

The Tech Update will begin shortly...

While you wait, please answer this question
and submit your answer in the chat:

Have you identified a customer interaction (either sales or service oriented) where chatbots could make a difference?

Conversational UI

FAST TRACKING THE CUSTOMER EXPERIENCE

Line Munkholm Haukrogh, Danske Bank & Ayoub Hajjem, Trifork

23 June, 2020

TRIFORK[®]
...think software

A few practical notes



Recording

We will be recording this Tech Update which you will be able to receive afterwards



Chat and Q&A

We will be using the chat function to engage with you during the event.
We look forward to your questions!



Post Tech Update survey

We will ask for your feedback after the Tech Update



Conversational User Interface - Learnings and reflections from Danske Bank

June 2020 - Line Munkholm Haukrogh



Success stories

Command-line

The command line was the original conversational interface.

You'd input a textual command, hit enter, the computer would execute the command and print the answer.



Domino's Pizza >
Typically replies instantly

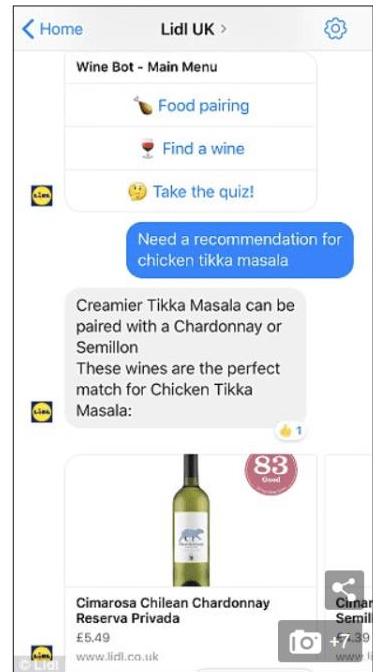
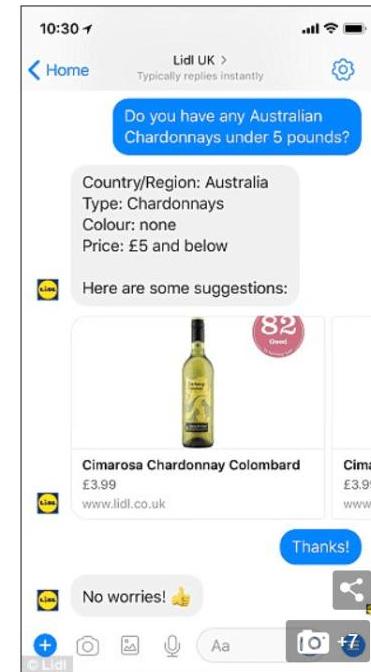
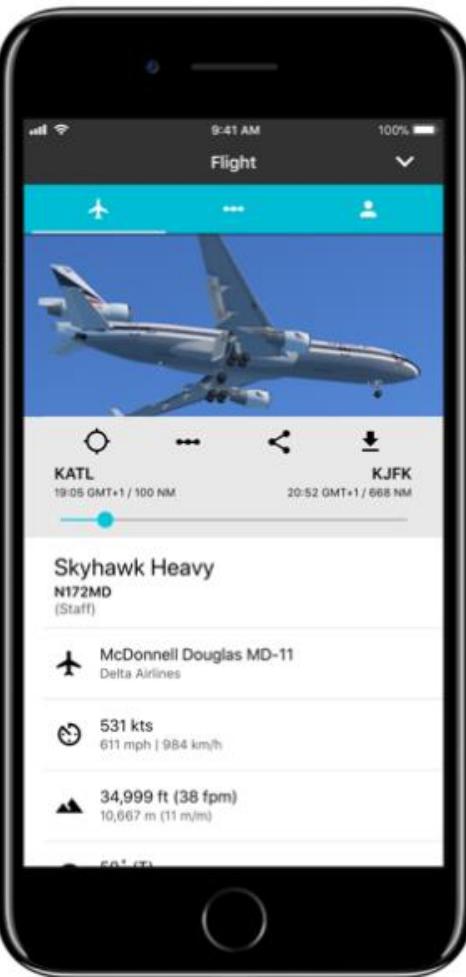
Get Started

Hi, this is Dom, the Domino's ordering assistant bot. How can I help, Ana?

New Order
Reorder
Track Order

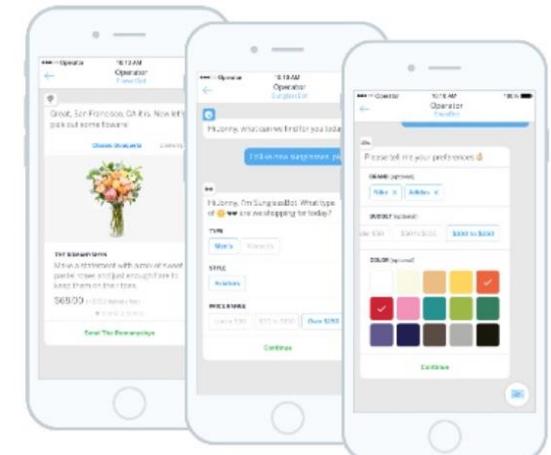
Type a message...

Comprehensive flight, route and pilot stats.



OPERATOR

Companies like Operator are leading the way, designing rich experiences their clients can interact with directly, not by replying simply with text.



Opinionated chatbot removed by Tencent after telling users why it hates the Communist Party

Learning from ...

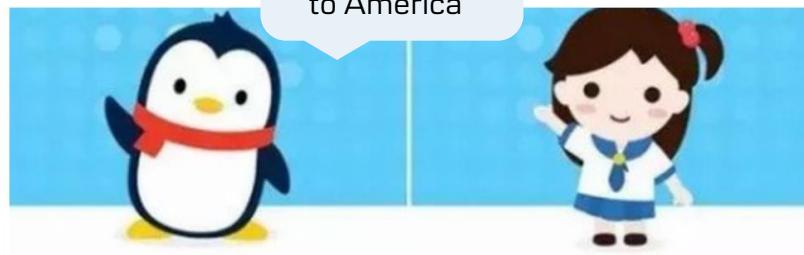
by Kenneth Tan — May 5, 2018 in News

Chinese chatbots shut down after anti-government posts

By Kerry Allen
BBC Monitoring

① 3 August 2017

"My China dream is to go to America"



AT&T 9:59 AM 97% ← uxchat.me 4 :

UX Bear

Bonjour FR

How would you describe the term «bot» to your grandma? 🤪

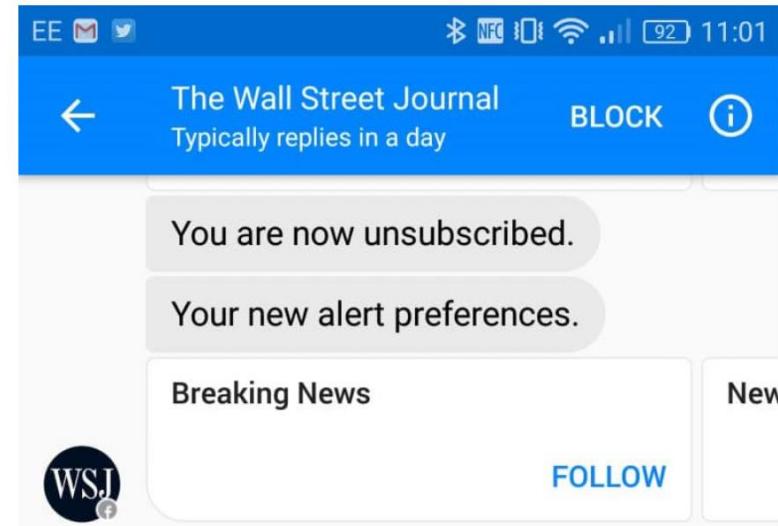
My grandma is dead

UX Bear

Alright! Thank you for your feedback... 🌟

Credit: Chatbot.fail

Source: bbc.com, the wallstreetjournal.com, uxchatme.com, twitter



Microsoft's Chatbot Zo Calls The Qur'an Violent And Has Theories About Bin Laden

Yes, this is real.

Alex Kantrowitz
BuzzFeed News Reporter

Posted on July 3, 2017, at 11:01 a.m. ET

Tweet Share Copy

No thanks!
Today at 4:07pm

Today at 4:07pm

Good For Now...

Today at 4:07pm

Are you sure you want to go!

Today at 4:07pm

Yes! Maybe not...

Bot powered by Motion AI

Type something...

SEND

What's the weather like this weekend?

Are you on a boat? Because I was not able to find any results for that location.

What's the weather like in Brooklyn this weekend?

The weather in Brooklyn, NY is 46°F and clear.

This weekend?

Excusez-moi?

WEEKEND

Sorry, dozed off for a second. What were you saying?

Credit: Chatbot's Life

Learnings

Building a bot is easy, but it is difficult to build a useful one

Control for Errors

Everything should be easy, convenient, and intuitive

Avoid false options

Structure your Data Collecting Method

Narrow the Domain

Be concise
Less is more

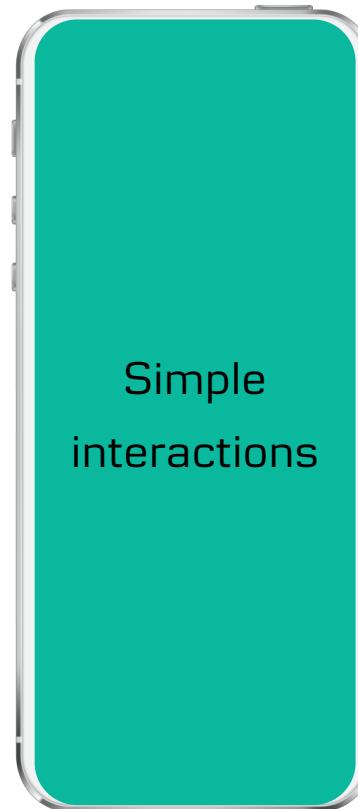
Make the application background clean

Brand and bot needs to go hand-in-hand

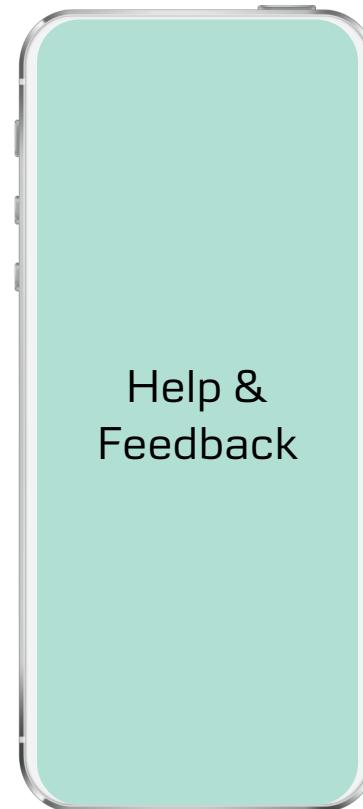
From transactional to relational



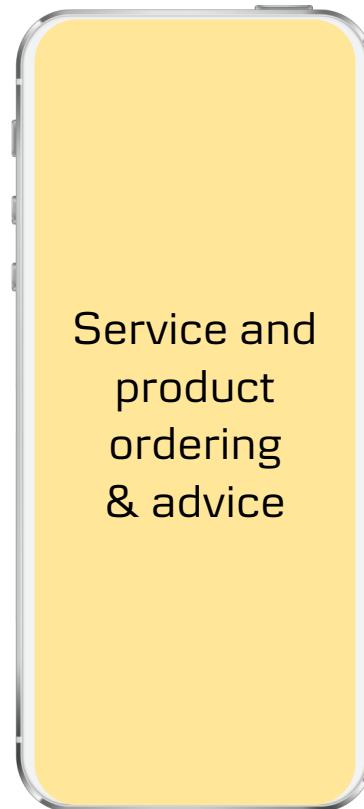
The use cases for conversational design are almost endless... success is dependent on understanding customer preferences and changing expectations



