

AI Readiness Report

Unlock the power of AI to positively impact customer experience, operational efficiency, and business management.

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SUMMARY

AI is the trendiest word in tech.

Many recent AI business projects have failed massively. By trying to keep up with the hype, business leaders aren't taking the necessary steps to prepare for AI customer experience success.

Hero Digital's AI Readiness Report showcases how businesses should get ready for AI success. Dive into this report to ensure your organization recognizes the full value of AI.

Creating Business Value with AI

AI has moved towards the top of the agenda for executives and board members. By and large, we've moved out of the hype and awe phase and into the phase where teams are eager to roll up their sleeves and put theory to practice.

Like any new technology since the dawn of time, AI is no different—it's all about risk and reward. Move too quickly on a nascent technology and costs mount up, but move too slowly and your competitors begin to lap you.

At Optimizely, we encourage executives to take a test-and-learn approach similar to what we preach to customers utilizing our software for experimentation. Ideate. Test. Measure. Iterate. Small wins generate the data and metrics necessary to build confidence in something larger.

The truth of the matter is, these platforms (i.e. vendor partners) are likely going to move much faster to bring AI features to market. Consider these as freebies on your AI journey—these are low-risk, low-effort tests with the benefit of speed to insight and value. For example, trying out “generative AI for content or image creation” is a safe and easy feature that can be done out-of-the-box easily within Optimizely's Orchestrate solution.

One practical idea is to dabble in AI-powered features via existing platforms already in use today by practitioners within your organization.

Another idea is to run a brainstorming workshop or a hackathon to uncover low-hanging fruit and then move quickly from ideation to proof of concept.

Regardless of the approach, you need to think about the workflow and governance.

The technology is great but managing the process and usage is just as important. Ask questions like how will you ensure there's a “human in the loop” when it comes to AI? (Note: We highly recommend you have a human involved in decisioning.) What is the impact on existing processes? Are you using data in a safe and compliant way when it comes to AI? Make sure all the proper guardrails are in place to not skew your results.

Everyone is excited about AI and the potential it brings to all industries and functions. How will you adopt it? How do you balance the risk vs. the reward?

Companies like Optimizely and Hero Digital—the creators of this report—are here to help you with advice and capabilities to leverage AI and accelerate your journey (and reap those rewards a little faster too!). We hope this AI Readiness Report helps you use AI to build business value.

— Kevin Li, VP, Product Strategy & Operations @ Optimizely

Prepare for AI Success

Unlock the power of AI to positively impact customer experience, operational efficiency, and business management.

Despite differing perspectives across all sectors, we believe AI has tremendous potential to drive business efficiency and growth.

When implemented correctly, AI positively impacts customer experience, operational efficiency, and business management.

“Companies that optimally implement AI can reap 13% ROI, more than double the average return from AI of 5.9%.” — IBM¹

On the other hand, many sources report massive AI failures with large investments yielding minimal ROI.

“70% of companies surveyed report minimal to no impact from AI.”

— MIT Sloan Management Review²

Recent failures, however, should not discourage AI integration. In fact, understanding today's failures is critical to achieving business growth. AI initiatives can fail from scope, data, human, or technology issues.

Critical issues that must be addressed for an AI project to succeed.³

CATEGORY	FACTORS
Setting the right expectations	Misunderstanding AI capabilities Thinking too big
Use case creation	Missing value or cost-benefit ratio Complexity Low error tolerance
Recognizing organizational constraints	Budget challenges Regulations
Resource availability	Lack of employee expertise Data availability
Tech acumen	Model instability Lack of transparency (black box) Possible result manipulation

Designing AI initiatives with these concerns in mind is essential for successful AI implementation. **We call this framework AI Readiness.**

¹ <https://www.ibm.com/thought-leadership/institute-business-value/en-us/report/ai-capabilities>

² <https://sloanreview.mit.edu/projects/winning-with-ai/>

³ <https://www.sciencedirect.com/science/article/pii/S1877050921022134>

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Arun Kumar, EVP, Data & AI

Arun believes organizations need to combine technology at scale with the power of human insight and empathy to develop meaningful, relevant, and experience-based relationships with constituents. He has led teams for some of the top agencies in the world including Wunderman Thompson and Publicis Sapient. Arun has helped build multi-channel touchpoints and direct-to-consumer strategies for brands like The American Red Cross, Bose, Carnival, Newell Brands, and TD Bank.



