Product Case Study

Redesigning onboarding for the next million at an MVNO

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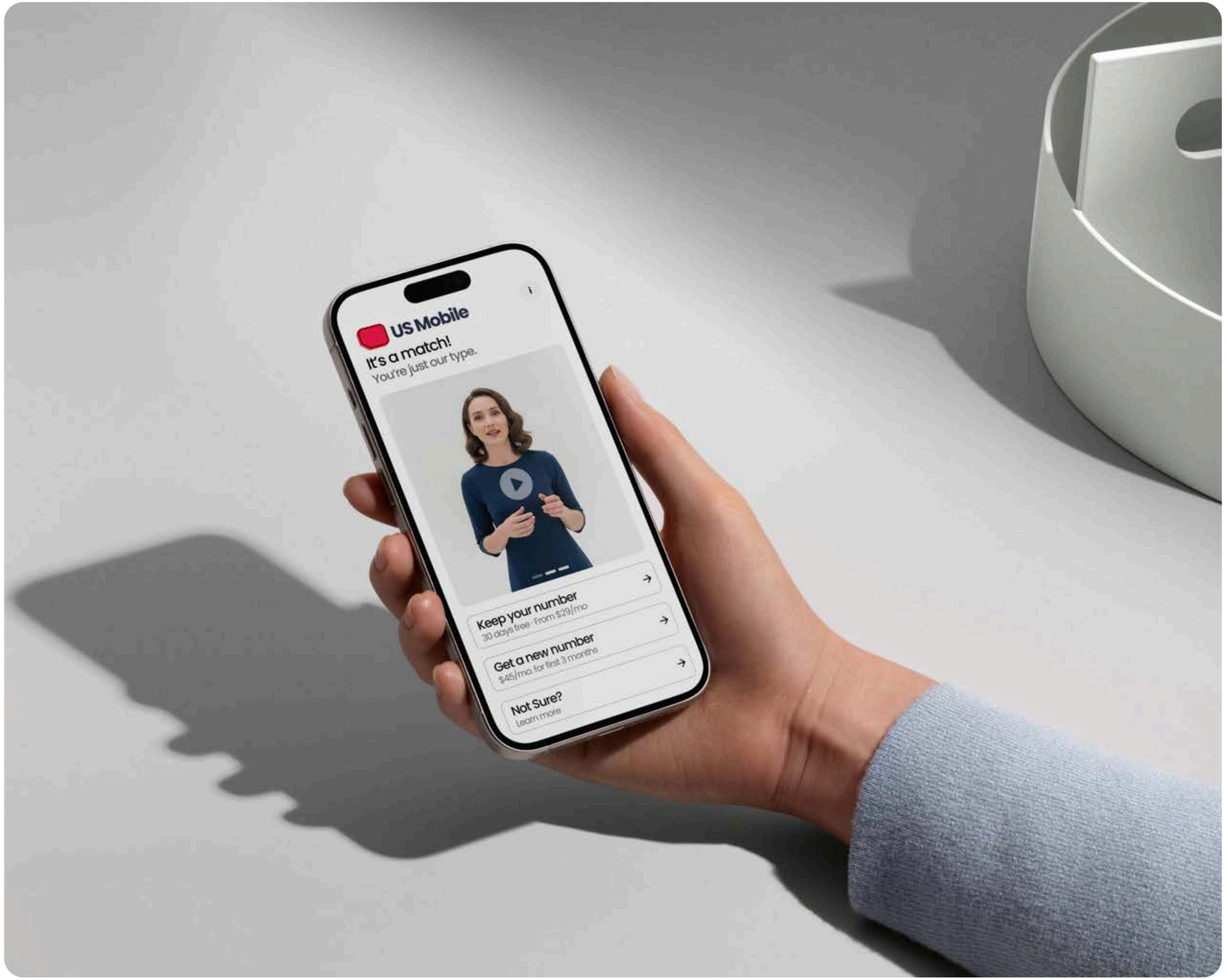
Role: Product Designer
Tools: Figma, Miro, Adobe Aftereffects
Duration: 2 weeks

Redesigning the onboarding flow for a digital-first Mobile Virtual Network Operator (MVNO) to simplify number porting, streamline eSIM activation, and reduce drop-offs, unlocking faster activation, lower support costs, and better user trust in a competitive, low-cost market.