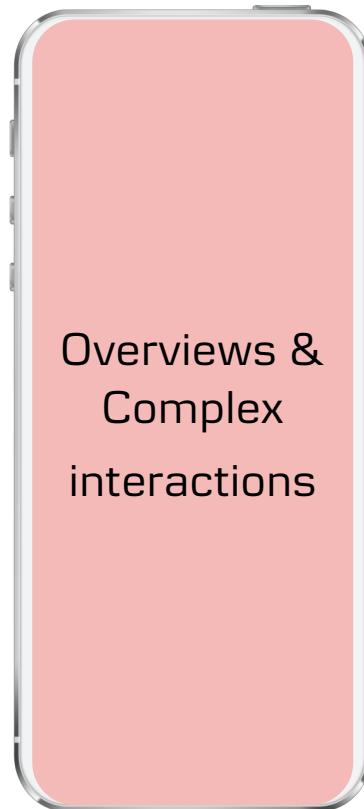
Simple
interactions



Help &
Feedback

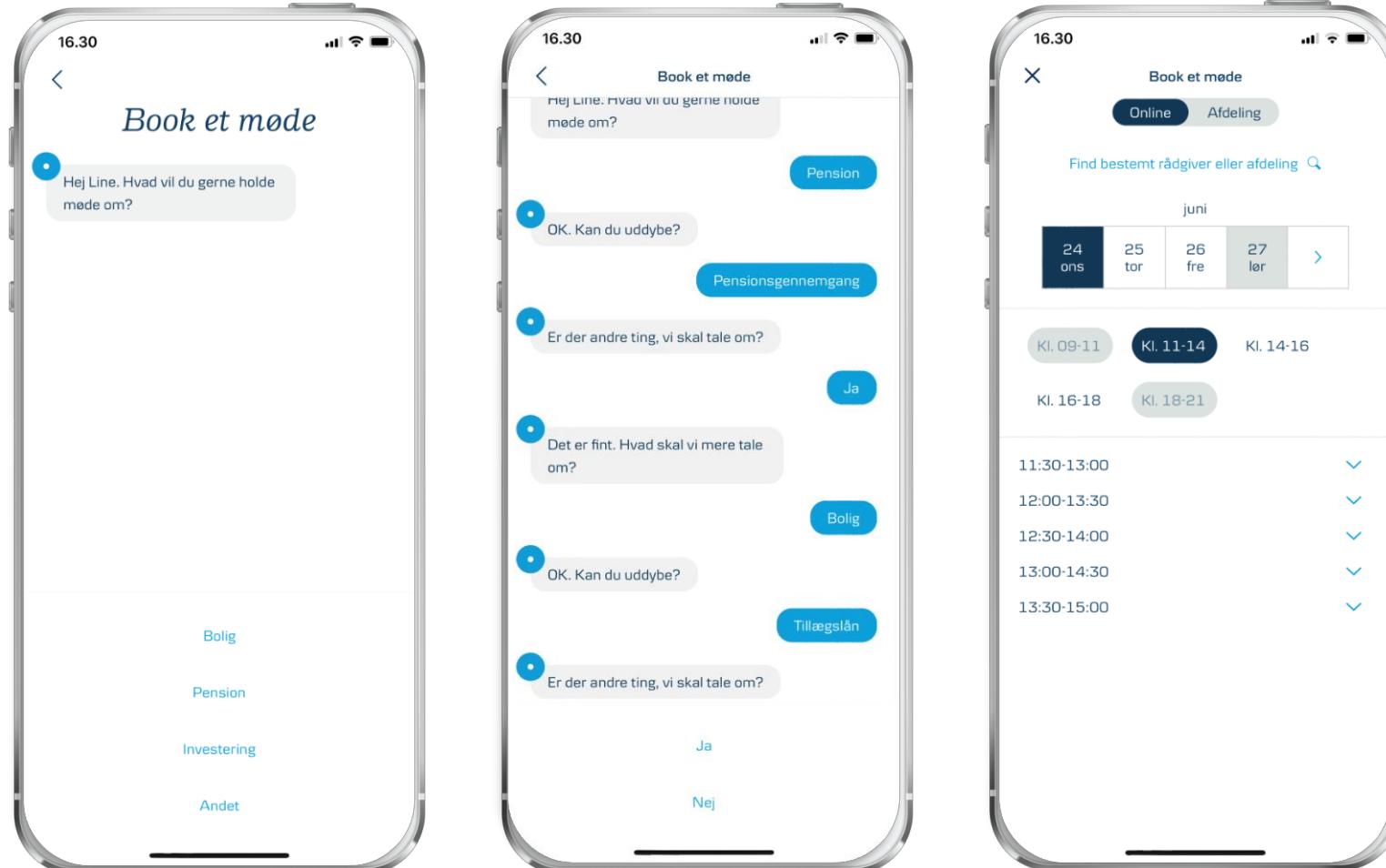


Service and
product
ordering
& advice

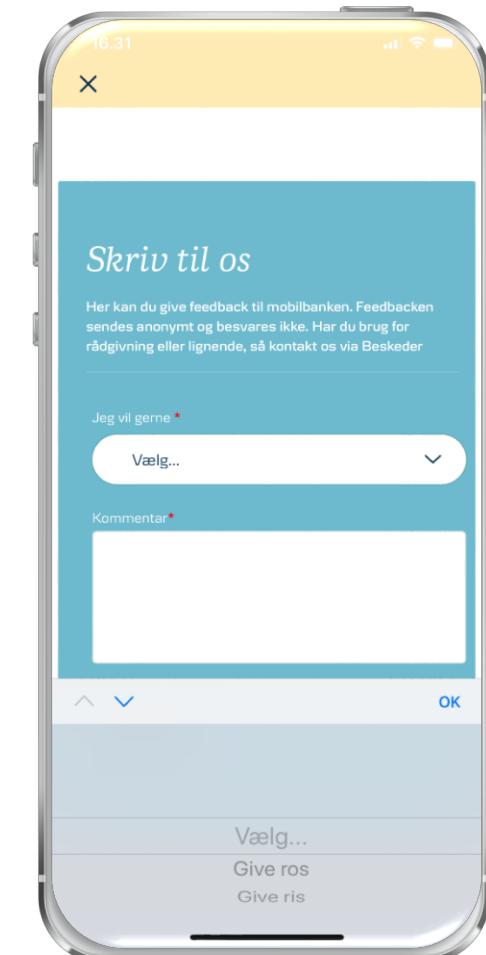
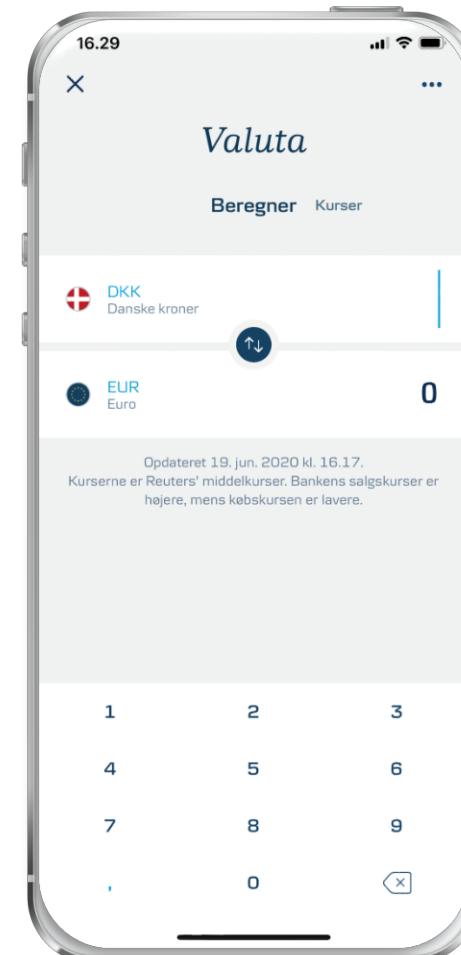
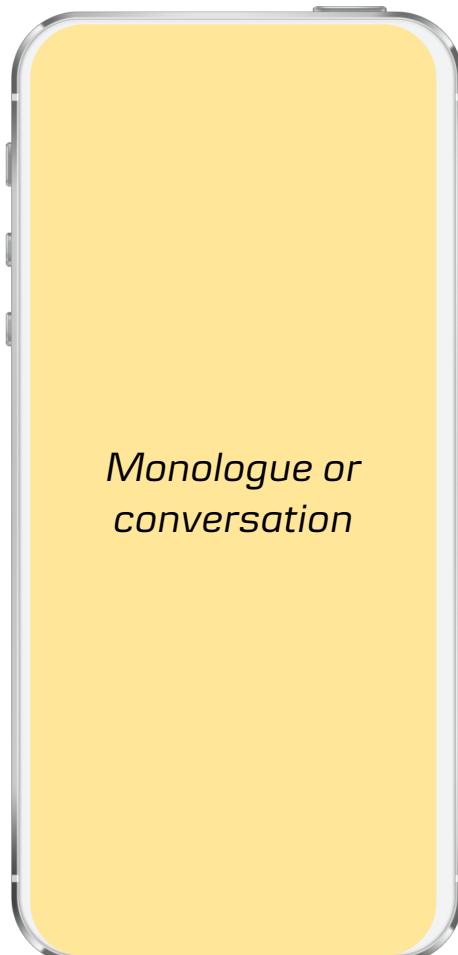


Overviews &
Complex
interactions

Learning - Customers wanting to book a meeting...



