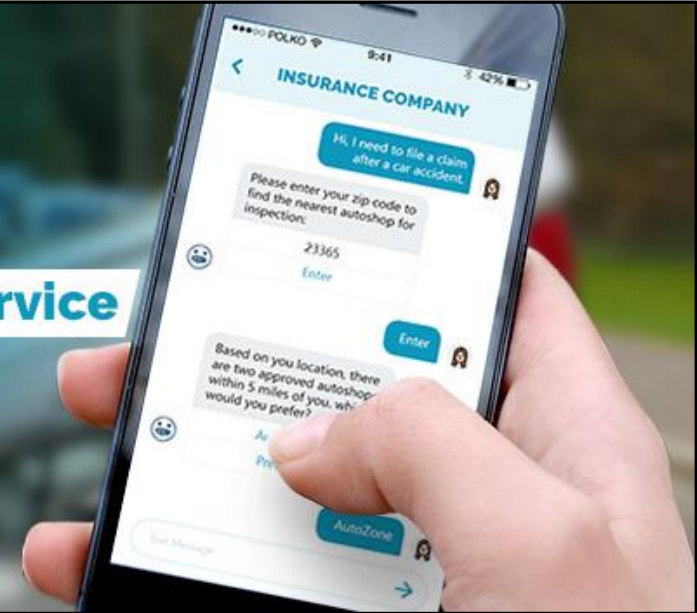
How AI is helping to prevent healthcare fraud - [TechTalks Blog](#)

Where AI investments are paying off for insurance companies



- [PwC Report](#)

How **Chatbots** are Redefining **Customer Service** in **Insurance Industry?**



From underwriting to claims management, artificial intelligence will transform the insurance industry

By Lexi Soberanis | 4 minute read | September 13, 2021 - [IBM Article](#)

Unfair Bias in AI

Unfair Bias in AI

Evaluating model fairness and identifying bias is predicated on the capacity for organizations to understand what drives decision making in their AI models.

- In the context of AI, technologists may consider performance independent of a protected attribute (i.e., an anti-discriminatory characteristic that serves to protect individuals) one mechanism to check for fairness.
- Analyzing a dataset for bias warrants considerations such as how and when the data was sourced, how it was labeled, what attributes comprise the dataset and what populations are represented in the dataset, what language(s) are incorporated, among others.

External Pressures on AI Usage

In response to AI's impact on the insurance value chain, regulators, technologists, customers, and society as a whole are **calling on the organizations** developing or deploying AI systems to **implement responsible practices.**

Regulation

- New York City Council passed a bill on automated employment decision tools requiring bias audits and communications to be sent to residents when the tool was used in a hiring or promotion decision
- As early as Jan '23 Colorado insurers are prohibited from using external data that unfairly discriminates, will have to provide information on external data sources, and ongoingly maintain and report on a risk management framework

