### KONSTANTIN FICKLSCHERER

**UXPORTFOLIO** 

### **About Me**



Coming from the world of design I always believed that functionality and aesthetics should complement and balance each other. I love working under constraints and enjoy converting something complex into something that is simple, but yet engaging and effective.

#### **Contact Details**

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### FORM **ADDS** FUNCTION









### **Overview** 1

#### PROJECT 01 / COHERO HEALTH

Cohere Health is a startup that allows respiratory patients to actively engage in their own care. Their inhaler sensor and mobile spirometer automatically sync real-time data to patients' smartphones, allowing patients, doctors and other caregivers to view their history of medication adherence (compliance) and lung function.

#### Objectives

I was on a team with two other UX students. Our task was to create a backend interface that allows doctors, insurance providers and pharmaceutical companies to view the adherence (medication compliance) and spirometry (lung function) data gathered by Cohero.

#### Challenges

Due to the complex nature of this project and the health care environment in general, we had to face a steep learning curve and a limited amount of time.

One of our biggest challenges resided in identifying user groups and overcoming industry specific hurdles to reach out and connect with them in a timely manner.

In addition, we had to deal with complex data that needed to be displayed in a coherent and visually appealing manner. One of our biggest challenges resided in identifying user groups and overcoming industry specific hurdles to reach out and connect with them in a timely manner.



### **Overview** 2

#### PROJECT 01 / COHERO HEALTH

#### Deliverables

- + Research Report
- + Personas / User Groups
- + Wireframes & Annotated Mock-ups
- + Clickable Prototype

#### **Timeline & Process**

The alloted time for this project was only three weeks, which meant that we had take a very lean approach involving rapid prototyping.



### **Research** 1

#### PROJECT 01 / COHERO HEALTH

#### Competitive & Comparative Analysis

The health care industry is very guarded and Cohero Health's product is a novel concept that offers data that no other competitor currently does. These challenges affected our approach when it came to the competitive study and we decided to develop hypotheses about the competitive interfaces by analyzing the data that was captured at the front-end.

In addition to this, we also examined Electronic Medical Record (EMR) interfaces.

#### FIndings

Some competitors seem to track more demographic data than Cohero currently does and current EMR interfaces are heavily populated with numbers. Visual integration into those systems can prove to be a challenge.

#### **EMR Interfaces**





#### **Competitive Features Table**

Com	oetitiv	ve Fea	ature	s Tab	le		
Features	Cohero	AsthmaSense	Respi	AsthmaMD	Nexus 6	Propeller Health	Gecko Cap
Notifications to take medication	•	•		•	•		•
Notification to refill inhaler, as determined by puffs remaining and date of medicine expiration	•						•
Automatic capture of BLE controller and rescue inhaler usage	•				•	•	•
Automatic capture of Spirometry data	•		•				
Inhaler count & manual reset of count according to specifications outlined in medical protocol sheet	•						
Onboarding (username, PW email, phone number, first and last name of user)	•			•		•	•
Demographic Info Captured	-Name -Age			-Name -Age -Height -Gender			
Asthma Info Captured	-Peak flow -FEV-1/FVC -Triggers -Health data -Medications -Adherence			-Peak flow -FEV-1 -Triggers -Symptoms -Medications -Adherence			

## **Research**<sub>2</sub>

#### PROJECT 01 / COHERO HEALTH

#### **User Interviews**

In a highly guarded industry, identifying users and scheduling interviews proved to be very challenging. Employing all the resources of our private and professional networks and using techniques such as snowball sampling, we managed to interview three doctors, two healthcare specialists, a pharma industry professional and an insurance marketer in the three week period.

Throughout the interview process we wanted to gain insight into how they deal with data, what data is truly important to them and how it should be displayed.



### Data Modeling 1

#### PROJECT 01 / COHERO HEALTH

#### **User Group Development**

Due to the fact that we could not collect sufficient data to develop full-fledged personas for all user segments, we opted to create user groups with our findings instead.

#### FIndings

The user groups helped us to quickly notice important aspects of the interface design such as a simple, clean layout with key indicators and the most important features that the users desire.

### **User** | **Doctor**

#### Scenario

Dr. Darcy has an asthma patient whose symptoms don't seem to have improved and he is not sure why.

