Josh Ziman

GROWING PRODUCTS WITH
HIGH-IMPACT UX DESIGN

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Hostelhops Reception App

FEATURED WORK
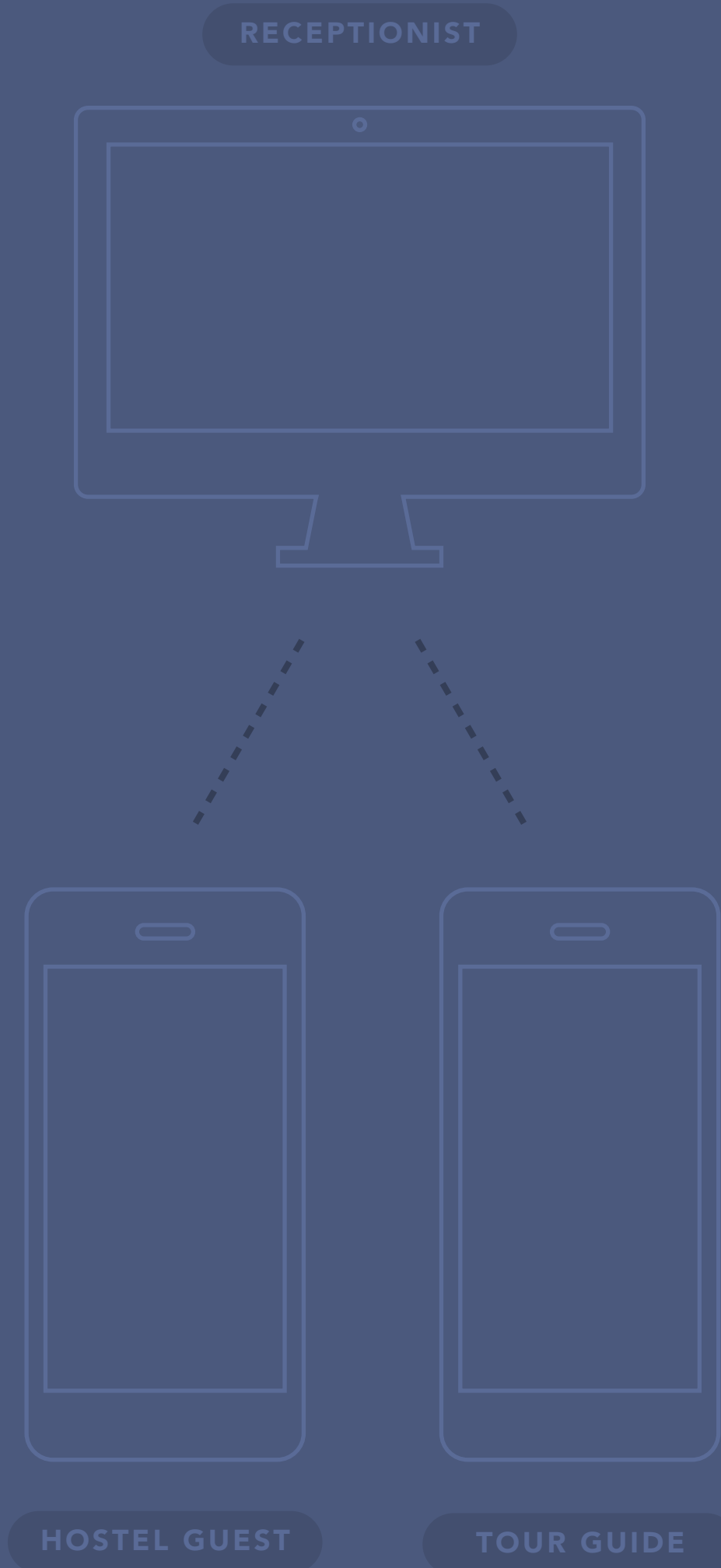
Hostelhops Reception App

Building a standard two-sided marketplace is challenging. Overcoming its chicken/egg problem, while bootstrapped, is even harder. And adding an extra dimension (a three-sided marketplace) while bootstrapped, is damn near impossible. "[Don't do it](#)", said the CEO of Postmates.

Open Travel Exchange attempted to build a three-sided marketplace for 5 years before my arrival. **That became successful once I designed the Hostelhops Reception App.**

We became the first bootstrapped startup in our space to create a liquid three-sided marketplace, by:

1. Empathizing with users through immersive research
2. Adhering to UX design principles
3. Designing effective habit formation loops

In the next 5 slides, I summarize our challenges and my decisions that facilitated our accomplishment.

PRODUCT OBJECTIVE

Build an app which takes offline tourism transactions and brings them online. Target:

- Hostels selling tours via reception desks
- Tour guides
- Panama & Brazil

USER ROLES

Even with prior backpacking and hostel experience, I needed to better understand our users and their stories. This required research of 3 distinct user roles:

- Hostel guests (backpackers, consumers)
- Hostel receptionists (booking agents)
- Tour guides (suppliers)

Each user plays their own role to process transactions, requiring 3 different UX designs.

How do I deeply empathize with users to provide my team actionable insights?

IMMERSIVE UX RESEARCH

1 Field Immersion

In Panama & Brazil, I lived in hostels for 3 months: eating, sleeping, exploring with backpackers, shadowing receptionists and tour guides. **Living and working in their shoes** was vital to gaining deep empathy with our diverse user base. It also provided a venue for user interviews, surveys and usability tests throughout the design process.

2 User Surveys & Problem Interviews

I surveyed 200+ people in hostels and at tour venues. I gathered data including demographics, resources, motivations and pains. Many problems were only clear on the surface. So in problem interviews, I used the "**5 Whys**" to discover problems at their root source. I compiled that data into insights for the entire team to understand and apply.

3 User Personas & User Stories

Using those insights, I composed personas for each user role. I used those personas to write user stories — a painful day for our users in their current situation, and a happy day with their problems resolved using our imaginary app. That allowed me and my teammates to **focus on well-defined problems and contexts**, while avoiding confusion and tangents.