Chris Boyle, Sr. Director of Data & AI

Through a decade of experience in traditional analytic and marketing science roles at some of the largest advertising agencies in the industry, Chris Boyle has brought expertise within performance marketing, web and ROI analytics, and testing to optimize client digital performance. While leading a team of analytics professionals, his ROI approach resonates with clients by creating value all while working to transform their business.

AI Readiness Explained

What is AI Readiness?

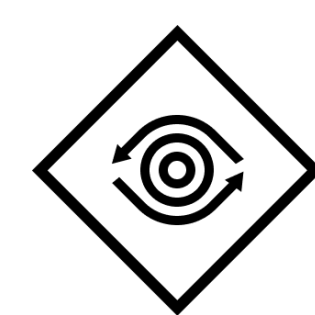
Artificial intelligence (AI), machine learning (ML), and large language models (LLMs) have emerged as major areas of growth opportunities across all industries.

While business leaders try to make sense of how AI and ML techniques will revolutionize their business, there are important actions that need to be taken prior to capitalizing on AI opportunities.



AI, ML, and LLMs all have one thing in common: **Data**.

Data is the core component of any AI opportunity. Before getting started, you must ensure your data is managed properly.

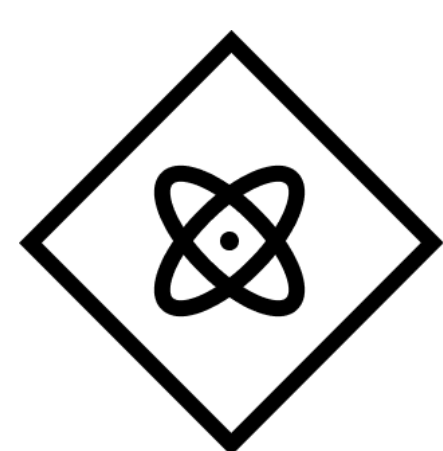


Data management is the culmination of **four components**:

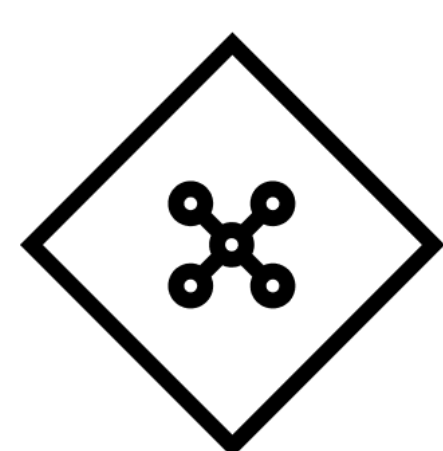
Data storage, data security, data governance, and data source aggregation. Each component sets the foundation for success.

Why is AI Readiness Important?

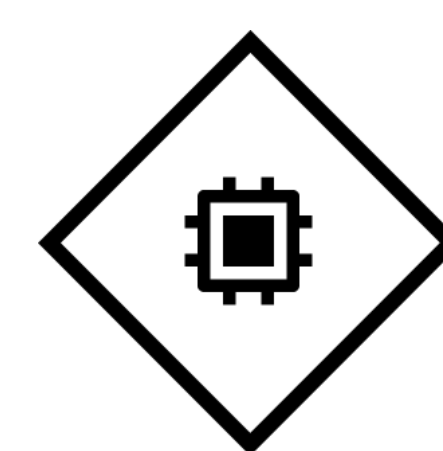
AI isn't a switch that can be flipped. It's not something you can purchase off the shelf and turn on. There's a learning curve that requires many inputs and training.



Increased cost efficiencies, improved customer experiences, and **better decision-making** are just some of the benefits your organization will see.



Challenges many businesses face relate to siloed data, data quality issues, and limited scalability and storage.