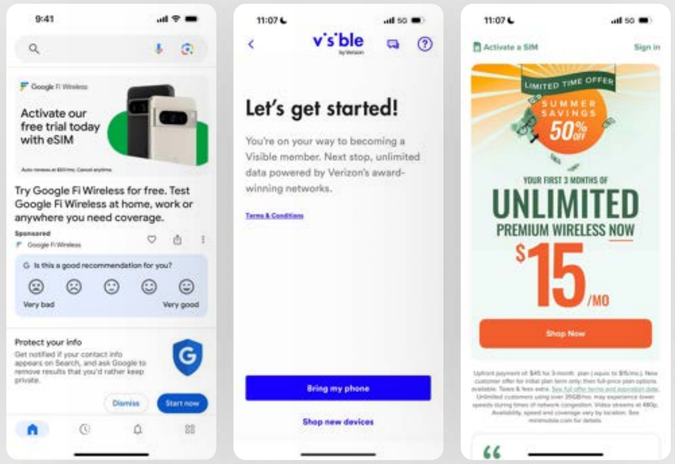


User Problem

Switching carriers is intimidating for many users due to unclear information, technical complexity, and perceived risk. US Mobile's current onboarding journey presents too many friction points for new users, especially those porting their number. Users must exit the flow to verify device compatibility and gather porting details, which adds cognitive load and reduces trust. The interface design lacks accessibility, clarity, and consistency, making the process harder for non-native English speakers and older users.

Research

Analyzed the current onboarding flow across platforms and ran competitor audits to evaluate best practices for eSIM and porting UX. Reviewed support docs, help ticket data, and customer reviews to understand friction points.



1. Reviewed onboarding flow across major MVNOs (e.g., Visible, Mint, Google Fi)

- ⚠️ CTA buttons are misleading
- ⚠️ Inconsistent UI system
- ⚠️ No System Status Updates
- ⚠️ Flow is based on Promos

2. Conducted heuristic evaluation for UX pain points across mobile and desktop

- Is your phone unlocked?
- Is your phone eSIM compatible?
- Want Warp 5G?
- Want the 90 day promo?
- Want an eSIM?
- Want GSM 5G?
- Want a physical SIM card?

3. Mapped complexity in interaction design vs accessibility best practices

Meta Insights

Mobile service experience is highly local, coverage clarity drives purchase decisions.