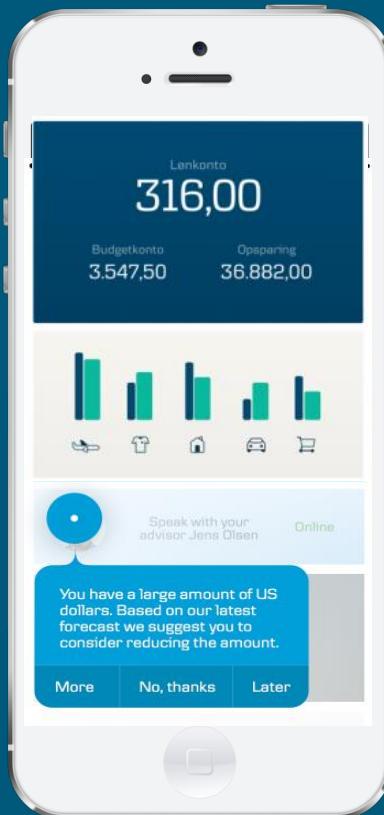
Learning - Conversational UI should be used for conversations



Simplicity - even in complex flows... Bridging high tech and high touch allowing the user to seamlessly navigate through different touchpoints to resolve their need

Simplicity – even in complex flows... Bridging high tech and high touch allowing the user to seamlessly navigate through different touchpoints to resolve their need

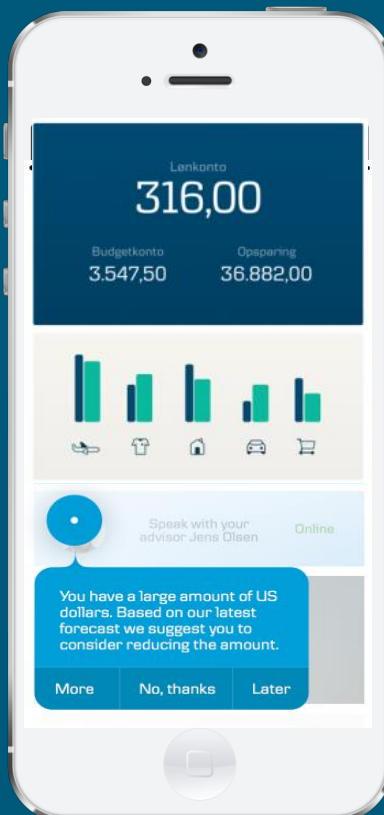
Customer receives a proactive message



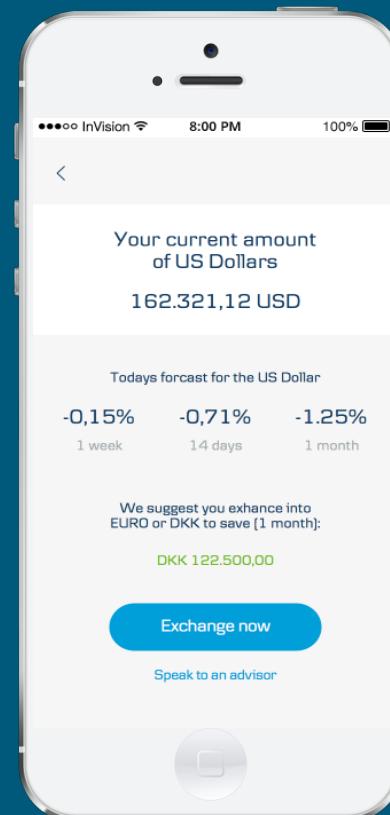
Big Data

Simplicity - even in complex flows... Bridging high tech and high touch allowing the user to seamlessly navigate through different touchpoints to resolve their need

Customer receives a proactive message



Customers reads the message and insight

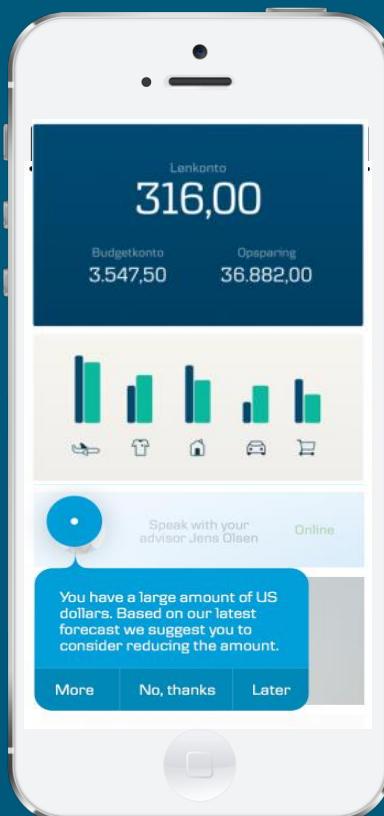


Big Data

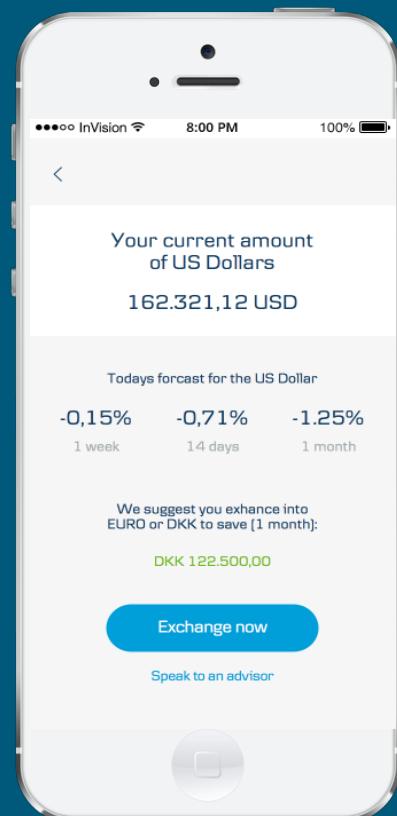
1-to-1

Simplicity - even in complex flows... Bridging high tech and high touch allowing the user to seamlessly navigate through different touchpoints to resolve their need

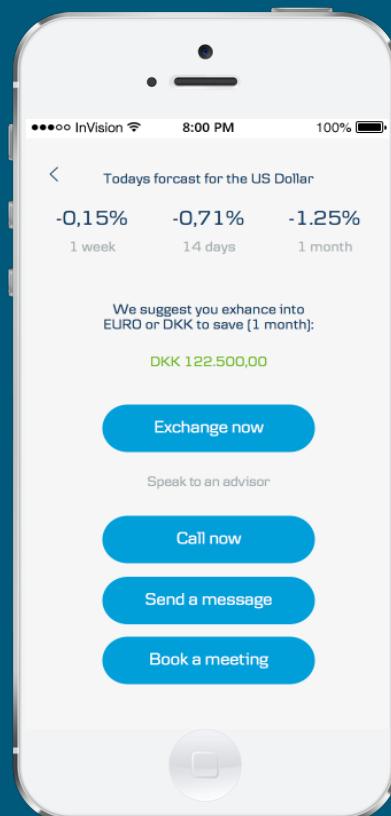
Customer receives a proactive message



Customer reads the message and insight



Customer chooses to contact an advisor



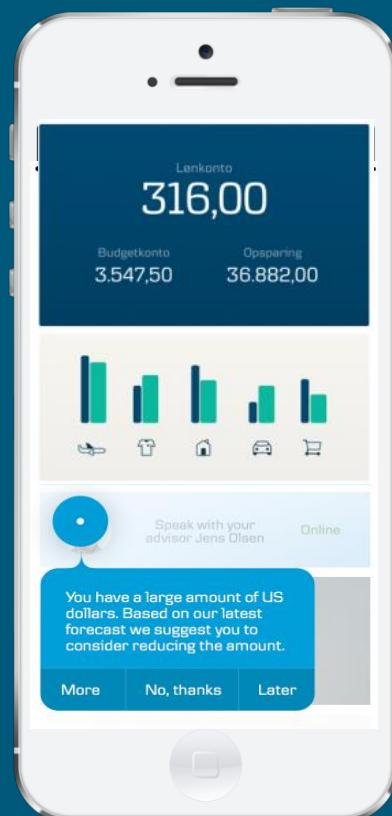
Big Data

1-to-1

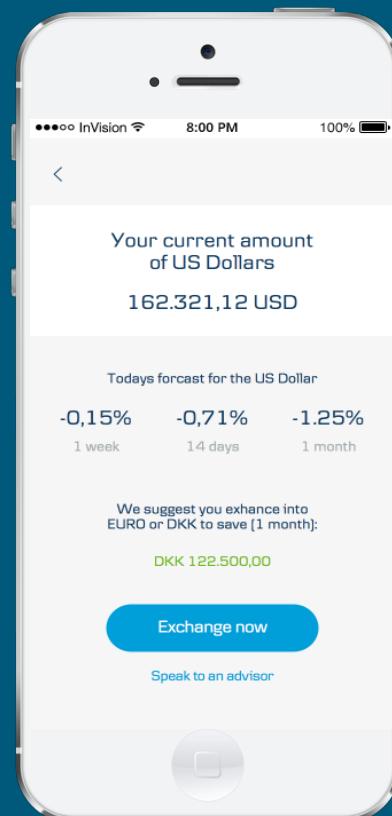
Contact strategy

Simplicity - even in complex flows... Bridging high tech and high touch allowing the user to seamlessly navigate through different touchpoints to resolve their need

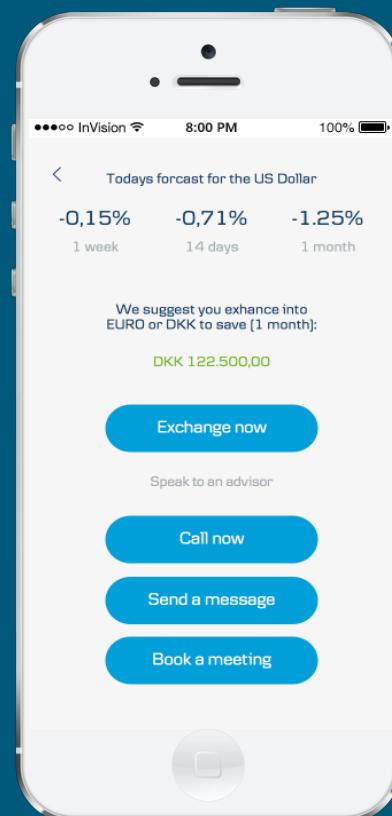
Customer receives a proactive message



Customer reads the message and insight



Customer chooses to contact an advisor



Customer chooses to call the advisor - and calls



Big Data

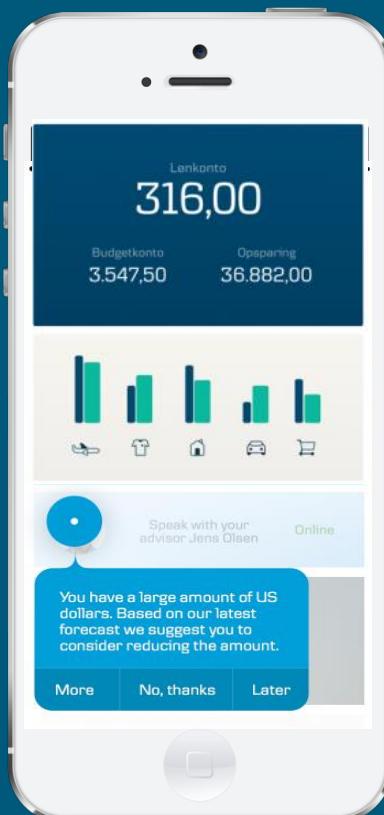
1-to-1

Contact strategy

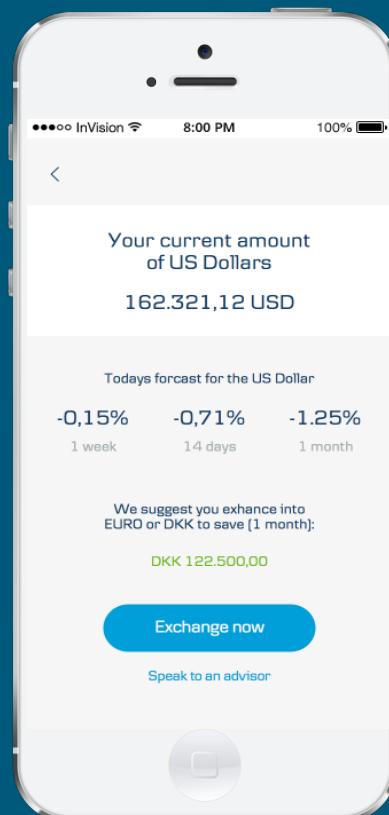
Omni-channel

Simplicity – even in complex flows... Bridging high tech and high touch allowing the user to seamlessly navigate through different touchpoints to resolve their need