Becoming AI-ready will prepare you to take action and capitalize on business-specific opportunities and applications.

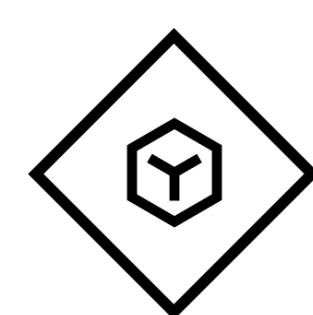
Getting Started with AI

Getting started with AI is difficult. It's easy to take costly steps in the wrong direction. Before you begin, it's important to have answers for the right questions.



What **business problem** am I trying to solve?

AI initiatives have many variables. To prevent distractions, set your sights on solving a particular business problem. Locking onto a business problem helps simplify scope, assess feasibility, and guides how you measure success.



Do I have the right **data**?

AI models are only as good as their inputs and training. Data quality, therefore, outweighs data quantity. Evaluate whether you have the right data available before taking steps to incorporate AI. To answer this question, **ask what use cases or business questions are you trying to answer with AI.**

Is your data in the correct format?

While you may have the right data available for AI to help solve business problems, you need to ensure it's in the correct format.

Bad data in equals bad data out.

You must ensure the data you collect is properly formatted. Use this outline of data types, their recommended format, examples, and use cases to guide your data formatting.

DATA TYPE	FORMAT	EXAMPLES	USE CASE
Numeric Data	Real Numbers, Integers, Floats	"1" or "0", 0.5%, 12932.2, \$4.80	Predict Price Changes, Identify Customer Preferences
Categorical Data	Discrete Values	Labels, Names, Classification	Classify Images or Text, Clustering Models
Image Data	Pixel Values	Digital Cameras, Scanners, Satellite Imagery	Facial Recognition, Image Segmentation, Bounding Object Boxes
Text Data	Words, Sentences, Paragraphs	Speech Transcripts, Emails, Articles, Social Posts	Extract Relevant Information From Text, Detect Customer Sentiment
Time Series Data	Date, Hourly, Daily, Weekly, Monthly	Stock Market Prices, Weather Patterns	Predict Commodity Shortages, Estimate Hurricane Trajectories
Audio Data	Pitch, Frequency, Melodic	Speeches, Music, Recordings	Music Generation, Audio Synthesis Tasks
Sensor Data	Pixel Values, Numbers, Time Series	Object Recognition, Pattern Recognition	Predict Patterns to Improve User Experiences
Structured Data	Tables, Databases, Spreadsheets	CRM, Site Data, Operational Data, Product Data	Increase Operational Efficiencies, Find Customers for Upsell Opportunities

The importance of “Good” data

AI must be trained to generate output that directly impacts the business problem you’re solving. The quality of your data will directly impact the quality of your AI solution. Always keep Garbage-In-Garbage-Out in mind when considering input data. If you introduce data indiscriminately to the AI, the level of noise will overpower the influence of true signals, and ultimately derail AI performance.

Once all available data have been identified, the data must be checked against **association, actionability, and algorithm compatibility**.

Association

Association refers to the relevance or informational value of the input data and the desired outcome we want to solve for. We must be able to rationalize why we’re introducing certain kinds of data into our AI model.

For example, we may want AI to consider customer attributes, because we theorize that certain socioeconomic status flags represent a greater likelihood of conversion or that certain products are only relevant to particular demographics.

We might also theorize that there’s an association between real-time platform activity and cart abandonment. We would then need to consider the viability of capturing the online activity of our customers.

We could also theorize that by incorporating historic purchasing history from our transactional data, we could help inform the AI what kind of customers we should retarget.

We would use statistical methods to test these associations prior to incorporating them into the AI model (e.g. hypothesis testing, correlations, regressions, ANOVA, etc.).

By checking for association, we mitigate the likelihood of introducing harmful noise into the AI, while also promoting discussion among stakeholders to think ahead and plan how the business can take action based on the data or AI output generated from the data.

Actionability

Actionability refers to the utility of the data. Specifically, the input data must be accurate, timely, and legally viable in order to be used for both model training (building and maintaining AI) and inference (leveraging AI).

