

UX HOMEWORK

UX Design Assignment

Please complete this assignment for your in-person meeting.

Problem: Doctors are extremely busy. They would like to be able to quickly check their daily appointments on the go and get a quick overview of the patient's medical history.

Requirements:

- Only authorized users can access the information.
- User must be able to see the appointment status.
- Users need to be able to quickly access information on the go.
- Users must be able to see the date, time and location where they are meeting the patient.
- User must be able to see the patient's full name, date of birth (DOB), contact information, and a summary of their medical history.

Acceptance Criteria:

- Provide a concept to show your proposed idea for solving the problem.
- Provide information on how you arrived at your proposed design.
- Discuss what your next steps would be for the project.

Note: Your presentation should include enough information/artifacts that both your full UX process for this project, as well as the final deliverable are explained, and clear to stakeholders.

Please segment your presentation into:

PART 1: Present this to us as if we are the stake holders and you are proposing a design.

PART 2: Explain the process on how you arrived at your proposed design. This may include what steps you took and any hypothetical steps you would have done if this was a real-world situation.

Do not spend too much time on the assignment.

Research

Study / capture the needs, desires and motivators of users & customers:

- Primary needs
- Unmet and unexpressed needs
- Purchase behavior motivators
- Identify any barriers to use or understanding (Informational, physical, emotional...)
- Communication preferences
- Examples of ideal sales experiences (both)

Tools:

- Site visits
- User/customer behavior walk through
- Face to face/telephone Interviews
- Audio/video recording
- Demographic survey (customers)
- Technical skills survey (users)

Deliverables:

- Summary report of research findings
- Survey results and opportunity identification
- User/customer personas
- User/customer use cases
- Feature preference priority (users)
- Prioritized needs (both)
- Ideal sales experiences summary (both)
- Research artifacts: photos, video
- Demographic summary (both)

Time estimate 4-6 weeks

Design

Create high level framework and feature set for the development of Live Guide 2.0

- Illustrate primary use cases
- Identify clusters of similar needs across customer/user groups
- Schematic/information flow diagrams of overall system
- Screen wireframes
- Identify how design direction delivers or not on the needs identified during research

Tools:

- Iterative cycles of design and internal review
- Wireframe/prototypes
- Share design thinking skills

Deliverables:

- Simple prototypes of screens and workflows
- User features and layout
- Schematic/information flow diagrams of overall system

Time estimate 4-6 weeks

Testing

Test design concepts and iterate

- Identify sites and schedule testing
- Test small groups of users (5-10)
- Identify strengths and weaknesses of design
- Share results internally with stakeholders
- Refine designs based on insights from testing

Tools:

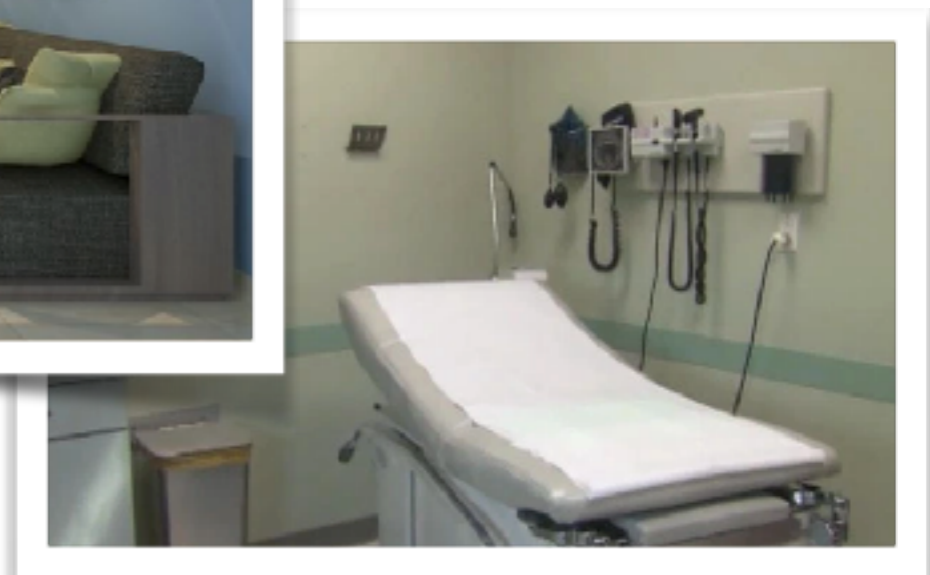
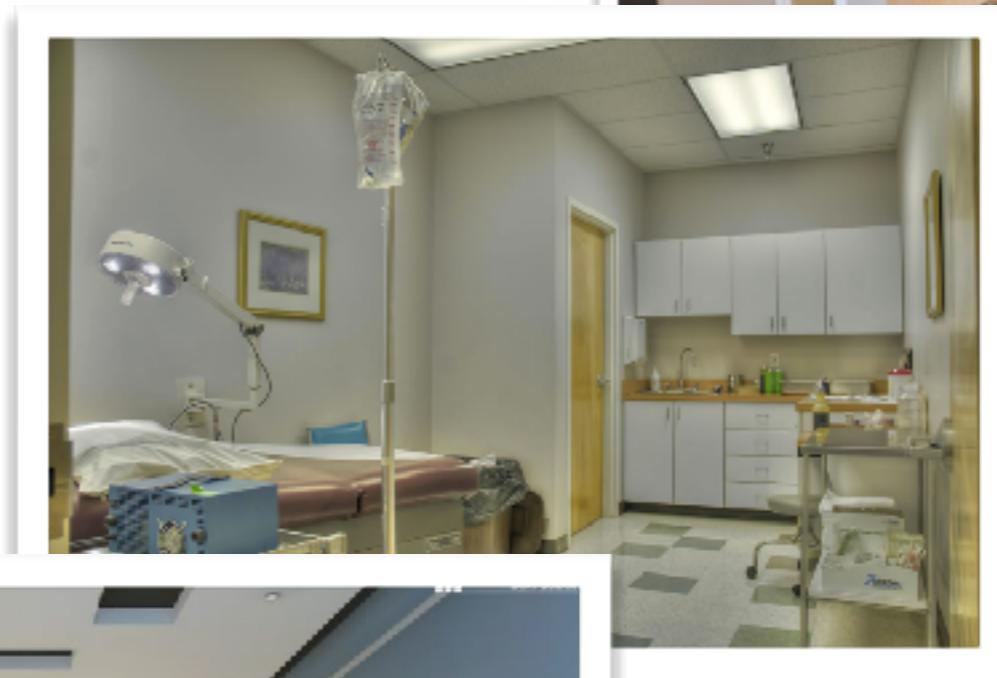
- Usability testing
- Post testing design satisfaction surveys
- Tech Smith MORAE ?