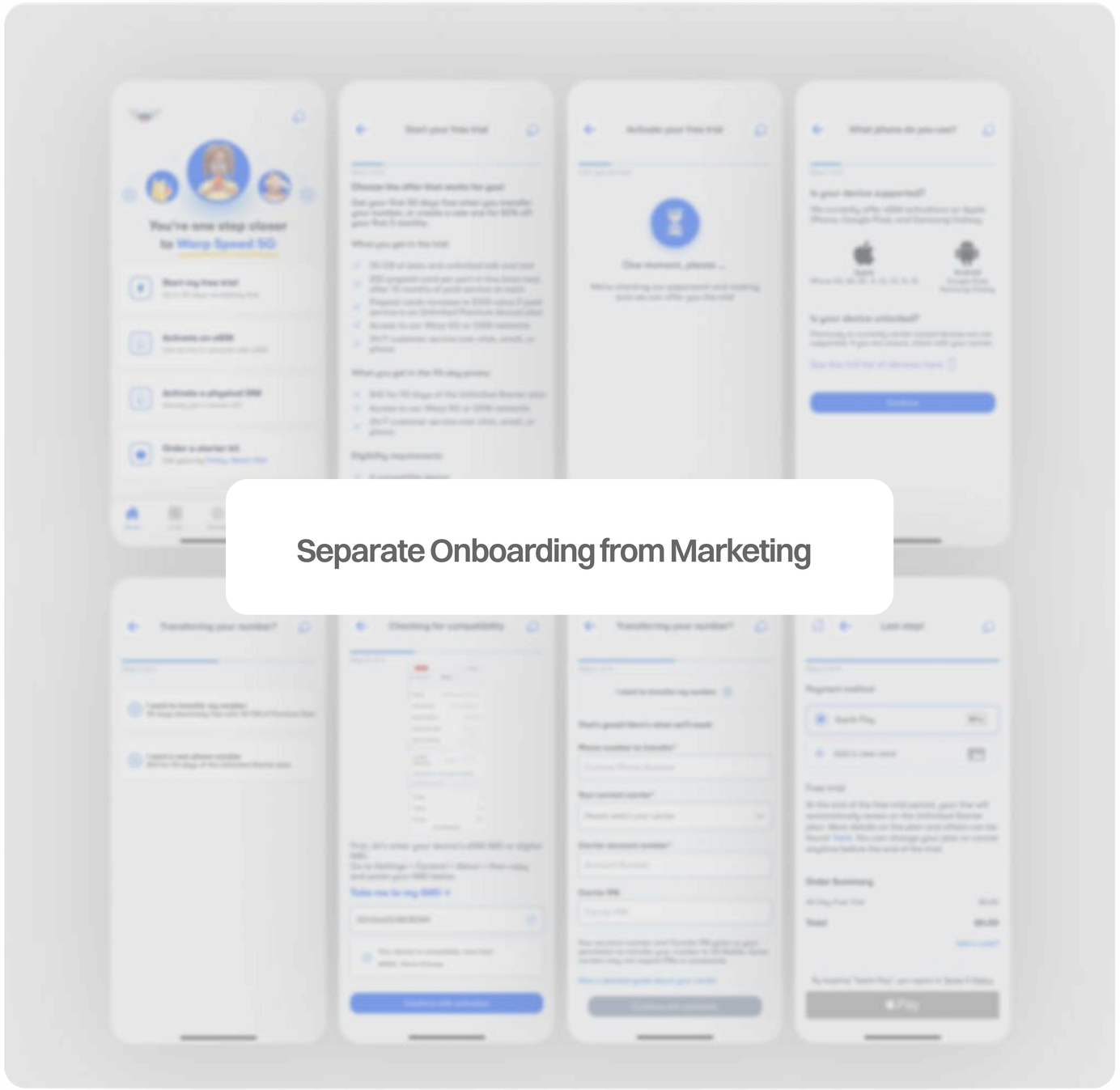
Time-to-value is critical; users must quickly understand the offers they are eligible for and feel confident in taking the next steps.

Multilingual support and layered information design are essential for future growth, as well as highlighting that their customer support is human, and not AI.

US Mobile has no retail presence, so the online onboarding experience is the product.

Activation times, offers, and user pathways vary and results in misaligned expectations which erode trust.

Users rarely switch phone providers, so the process must be intuitive for first-timers.



Breakthrough Insight

Users don’t need less information; they need the right information, layered appropriately. US Mobile assumed users wanted a simplified journey, but instead, they needed clarity and system transparency, including expectations about downtime, risk, and support. By designing a guided, visual breadcrumb flow and context-aware helper text, we found that users felt more in control even with the same number of steps.

Journey Mapping

Device Eligibility Check | Local Network Coverage | Offers & Value | Porting Process

Local Network Coverage | Device Eligibility Check | Offers & Value | Porting Process

Offers & Value | Porting Process | Local Network Coverage | Device Eligibility Check

Porting Process | Local Network Coverage | Device Eligibility Check | Offers & Value

4! = 24 possible intent journeys

The Current Climate

2008 - 2009

When FCC mandate on portability reform significantly increased market competitiveness by lowering switching costs.

GSMA

50%

consumer awareness of eSIM. MVNOs need to guide and offer a seamless, uncomplicated process.

GSMA

76%

of smartphone users are expected to switch to eSIMs by 2030, on-boarding UX is now a competitive differentiator.

GSM Intelligence

$14.8B

The market size for the MVNO category in the US in 2025 . Users are very open to switching for better value service.

Research & Markets

55%

Percentage increase of onboarding and input errors for products that use structured onboarding processes.

UserGuiding

0

Number of physical retail locations of US Mobile. Lack of retail support requires seamless digital-first GTM.

US Mobile

91%

of users who switched to MVNOs reported service equal or better than their previous carrier. Word of mouth promotion is a big opportunity.

Global Market Insights Inc.

