DAVID HOLIFIELD
UX & Product Design Leader

CASE STUDY

Anthem Virtual AI Customer Service Agent

CLIENT

Anthem Blue Cross Blue Shield

MY ROLE

Sr. Design Manager, IBM Client Engineering

SUMMARY

I led my design team to deliver an AI solution that **reduced customer service calls by 24%** while **increasing customer satisfaction scores** using design thinking and co-creation.

SITUATION

I was managing a team of 14 designers for IBM’s Client Engineering. We collaborated with IBM’s top-tier healthcare clients to **innovate customer-focused solutions** using IBM products and services.

Anthem was a key account that utilized many IBM technologies and my team spent approximately 30% of their time servicing this account. Based on this relationship, Anthem viewed my team as an integral partner in their ongoing success.

Engagements typically included an account manager, data scientists, engineers, researchers, and business technical leaders.

PROBLEM IDENTIFICATION

Anthem came to IBM asking for help:

How might we improve our member experience by providing better, quicker, and more accurate customer service?

Anthem customer service agents handle ~46M calls a year and that number was projected to increase. They needed a way to quickly increase call volume while raising the bar on the level of service they were providing. And this had to be done without increasing costs of hiring additional agents.

PROBLEM DISCOVERY

We wanted to **understand the problem space** before we looked for solutions. So we spoke with the customers. In this case, customer service agents.

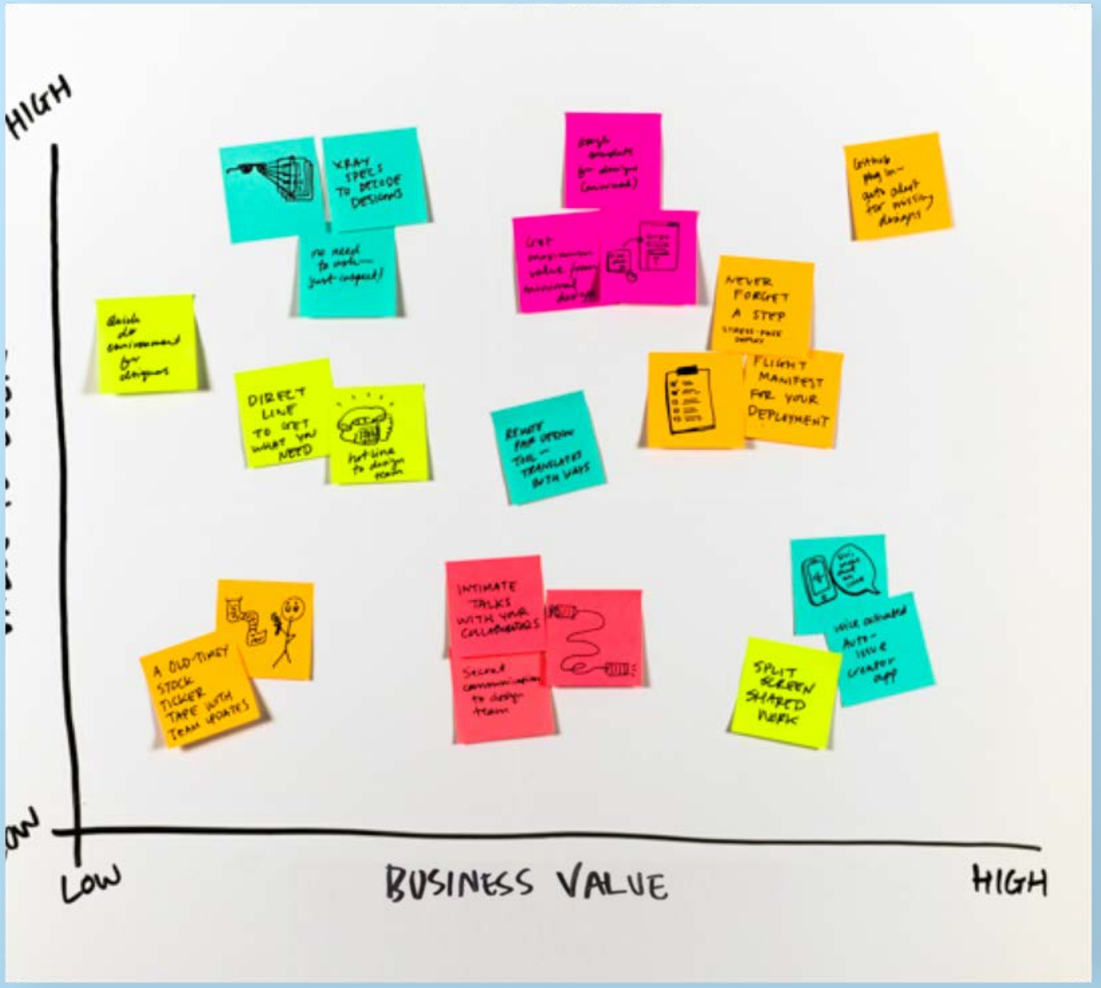
- **A Day in the Life.** By speaking directly with agents we were able to understand the variety and difficulty of their tasks.
- **Some Calls Were Simple.** Calls regarding billing questions and coverage were easy to solve for.
- **Some Calls Were Complex.** Other issues had fewer similarities and needed further investigation and escalations.
- **A Myriad of Tasks.** Agents also provided high-level tech support for digital products, reset passwords, emailed documents, and retrieved general information.
- **Several Ideas Emerged.** Agents were not short of ideas on how to increase efficiency in many areas of their work.
- **We Still Sought Clarity.** While we found several areas where we could make improvements, there were no clear answers.

I felt we needed to do a dive deeper with a **design thinking workshop.**

DESIGN THINKING WORKSHOP

The purpose of this in-person workshop was to dig deeper into idea generation and evaluation.

After collecting additional ideas from Anthem staff, we felt we had a good set of ideas to evaluate. **Idea prioritization is only as good as the ideas you bring to the table.**



FEASIBILITY MAP

We mapped ideas to understand the importance to the user and business value (low to high).

