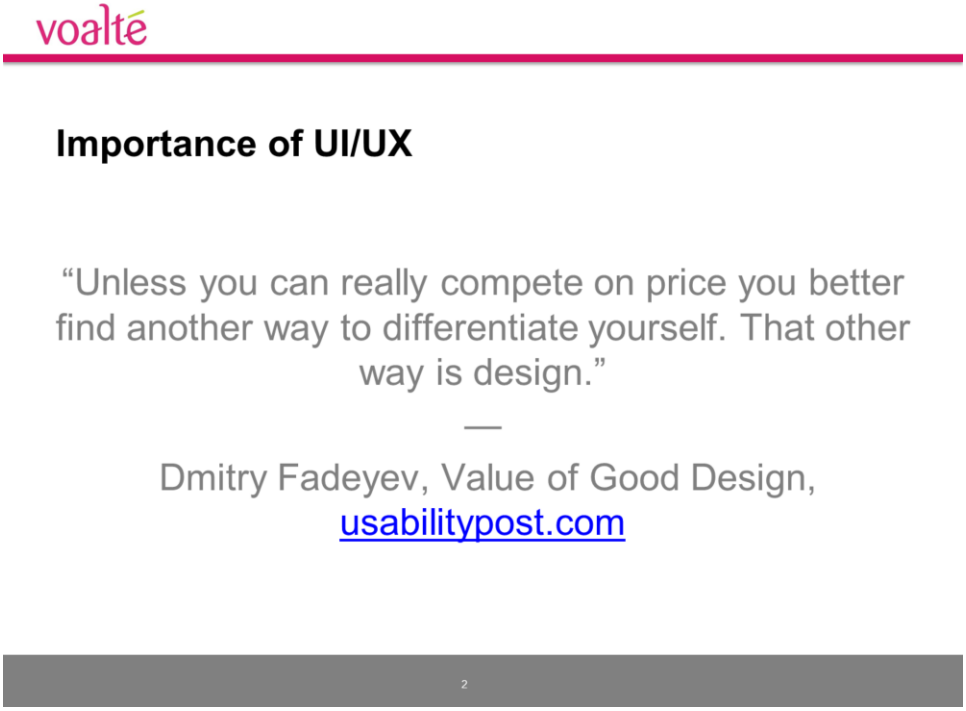
Disclaimer: Part of presentation was removed due to the amount of internal information presented.



Importance of UI/UX Slide

Summary : As a **consumer and product driven** company, we should push to deliver exceptional user experience, gain **competitive advantage** over our competitors, and **monetize** over value added features. Focusing in user experience will have long lasting effect for us as a company moving forward.

So what exactly can an exceptional UI/UX do for us ? **It allows us for….**

Ease of new client acquisition:

Reflect the unique and exceptional Voalte experience.

Allowing our app to reflect consistent branding and marketing goals.

Create truly value added features:

Voalte is **entering** this rapid growth stage with a **maturing** mobile healthcare industry. We will have to find ways to distinguish ourselves, become the **industry leader** NOT the follower. (With **design** being an important aspect of it, and of course **engineering** , **support** and other **function** of the company that follows)