#### Motivations

- + To give the best treatment
- + Be efficient with examination time
- + Educate patients

#### Pains

- + Data Entry- Scanning, consistency
- + EMR-Hard to use, time consuming, inconsistent
- + Data Overload
- + Reliability of user reported data
- + Insurance companies

#### Job Title

Pulmonary Specialist, Allergist, General Practitioner, Pediatric or Nurse

#### Behavior

- + First seek verbal feedback
- + Perform diagnostic tests- ACT and Spirometry
- + Assess severity of symptoms
- + Test airway obstruction- FeNO Test
- + Review historical data
- + Determine treatment plans

#### Features

- + Spirometry data
- + Patient predicted best data
- + Adherence tracking (control and relief) + FEV1 /FVC Data



### Data Modeling 2

#### PROJECT 01 / COHERO HEALTH

#### **User Flows**

With the restrictions and challenges that we had to operate under, the development of user flows became very important to the creative process.

#### Doctor - Alert User Flow



### **Creative** Development<sub>1</sub>

#### PROJECT 01 / COHERO HEALTH

#### **Feature Mapping**

One of the first steps following *Data Modeling* was to generate and prioritize potential features.

#### FIndings

After this exercise it became quickly evident to us that a one-size-fits-all solution is not ideal. We concluded that each user group needs to have a customized interface with a different set of features.

#### **Must-Have Features**

Features	Doctors	Pharmaceutical	Insurance
Controller Data	•	•	•
Rescue Data	•	•	•
FEV1	•		
FVC	•		
Adherence Data - Time of Day	•	•	•
Condition Severity	•	•	•
Medication History	•	•	•
Hospitalization List	•		
Color Schemes	•	•	•
History Triggers	•		
Data Filter - Time/Data		•	•
Inhaler Percent Used		•	•
Population Data		•	•
Location Filter		•	•
Severity Filter		•	•
Medication Filter		•	•
Demographic Filter		•	•
Adherence Filter		•	•
Patient Summary	•		•





#### Nice-to-Have Features

Features	Doctors	Pharmaceutical	Insurance
Health Kit Data	•		
ACT Asthma Control Test	•		
Inhaler Percent Used	•		
Education Tool	•		
Diagnostic Tool	•		
Alert function	•		
Doctor's Notes	•		•
History Triggers		•	•
Triggers Filter		•	•
	1		

# **Creative** Development <sub>2</sub>

#### PROJECT 01 / COHERO HEALTH

#### Sketching

Following *Feature Mapping* we decided to focus on the interface for doctors as the primary user group. This is the area where he had sufficient research data and where we felt confident in our feature prioritization. We began to sketch out ideas and create interface layouts on paper and on the whiteboard.

#### FIndings

Throughout the sketching process we quickly discovered that the data points needed to be front and center and that one key feature would be the adherence graph aligned with the spirometry data.

#### **Initial Sketches**





### **Creative** Development 3

#### PROJECT 01 / COHERO HEALTH

#### Wireframing

Once those ideas were developed on paper, we began to create medium fidelity wireframes in Sketch. These morphed into what was our first paper prototype.

#### Wireframe Development



# **Creative** Development 4

#### PROJECT 01 / COHERO HEALTH

#### Sitemap

During this stage a sitemap was also conceived, providing us and the client with a good framework for further creative development.

#### Sitemap - Doctor Interface



### Prototyping & Testing

FIndings

#### PROJECT 01 / COHERO HEALTH

#### **Rapid Prototyping Prototype Annotations - Doctor** ard 6 Months Before we began with the development of a clickable prototype, we tested a static prototype. **Dashboard** 7 Days Our findings showed that while layout Finding 1 and functionality were on track, cohero health Understood page functionality and was able to quickly interpret data and graph. certain important data points were Jake Smith -Finding 2 not featured with enough prominence. ZDays (2 Weeks) (4 Weeks) (6 Months) (Year) (Duston Although thought Rescue Use and ER Visits stry Multiple Reading were important, would rather see Peak Flow 54% 68% 3.45 and FEV up front. Would like the order to be Adherence, FVC, FEV1, Ratio then PEV. Date of Change o Prescription Last Clin Finding 3 ..... Asthmatic himself and liked that Inhaler Expiration Being Tracked and shown. 63 Medication GMAR 80 MCG 5 Finding 4 6 Wording change of Expiry Date to Medica Remain 27% 4 . Expiration Date. Expin 3 . Finding 6 Change QVAR to a more common medication . Best Value EV1 3.00 PV5 3.05 PU5 5.70 PE15/PV5 210 2% Symbicort or Advair. Worst Value R013.32 R03337 R01334 R010VC 70% Finding 7 Align Spirometry Data to day line more clearly. Vew More 6 *Sverview*

# Prototyping & Testing 2

#### PROJECT 01 / COHERO HEALTH

#### Wireframe Revisions

With the information from the rapid prototype testing, we made revisions to the wireframes.