🚀 *Our team was part hacker house, part remote. By posting these insights to Slack and Google Drive, we could always make references and contribute. Rather than waiting through long cycles, I posted iterations frequently for asynchronous feedback and continuous improvement.*

現地現物 ("*Genchi genbutsu*" or "*go and see for yourself*") *is a Japanese management practice and pillar of the Toyota Way. It was popularized in startup culture with The Lean Startup book and its motto: "get out of the building!" The core idea is to* **become the user before designing for the user.**

The **5 Whys technique** *was developed by Toyota to improve their manufacturing process. The core idea is to approach a surface-level problem, ask "why did that happen?" 5 times, eventually* **reaching the problem's root cause.**

See figures 1.1, 1.2, 1.3 in appendix

USER PROBLEMS

Offline transactions are inefficient. Receptionists act as a booking agents to coordinate guests with preferred tour guides. Doing this by phone and SMS is slow and results in missed opportunities, which means:

• Less revenue for tour guides
• Less revenue for hostels (commissions)
• Bad guest experiences

CORE FEATURES

• Realtime booking UI allowing receptionists and guests to book tours
• Inventory management UI that communicates tour availability and pricing
• Notification system that delivers relevant booking info to each user

How do I design to maximize effectiveness while minimizing waste?

FEEDBACK-DRIVEN DESIGN

1 Wireframes & Stakeholder Pitches

I pitched wireframes to stakeholders and engineers. Together, we scratched and backlogged features based upon feasibility and hypothetical effectiveness. That allowed us to focus on high-impact features and prevent feature creep.

2 Prototypes & Usability Tests

Inside the hostels, I tested prototypes on real users (receptionists) and test users (guests). I compensated their time with beer. They provided vital feedback that informed design adjustments early, preventing wasteful and costly redevelopment time.

3 Universal Visual Language

I chose Material Design (MD) as a reference for visual language because it spoke to our audience. Survey data indicated that our users were widely familiar with MD's patterns. Previously, I built a component library upon Bourbon SCSS framework using MD patterns. That allowed me to quickly reuse existing components, expand upon the library as needed, and continue documenting a styleguide for collaborators.

🚀 *I pushed HTML and CSS — my coding strengths — with some basic JS implementation. Our engineers coded a majority of the JS — my limitation. We routinely collaborated to hatch JS-enabled interactions, resolve bugs and optimize performance.*
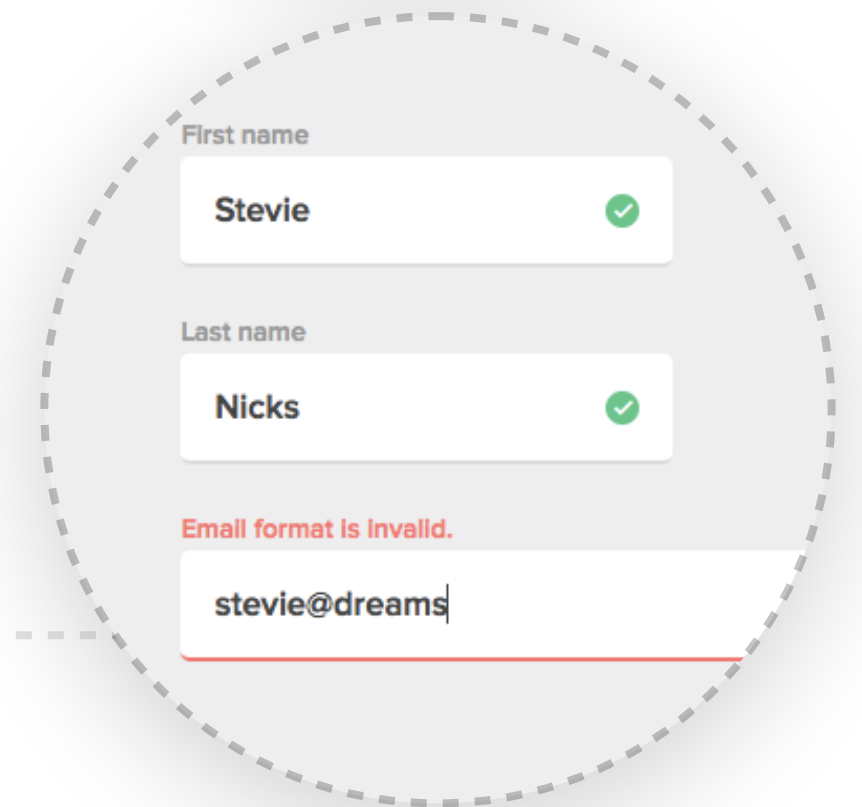
USER CONSIDERATIONS

Our user types are vastly different from one another. They speak different languages, use different devices, have different economic contexts, education levels and cultural backgrounds.

EMPATHETIC ROLE PLAY

I place myself in the perspective of the user and ask, "which feature would provoke feeling *x*?"; "which trigger would make me perform *y*?" I don't think these answers are learned in a classroom. Empathetic design capabilities improve through experience, with each additional user.

Designing solutions through empathetic role play *is my strength.*

Core features deliver value. How do I also design for usability and, eventually, delight?

HIERARCHY OF UX NEEDS

*My **UX design principles** reside in **3 levels**. First, products must provide value to their users. Second, they should be easy to use. Lastly, they should delight users.* See figure 3.1

Responsive Design   USABILITY

First things first, users must to be able to use the product. Desktop, tablet and mobile were all mandatory. Limited to one build, **web-based responsive design** enabled device-agnostic support. That allowed all of our user roles to participate — a fundamental requirement to build marketplaces.

Fast & Simple UX   USABILITY

For the UX to be as fast and simple as possible, I said "maybe later" to most of the tour guides' feature requests — things that would bog down the receptionists' workflow. Receptionists were the true *gatekeepers* to the marketplace's success. They'd only participate if the UX was 10x better than alternatives, while other user roles had less leverage. So we kept the product trim and focused. As a result, **receptionists cited the app's speed and simplicity as its differentiators.**

Delightful, Pleasant Surprises   DELIGHT

Tour guides are 24/7 hustlers, earning through the short high seasons to support their families through long low seasons. I designed their UX to **communicate revenue reports in weekly digests.** Demonstrating value increased our marketplace's defensibility.

Backpackers are tight-budget travelers, always looking to save a buck. So I designed their UX to **communicate price advantages.** This spawned loyalty and word-of-mouth growth.

Receptionists are often long-term guests, earning modest paid, who enjoy socializing and partying. So I designed their UX to **communicate commission shares** and **variably surprising them with beer bonuses.** Demonstrating value helped us form stronger camaraderies.