At the end of the day , we want to **Increase ROI, for the company with:**

Decrease the need for redundant tech support

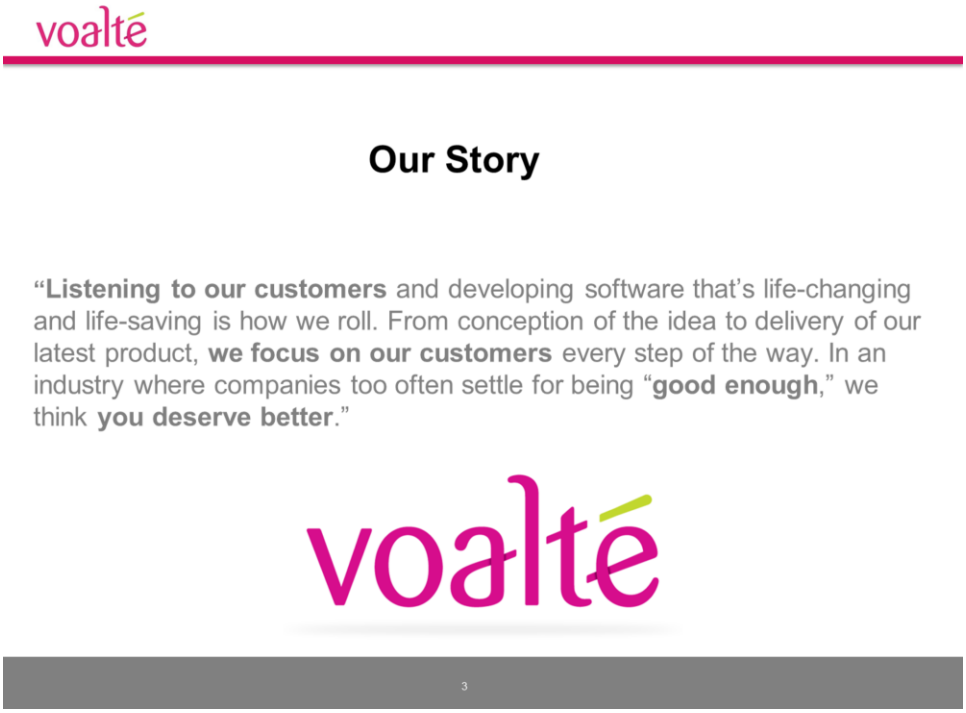
Increase user satisfaction rate

Measure by the decrease in tech support tickets

Longer and more "active" users in hospital setting

Decrease the amount of training time for end users and the amount of onsite ICs,VMAAs…

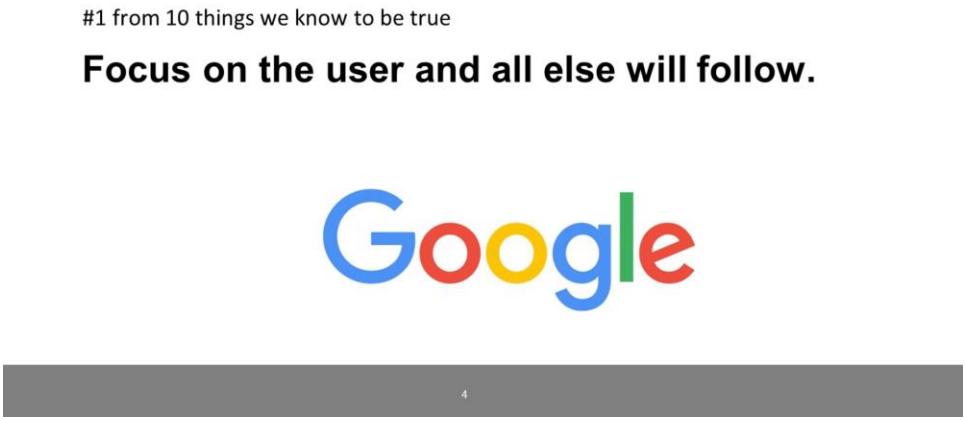
Decreasethe deployment cost and decrease deployment time.



"**Good design at the frontend** really **suggests** that everything is in **order** at the **backend**, whether or not that is the case."
The Value of Good Design