#### Key Revisions

- + Values on the dashboard metrics changed 1
- + Graph overlay feature was added to the spirometry screen (2)
- + Asthma Trigger Frequency was introduced (3)

#### **Revised Wireframes - Doctor**









### **Prototyping** & **Testing** 3

#### PROJECT 01 / COHERO HEALTH

#### **Clickable Prototype**

After the initial round of feedback, we proceeded to create a clickable prototype based on the revised wireframes.

https://projects.invisionapp.com/ share/ND31QA8V5#/

#### **Revised Prototype - Doctor**



### **Takeaways**

#### PROJECT 01 / COHERO HEALTH

One of the biggest challenges we faced, was certainly the difficulty to identify and contact users on the insurance and pharma side. Those industries are heavily guarded and opaque. We tried to get as much information as we could through seconddegree sources and developed hypotheses based around those findings. However, this left us with several blind spots. Further research is still required and additional data needs to be gathered.

#### **Blind Spots**

Due to the complex task, the various challenges in communicating with users and the time constraints, we were still left with several areas that need further validation. We decided to list them out and provide the client with recommended responses.

#### **Alind Spots** Pharma Blind Spots Doctors Patient Examination Process Problem - Different techniques used by different Doctors to diagnose and treat patients depending on availability of resources. Includes ACT (Asthma Control Test)\* Recommended response - Contextual inquiries followed by survey to gather quantitative data to determine if additional features needed User Segmentation Problem - Initial research has shown further segmentation of the Doctor group is needed in order to design an interface for all levels of experience and education Recommended response - Further user research and user testing. Alorte Problem - Current patient treatment process does include real time data being sent to a primary care physician. Legal review of this feature is required in order to eliminate liability issues. Iind Spots Insurance Recommended response - Legal review of user flow and data paths. EMR Integration Problem - Availability and limitations of EMR integration are yet to be defined. Recommended response - Further technical and legal investigation \*Additional research needed to confirm accepted use of medical language. "Compliance" was preferred to "adherence" by several interview subjects 70



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### **Overview** 1

This project had a very wideranging scope. We, two other UX students and myself, were asked to explore a problem/ area of opportunity for an existing brand and then come up with a creative solution.

#### **Problem Statement**

New York City has so much going on it's impossible to know about everything happening around you at any given moment.

#### Solution

A sister app to Twitter that allows fellow NYers to alert each other about things they are interested in (events, sales, street fairs, news, etc.) as they are happening.

#### Challenges

Creating an app that is user-friendly, engaging and integrates well with the Twitter brand.

## information about things happening right now.

What is needed is an app that

allows fellow NYers to share

## **Time + Location = Helpfulness**

### **Overview** 2

#### PROJECT 02 / **STARLING**

#### Deliverables

- + Research Report
- + Personas / User Groups
- + Wireframes & Annotated Mock-ups
- + Clickable Prototype

#### **Timeline & Process**

The alloted time for this project was two weeks.



## **Research** 1

#### PROJECT 02 / STARLING

#### Competitive & Comparative Analysis

We looked at the apps Facebook, Foursquare, Instagram, Snapchat and Vine. We examined their structure and their onboarding process. Each app gave us insight into how users interact with the most popular apps similar to Starling.

#### FIndings

Some onboarding processes are a bit of a cautionary tale. The user is asked a series of incrementally intrusive questions in a never-ending series of screens. These allow for a possibility of drop-off by the user that we definitely wanted to avoid.





#### PROJECT 02 / **STARLING**

## Research 2

#### **User Interviews**

After we sent out a survey to screen for respondents, we went on to interview ten potential users. Interviewees were questioned about their Twitter usage as well as features they liked or didn't like about Twitter and other social sharing apps. We asked about how they use their smartphones, how often they refer to them and what kind of information they look up. Furthermore, we also enquired about their view on push notifications.

#### FIndings

Some of our key findings were that people tend to consume more than they contribute. In addition, Twitter is liked for its ease-of-use, however Twitter's feed can be overwhelming as retweets and hashtags tend to clutter the space.





#### **Card Sorting**

Since our intitial research indicated that this was also an information architecture challenge, we decided to conduct open and closed card sorts in order to establish our feed categories (channels).