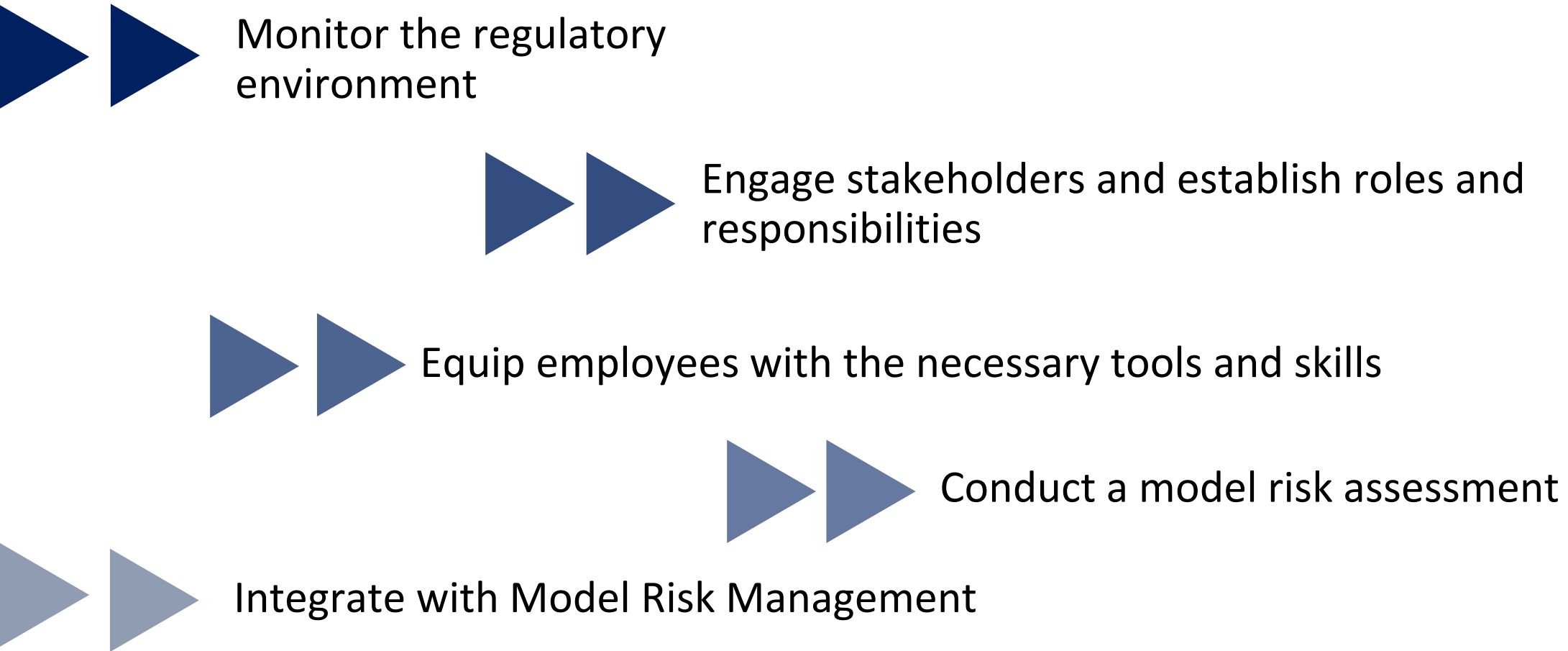
Customer Concerns

Customers are also expressing concerns related to AI's use and impact, according to PwC's 2021 AI predictions report:

- 27% of insurance executives consider "customer distrust of AI leading to lost business" a threat over the next five years
- 22% view "societal backlash against AI" as a threat