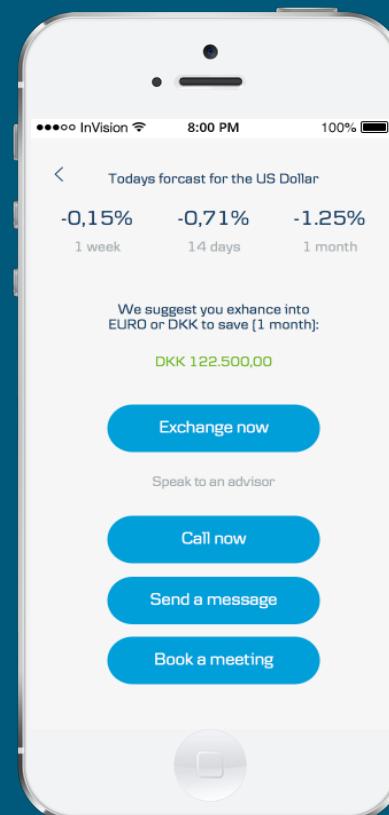
Customer receives a proactive message



Customer reads the message and insight



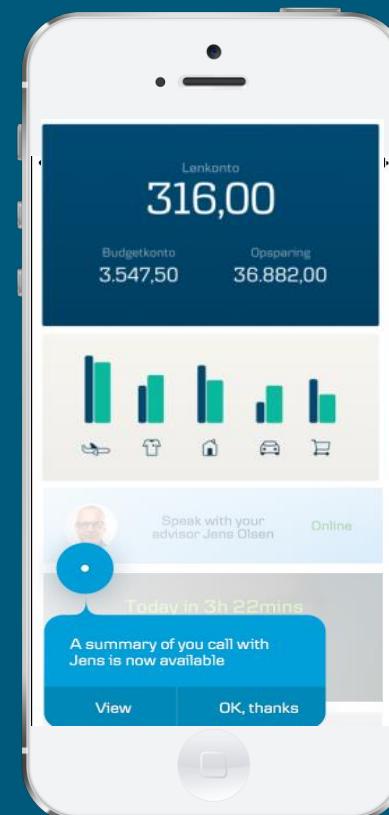
Customer chooses to contact an advisor



Customer chooses to call the advisor – and calls



Customer receives minutes from the call



Big Data

1-to-1

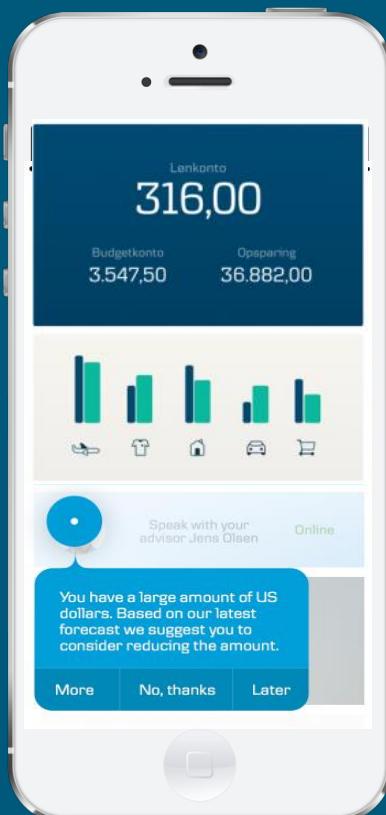
Contact strategy

Omni-channel

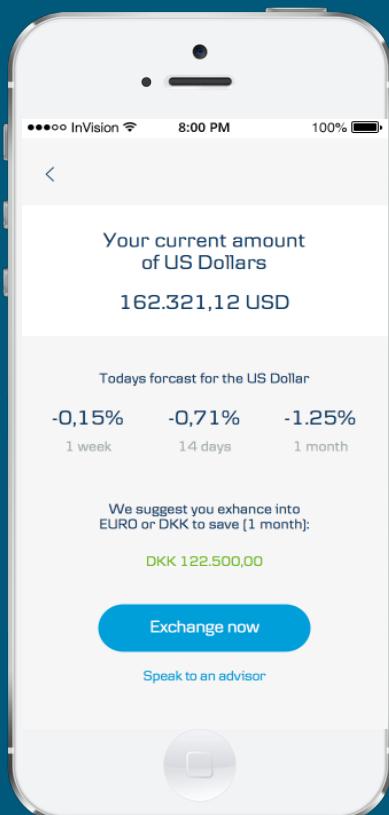
Advisor systems

Simplicity - even in complex flows... Bridging high tech and high touch allowing the user to seamlessly navigate through different touchpoints to resolve their need

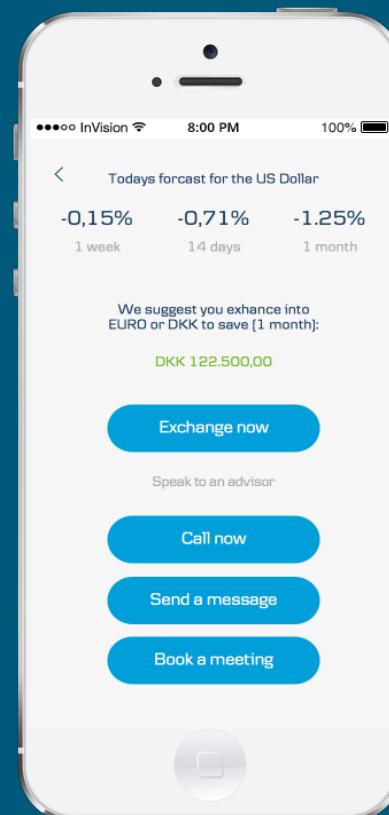
Customer receives a proactive message



Customer reads the message and insight



Customer chooses to contact an advisor



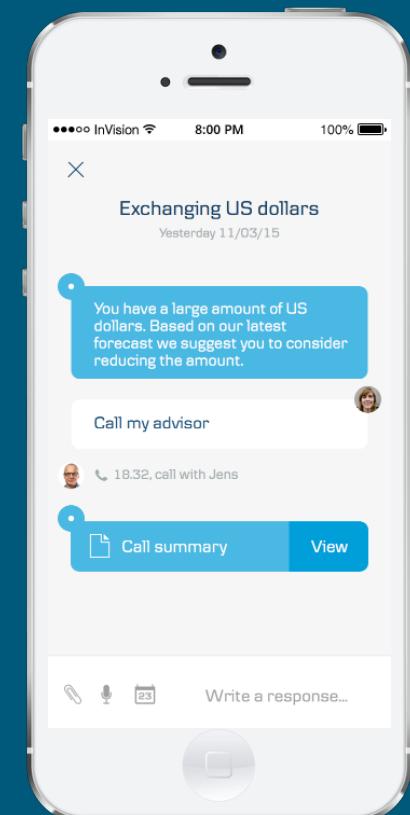
Customer chooses to call the advisor - and calls



Customer receives minutes from the call



Conversation archive



Big Data

1-to-1

Contact strategy

Omni-channel

Advisor systems

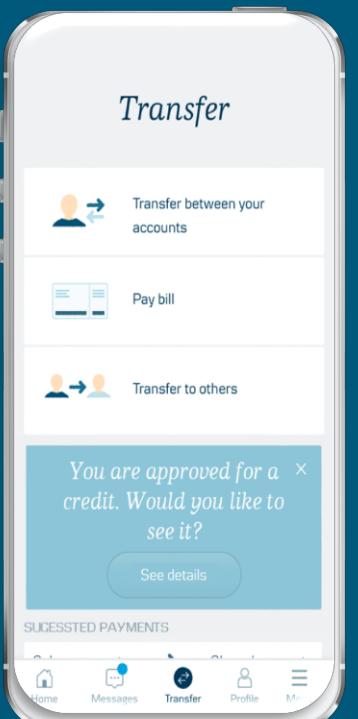
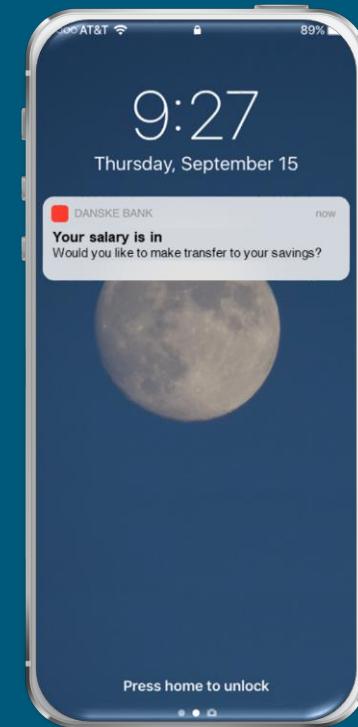
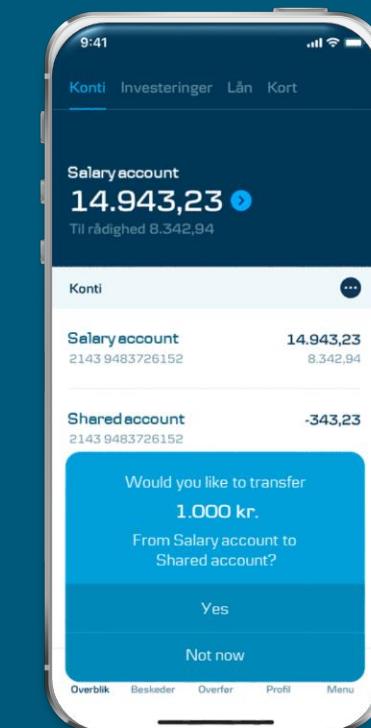
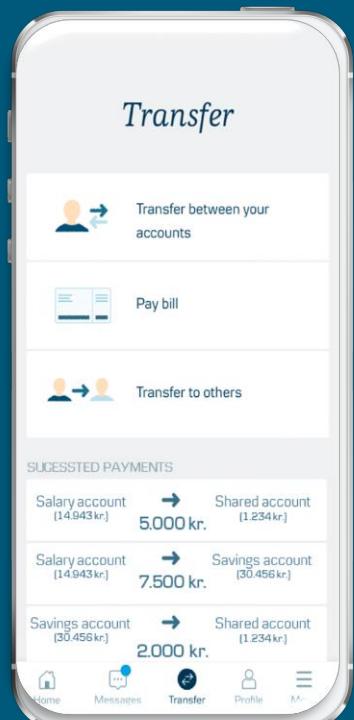
CRM

Our ambition is to deliver a contextual and personalized customer experience

PIVOTING OUR FOCUS ...

From solely conversational
... to contextual interactions

- Behavioral clustering
- Personalized digital sales
- Embedded (IoT, Voice)



... TO DRIVE MORE CONTEXTUAL ENGAGEMENT



?

Line Munkholm Haukrogh

SVP, Head of Digital Banking - Retail Channels
linj@danskebank.dk



Conversational UI

WHERE TO GO FROM HERE?

Ayoub Hajjem
Team Lead, Trifork

TRIFORK®
...think software

Human terms



Smart, can understand
humans

Conversation



Dynamic, unpredictable
and interactive

Why now?