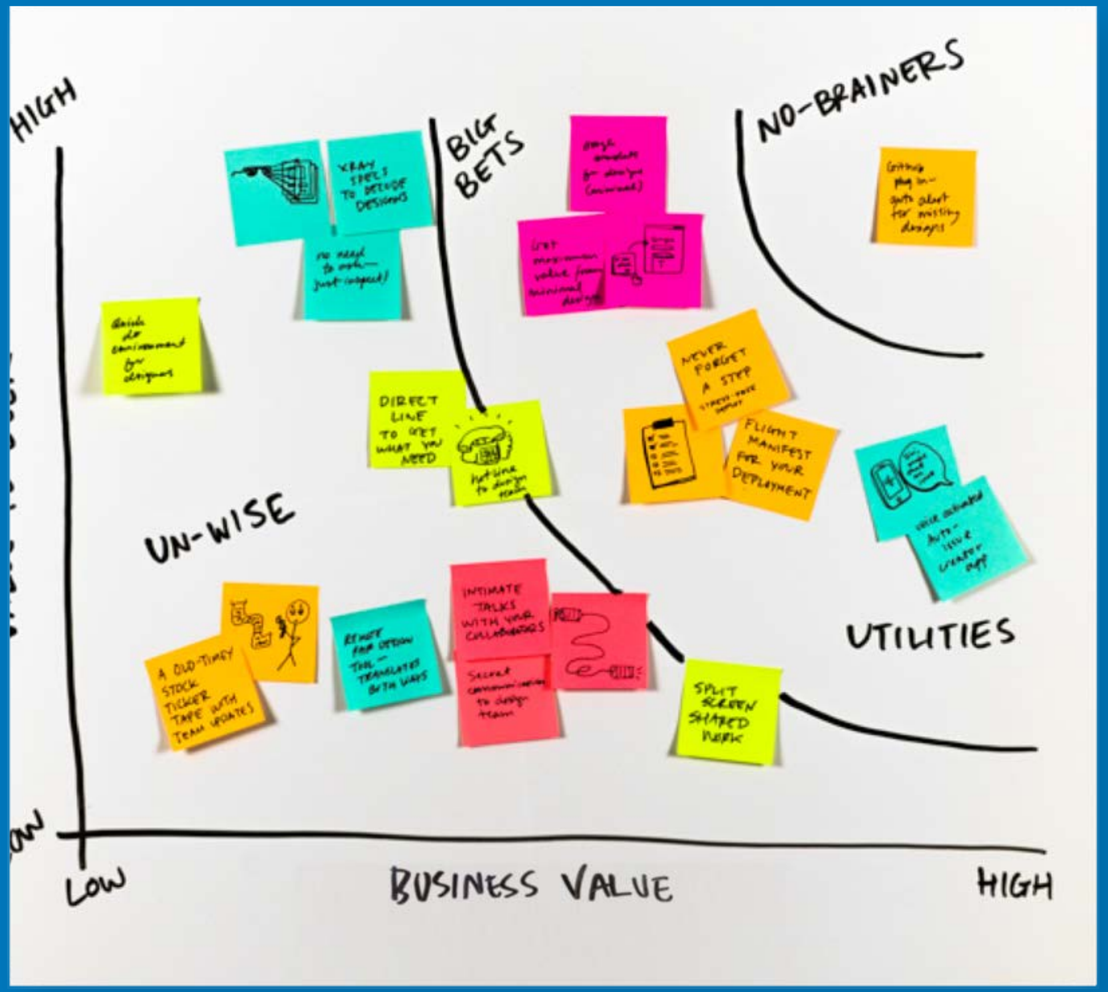
Ideas were plotted on the grid by **evaluating how well they helped the user reach their goal** and how heavy the lift would be from a business standpoint.

This required a lot of discussion about how ideas would affect agents' work.

FEASIBILITY MAP

We then drew rough sections across the map radiating out from the upper left. Each areas was labeled *No Brainers, Big Bets, Utilities,* and *Unwise.*

We took notice of ideas that reflected significant payoffs for both the user and business. ***Big Bets*** is where we find mid to high business value and high importance to users.