For example, in terms of accuracy, we cannot use data that is not reliably populated, lands with inconsistent data typing or formatting, or has inconsistent content (captured fields change meaning over time).

The data must also be timely, meaning it must be available when it is needed. This is especially important in the context of sequence, as the order of data is critical. It would be backward to build an AI predicting conversion likelihood with demographic data if the customer attribute was collected post-conversion.

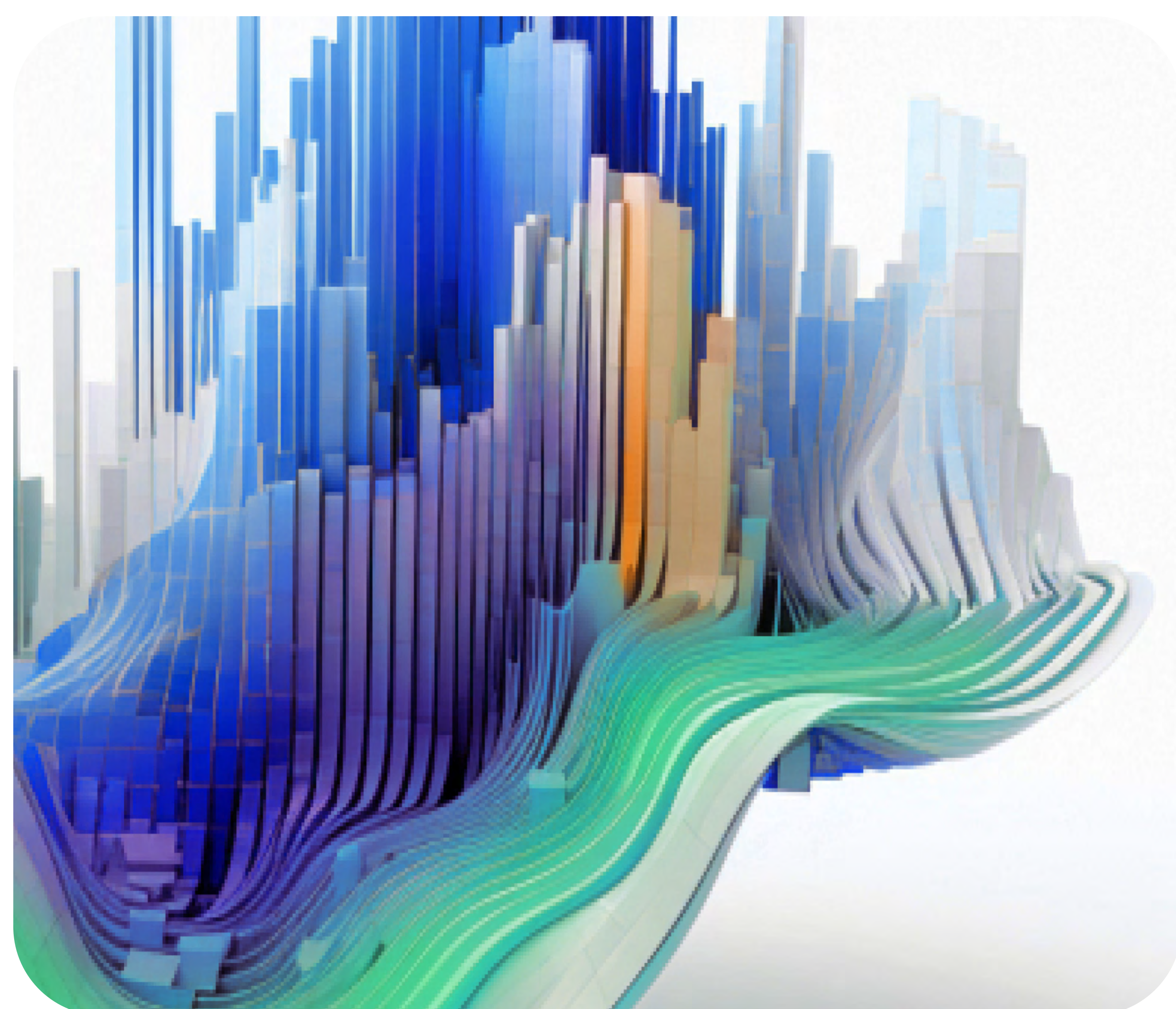
Finally, data must be legally viable to ensure that the AI solution will not be hampered by regulatory issues.