86%

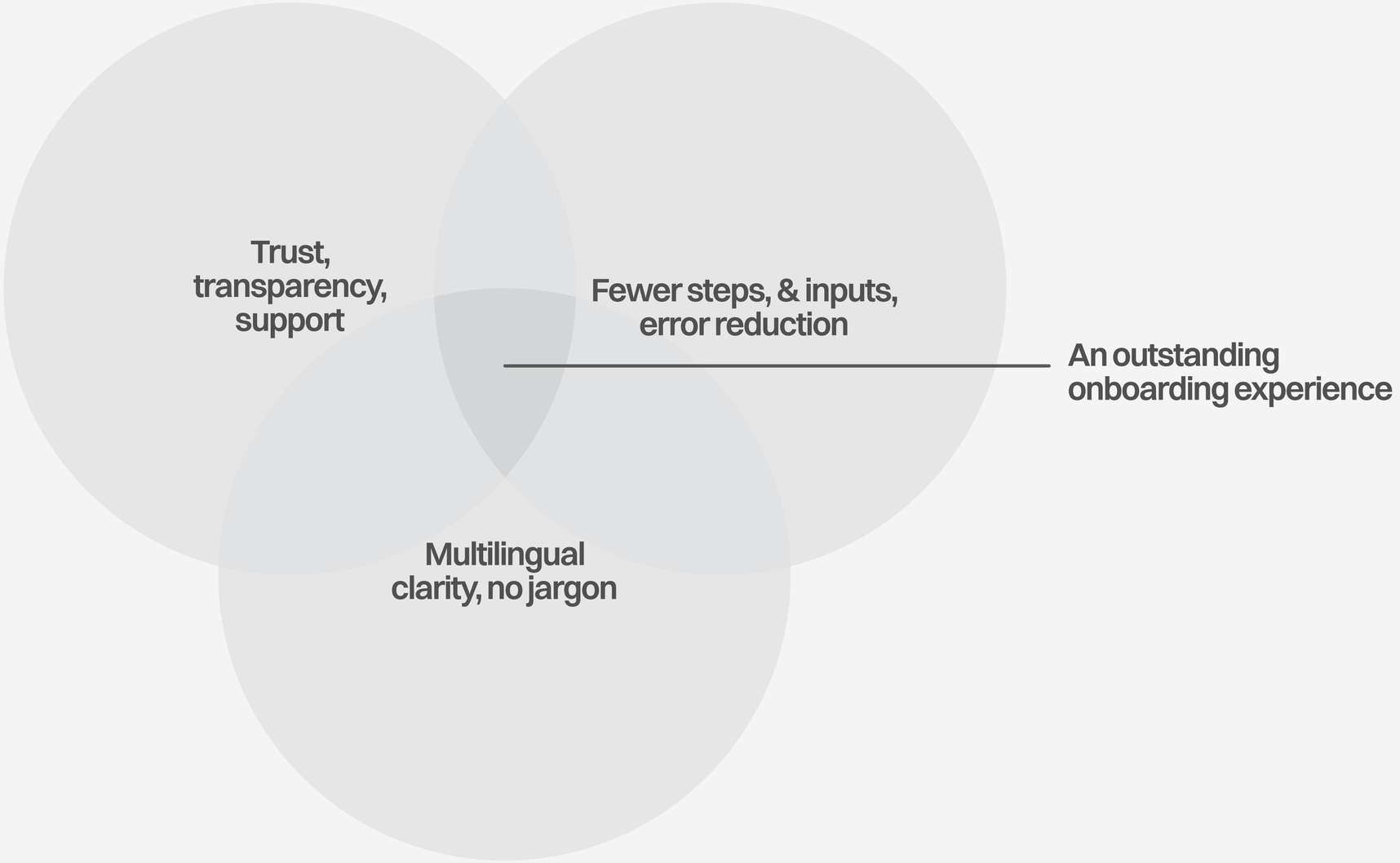
of customers say they’re more likely to stay with a brand that offers personalized onboarding, and are twice as likely to refer others

GitNux

Competitive Analysis

Platform	Concept	Value Propostion
Visible	Verizon-backed digital carrier	Instant setup, all-digital
Mint Mobile	Budget-friendly prepaid MVNO	Low cost, high flexibility
Cricket	AT&T-owned prepaid brand	Strong coverage, retail access
Tello	Customizable low-cost plans	Extreme affordability, control

A New Opportunity



What Happens Next?

Reframe onboarding as a guided compatibility and activation assistant, using system logic to reduce burden on users. This journey will be built modularly to account for offer, network, and compatibility variability.

