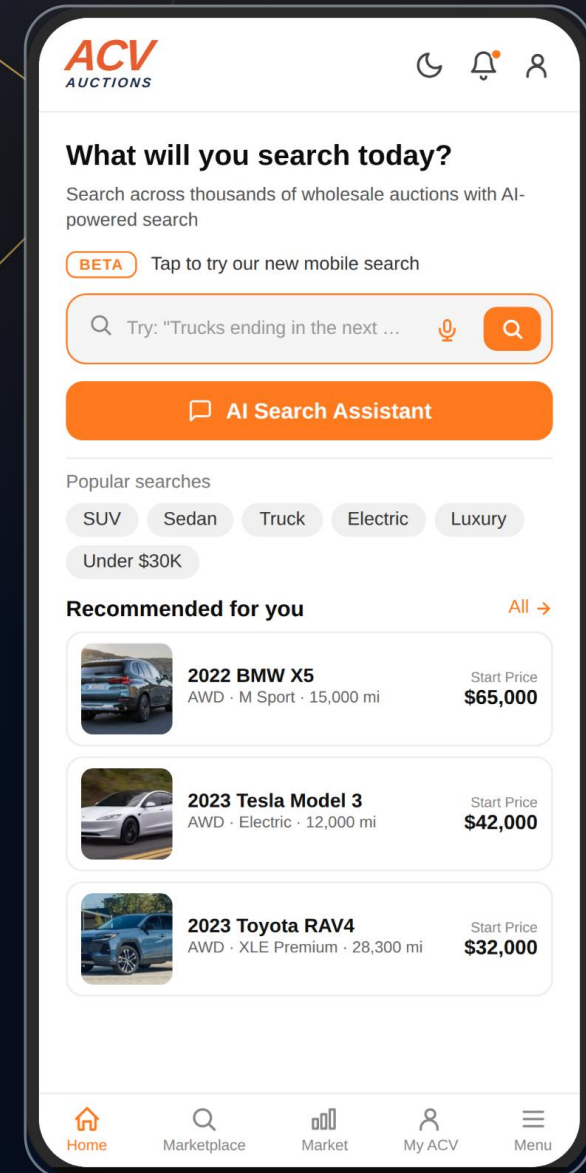


PRODUCT DESIGN CASE STUDY

ACV EASE

AI-powered search & discovery for wholesale vehicle auctions.

Margaux Kan · Senior Product Design Leader



BUSINESS CONTEXT

A quick primer before the case study

ACV Auctions runs an online wholesale marketplace where car dealers buy and sell used vehicles at auction — think of it as a stock exchange for dealers, instead of a traditional in-person auction lot. Independent dealers depend on ACV to restock their lots fast, often bidding from their phones between customer appointments and test drives.

The buyer

Independent used-car dealers who buy inventory in bulk, fast, and on the move — on the lot, at an appraisal, between customers.

The old experience

Search meant clicking through rigid filters and checkboxes, which slowed buyers down and let strong inventory slip past unnoticed.

The bet

Let buyers search in plain language instead, and have AI surface and explain the strongest match — so search becomes a shortcut, not a chore.

The case study that follows walks through how we designed and shipped that shift, from research through impact.

ROLE & OUTCOME

Reimagining how dealers find their next car

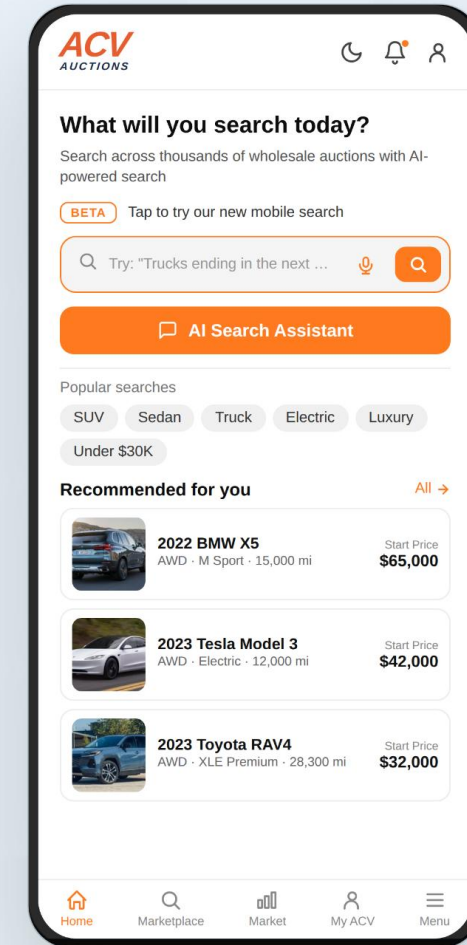
ACV EASE is a mobile-first search experience for ACV's wholesale auction marketplace. Instead of stacking rigid filters, buyers ask for what they want in plain language, by voice or text — and an AI layer surfaces the strongest opportunities, explains why they matter, and guides each buyer from search to bid.