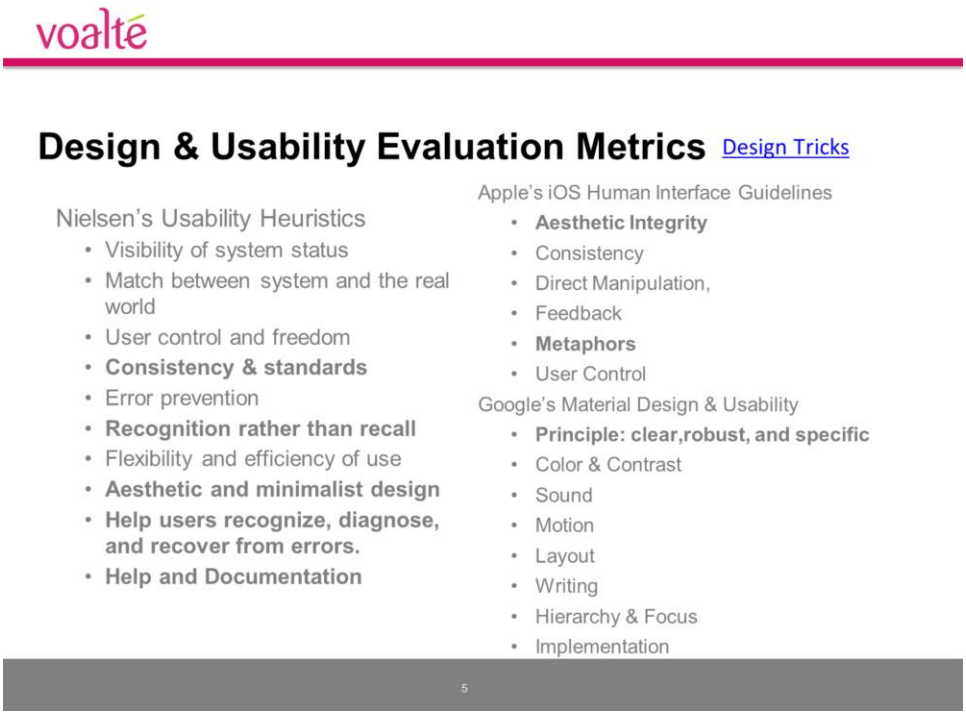
There are also **plenty of researches conducted** that have data that states large number of **users assess the credibility** of sites and application **based on the appeal of the overall visual** .

As a reminder, this is what we promised our customers, "**we don't settle for being 'good enough** ' "



And if I draw some parallels, here's **Google's number 1 philosophy** .

*With that we will **move on** to see **how usability is evaluated** and how Voalte Platform is doing against these evaluations.*



Using Usability Evaluation

Summary : With the ***importance of UI/UX established***, let's briefly walk over how usability and user experience is evaluated. **Human eyes are extremely sensitive** , and that's what makes design hard to grasp.

A lot of people think "UI is just a matter of opinions and colors" .
That's not exactly true, there are **specific ways user experience** can be **evaluated objectively** .

One of the most **widely adopted metrics** in the industry is the **Nielsen's usability heuristics** .

Here you can find **specific and objective qualification** on if we are delivering good user experience. You can even find these heuristic guidelines being mapped into the **two of the most popular client ecosystems** . IOS and Android. These guidelines were **set up to maintain consistency between different apps** within the same ecosystem.

Having this **consistency is extremely important in helping users to adopt and familiarize expected user behavior** . Can you imagine having users to relearn a new set of rules every time he or she download a new app ? That would be

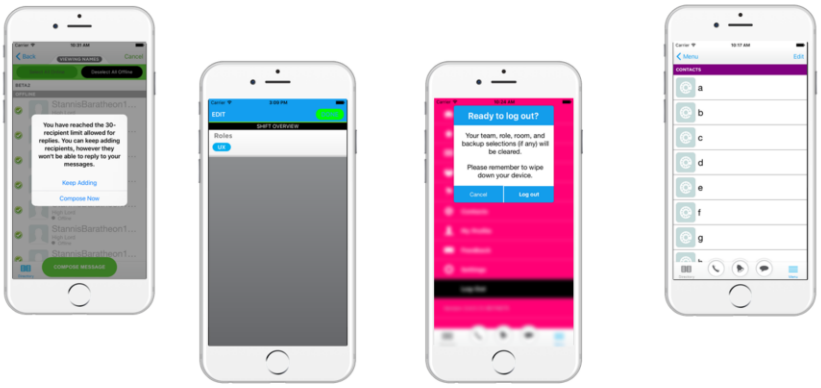
disastrous.
So here you can see how **detailed the Nielsen's usability heuristics are** . We do well in most of these evaluations and I've **bolded** some specific points where we could use some attention.