1

Secure organization-wide buy-in for backend integrations (IMEI, coverage, eSIM provisioning)

2

Design an interaction framework that supports layered info, guides, and visual status

3

Map all potential edge cases (downtime, ineligible device, porting errors)

Ideas That Didn’t Make It

Video tutorial before flow begins

Letting users customize SIM plan before checking compatibility

Animating the compatibility check

Mandatory account creation before any action on the app

Showing competitor offer comparisons in onboarding

Asking for port-out reason, or other feedback on previous provider

Asking user to upload a screenshot of their IMEI/ info page

Collecting marketing preferences during onboarding

Displaying testimonials during activation wait or other offer

Emailing a port-out checklist separately

Using a chatbot for porting

Scheduling a chat or a call to do an assisted onboarding

Proposed Solution

System auto-checks device compatibility and network coverage, using IMEI and location.

1

User chooses to port number or get a new one, guided with contextual help. They are only shown sign up offers that they are eligible for.

2

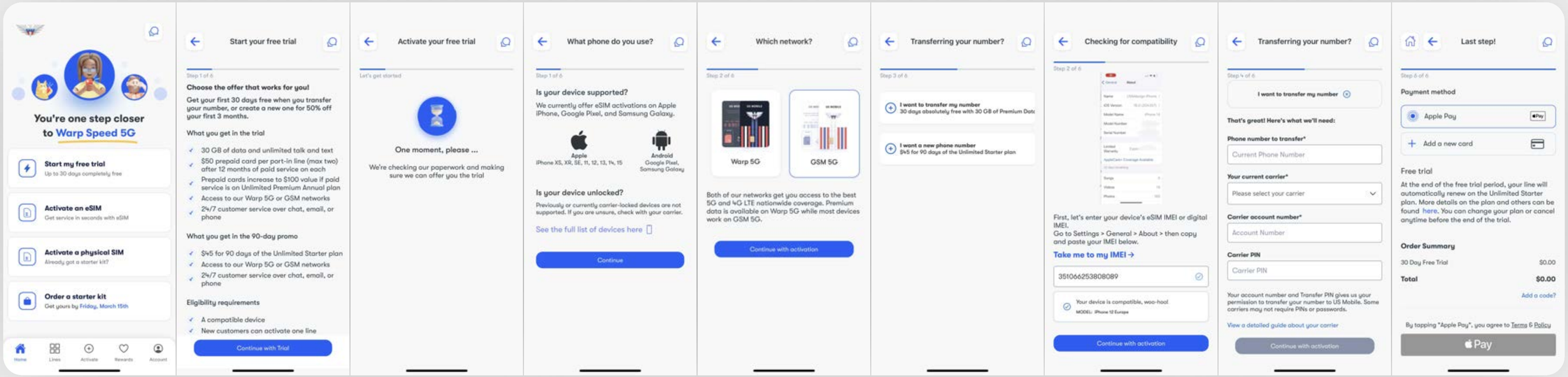
Payment screen confirms downtime window and, estimated time of activation.

3

Real-time system status and push notification mark successful onboarding completion, as well as support on what to do if the process fails.