### Data Modeling

#### PROJECT 02 / STARLING

#### Martin **Persona Development** "The Targeted 32, Lives in Astoria, N After sending out a screener and Personas interviewing ten people, we created April four personas to represent Starling's p with friends during the day be a challenge all beev working, and so he "The Casual Consumer" different user types. Open up New York City in a 25, Lives in Fort Greene FIndings Works as a Talent Assistant at Spotlight PR Agency The personas guided us in creating April goes out nearly every night of the week. When not assisting Patrick Stewart at a film premiand prioritizing features and made with colleagues or old college friends at an endless array of concerts, bars, karaoke clubs, b Tyler us aware of the differences between other types of excursions. She doesn't organize these excursions, but goes along with th contributors and consumers. also loves fashion and shopping. She considers herself a "power shopper" and is alway. deals and sales. On Twitter she follows some comedians and musicians. She mostly u but doesn't tweet herself. ery popular app that can help Already uses many A new way to find mos **Potential Obstacles** Wants To know what's going on so she can keep April is more of a follower. Getting her to use up with the crowds. Good ways to learn and share anything with her friends is difficult. information about sales. **Potential Opportunities** Needs Become an even more powerful "power cynthia Simplicity. She doesn't use Twitter mainly shopper" using Starling. 31, Lives in Maspeth, Queens Works for a bar in Manhatta because she finds the hashtags and retweets sic, and show big sp confusing. hie to reach neonle who are returning starling

### **Creative** Development<sub>1</sub>

#### PROJECT 02 / STARLING

#### **Brainstorming & Feature Mapping**

After analyzing all of our research, we continued with a feature brainstorming session.

#### Sketching

The initial sketching sessions quickly allowed us to get on the same page with such features as the map circle or the channel tabs.



# **Creative** Development <sub>2</sub>

#### PROJECT 02 / **STARLING**

#### Wireframes

After the sketching session we set out to create wireframes separately. These morphed into what would become our app template.

*Differentiating the channels with distinct, easily identifiable colors was paramount.* 







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# **Prototyping** & **Testing** 1

#### PROJECT 02 / **STARLING**

#### **User Testing**

We conducted numerous paper and digital prototype tests. Throughout we tested two distinct user flows, one for contributors and one for consumers.

#### FIndings

While some design issues needed to be addressed throughout the testing process, the overall response was a very positive one. Users seemed to have a good understanding of the overall functionality of the prototype.



# Prototyping & Testing 2

PROJECT 02 / STARLING





### **Takeaways**

#### PROJECT 02 / **STARLING**

We found out that having a lot of creative freedom can be a challenge in itself. In a project that has a timeline of only two weeks, quick decision making is key. One cannot get too attached to one specific idea and instead has to be open to exploring other avenues.











6-Task List

### **Overview**

The initial brief for this project was to create a to-do list app prototype based on user interviews and testing.

This project has been revisited recently.

#### **Problem Statement**

Many users feel overwhelmed and burdened by their daily tasks. They have difficulty prioritizing what needs to get done and find many to-do list apps too complex.

#### Solution

A simple, elegant to-do list app that prompts users to prioritize their tasks through constraints: The 6-Task App.

#### Challenges

Creating an app that is user-friendly, simple, and yet functional.

### Isks. find many **Keep it simple**.

## **Previous**

#### PROJECT 03 / 6-TASK LIST

#### **Previous Work**

Previous work entailed user interviews, affinity mapping, sketching and user testing.







#### PROJECT 03 / 6-TASK LIST

#### **Current Status**

Since the project has been revisited, several changes have been made.

- + Simplified layout and increased number of task from 5 to 6
- + Removed the ability to have numerous lists at once
- + Removed numbers on tiles

#### **Key Features**

- + No more than six items at any time
- + Tiles can be dragged and rearranged according to priority
- + Icon indicates whether picture or voice recording has been added to task





••••oo 🔶 12	:45 AM 50%
Buy groceries	Buy bottle of red wine
Call Mom	Take dog for a walk
Sign up for hackathon	+ Add task

#### PROJECT 03 / 6-TASK LIST

#### **Key Features**

- + Task titles are restricted to three lines of text
- + Tile color within a given scheme can be individually selected
- + Adding more detail to a task is optional
- + Pictures and voice recordings can be added to a task



#### PROJECT 03 / 6-TASK LIST

#### **Key Features**

- + History shows all the completed tiles
- + Various color schemes can be set (retro, winter, funk, pastel, etc)





#### PROJECT 03 / 6-TASK LIST

#### **Key Features**

+ Color schemes create variety and allow the user to customize the look according to their preferences

#### Considerations

- + Potentially adding tab bar (settings, history, home screen)
- + Planning to do A/B Testing on tab bar vs hidden settings page (swipe would reveal page)
- + How to motivate people to create and finish tasks
- + Developing a way to perhaps compare various timeframes in the history section



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happy





DLD BAHAMA BAY







OLD BAHAMA BAY - LOGO + BROCHURE