MY ROLE Senior Product Design Manager

TIMELINE 14 weeks, 2025

PLATFORM iOS & Android

TEAM 1 Product Manager · 4 Engineers · 2 Designers



👉 Tap the screen to try the live prototype

DESIGN PROCESS

A structured path from intent to confident bid

Five phases — pushing design upstream to shape the search strategy, not just the UI.

01

Understand

Interviews & ride-alongs with 10 dealers; observed live sessions and audited the legacy filter search.

02

Frame

Mapped the search-to-bid journey and a buyer-intent model.

03

Explore

Co-designed conversational and voice search patterns.

04

Validate

Prototyped & tested natural-language and voice search with dealers.

05

Deliver

Shipped a beta with Product, Engineering & Data Science.

WHAT I LED

Framed AI-powered search as a growth bet, defined the vision for conversational, explainable discovery, and aligned Product, Engineering & Data Science around buyer intent.

HOW I LED

Championed a mobile-first experience, partnered with Data Science on ranking, and used field evidence to resolve cross-team trade-offs.



Finding the right car was slow, manual, and overwhelming

Buyers run a high-volume business from their phones — between appraisals, on the lot, on the move. The old search made them work for it.

Filters, not language

Buyers had to translate what they wanted into rigid drop-downs and checkboxes, often missing inventory that didn't match the exact filter.

Thousands of live auctions

Relevant vehicles were scattered across constantly-changing auctions, hard to scan on a small screen with seconds to spare.

Good deals stayed buried

Nothing told a buyer which listing was actually a strong opportunity, so the best cars were easy to scroll right past.

HOW WE GOT HERE *Interviews & ride-alongs with 10 dealers; observed live sessions and audited the legacy filter search.*



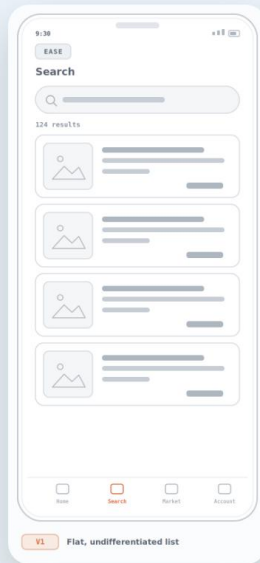
From first need to confident bid

Mapped the search-to-bid journey stage by stage to frame a buyer-intent model — and find where AI could remove friction.

	DISCOVER		EVALUATE	COMMIT	
STAGE	1. Spot a need	2. Search	3. Sift results	4. Size up the car	5. Decide & bid
DOING	On the lot	Voice / text	Results list	Vehicle page	Bid + assistant
FEELING	Hopeful	Friction	Overwhelmed	Unsure	Anxious
PAIN POINT	Restocking is reactive, time-boxed.	Wants don't fit rigid dropdowns.	Strong cars buried in the noise.	No read on whether the deal is good.	Commits on gut, low confidence.
EASE RESPONSE	Meets buyers on mobile, in the moment.	Plain-language & voice search.	Surfaces one ranked top pick + why.	AI summary, bid score, success signal.	Confident bid; assistant one tap away.

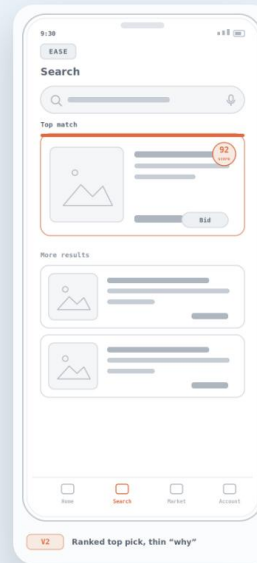
Co-designing conversational and voice search patterns

We shifted from helping buyers filter inventory to recommending the strongest opportunity — and explaining why it's worth a bid.



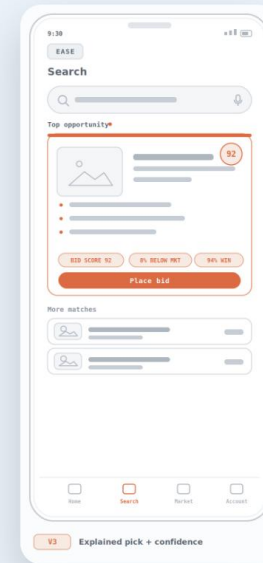
01 Flat list

Buyers think in plain language, not filter taxonomies.



02 Ranked pick

One strong, explained pick beats a long list.



03 Explained + confidence

Trust comes from the why, plus a confidence signal.