We will go through these in more detail in the next couple slides as we walk through a typical user flow within our Voalte system

Questions?

Current User Experience

A typical user-flow



Consistency of the overall Voalte System

Summary :

Analyzing Voalte from a **higher level overview** , our current system is feature rich and densely packaged. However, anyone who has had experience onsite would be able to **recall incidents** where our end users **didn't realized certain features existed** . Leading them into **frustration** and **negative** experience with the Voalte system. If you remembered the couple bullets I highlighted a slides back, to improve the current UX , we essentially need to **find**

1)Consistency & standards,

bring

2)Aesthetic & minimalist design

Help

3)Users recognize, diagnose, and recover from errors and

Allow

4).Users to recognize an action rather than having them recalled an expected action.

We have a great **features**, it's a shame if we don't see more users actively using them.

Without going into specifics just ye t, and just by looking at this slide right here, you will realize our UI is fairly **inconsistent** as it **deviates** and **follows**

iOS standard practices from screen to screen. Our system also contains **5+ colors** and different sizes of fronts to **convey** very **specific emphasizes** on different screens. Referring back to the usability heuristic evaluations, this is **not only distracting and inconsistent** , it subconsciously results in **extra cognitive load** for our users to distinguish from one action to another. Imagine nurses curious about why the color just all the sudden changed, or **why certain things aren't in a certain place.** That's the **discrepancy we want to solve.**

[off script]
talk about inconsistencies on the screen, and distracting colors.

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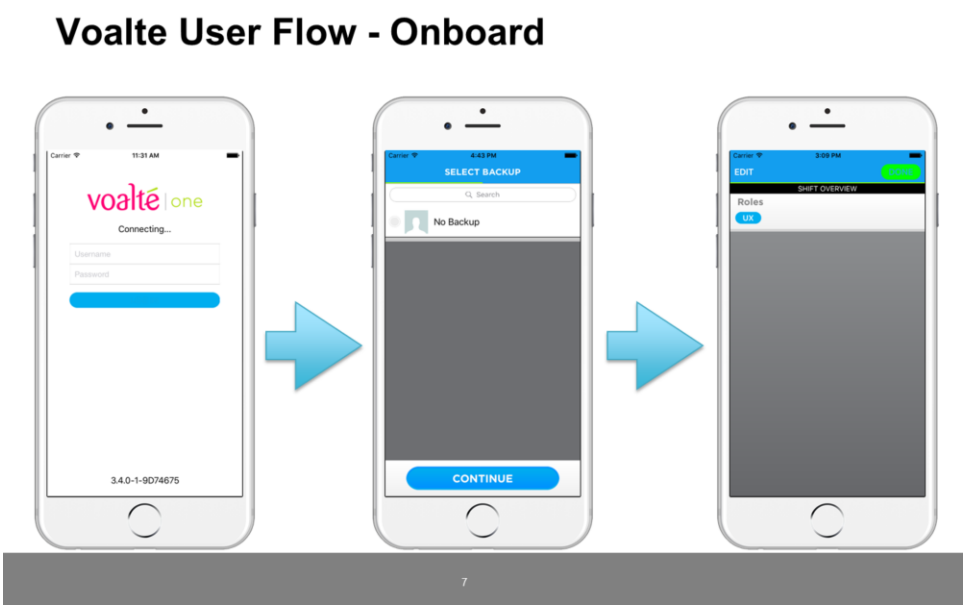
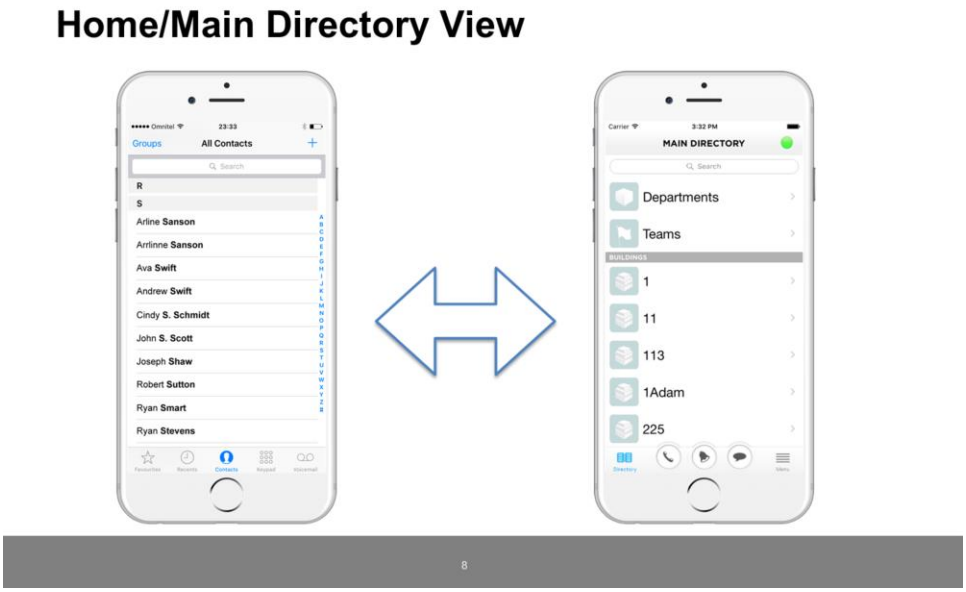