DELIGHT
USABILITY
VALUE
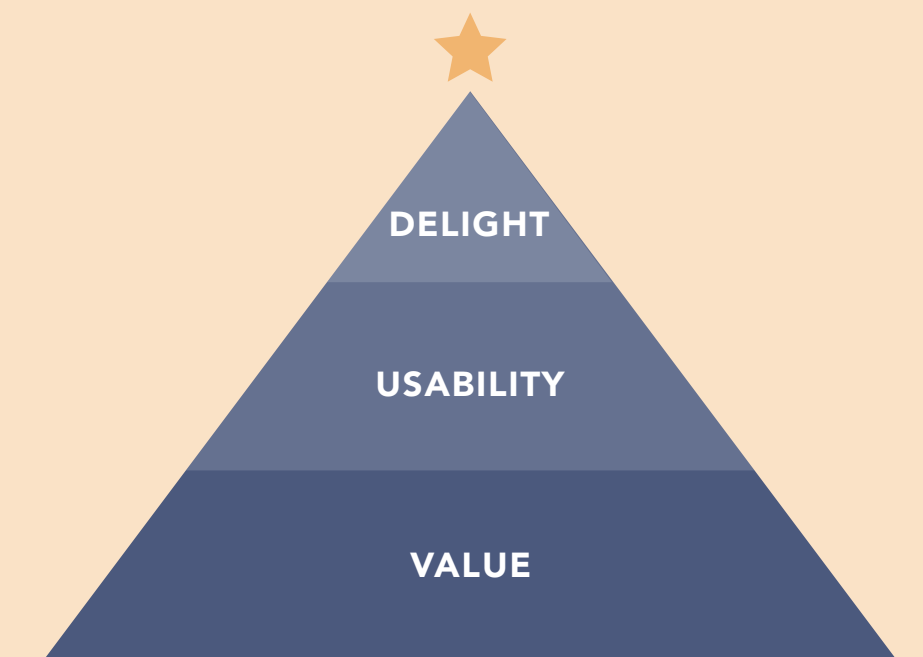
UX Design Principles

Be Delightful

Be Findable

Be Actionable

Be Simple

Be Forgiving

Be Consistent

Be Reliable

Be Fast

Be Human

Be Valuable

How do I solve critical UX problems in high-pressure situations?

CREATIVE & PRACTICAL "DESIGN THINKING"

① Discover the Problem

Because similar, unresolved problems existed for other products, we had prior theories supported by new feedback and insights.

🤔 Convergent Drilldown & Define the Problem

We lacked essential understandings to explain **why** receptionists weren't behaving as designed. I called and visited hostels to conduct problem interviews with receptionists, again using the **5 Whys**. (*See next page for actual problem definition.*)

② Ideate a Solution

After reaching the core issues, we needed to ideate a solution that would fix the point of failure, and we needed to implement quickly.

💡 Divergent Brainstorming

I went into divergent thinking mode and brainstormed 10 ideas that disregarded feasibility. Some of them were wild, some were impractical. But limiting possibilities inhibits good ideas. So I wrote down everything I thought.

🤔 Convergent Filtering

I pitched those ideas to the lead manager (CEO), lead engineer (CTO), and our growth team. We filtered ideas by feasibility, leaving 3 possibilities. Then, we unanimously agreed upon our favorite, which we hypothesized to be most likely to succeed.

AFTER SHIPPING

Despite high praise and A+ usability tests, few receptionists used it. We moved only 5 transaction units per day for the first week — all through the same one hostel.

We had expected to see that figure replicated by the remaining 19 hostels in our initial batch — approx. 100 units/day.

END OF RUNWAY

We were nearly out of money. We had 30 days to solve the problem or we'd be forced to shut down.

Our company experienced similar adoption issues in related products, preventing other successes. It was *now or never* to solve it once and for all. The weight was on my shoulders.

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*My **design thinking process** contains divergent and convergent stages to resolve root problems creatively and practically.*

Divergent Problem Discovery

Convergent Problem Drilldown

Discover Problem

PROBLEM

Define Problem

SOLUTION

Divergent Solution Brainstorming

Ideate Solution

Convergent Solution Filtering

Hypothesize Solution

Build

Test
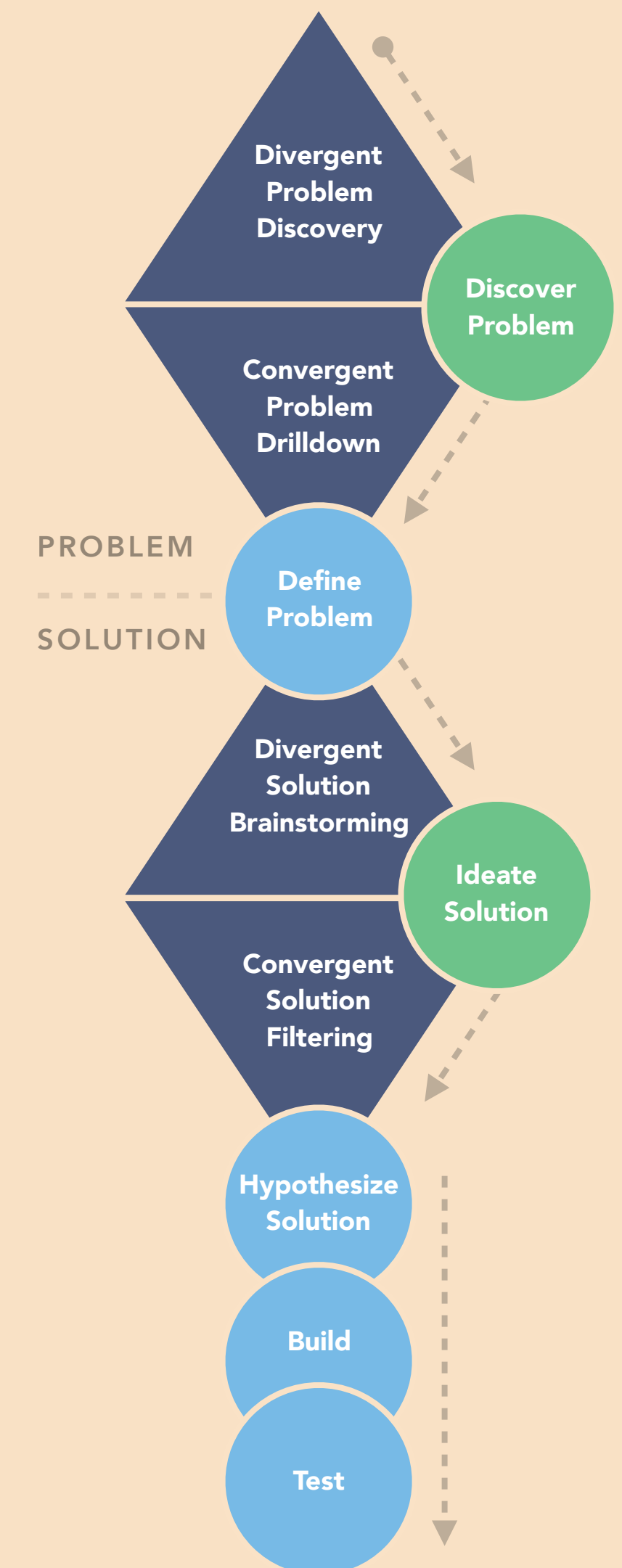
PROBLEM ON THE SURFACE

In our analysis we noticed that 95% of the 19 idle hostels never ever opened our app at all during their initial week. That indicated a point of failure in our habit formation loop:

When guests approached receptionists with tour inquiries (*trigger*) they didn't respond by opening our app to book the tour (*action*). That's a big problem because receptionists weren't reaching their *Aha! moment,* which comes later within the *reward.*

PROBLEM AT THE CORE

I deduced that hostels are difficult settings to form new habits (*noisy social environment*) and receptionists are unmotivated to change their ways (*apathy*). It was required to design a solution that addressed those core issues.