Algorithm Compatibility

Algorithm compatibility refers to the suitability of the data for the specific AI algorithm we intend to deploy. Just like any other technology, AI algorithms have different input requirements for their data.

For example, some algorithms require the data to be scaled, or to be all numeric, or to be a particular dimensionality (e.g. pixel dimensions). These requirements drive the feature engineering phase, which is the preprocessing of the input data in specific ways prior to model building and inference.

Each data input must be assessed against the algorithm requirements and, if found to be incompatible in its native state, whether an appropriate transformation can be applied to the data to accommodate the algorithm.



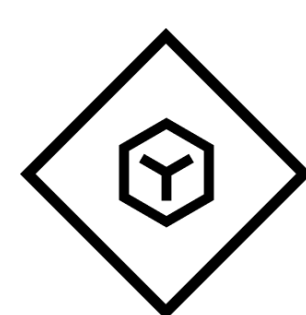
Organizational Preparation

Now that we addressed the importance of data and how it fuels the development and utilization of AI, we must consider other critical aspects of an AI project.



Culture

Company culture is an underrated aspect of AI readiness. Before embracing AI and its tools, internal company stakeholders need to be prepared to accept outputs and utilize results and insights within their business units and teams. A culture of testing and optimization must be cultivated as long-term testing roadmaps are required to see long-term success.



Tool Selection

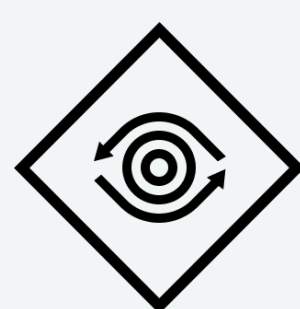
Selecting the right tool and model that best fits your business and goals is extremely important. Identifying a use case prior to selecting a tool will save you time and help you consider the right tool for the job. There are many different models to choose from with foundational models being easier to integrate with but they only contain generalized knowledge. Domain models are more specialized for specific functions but are much more impactful compared to foundational models.

Organizational Preparation



Privacy & Security

With data privacy regulations and compliance requirements, organizations must ensure that data handling processes align with legal and regulatory standards. Highly regulated industries such as healthcare and finance need to take additional precautions with how they leverage internal data for AI purposes. Through research and experience, Hero is qualified to help answer these questions and guide organizations toward transparency and compliance.



Legal & Regulatory

Regulations are rapidly evolving in this dynamic space. The recent Executive Order on Safe, Secure, and Trustworthy Artificial Intelligence establishes new standards for AI safety and security. While legal implications should always be worked through with in-house legal teams, we partner with our clients to help understand the business impact of changing laws.

AI in Action

Improving CX with Good Data and Machine Learning

The Situation

A leader in natural gas distribution asked Hero Digital to find ways to mitigate calls to their customer support center. The available data consisted of customer demographics, address, customer history and status, transaction data, customer call history, and customer call logs.

Our Solution

We initially hypothesized that customer attributes, such as demographics and location, were predictive of customer calling behavior. However, statistical testing did not find the customer attributes to be as influential as we thought. Regardless of background or residence, customers called if they experienced issues.

We decided to focus entirely on customer status, call history, and log information because we were able to find statistical and logical connections between the data and customer complaints.