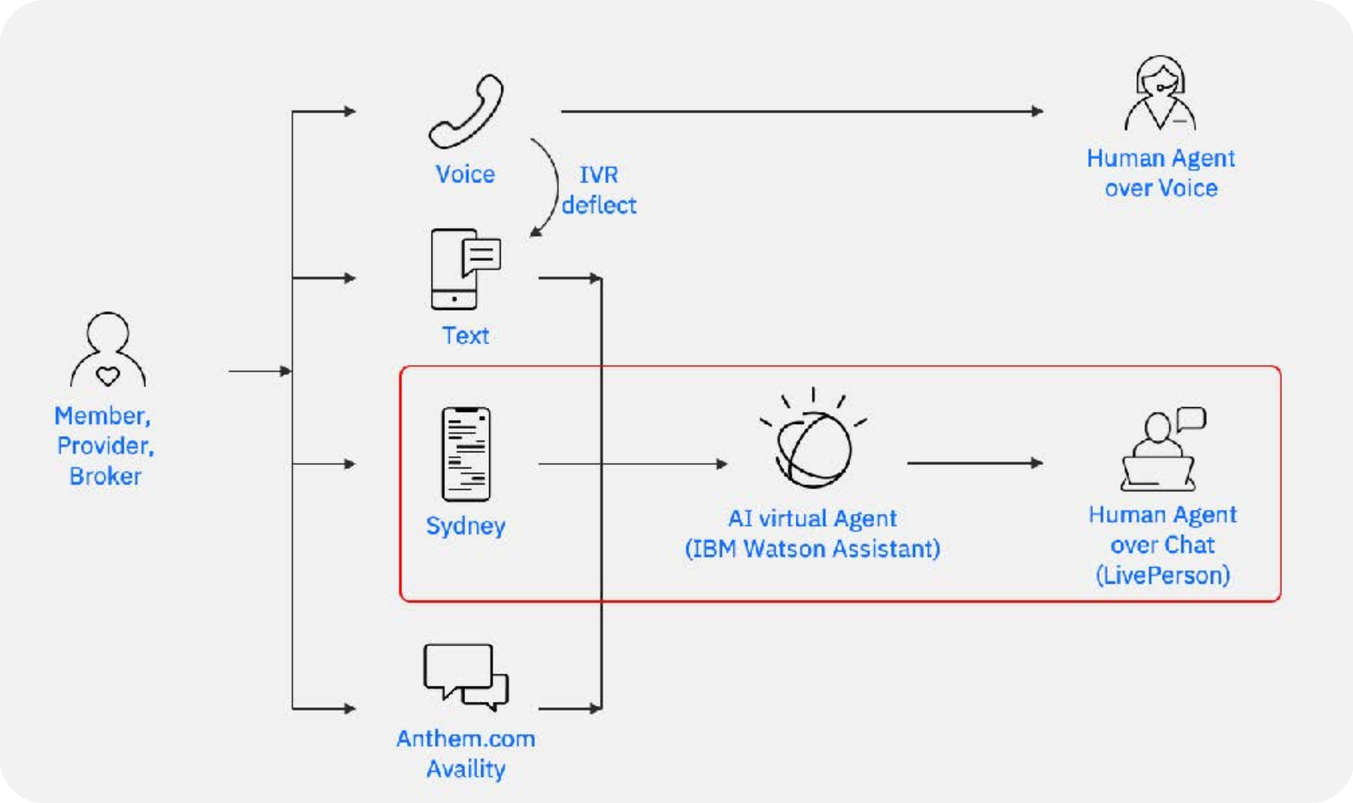


HYPOTHESIS

Coming out of the design thinking workshop, we developed a hypothesis that **a virtual agent built on IBM Watson AI Assistant** would be able to handle a significant amount of issues we classified as “simple.” This would free up agents to focus on more complex issues.

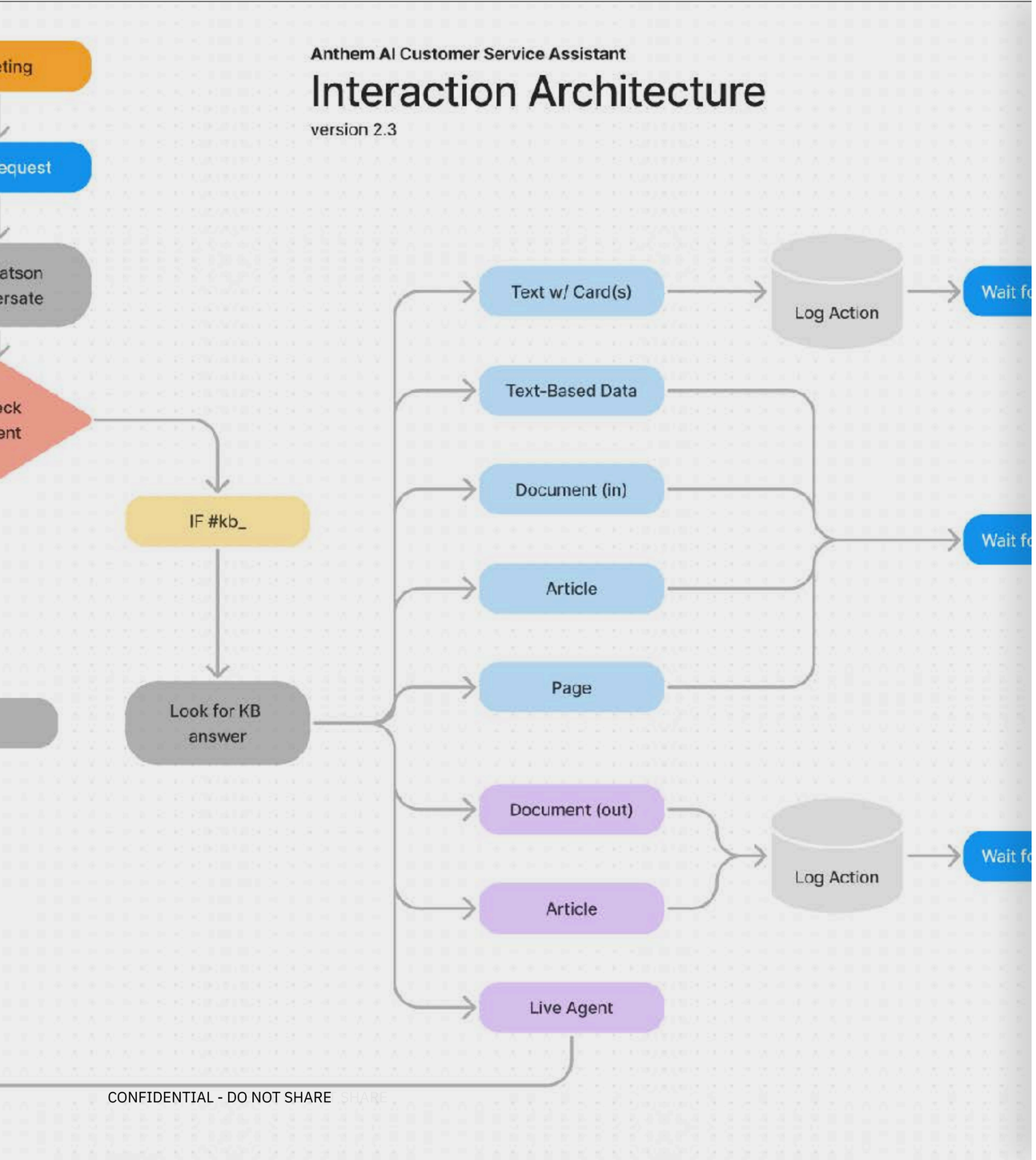
To test this hypothesis, we set out to build a working prototype of an AI virtual agent in hopes of validating our ideas.

ECOSYSTEM FIT



We proposed that **IBM Watson AI Assistant** would fit within the current customer service ecosystem to seamlessly support other channels.

Watson Assistant would be able to hand off more complex issues to a human agent, if needed.