How do I formulate habits & lead users through their "Aha! moment"?

EFFECTIVE HABIT FORMATIONS LOOPS & MICROINTERACTIONS

Failing habit formation loop	
Trigger	*Guest approaches receptionist with tour inquiry*
	FAILURE
Action	*Receptionist opens app to book a tour*
Reward	*Receptionist earns commission faster & easier* **AHA!**
Investment	*+1 positive guest/receptionist experience (& deposits to other relationships)*

I needed to establish an association between **trigger** and **action** (above) while reducing receptionists' **apathy** and cutting through a **noisy social environment**. So I designed this small, but powerful interaction, intended to establish the missing link:

Microinteraction to mend the failing habit loop	
Trigger	*Receptionist routinely opens a new tab in browser* • Occurs by user at a high **frequency** • **Cuts through noise** (*web browsing is a deliberate, engaged behavior*)
Feedback	*App's dashboard UI automatically loads in new tab, seen by receptionist* • Signals the habit loop's call to **action** (CTA) and **reward, addressing apathy** • Is visually pleasing and won't annoy the user
Investment	*+1 memory of CTA & reward is deposited to receptionist's subconscious* • Proven effective to **build mental associations**

Based on previous experiences, I recommended development of a Chrome Extension. I suggested it'd be ideal due to its additional interaction layer (enabling the behavior above), easy deployability, and matching browser support for our target audience.

🚀 *We shipped to the Chrome Store, and scrambled to ensure installs. See figure 4.1*

TRIGGER   REWARD

INVESTMENT   ACTION

Habit formation loops (aka "hooks") are user interaction sequences designed to change user behavior at the subconscious level. The more times users pass through loops, the stronger the habit is formed. This is called the *frequency principle*.

Microinteractions are subtle moments in the UX intended to entertain, educate or empower users, often subconsciously. In this case, it empowered and educated our users by developing memories, forming mental connections, and helping them reach their reward.

Frequency principle applies to forming mental associations, just as it does with habit formation. In this case, the more times the user experiences the microinteraction, stronger the memory is developed, and the closer the user is to responding to the habit's trigger with action.

RECEPTIONIST

HOSTEL GUEST

TOUR GUIDE
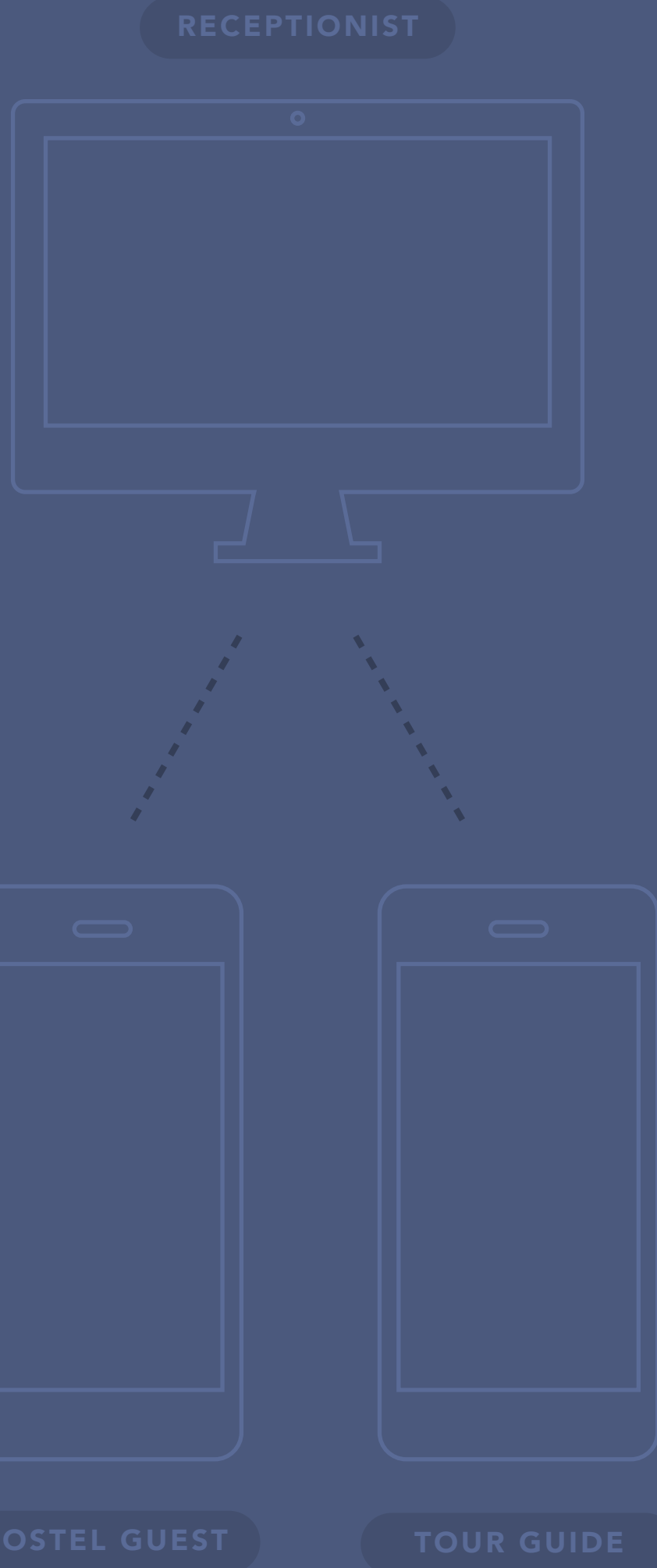
THE RESULT

Success 🎉

Within 24 hours of shipping the Chrome Extension, 7 additional hostels made their first transaction. Within 1 week our **adoption rate** hit 45%, and by the end of the month 85% (17 of 20) hostels were hooked.