1.Onboarding (Signing in process)
Summary: **Traditionally** for consumer facing products(apps), the **onboarding process refers to initial app launch** where it provides an enduser training before a user is finally landed inside the system.

Understanding our unique niche of consumers, this might not be completely applicable. However, upon looking at these initial screens, we still have **some room** for " **design fun** ". We could **guide** our end user through this **signing** in process while providing a **brief overview** of how our app work. (this in the end would **leverage for additional trainings** needed from our ICs/Support team)

Aside from the **educational purpose of this onboarding process, these screens are also golden opportunities to express VOALTE as a brand** .
1. Note: ***Inconsistency*** in tapping **Continue** and **Done**.



Main Directory View

Summary : This is **first screen** a user sees after the initial onboarding process. **At first glance** , this is a screen with large table row sizes and easy to read. If we pull up the **default** [Contacts] UI from the **IOS system** , you'd immediately notice the scroll to **filter feature** that cease to exist in our system. There are also other little things and **minor criticisms** , but **let's move forward** to the **core functions** of this app so we can see what **inconsistencies exist from screen to screen.**

1. Default icons doesn't "pop"/stand out
2. Awkward grey divider.

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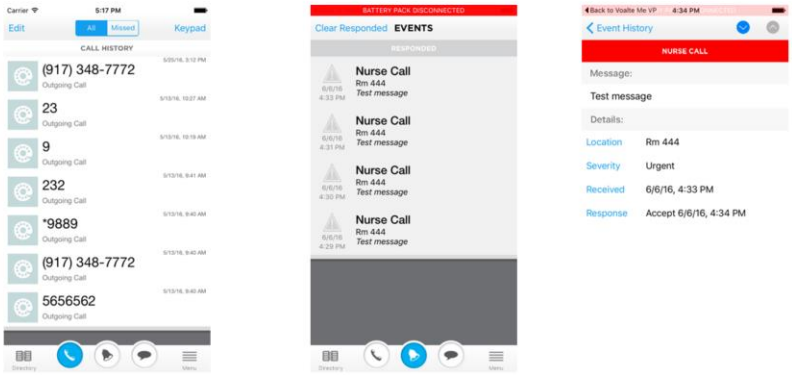
Core Features