Mitigation Methods and AI Governance

Foundational Recommendations - Internal Policies and Practices



AI Model Development Recommendations and Stage Gates

Research Findings

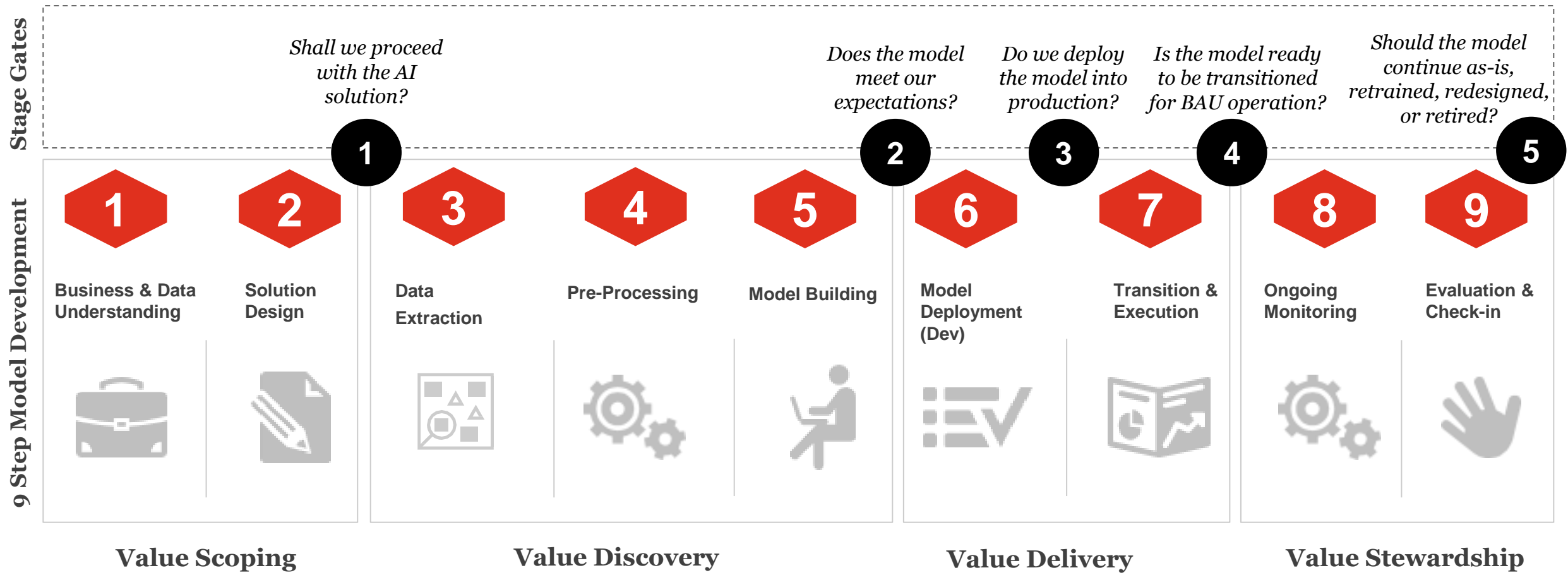
- The companies interviewed had differences in their AI governance practices, which highlighted that **AI governance practices are not a one-size fits all.**

Tailoring Governance

- Considerations such as insurance industry alignment and what problem the AI is trying to solve will drive the governance processes necessary to support regulatory compliance and business objectives.

We reference PwC's 9-step development process that is divided into four key components: Value Scoping, Value Discovery, Value Delivery, and Value Stewardship.

PwC's 9-step process



Stage 1 – Value Scoping

The phase that determines whether there is any business value in building the model, the success metrics for the model, how the model is intended to be used, and the risk of the model.



Step 1: Business and Data Understanding

Understand the business challenges; identify and source data, including actual and synthetic data



Step 2: Solution Design

Design the solution, select the analytic & AI methods suited for the application and requirements

Stage Gate 1: Shall we proceed with an AI proof of concept?

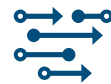
Stage 2 – Value Discovery

The phase that evaluates and defines success criteria, what data is required, measures to test for fairness, and methods for tracking model experiment and versions.



Step 3: Data extraction

Data preparation including data selection, cleansing, extraction, and imputation



Step 4: Pre-processing

Iterative feature selection and engineering to create final ML ready dataset



Step 5: Model Building

Build and validate the solution with continuous testing

Stage Gate 2: Does the model meet our expectations?

Stage 3 – Value Delivery

The phase where the model is deployed into a production environment and transitioned into business-as-usual production.

Step 6: Model Deployment

Publication of a trained model into a test of dev environment for testing and evaluation

Step 7: Transition and Execution

Implementation into business process and workflows; evangelization

Stage Gate 3: Do we deploy the model into production?

Stage Gate 4: Is the model ready to be transitioned for business-as-usual operation?

Stage 4 – Value Stewardship

The phase where the model's value is captured and reported to senior management on an ongoing basis, that model performance is not degenerating, and any changes required to maintain the model's robustness.



Step 8: On-going monitoring

Ongoing monitoring of outcomes for continuous observation and auditing



Step 9: Evaluation and check-in

Evaluation of insights and actions against business objectives

Stage Gate 5: Should the model continue as is, or be retrained, redesigned, or retired?

Thank You!