4

Current Onboarding Flow - 9 Steps



Sign up Offers

TOC of Offers

Loading Screen

Enter Device Info

New Number or Port-in

Enter IMEI

Enter Port Out Info

Pay

Proposed Onboarding Flow - 5 Steps

Compatibility Check

New Number or Port-in

Porting Process

Pay

Support

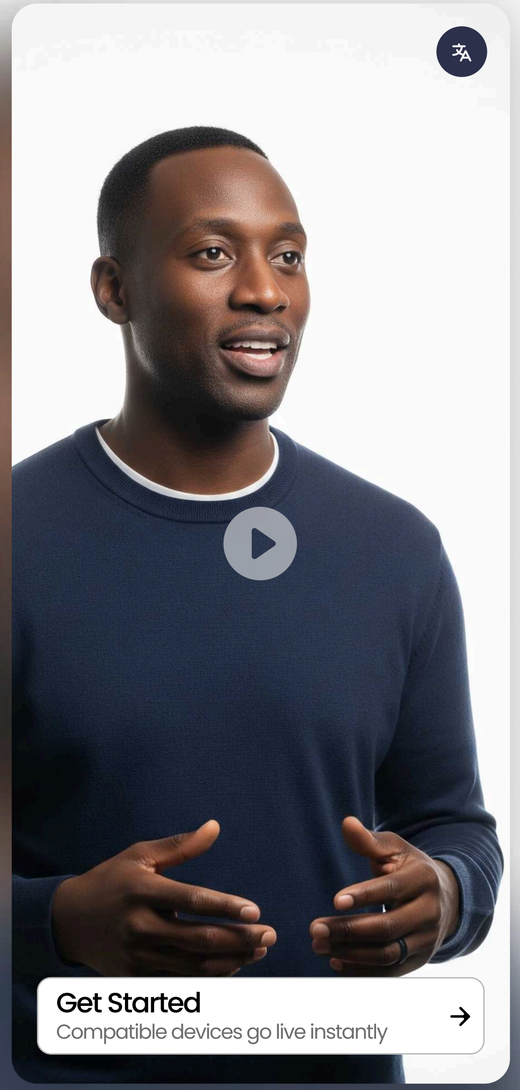
Ideology Buy-In

The core myth this product challenges is that mobile onboarding should prioritize promos over clarity, assuming users already understand the process.

Trust begins when systems, not special offers, guide every user, regardless of tech fluency, location, or past provider, through a clear and honest switch.

High-Fi Prototypes

US Mobile



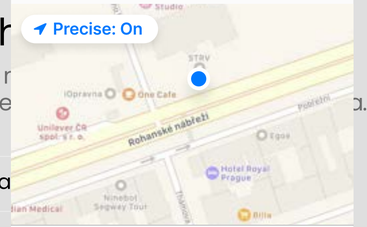
Where are you?

We need to access your location to determine network quality in your area. We're also checking to see if we your device is compatible on our network.

Enable location access →

Allow "App" to use your location?

Your precise location is used to show your position on the map, get directions, estimate travel times and improve search results



Allow Once

Allow While Using the App

Don't Allow

Compatibility Check

- Your smartphone is unlocked
  Now lets set you free from your contract
- Your device is eSim enabled
  We'll set you up in seconds
- We have great coverage in your area
  Guess it was meant to be..

US Mobile

i

It's a match!

You're just our type.

Keep your number →
30 days free · From $29/mo

Get a new number →
$45/mo. for first 3 months

Not Sure? →
Learn more

Chat with a real person
Average wait time is 6 seconds

Browse Plans →
Special Offers →
About US Mobile →

US Mobile

i

←

Port Into US Mobile

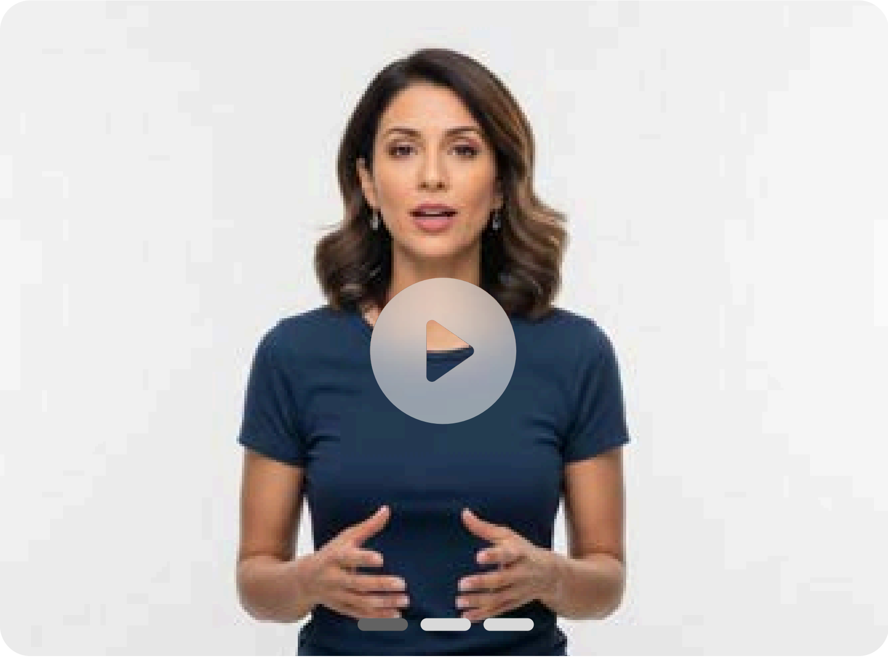
Keep your number - its easy

Number to Transfer
_ _ _ _ _ _ _ _ _ _

Current Carrier
Verizon 5G

How To Port From Verizon

Here is all you need to know



I'm ready to Switch →
I have my account number + PIN ready

US Mobile

i

←

Verizon Port Out PIN

This will be quick and painless

You Carrier Account Number and Transfer PIN gives us permission to transfer your number to US Mobile.
As part of the port out, you may be out of service.
Use WiFi to stay connected during this time.