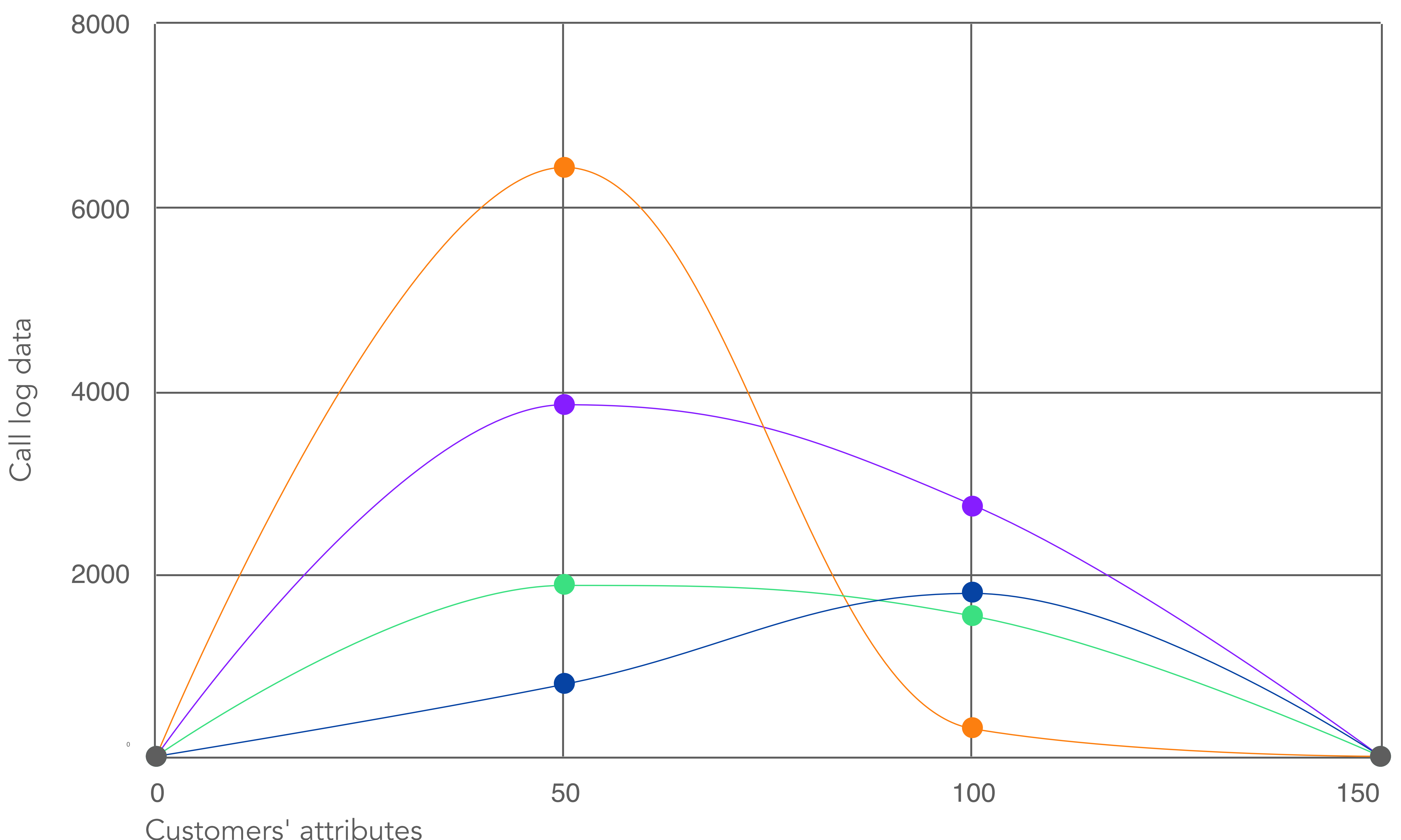
Results

By analyzing the data in this way, we discovered a large group of customers with repeat calls were either new subscribers or expired customers. It appeared that customers were having problems onboarding and offboarding.

When we used AI to mine the call logs, we confirmed that many customers were calling about not receiving new service or were unable to terminate their service. We also found that delivery issues were the top reason people were calling.