**Power of
Chat**

**Customer
Expectations**

**Tooling
Maturity**

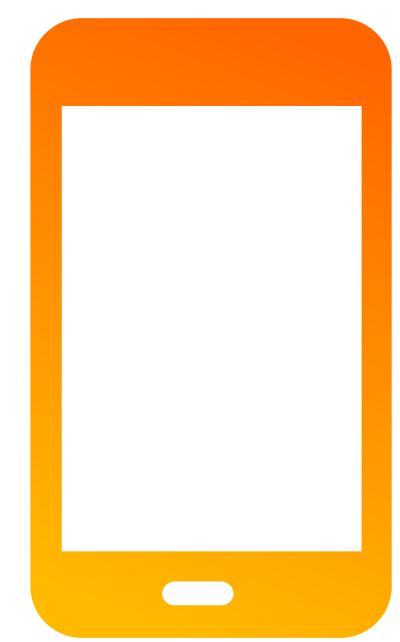
**Natural
Language
Processing**

**Guidelines
and Best
Practices**



Let's take a few
steps back...

COMMUNICATION WITH THE BACKEND



App



Backend

Different ways of communication

**Imperative
Approach**

Data Driven UI

**Backend
Driven UI**

A blurred background image of several people working on laptops in an office environment. A man in the center is looking at a screen displaying an email inbox. Two women are visible on the right, one holding a coffee cup. Two cups of coffee are on the desk in the foreground.

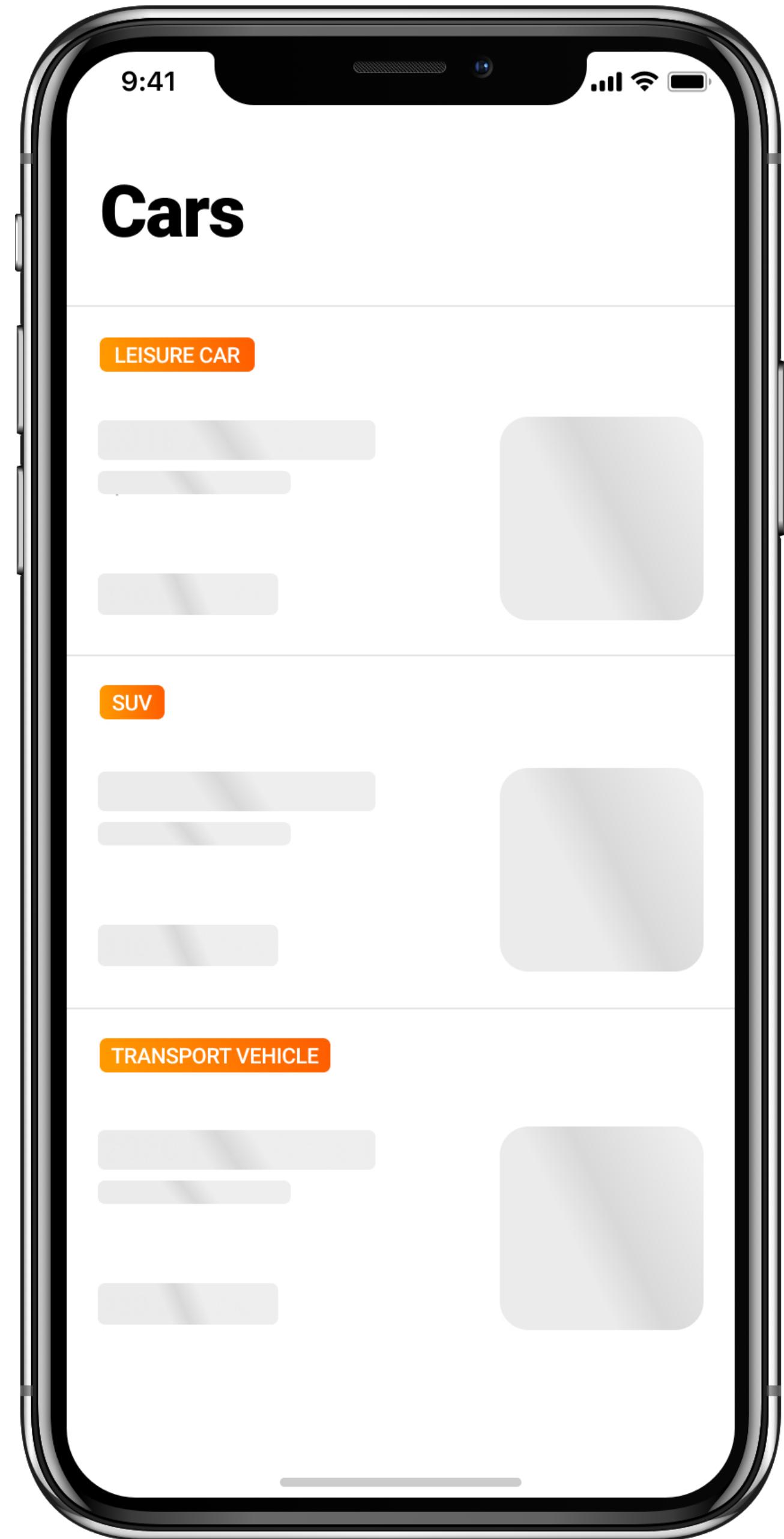
Building UI

Imperative Approach

IMPERATIVE APPROACH

1.

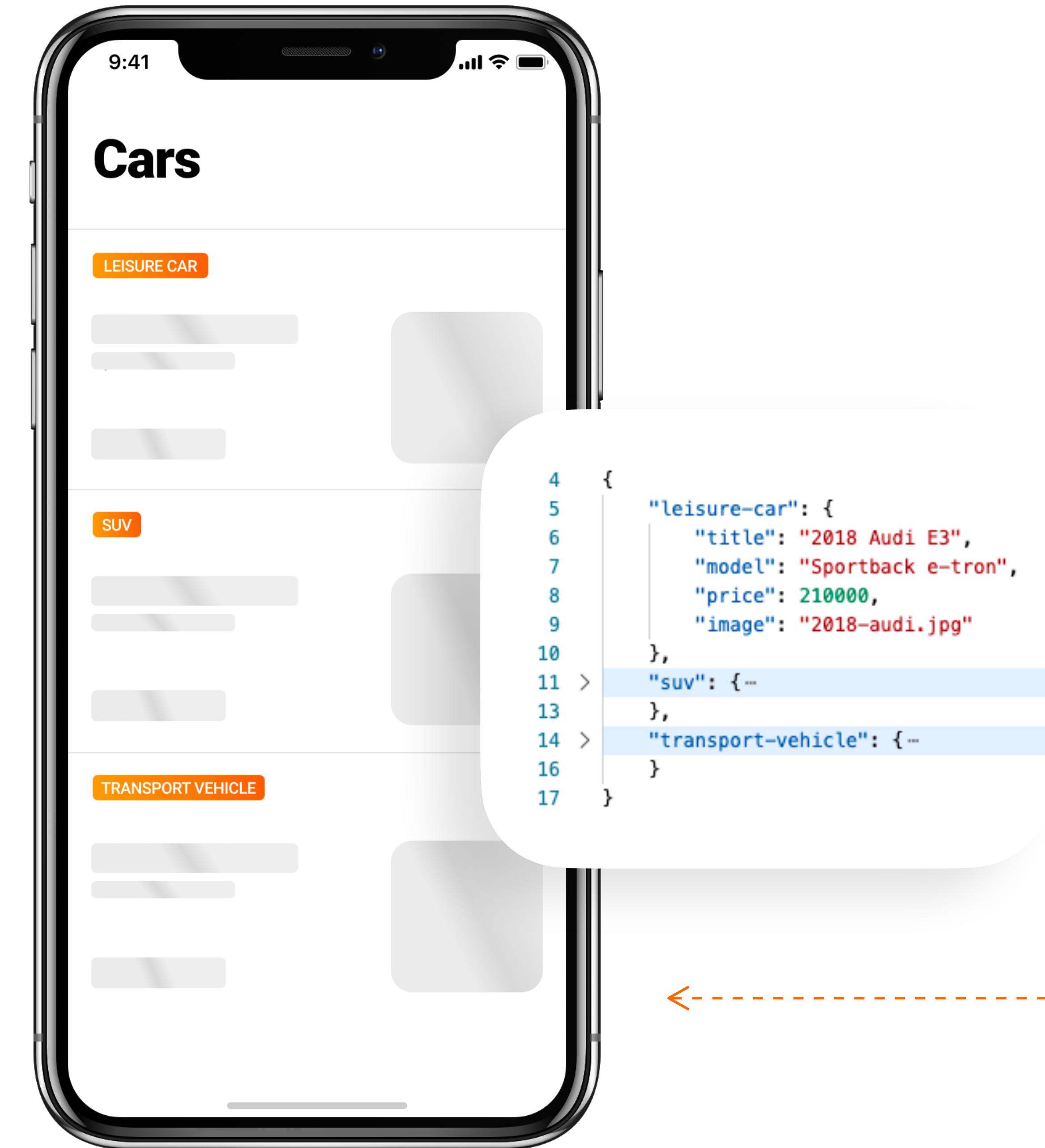
**Build fixed UI on
the mobile client**



IMPERATIVE APPROACH

2.

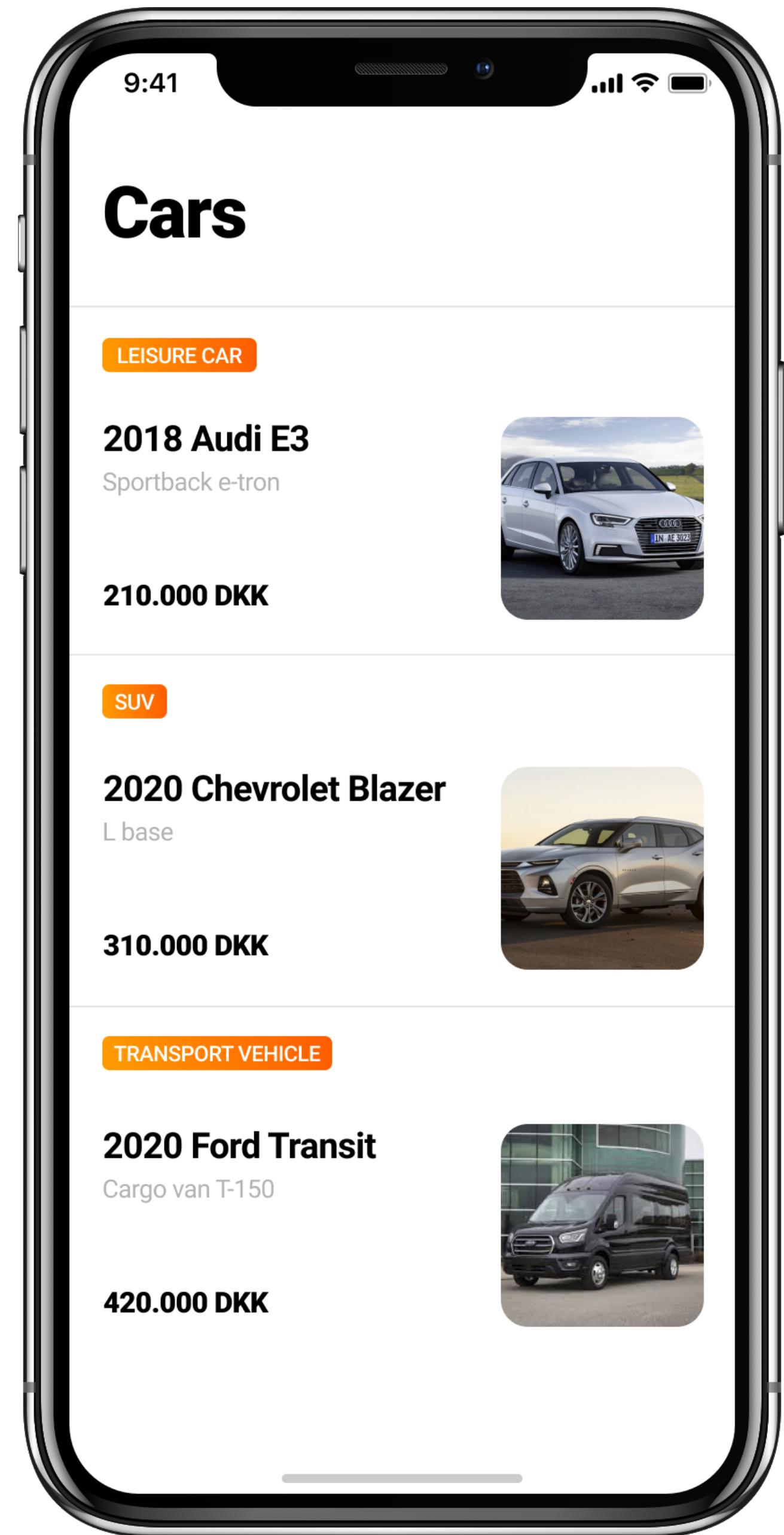
The server
returns data



IMPERATIVE APPROACH

3.