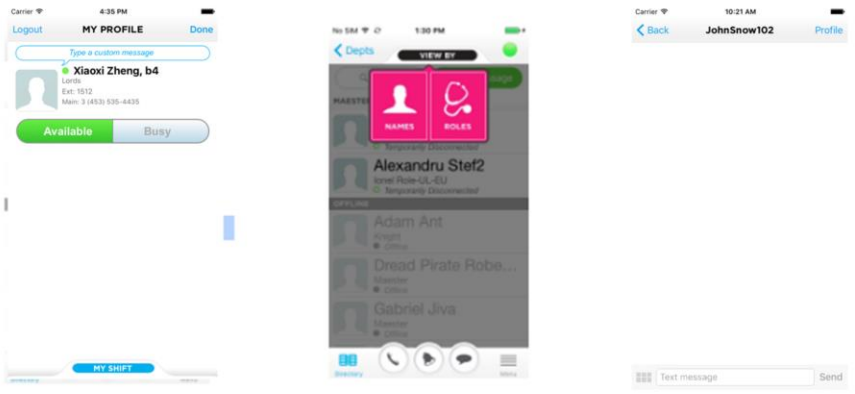
9

Alarm/Text/Call NonEmpty Views

Summary: **So as a nurse** , or hospital staff. I'm finally here in the **core features of Voalte**. I'm supposedly excited because Voalte is suppose to make **my life better with mobile healthcare solution** right? However, just from navigating quickly between the core feature screens, you can't help but **feel** how the different screens **flickers in front of you**. You **can't pinpoint what's exactly "wrong", but it feels awkward to navigate around.**

So let's take some time and analyze what I mean by " **flickering"** .
Notice:
1. Differences in Table row sizes due to differences in **font size** and differences in **icon presenting styles.**
2. **Intruding banners** .
3. Difference in the **presentation of icons.**
a. Inverted colors vs no border design.

Potentially Unused Features



Potentially missed Features
Like I mentioned previously, **one of the major criticism** for Voalte Platform is that we have a feature rich system, but some of them seem to be "**hiding**" from the end users. Here you will see a couple examples.

User Profile View
In the user profile screen, **I'm expected to know** what my role, team, and **all the information** I inputted **during my shift selection** process. However, I landed on this page. It has my basic information, now what? We have so much empty space, yet users are still expected to tap on the "my shift" tab. **Referring back to the usability heuristics, this requires users to "recall" an action rather than intuitively "recognize" an expected action.**

And because we want Voalte to look identical on both ios and Android, this **specific gesture(scroll up from below)** is almost specific to IOS, which require Android users to **learn** this **expected** gesture.

====
Detailed Directory View
Similar to the user profile view, detailed directory view has a similar issue. **The viewing by Name/ Role/ Room feature** is basically hidden from the user. I think it **took me a month** myself to " **uncover** " this feature. And it wasn't

from “playing around with the app, it was from the **code** ….

I know I didn't went through any end user trainings but as **we go live with bigger** hospitals and with more phones, it's almost **unavoidable** for some **users to never receive any training** from our ICs. (Ex: Cedars)

===

Messaging View

The messaging interface is fairly straightforward and follows default IOS UI designs. With features like:

1)Sending Priority messages

2)quick messages

It would be interesting to ask end users some opinions about the presentation of these features, and **how many of our users opt** in just to type the message, instead of routing through “quick messages”.

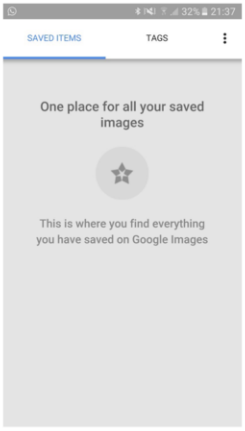
Q: Do they know what priority messages or the double exclamation points actually do?

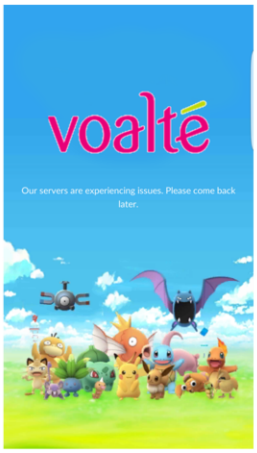
With **some more research and data analysis** , I'm sure ICs and tech support bffs will have a **list of features** to add that are often missed by users when they first encounter our system.