INTERACTION ARCHITECTURE

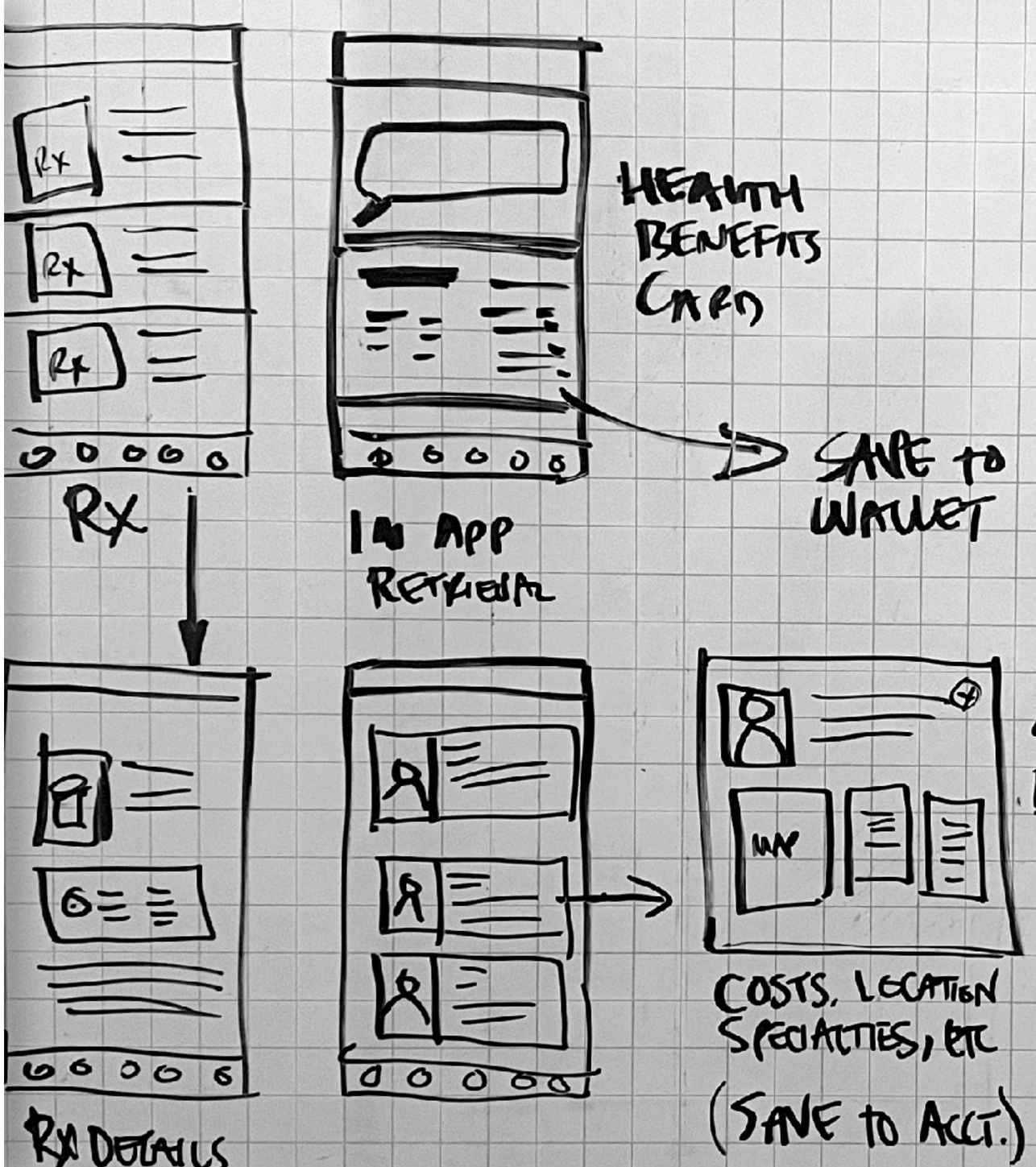
We designed a chat architecture to create a natural user interaction for their specific contexts.

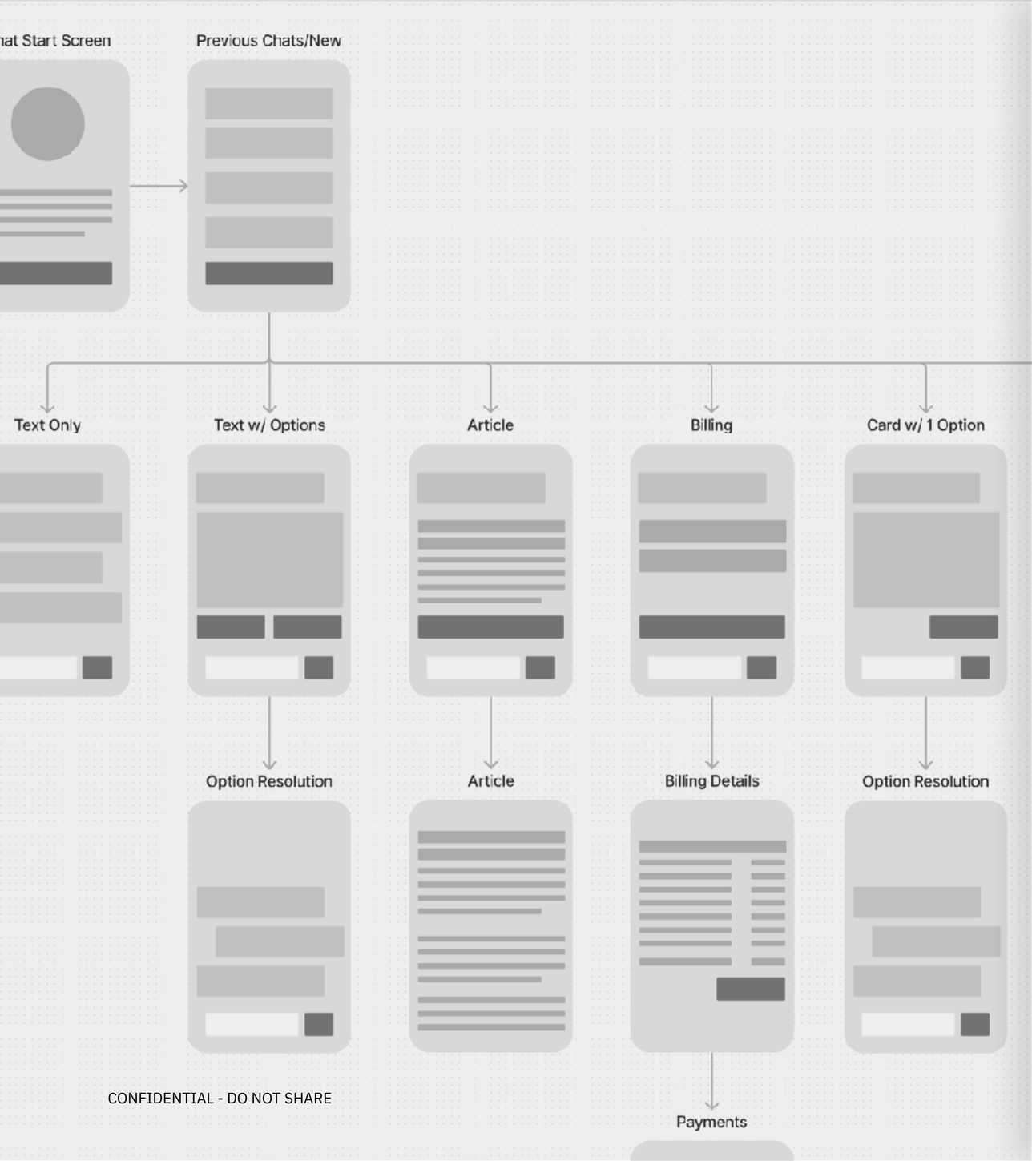
What we found useful in this project was to **divide intents in two macro-categories**: knowledge base and small talk. The former is intended to manage the actual answers we want to deflect to customer support, the latter aims to cover the basic interaction to make Watson feel a bit more human.