KPI
Total transaction units

1000
GOAL

1074
ACTUAL
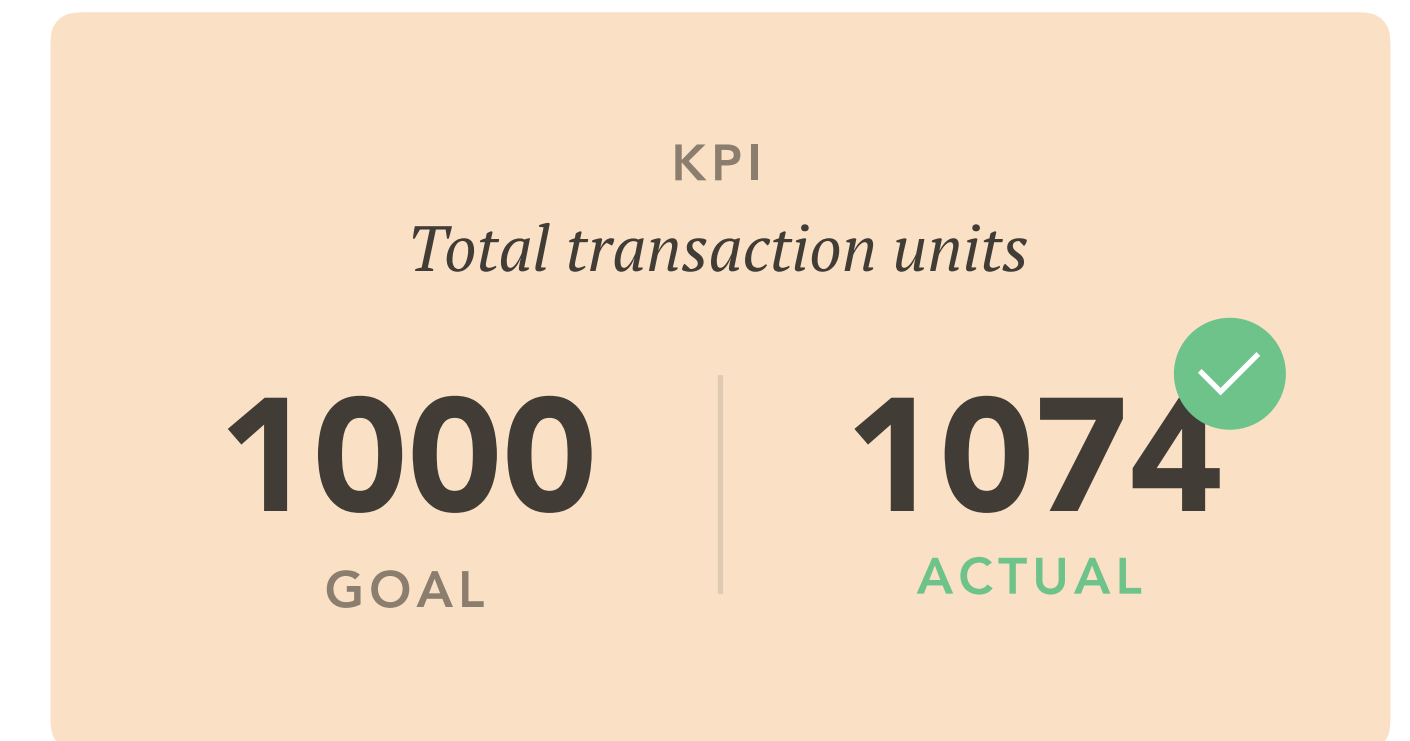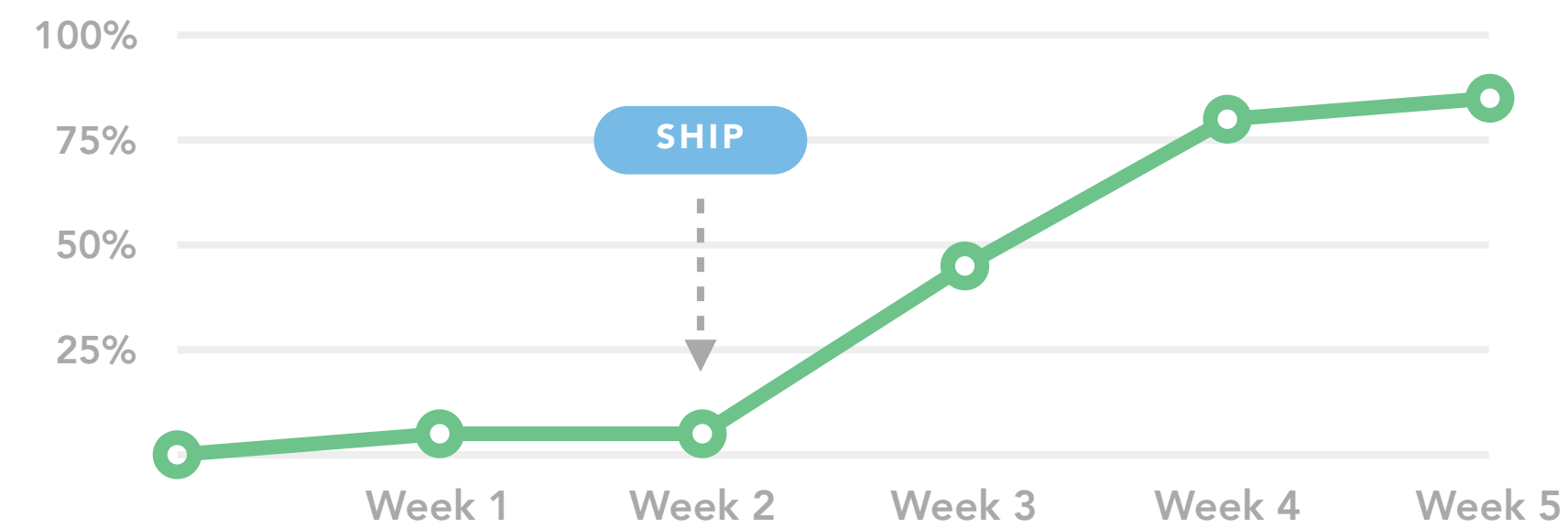
We moved over 1000 transaction units that month, becoming the first bootstrapped startup in our space to create a liquid three-sided marketplace. Hitting our KPI goal resulted in extending our runway, and challenging $6MM VC-funded competitor, Rezdy, for a slice of the Latin American market.

Since choosing a different career path, the product has expanded into new markets under a new name — WhenWhereGo. Big thanks and much love ❤️ to my former teammates for the hard work and dedication. Appendix follows with figures and design artifacts.