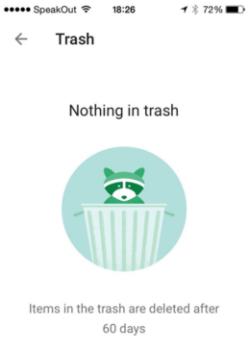
It would be **interesting** to see the **actual percentage** of users actively using these features. (Stress we need in-app analytics implemented!)

With that being said, **let’s move forward** and see how we can **highlight** these features with **empty states.**

Empty States and Error Prevention







Alarm/Text/Call EmptyState Views Slide
Summary: **Empty state** is probably the most **overlooked** aspect of **ux design** , and it could be the **most important.**

" A useful empty state **tells you *what* it's for, *why* you're seeing it, and *how* you can fill it up** …. (what, why and how) is the formula for reengaging your user, but also keep in mind that it's the bare minimum requirement for an empty state."
Benjamin Brandall

Consider redesigning our **empty states on different screens that tells the user what they should be expecting** . It is an extremely helpful for users to learn about our system with these temporary empty screens. On the slide here, you can see some interesting empty state designs. Consider how helpful this would be **if it's applied to a user's "empty" favorite/contact/message screens?**

This will help cope with the low active use rate, and reduce redundant support desk tickets. **A well designed app, should be able to explain itself to users. Users should eventually learn how to navigate our system with confident and not have to guess what "Contacts"** mean in our system.

Another place a we might want to implement this type of system **feedback/documentation is in error messages.** Referring back to the usability evaluation metrics, these **feedbacks** are an excellent **examples** of " **helping users recognize, diagnose, and recover from errors.**

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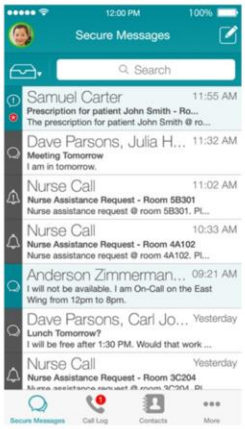
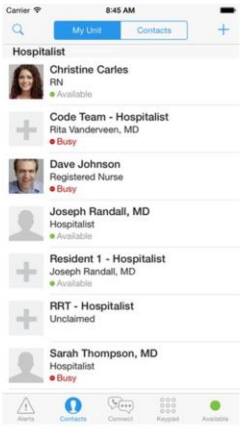
Competitor's Designs

Vocera Collaboration Suite



Cerner CareAware Connect



12

Competitor's Design
Summary: Here, **I would like to show you briefly** what our competitor's user interface look like. You will see **Vocera** utilizes its **key brand color.** Almost immediately you would **recognize** its **Vocera** without even needing a logo. On the other hand, you will see **Cerner's** fairly **simplistic UI** that matches **highly with the IOS default standard** , making this much of a comfortable UI for anyone new to Cerner's app.

These two sample UIs serve as a **reminder** that we should make our **Rubine RED** more prominent in our Voalte system while **sustaining IOS standards** to make sure end users are comfortable to use.