SKETCHES

Once we understood how users would want to interact with the app, we started quickly sketching our initial ideas.

Our goal was to go for a **quantity of ideas** then narrow them down later. Many of our initial ideas did not stick, but this exercise gave us many good ideas that did.





SCREEN FLOW

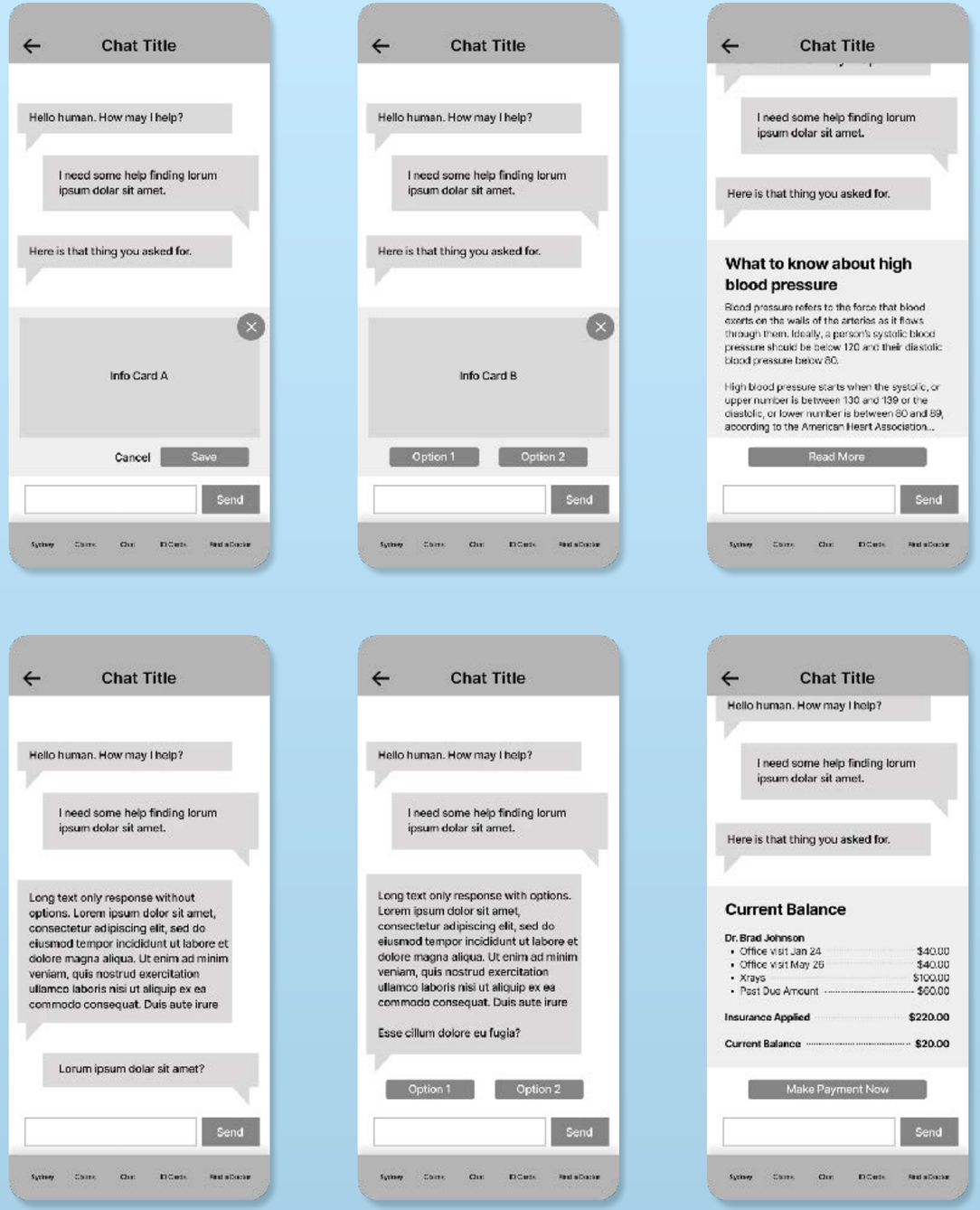
My team and I **collaborated with AI engineers and Anthem leadership** to understand how content would be retrieved and displayed. From there we designed the general screen flow we would use for the prototype.