PHASE 04 • VALIDATE

Real dealers, real auctions, real feedback

We prototyped and tested natural-language and voice search with dealers in the field, not just in a lab, to confirm the explained-pick direction before build.



PERSONA

High-volume dealer, buying mobile-first between appraisals and on the lot.



DEALER QUOTE

“EASE surfaces the one car I’d have missed — like having a co-buyer in my pocket.” — Jason M., TX



KEY LEARNING

One explained pick, plus voice input, cut friction without hiding inventory.



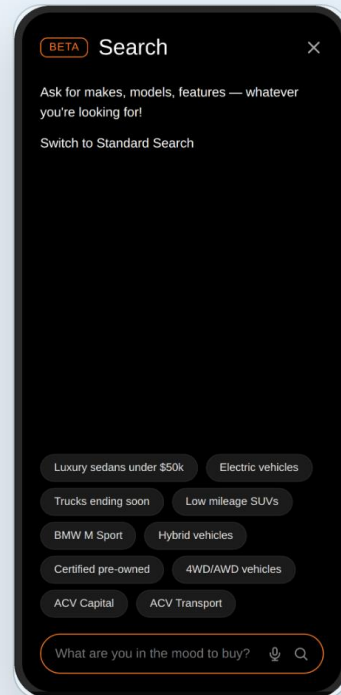
Voice Search ↗



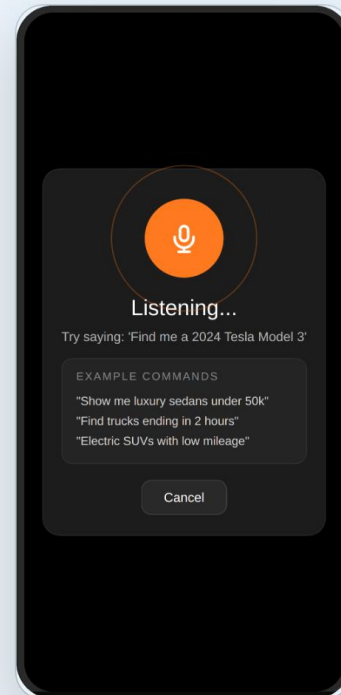
Vehicle Page Navigation ↗

One intelligent flow, end to end

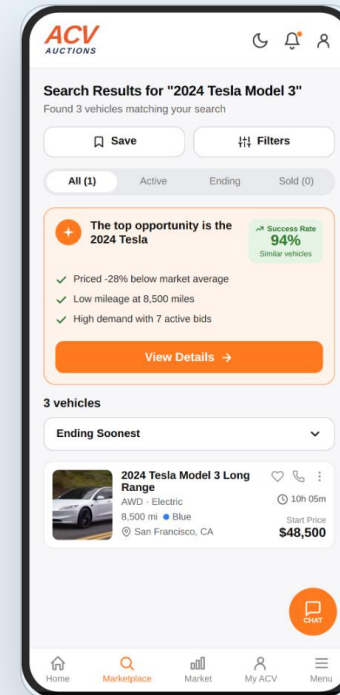
From a spoken request to a confident bid, the experience stays in one continuous, guided thread — shipped as a beta with Product, Engineering, and Data Science.



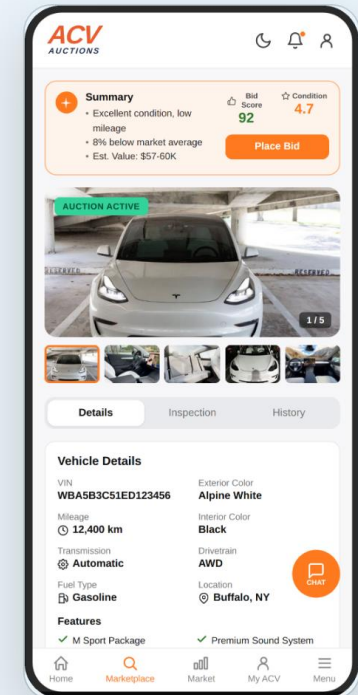
1 Ask



2 Understand



3 Surface



4 Decide

IMPACT

Early signals

Illustrative results from beta — to be replaced with measured launch data.

USER IMPACT

40%

Time to first relevant result

vs. the legacy filter search

4.3 / 5

Beta buyer satisfaction with the new search

42 dealers surveyed

BUSINESS IMPACT

+12 pts

Lift in search → vehicle-detail view

beta cohort vs. control

+6%

Bid conversion rate

beta cohort vs. control

CONCLUSION

By reframing search as a recommendation, not a filter, ACV EASE turned a slow manual chore into a fast, trusted first move — early signals point to a stronger habit and a healthier funnel at scale.



[Vehicle Page Navigation ↗](#)



[Voice Search ↗](#)