Carrier Account Number
_ _ _ _ _ _ _ _ _ _

Carrier PIN
* * * *

Let's Get Connected

One final step away..

Continue with eSIM →
Installed immediately

Request SIM Card by Mail →
Expected delivery : Tues., March 18

US Mobile

Payment Method

Set-up for faster checkout

At the end of the 30 day free trial, your line will renew on the Unlimited Starter Plan. You can change your plan or cancel at no charge before the end of the trial.

Apple Pay
via a card on Apple Wallet

Add a New Card
Visa, Mastercard, Discover, AMEX

Order Summary

Cycle renews April 17, 2024

30 day free trial Unlimited Starter Plan	$0.00
Total	**$0.00**

By tapping ""Apple Pay", you agree to Terms & Policy

Pay

Pay

Apple Card
•••• 1234
27 Fredrick Butte Rd, Brothers O...

Contact
j.appleseed@icloud.com
(458) 555-2863

US Mobile

Confirmation #683284

You're all set!

All done! We're excited to have you with us. Over the next hour, your number should port over to US mobile!

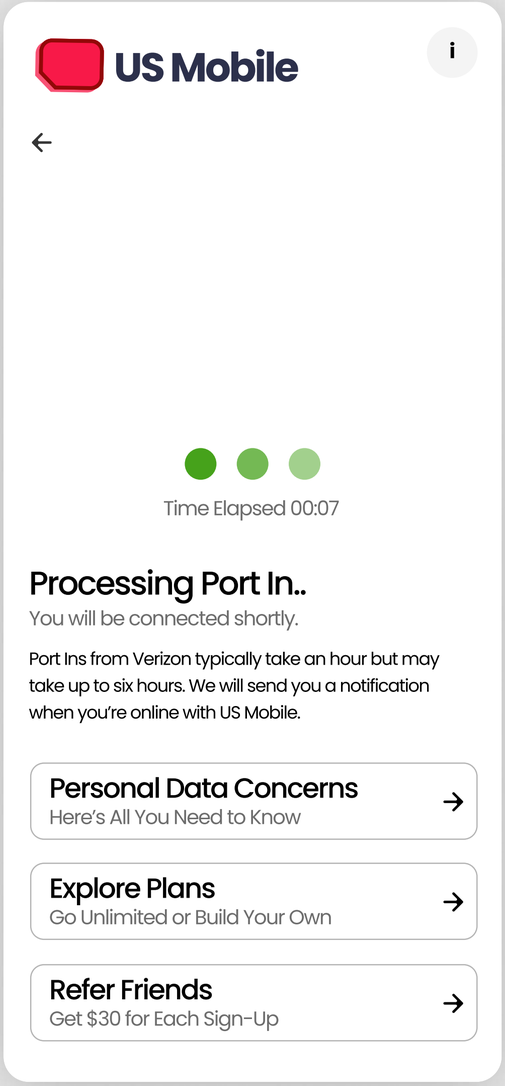
Personal Data Concerns
Here's All You Need to Know