Figure 1.1 USER PERSONAS

Johann is the hero of our user stories. I created his persona — a German surfer bro looking to catch some waves after a half-day's travel — based upon survey data, problem interviews, field observations and hundreds of casual interactions. He has the common qualities of his particular user role (a hostel guest).

Supporting characters — Emile (receptionist) and Miguel (tour guide) — have their own personas, too. The complexity of 3-sided marketplaces is simplified when each user persona is well-composed and distinct. These kept our team aligned, working towards unified goals while understanding each user's limitations and needs.

Johann HERO

BACKPACKER & GUEST @ BAMBUDA HOSTEL

Johann is a backpacker traveling through Panama. He spent this morning traveling to Bocas del Toro, a beautiful set of islands, and just arrived to his hostel. He is tired after a 5 hour bus, but still excited to make the most of the remaining day. After arriving to the hostel, he asks the receptionist for guidance.

EDUCATION
University student

AGE
23

"Emile, I want to go surfing. How do I get to the best spot?"

ACTIVITIES
Traveling b/t destinations
Exploring destinations
Relaxing at hostels
Socializing w/ locals
Socializing w/ other tourists
Surfing

RESOURCES
iPhone 5 (no local data)
Lonely Planet book
Surf board
$25/day expenditure
2 days stay per destination

LANGUAGES
German (Fluent)
English (Conv.)

ORIGIN
Berlin, Germany
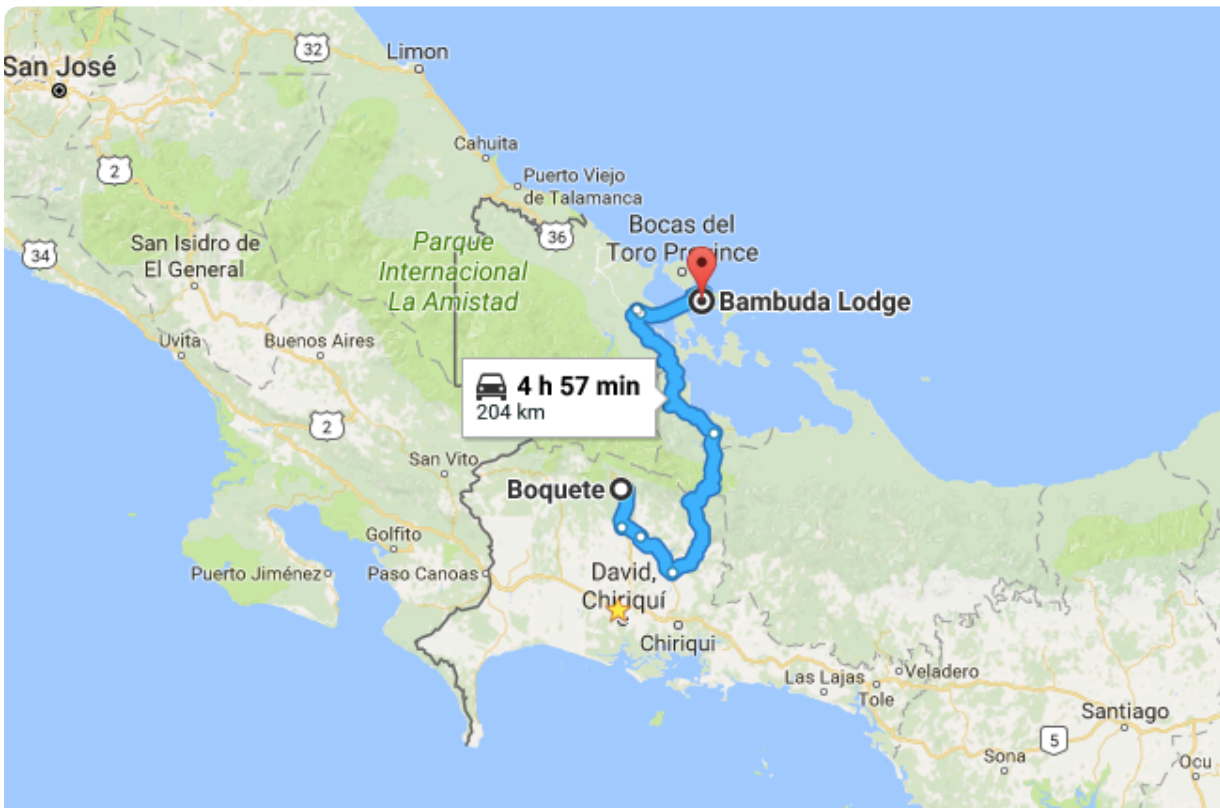
GOALS
In Bocas, Johann wants to:

1. Surf at beautiful beaches
2. Gain memorable experiences
3. Capitalize on limited stay time

PAINS
When he fails to meet his goals, it's often b/c he's:

1. Unfamiliar with local areas
2. Skeptical hiring tour guides w/o recommendation
3. Doesn't speak local language
4. Doesn't have local data on phone

Figure **1.2** USER STORY — PAINFUL PATH

This story represents a "Painful Path" scenario, containing a solvable problem for our users. Like our fictional personas, the story is based upon an aggregate of field observation, problem interviews and surveys.

Our team refers to and adapts this story to focus on our users' core pain points and most common circumstances. This story also informs the "Happy Path" scenario — *Johann's Perfect Day.*

Johann's *crappy* day 😞 💔

PAIN POINT

LASTING IMPRESSION

"How should I spend my afternoon?"

"Zapatilla Beach! Look at the pics in this tour book. It's beautiful and perfect for surfing. I'll call you the driver."

Emile arranges for Miguel to pick up Johann from the hostel.

Miguel misunderstood Emile and goes to a different hostel, loses cell service.

"It's been 30 minutes. Is Miguel coming?"

"Sorry Johann. I can't get a hold of him. Would you like me to try a different driver?"

"I can't wait any longer. Any other ideas?"

"There is a beach within walking distance. Though, it's nothing special. Here are the directions. "

Oh, wow. This beach does suck.

He's probably realizing how bad that beach sucks.

Johann returns to the hostel.

| JOHANN PLANS TRIP | → | 30+ MINUTE WAIT | → | SHIT OR GET OFF POT | → | SETTLE FOR ALT PLAN | → | REMORSE |

Johann's *interests are piqued*. He's *excited* to visit the beautiful beach.

Emile is *excited* for Johann and *proud* to facilitate his perfect day.

Johann's *interest* and *excitement* wanes as the clock ticks.

He becomes *worried* about his limited time and *frustrated with uncertainty.*

Johann is *disappointed* to have killed 30 minutes to no end.

Emile is *disappointed* for Johann, and *frustrated* as this is an recurring problem.