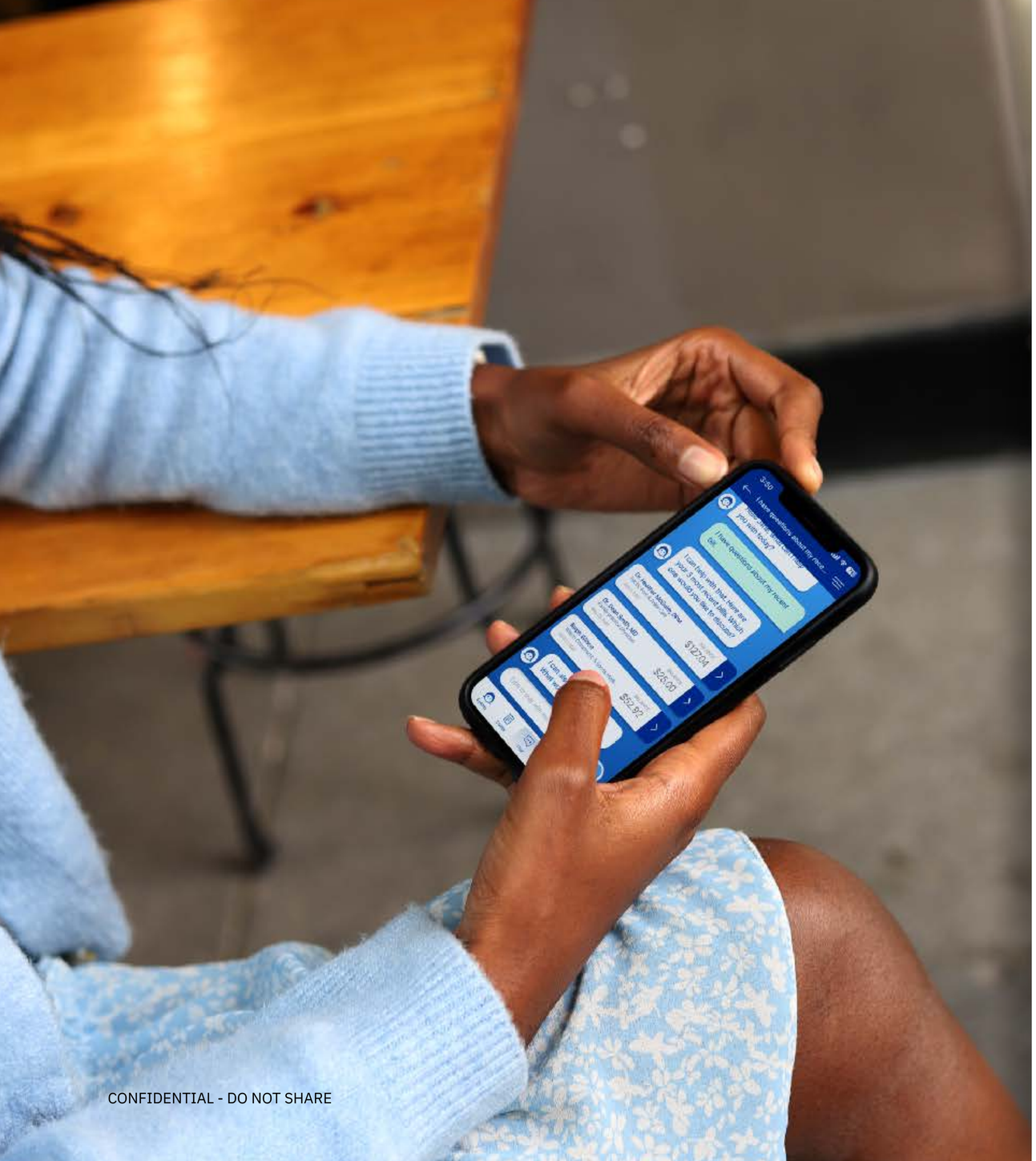
This also allowed us to understand the number and type of template we would need to design for.

LOFI WIREFRAMES

We quickly went to work on the low-fidelity wireframes so that we could see how the app was shaping up.

By laying out these screens next to each other **we discovered several holes in our logic** and went back to update the screen flows accordingly.





PROTOTYPE & USER TESTING

Once we had the problems worked out that we discovered during wireframing, we put together a high-fidelity prototype.

This allowed us to watch people use the app and see where we could make improvements. **Many of our assumptions were correct, but we missed the mark on others.** We went back to the wireframes and made the necessary adjustments.

FINAL UI DESIGNS

After a few rounds of user testing and settling on functionality for v1, we design the UI for each screen.

Using the established Anthem design system, we applied the interactions and visual treatments to our designs. We wanted to deliver a full set of screens that the Anthem team could **integrate with little additional effort**.

OUTCOMES & LEARNINGS

After launch, Anthem started seeing the benefits right away. Within months it was clear the new virtual agent was having a **significant impact**:

24%
of all interactions were now digital

60%
YoY growth in messaging

>5pts
higher CSAT than any other channel

5M+
annual reduction in calls

OUTCOMES & LEARNINGS

We learned a lot during this process and the team agreed that we would do some things differently next time.

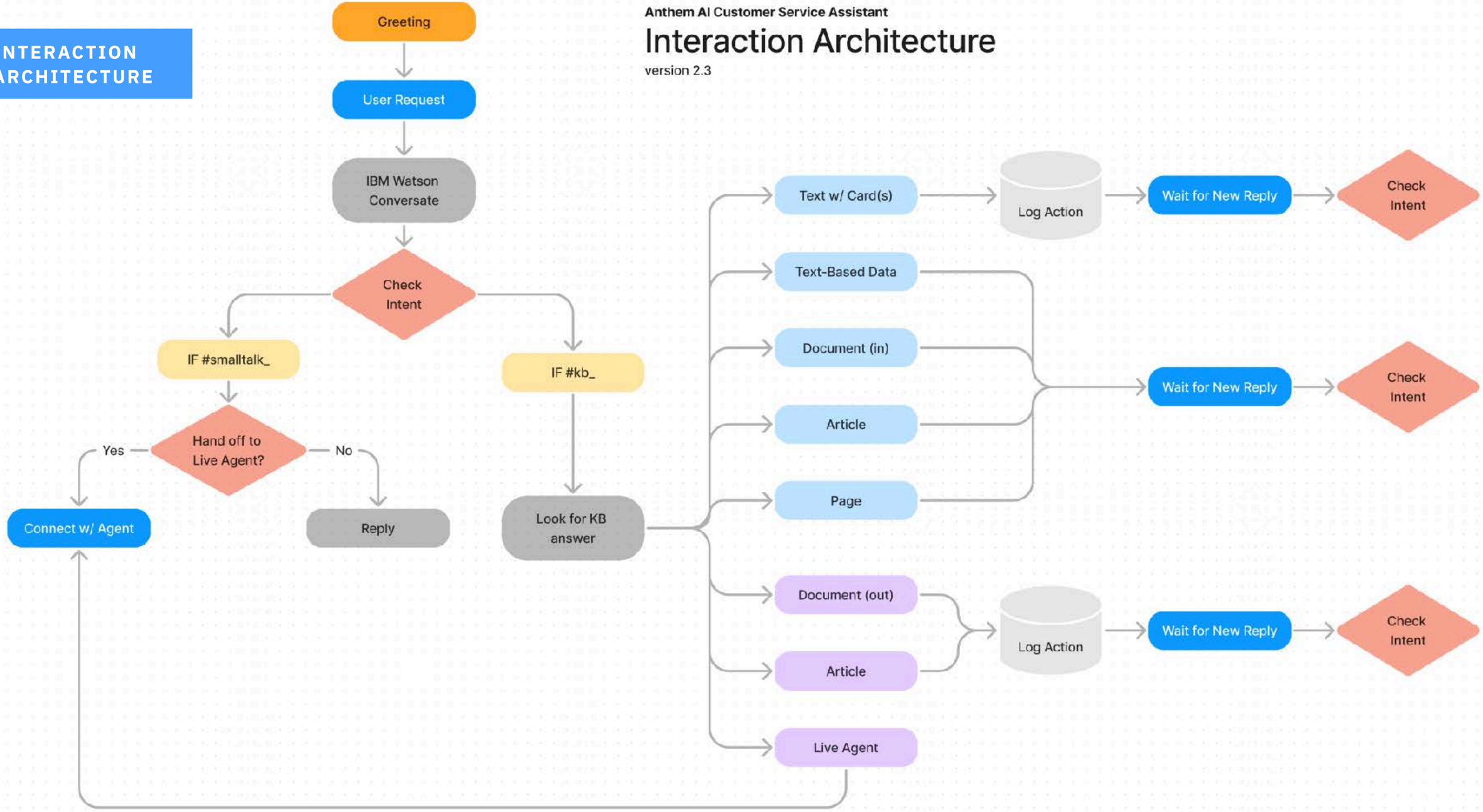
- **Lowered expectations.** We discovered that people have lower expectations of what AI-powered agents are capable of. Next time we will keep that in mind as we determine features.
- **The right content at the right time.** Users were not expecting articles to be suggested by a virtual agent so we eliminated this feature in the end.
- **Scaled experience.** Many people were not ready to fully embrace a virtual agent right away. That meant some functionality was not immediately discovered. Next time we may suggest scaling features as expectations grow over time.