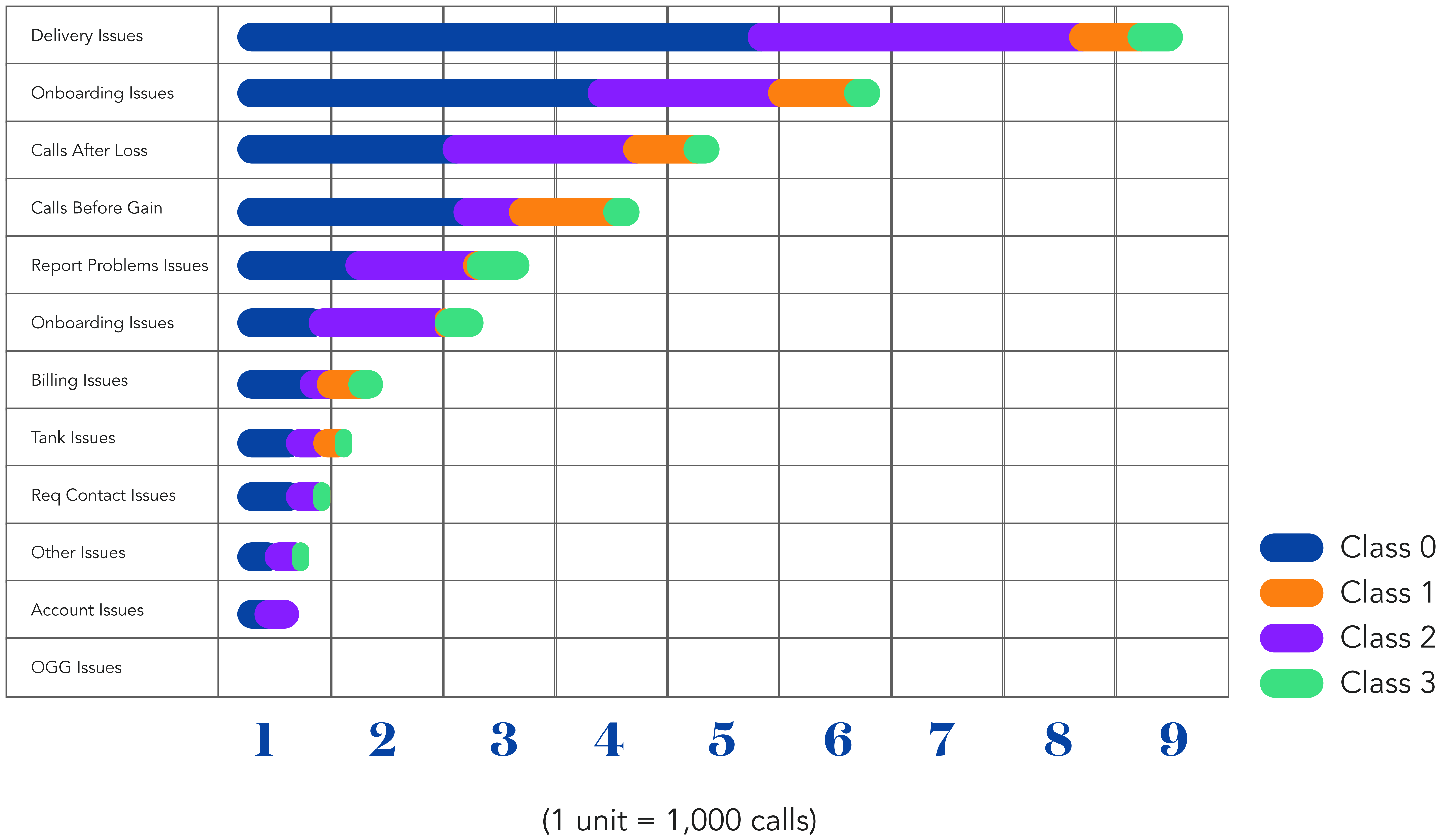
The client learned that by addressing these common problems in the customer journey (delivery issues, onboarding, and offboarding), they could mitigate the majority of customer calls.

Output after reducing customer call log data from several hundred dimensions to three and clustering on mined attributes.



Results

AI organized the importance of particular customer attributes from phone call dataset.



Let's Talk About AI

AI is here to stay. While its use and application are yet to be known across industries, preparing your organization for its application is a necessary step to ensure future success.

Hero Digital can help set you up for success by utilizing the data management practices we've outlined in this report and can help guide you step by step. When the opportunity arises, you can capitalize on AI applications and get ahead of the competition.



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