Johann is still *disappointed.*

Emile is *concerned* that Johann will have an underwhelming day.

Johann *regrets* asking Emile for the call, waiting around, and settling.

Emile is *disappointed* to let Johann down, not achieve her goal.

Figure **1.3** USER STORY — HAPPY PATH

This story represents a "Happy Path" scenario for our characters. It contains the ideal outcome, which we can practically enable given all parties' resources and limitations. This tool allowed our team to remain focused on the same solution.

Johann's *perfect* day 😍 🤙

PAIN RELIEVER

LASTING IMPRESSION

"How should I spend my afternoon?"

"Zapatilla Island! It's beautiful and perfect for surfing. I'll call you the driver."

Emile uses the **Hostelhops Reception App** which distributes digital itineraries to all parties in multiple languages.

Miguel receives Emile's clear, translated instructions and drives to Bambuda.

Miguel arrives to take Johann to the beach.

Johann hops in Miguel's boat w/ his surf board.

Emile waves Johann goodbye and wishes him a great time!

Miguel delivers Johann to the beach; stays.

Johann surfs on paradise beach.

Miguel delivers Johann back to hostel, is paid.

"Thank you, Miguel and Emile, for the perfect day!"

"My pleasure! I'm happy you enjoyed your day!"

| JOHANN PLANS TRIP | → | INSTANT CONFIRM | → | JOHANN GETS A RIDE | → | JOHANN ENJOYS BEACH | → | JOHANN RETURNS HAPPY |

Johann's *interests are piqued*. He's *excited* to visit the beautiful beach.

Emile is *excited* for Johann and *proud* to facilitate his perfect day.

Johann's *piqued interest* and *excitement* intensify.

Emile's *excitement* and *pride* intensify.

Johann's *piqued interest* and *excitement* intensify.

Emile's *excitement* and *pride* intensify.

Miguel is *happy* to be making money.

Johann is *blissed*.

Miguel is *happy* to be apart of Johann's perfect day.

Johann, Emile, and Miguel each *achieved their goals*, so they feel *happy* and *accomplished*.

Johann's *bliss* continues through the night, as he *excites* his new hostel friends about the beach.

Figure 2.1 WIREFRAMES

Wireframing was the initial, low-fidelity design deliverable for the eventual UI. The purpose was to visually layout basic feature ideas and structures so that the entire team, including engineers, could provide feedback to inform adjustments.

Annotations and specifications informed the engineers which data would be necessary. We added a page map to facilitate communication. That allowed us to clearly communicate associations and avoid misunderstandings, which were previously caused by more abstract conversations.

iPhone 5, iOS 9.0

macOS 10.10

RECEIVES CONFIRMATION EMAIL

OPENS APP

1.0
/DASHBOARD

CLICKS "BOOK TOUR"

2.1
/SELECT

CLICKS "MIGUEL"

2.2
/CHECKOUT

SUBMITS DATA

2.3
/CONFIRMED

2.1

2.2

SELECT TOUR

DATE ▼   PASS. CT. ▼

M ZAPATILLA WITH MIGUEL
   8AM-12AM 4 AVAILABLE $50

N

O

Emile asks Johann which of the available operators he prefers. Johann considers their price and time. Emile selects.

USER FILTERS
Date
Passenger count

```
Min = today
Max = today + 30 days
Default = today
Fwd/back = retain value

Min = 1
Max = 12
Default = 1
Fwd/back = retain value
```

EACH LISTING
Operator Name
Time
Duration
Cost
Remaining availability count

ORIGIN

DESTINATION

DATE

TIME

PASS. CT.

OP. NAME

TOTAL COST

DEPOSIT DUE

CUSTOMER INFO

FIRST NAME ✴

LAST NAME ✴

EMAIL ✴

NATIONALITY

PASSPORT ID

SUBMIT

Emile asks Johann for all unknown info. Johann responds, Emile inputs and submits.

Consider edge case that name/email are typo'd during verbal relay.