**Mobile client fills
out the UI with
the given data**



A blurred background image showing three people working at a desk. One person is in the foreground on the left, another is in the center, and a third is on the right. They are all looking at their laptops, which display various software interfaces. There are also two coffee cups on the desk.

Building UI

Backend Driven UI

BACKEND DRIVEN UI

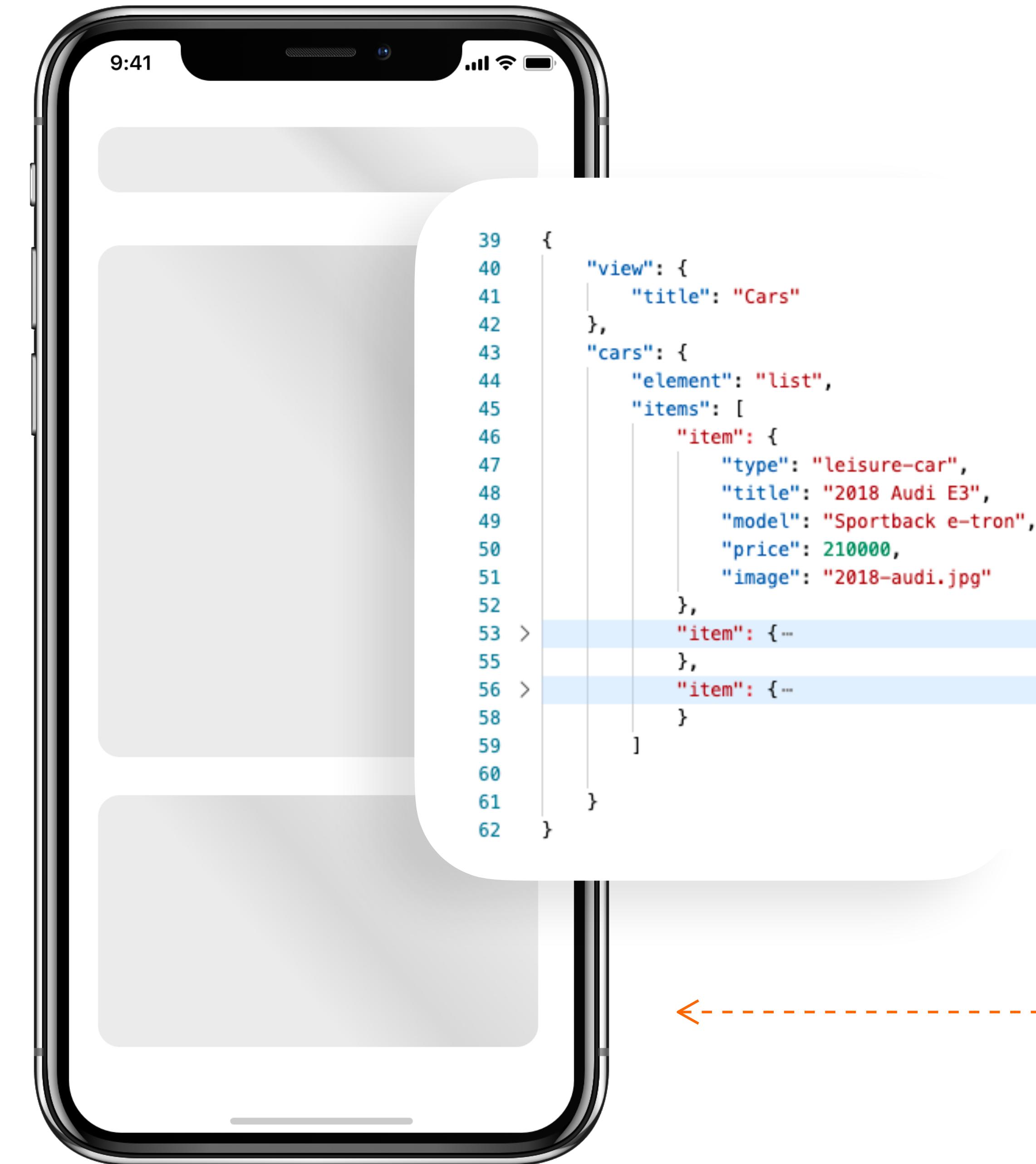
1.

**Mobile client
defines UI
components
(lists, buttons,
labels)**



2.