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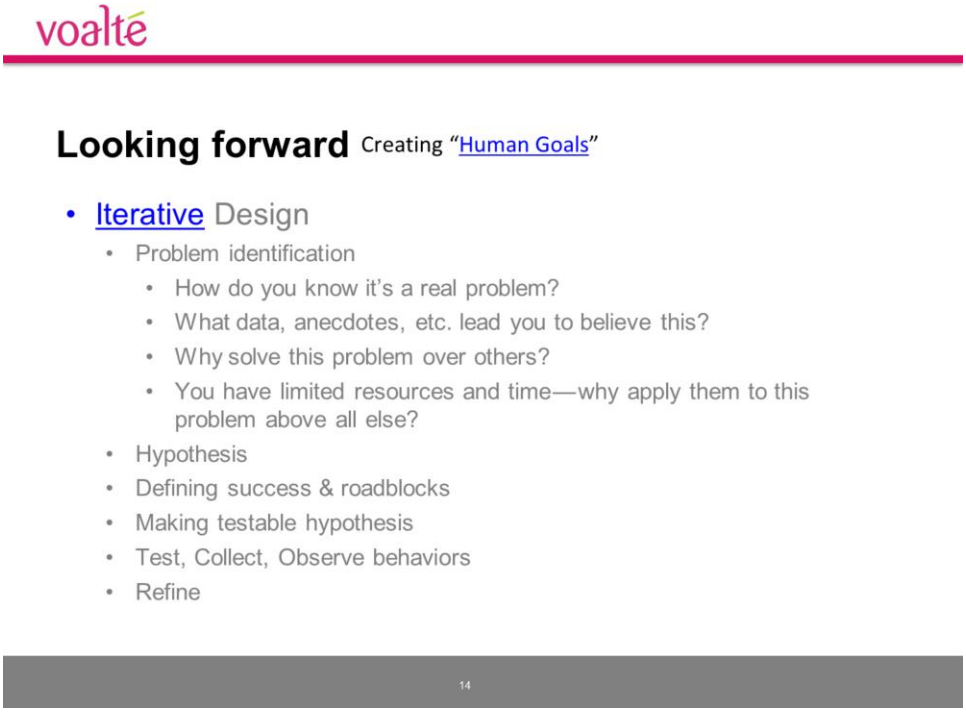

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Summary: One of the **goal** for me and this presentation is to encourage managers to **incorporate this concept of iterative process design in the deployment process** . Generally we have this structure, **id problem, hypo** ... to ensure the **final product we ship has top of class UX** .

From **what I've learned** the past couple months here, we are already doing a lot of what this structured out to do, but we could use some **emphasis** on **DESIGN** aspect of things instead of **pure FEATURE** driven releases. **This design process could even be independent of the regular deployment process** . We could create prototypes and do some **initial pilot** testing with **none of the backend implementation**(using tools like inVision, Origami and etc).

Essentially this should be part of the **product business review process** and final decisions are then converted into the regular triage ticketing system.

//Go in-depth with specific user case scenarios.

Stress analytics!
With that being said, we need a **more objective way** to analyze our **end user**

experience . We
need to start **collecting** some **data/survey** to reflect how nurses and hospital staffs are **actually** using our app.

What's the **avg. rating** a nurse would give after a new app update?
What is the **average active rate** (in % of all deployed phones)
How long do they spend in the app per shift?
How many **calls/alarms/messages** gets **ignored** ?

Consider **sending** our **surveys** to those nurses that **do not like to use** or try to **avoid** using the Voalte System, ask them **what keeps them** from using the Voalte phones that are assigned to them.

Note this is different from the **Voluntary feedback** form we have within our app, we need to be more **active** (aggressive) on **collecting** these data. We don't just want bad feedbacks, we want an accurate representation on how our apps are being used on a daily basis. And yes.. There's also **strategies** in how to **prompt for feedbacks** with the highest integrity.
[Sample Survey Questions attachment]

Test, Collect, Observe behaviors
So now… we're finally at testing and collecting data to observe user behaviors… There a lot of third party analytic services that can help us in this process, or we can even **start collecting/analyzing our own data** from our **servers** to start. **Establishing benchmarks** for what identify as a successful "change" is another **challenging and lecture itself** . But imagine, we could use **data to derive potential paid features** , potential of **paid white labeling** our apps for hospitals with strong marketing purposes and etc.

Prioritize Human Center Design.
Instead of **simply** measuring **number** of text/calls/alarms received, **measure the meaningful exchanges(interactions)** within the app. Similar to what
was mentioned in the webinar from UCSF, examples are what are " **actionable alarms** ".

What's the ***net positive contribution*** to patient experience?. [See attached for sample KPIs]

Refine
From either hard data we collected through regular end user usage or through different design specific iterations, **we will then finally refine our users' needs** and turn them into triage tickets for developers.

These can be mark as **low priority or aesthetic fixes** but remember it's important first **step for them to be on the board.**

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Questions?

Xiaoxi Zheng
- iOS Engineering Intern


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Reimagine healthcare communication.