INTERACTION ARCHITECTURE

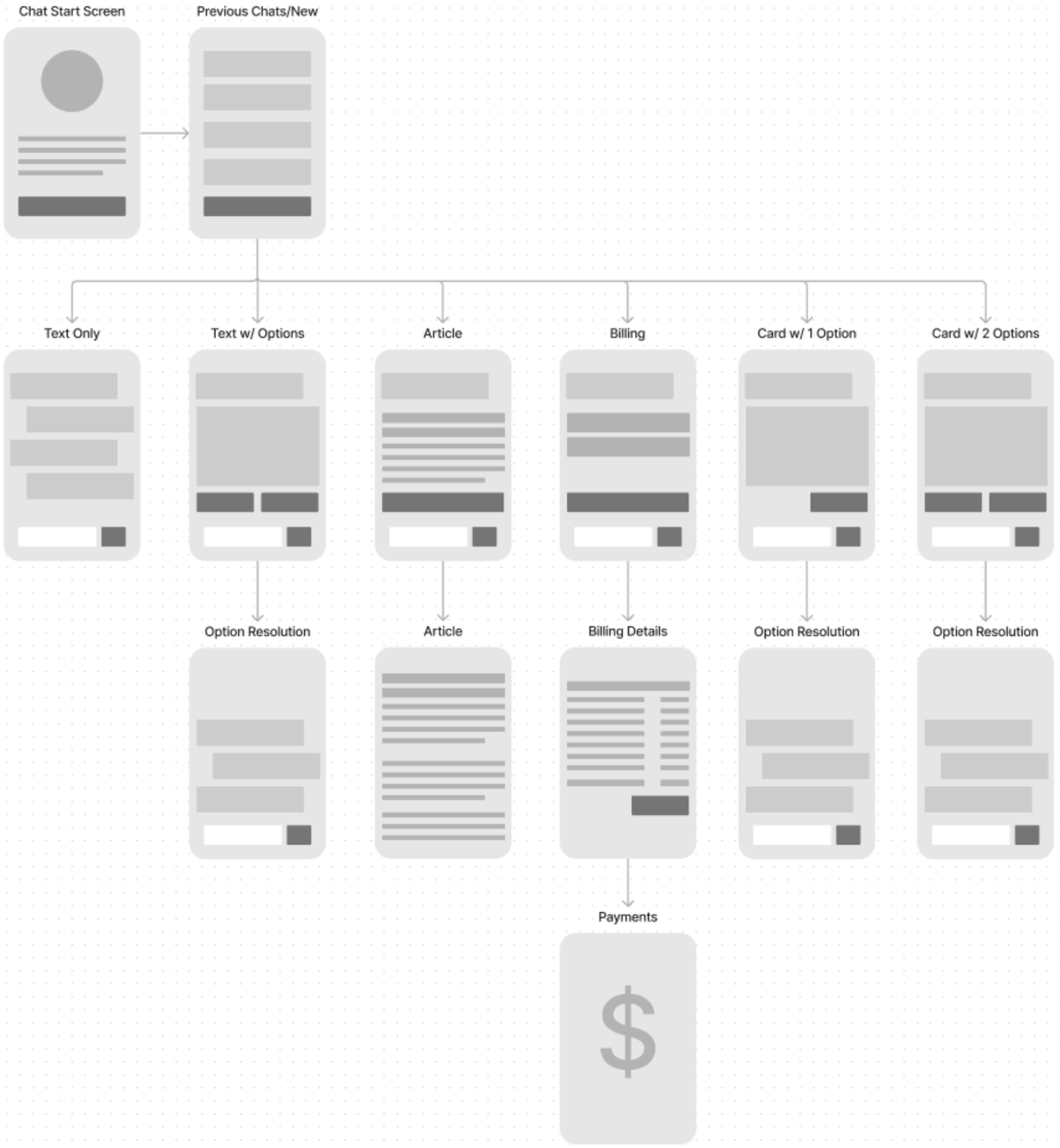
Anthem AI Customer Service Assistant

Interaction Architecture

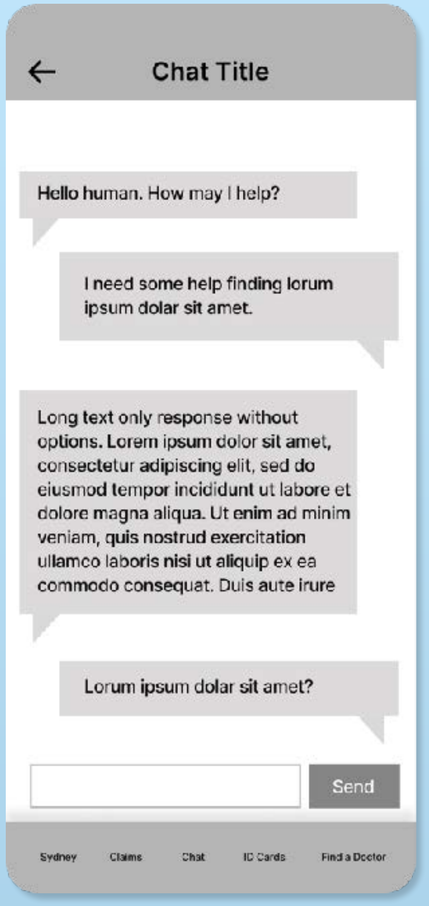
version 2.3