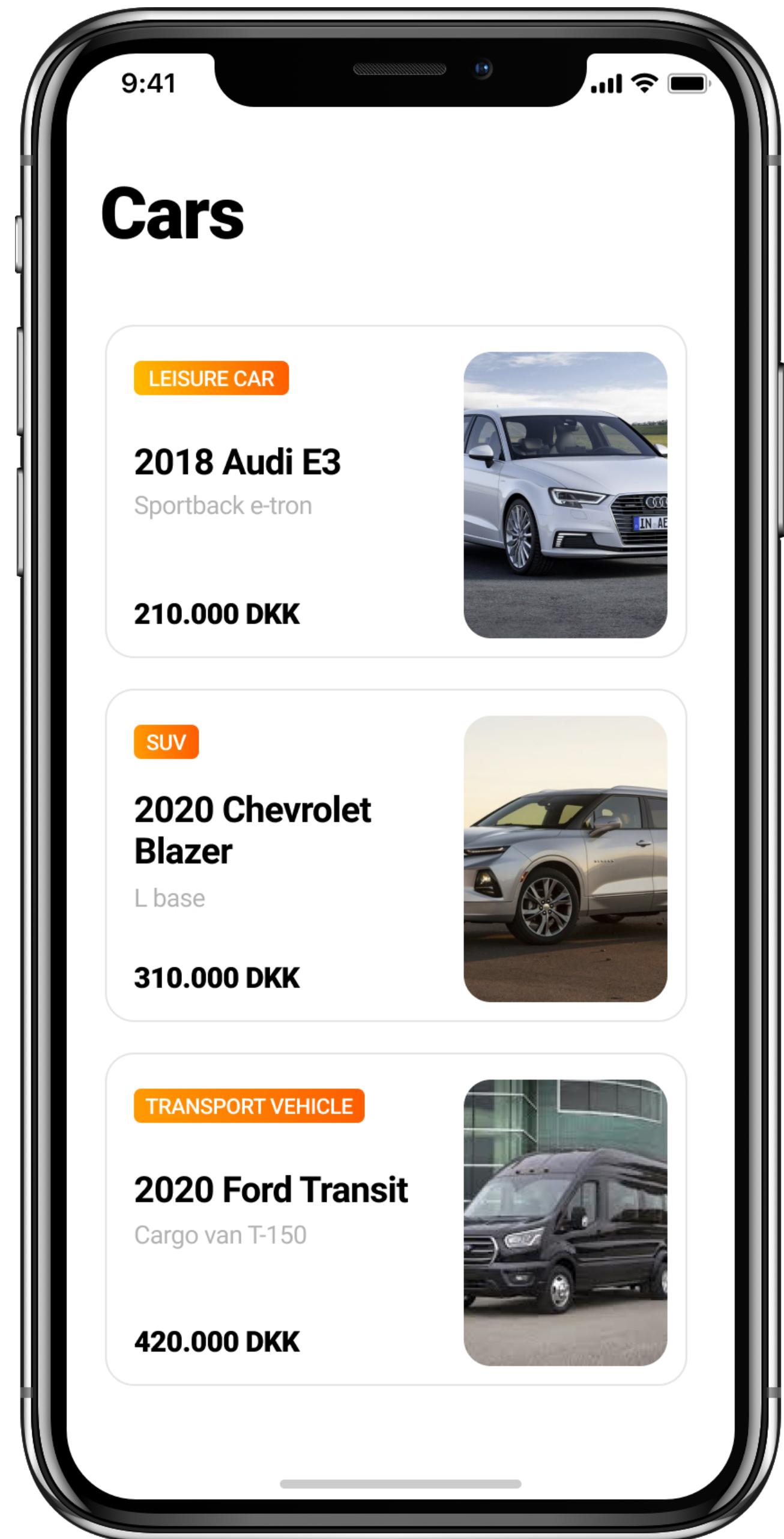
The backend
dictates the UI



BACKEND DRIVEN UI

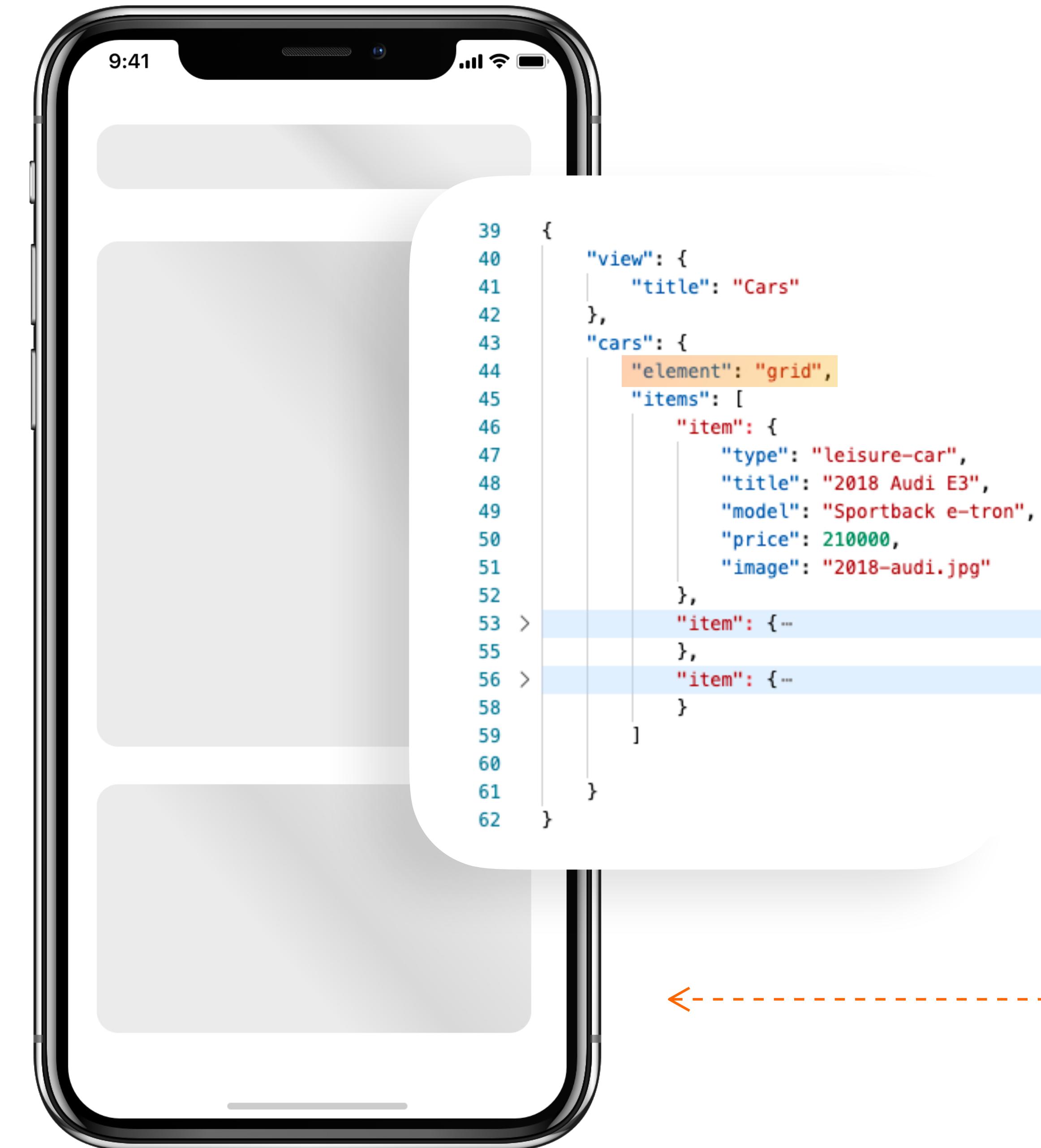
3.

**Mobile client
renders the
predefined UI
components**



4.

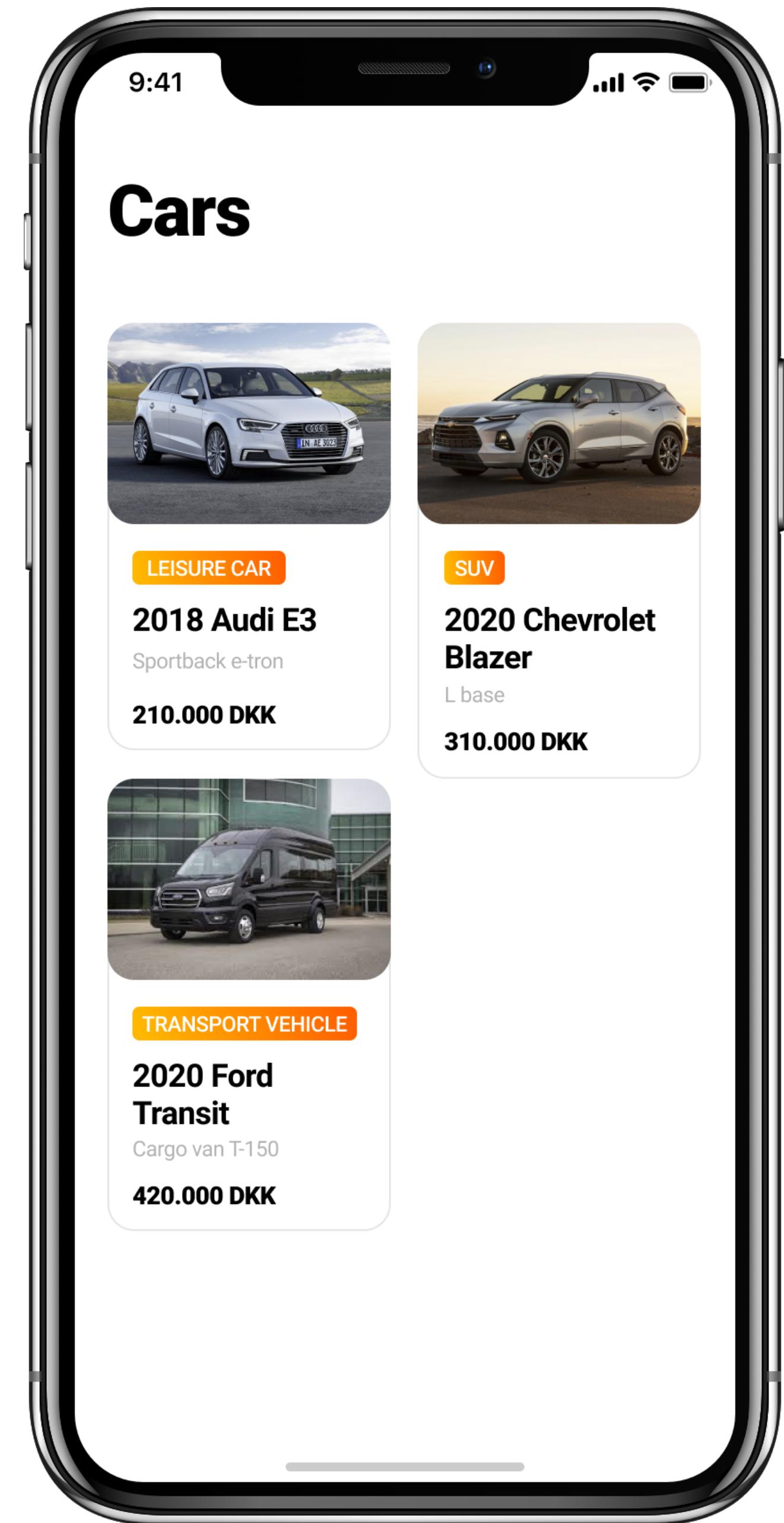
The UI can
easily be
updated on the
fly



BACKEND DRIVEN UI

5.

**Mobile client
renders the UI
accordingly**

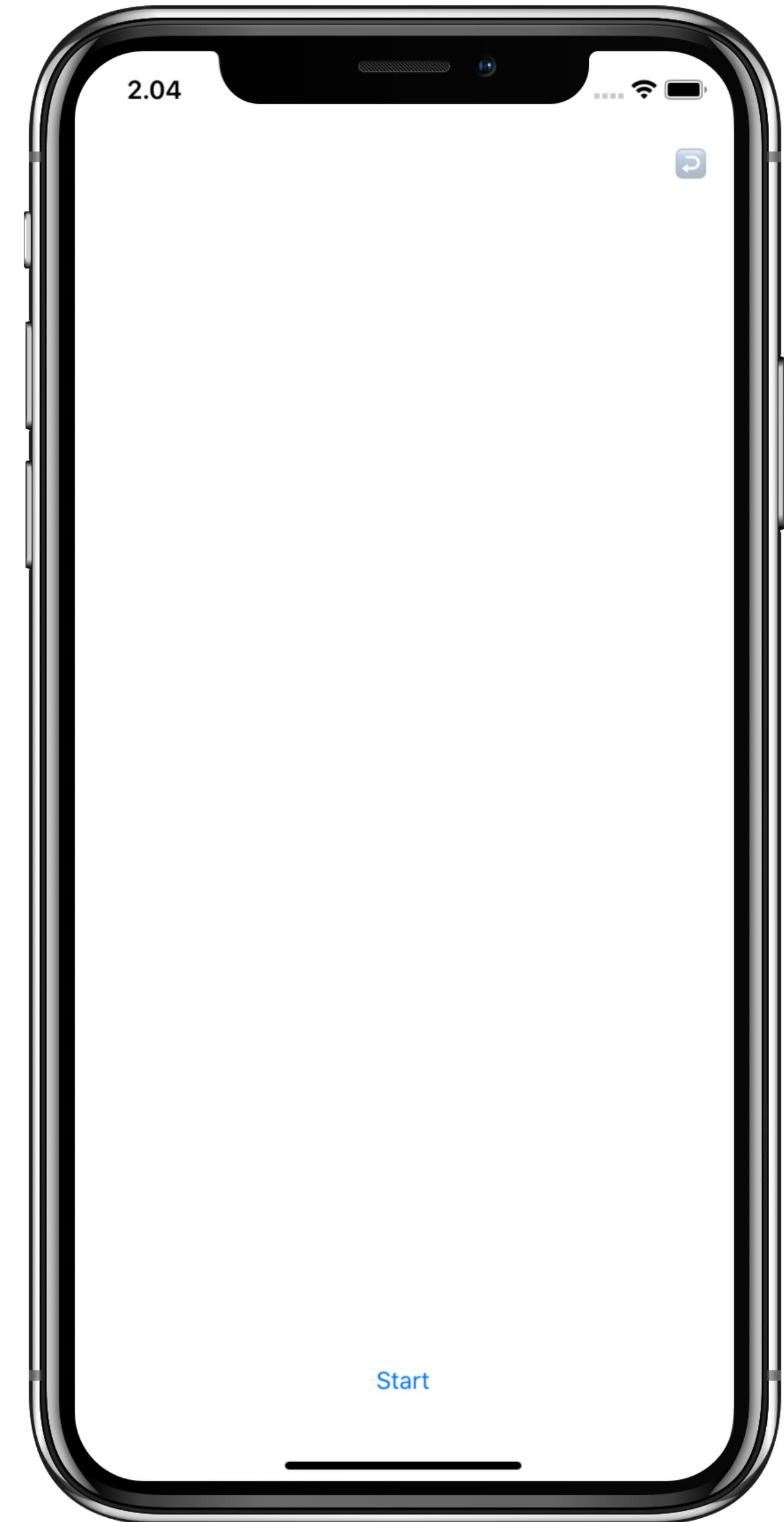


A blurred background image of an office setting. In the foreground, a person's hands are visible on a laptop keyboard. The laptop screen displays an email inbox with many messages listed. In the background, other people are working at their desks, and there are coffee cups and a smartphone on the desk.

Conversational UI

Back to Conversational...