USER INPUTS

First name (req)
Last name (req)
Email (req)
Nationality
Passport ID

Passport data may be required by law in some cases. We should

Figure (3.1) UX DESIGN PRINCIPLES

I'm guided by UX design that is valuable, usable and delightful — in the order. I divide usability into 8 principles of their own, as seen below. Adherence to these principles is one of my secret weapons and key to improvement as a UX designer. They informed the success of the Hostelhops Reception App's design and I'm continuing to employ these principles (and others) in additional products.
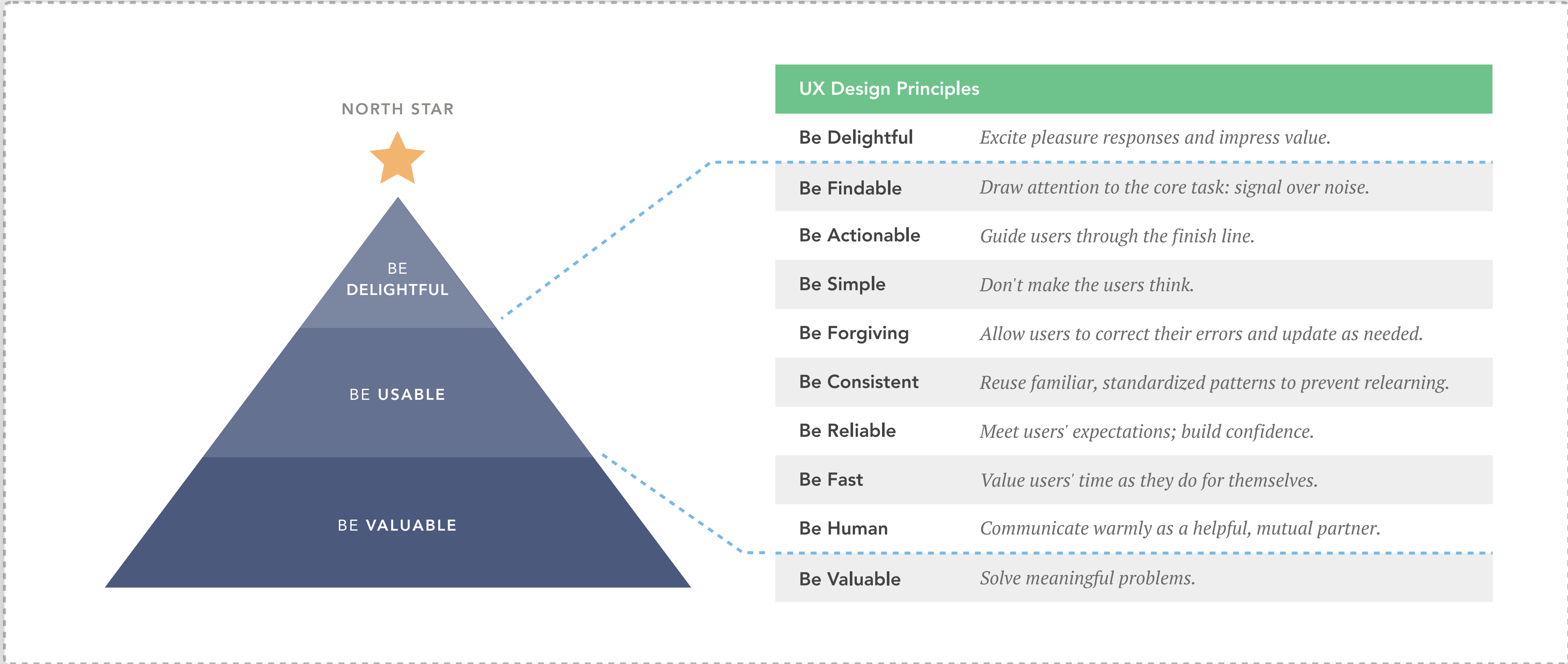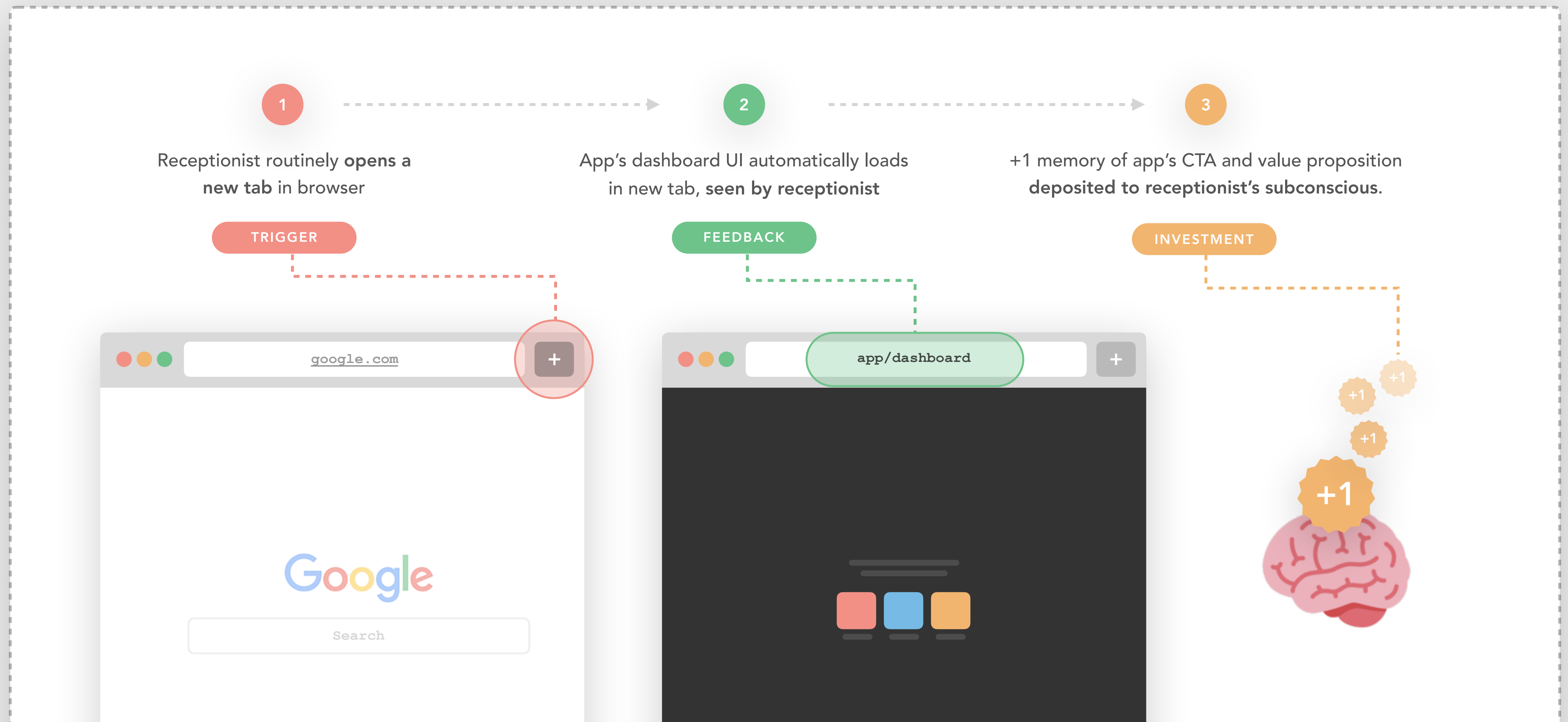
NORTH STAR

BE DELIGHTFUL

BE USABLE

BE VALUABLE

UX Design Principles	
Be Delightful	*Excite pleasure responses and impress value.*
Be Findable	*Draw attention to the core task: signal over noise.*
Be Actionable	*Guide users through the finish line.*
Be Simple	*Don't make the users think.*
Be Forgiving	*Allow users to correct their errors and update as needed.*
Be Consistent	*Reuse familiar, standardized patterns to prevent relearning.*
Be Reliable	*Meet users' expectations; build confidence.*
Be Fast	*Value users' time as they do for themselves.*
Be Human	*Communicate warmly as a helpful, mutual partner.*
Be Valuable	*Solve meaningful problems.*

Figure (4.1) CHROME EXTENSION PROTOTYPE

Using Invision, I created a simple prototype to demo this microinteraction to the team. Allowing teammates to maneuvering the interaction flow (**trigger** -> **feedback**) allowed them to experience the **investment** step for themselves.

That provided my teammates the confidence they needed to vote unanimously in favor of this design solution, which proved successful within 24 hours of deployment.

1 Receptionist routinely **opens a new tab** in browser

TRIGGER

2 App's dashboard UI automatically loads in new tab, **seen by receptionist**

FEEDBACK

3 +1 memory of app's CTA and value proposition **deposited to receptionist's subconscious.**

INVESTMENT

google.com

app/dashboard

Google

Search

+1

Josh Ziman

GROWING PRODUCTS WITH
HIGH-IMPACT UX DESIGN

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Thank you for reading. If you have an interesting product and think we'd work well together, please reach out to me.

MISSION

To improve the world with easy-to-use, disruptive technologies so that people live happier, healthier and more accomplished lives.

AREAS OF INTEREST

B2B SaaS & SaaS-enabled marketplaces

Productivity & automation tools

P2P cryptocurrency adoption

& MORE