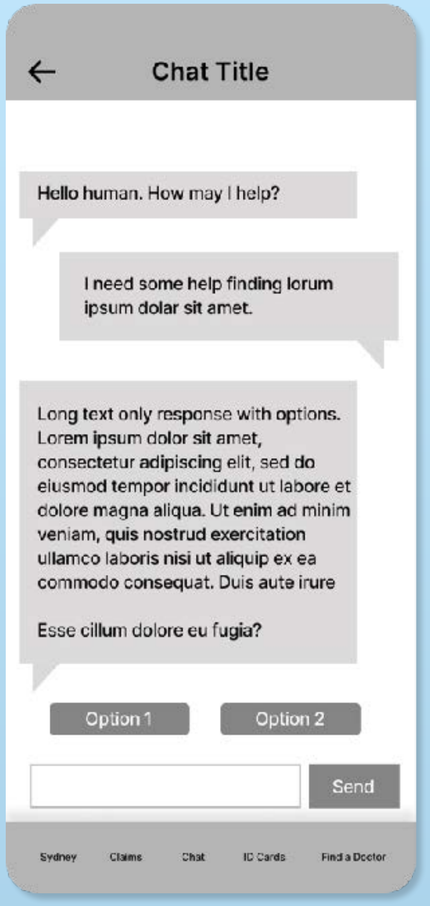


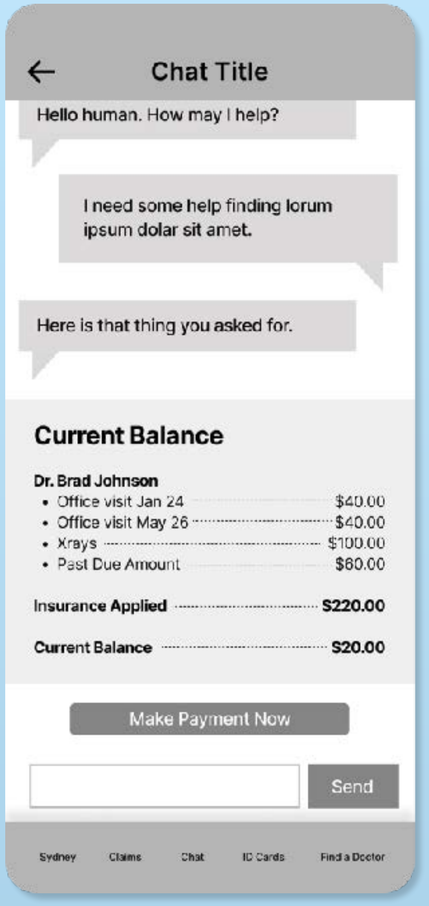
SCREEN FLOWS

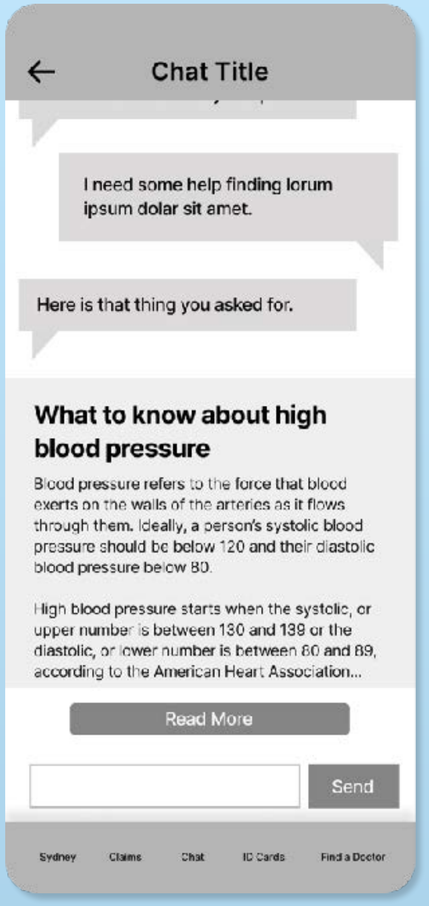


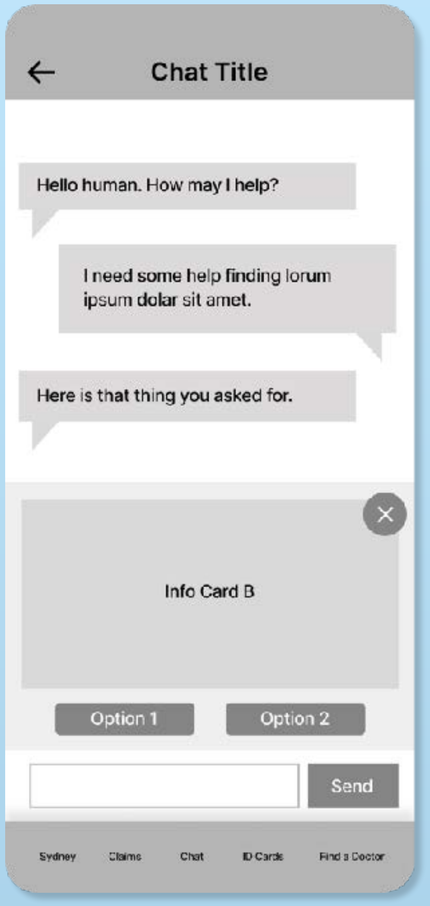
LOW-FI WIREFRAMES











UI DESIGNS