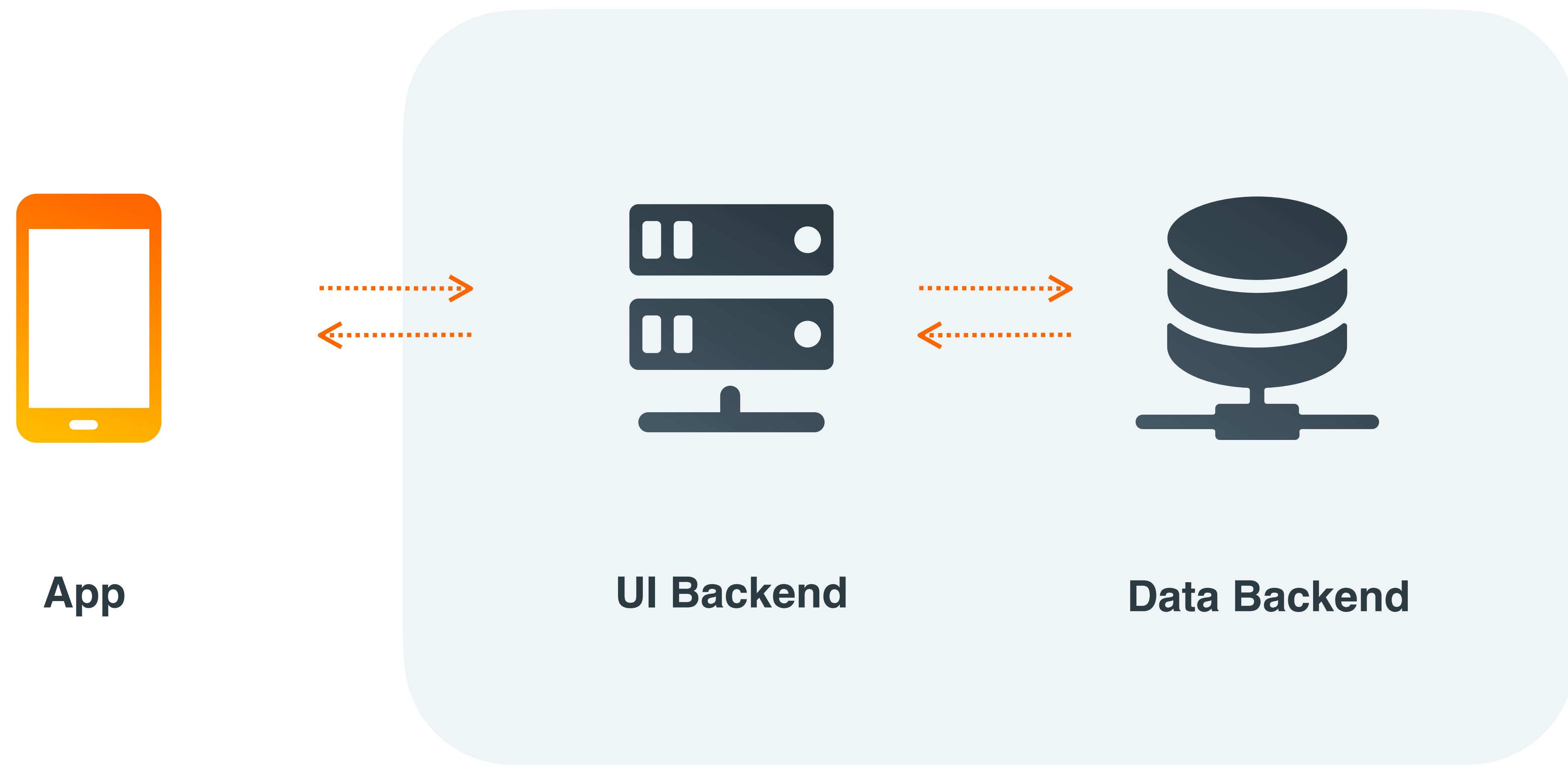
**Dynamic,
unpredictable
and interactive**



**Notice dynamic
components:**

- Lists
- Carousel
- Slider
- Number pad
- Free text
- Date picker
- Address autocomplete

THE ARCHITECTURE



Human terms

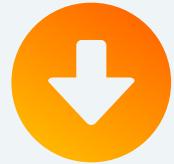


Smart, can understand
humans



Natural Language Processing

Conversation



Dynamic, unpredictable
and interactive



Backend Driven UI

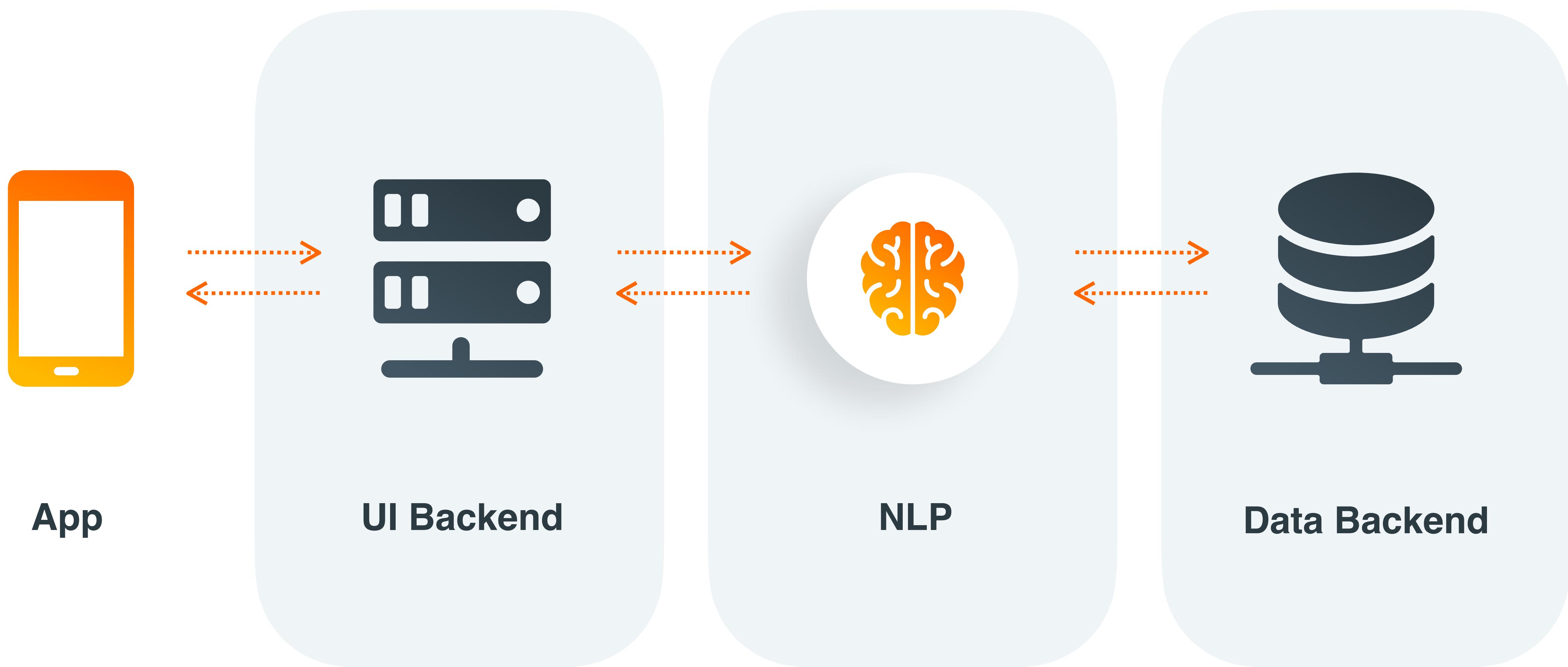


CONVERSATIONAL UI

Why Natural Language Processing?

- Human-like
- Intuitive (complexity)
- Fixed flow vs. Dynamic flow
- Predefined answers
- Know your customer
- Sentiment analysis
- Building relationships with your customer

WHY NATURAL LANGUAGE PROCESSING?

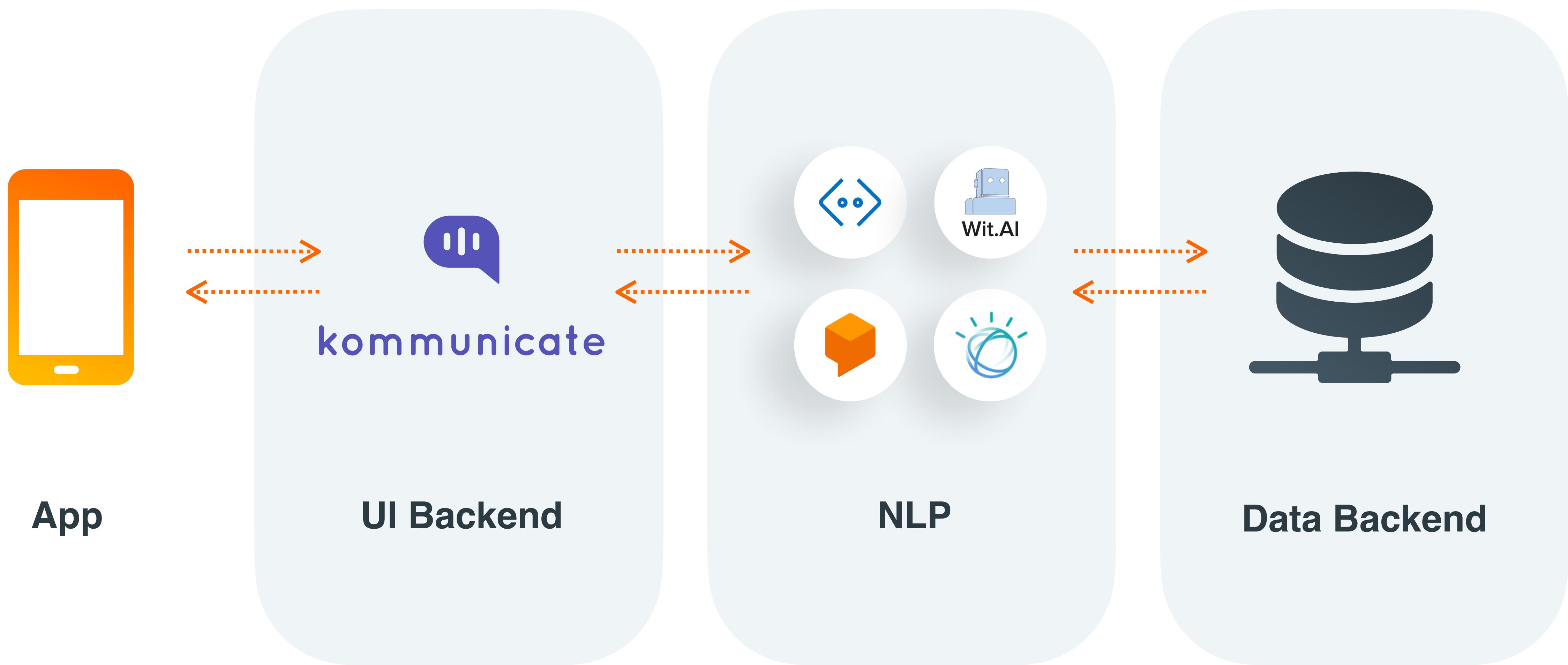


A blurred background image showing three people working at a desk. One person is in the foreground on the left, another is in the center, and a third is on the right. They are all looking at their laptops, which display various software interfaces. There are also two coffee cups on the desk.

Conversational UI

Tools in the market

TOOLS IN THE MARKET



Key Takeaways

-  Backend driven UI is the only way to go
-  Be smart and make it smart with NLP
-  This is a new skill set
-  Focus on your business and build a custom solution
-  Use the best practices that make sense for your business



During this presentation...

Did you identify a customer interaction (either sales or service oriented) where conversational UI could make a difference?

A photograph of three sailors in a M32 sailboat on the water. The boat is dark-colored with white text and logos. The text "TRIFORK" and "...think software" is visible on the side. The number "M32" and "SERIES" are also present. The sailors are wearing helmets and sunglasses, and one is wearing a white shirt with "TRIFORK" on it. The background shows a body of water and some trees in the distance.

Thank you and see you
next time!

TRIFORK

...think software

M32
SERIES

TRIFORK
...think software