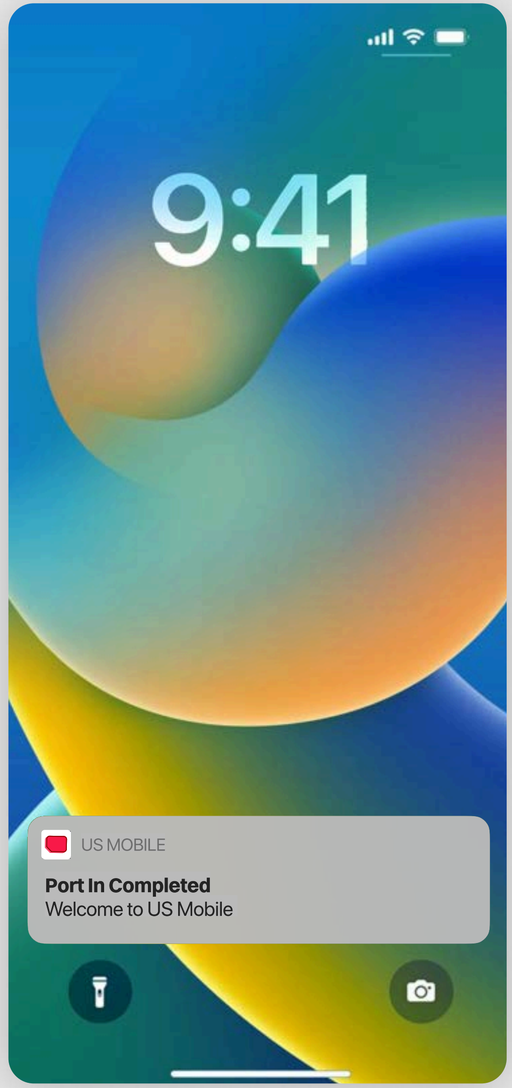
Explore Plans
Go Unlimited or Build Your Own

Refer Friends
Get $30 for Each Sign-Up

Activate eSIM
Get Connected Immediately


Cancel
Activate eSIM
US Mobile would like to activate an eSIM on this iPhone.
Continue


US Mobile
Time Elapsed 00:07
Processing Port In..
You will be connected shortly.
Port Ins from Verizon typically take an hour but may take up to six hours. We will send you a notification when you're online with US Mobile.
Personal Data Concerns
Here's All You Need to Know
Explore Plans
Go Unlimited or Build Your Own
Refer Friends
Get $30 for Each Sign-Up


9:41
US MOBILE
Port In Completed
Welcome to US Mobile

Early Feedback

“I didn’t expect it to be this easy, felt like setting up a smart speaker.”

“ It said they do provide coverage in my area but how can I trust them?.”

“Really appreciated the visual progress, it kept me calm through the switch.”

“Love the downtime counter; it reassured me it was working.”

“I still had to look up my account number, but the guide helped.”

“Honestly, I didn’t even realize it was eSIM. It just worked.”

Impact, Metrics, OKRs

Impact Metrics to Track

- Time-to-Value (TTV) reduced through automation and clarity
- Input errors dropped due to better guidance and validation
- Completion rate increased due to lower friction

Monitor for Negative Impact

- Users misunderstanding coverage due to auto-location assumptions
- Overpromising porting time and breaking trust
- Increased support tickets if users don’t see downtime updates

Additional KPIs to Consider

- Drop-off rate between compatibility check and number selection
- % of users using help guides vs skipping
- Average time spent on each screen (scan-ability audit)

Reflections

Surprises

- Trust ≠ simplicity, but clarity
- Users fear unknown downtime
- Porting guides must be personalized

Adjacent Challenges

- SIM card return/refund UX
- Support for international port-ins
- Transparent device financing disclosures

Future Design Explorations

- Build multilingual onboarding pathways
- Offer human-assisted live chat fallback
- Visualize SIM plan savings instantly

Key Trade-Offs

Automation vs. User Control

Automated IMEI/location checks reduced user effort. However, this means less manual control for privacy-conscious users.

Clarity vs. Speed

Added layered guidance and status updates for transparency mean a slightly longer flow compared to a bare-minimum fast signup that it could be.

Standardization vs. Personalization

Unified visual flow boosts predictability and scalability, but offers less room for hyper-personalized UI choices during onboarding.

Single Journey vs. Engineering Ease

A single seamless flow for port-in and new numbers offers user simplicity, but adds complexity in engineering to handle all cases within one journey.

Developer Hand-Off

Component-level Figma Specs

- Input fields with validation states
- CTA buttons with hover + disabled states
- Progress indicators (breadcrumbs)

Interaction Documentation

- Guide text logic by screen state
- Dynamic content per carrier/trial offer
- Time-to-activation messaging logic

Design Tokens & Constraints

- Typographic system scalable to 14+ languages
- Accessibility tokens (contrast ratios, tap targets)
- Local coverage confirmation hierarchy standard

ARIA & Accessibility Guidance

- Screen reader order for breadcrumb flow
- Contextual labeling of input fields
- Semantic alerts for error messaging

Final thought...

Could sign-on bonuses effectively be compensating for poor onboarding processes?