Deliverables:




- Summary report of testing results
- Suggested modifications/iteration based on input

Time estimate 2 weeks

Field study, Interviews, and survey



Persona Overview

<h2>Central Hospital</h2> <p>Large urban hospital with a level 2 trauma center and a number of outpatient clinics</p>		
<p>Dr. Dan Ling Hospitalist</p> 	<p>Dr. Paula Campbell Endocrinologist, Outpatient Diabetes Clinic</p> 	<p>Pam Kraus ER Charge Nurse</p> 
<p>“I spend half my time looking for information. I’m a doctor, not a detective!”</p>	<p>“Sometimes I feel like I’m on that <i>I Love Lucy</i> episode, but it’s patients flying down the conveyor belt, and I can’t keep up.”</p>	<p>“It all comes down to one question: How do you take the best care of the most patients?”</p>
<p>Summary</p> <ul style="list-style-type: none"> • Typically has 12 patients in the hospital across many units. • Sees patients and develops and adjusts plans of care, gives lab and medication orders, dictates clinical notes, communicates with specialists and PCPs. • Interested in changes over the last 24 hours and trends over several days. • Doesn’t fear technology, but feels too busy to learn new tools. 	<p>Summary</p> <ul style="list-style-type: none"> • Sees up to 30 patients in a day, and with follow-ups, could be concerned with up to 50 patients per day. • Sees new and returning patients and their families, and develops and adjusts treatment plans, types clinical notes, orders medications and labs, and recruits patients for her clinical research studies. • Interested in changes since last visit and trends over many years. • A technophile with high expectations. 	<p>Summary</p> <ul style="list-style-type: none"> • Manages three to six nurses, overseeing the care of up to 100 patients per shift. • Manages patient flow; takes calls about incoming patients; arranges admissions; coordinates techs, volunteers, social workers, etc.; balances nurse workload; and monitors the most acute patients. • Interested in patient wait times, outstanding orders and consults, nurse workload, and pending discharges. • Proficient with her current tools but has been burned by bad systems in the past.
<p>Goals:</p> <ul style="list-style-type: none"> • Ensure he’s always with the patient who needs him most. • Understand the gestalt of what’s going on with each patient. • Evaluate and improve his practice. 	<p>Goals:</p> <ul style="list-style-type: none"> • Ensure the effectiveness of her treatment plans. • Make stronger connections with patients. • Find good candidates for research studies. • Equip GPs with the information needed to deliver good care and to refer appropriately. 	<p>Goals:</p> <ul style="list-style-type: none"> • Understand where the bottlenecks are and help unclog them. • Monitor the care and needs of the most acute patients.
<p>Details on page 295</p>	<p>Details on page 297</p>	<p>Details on page 299</p>
<p>For more information about personas, including the full set of personas for this project, see “Personas” page 290.</p>		

CLINIC ANYWHERE :

Rooming Nurse Patient Receiving

Arriving the patient and rooming task flow...



Rooming nurse: 2

Prepares room as needed then.....

Rooming nurse authenticates herself as doctor's proxy at in room terminal

Opens appropriate patient record(s) for doctor

Exit / Closes view (sleep)

Proceeds to pick up patient from waiting area



Rooming nurse: 4

Collects: current medications, updates history and physical

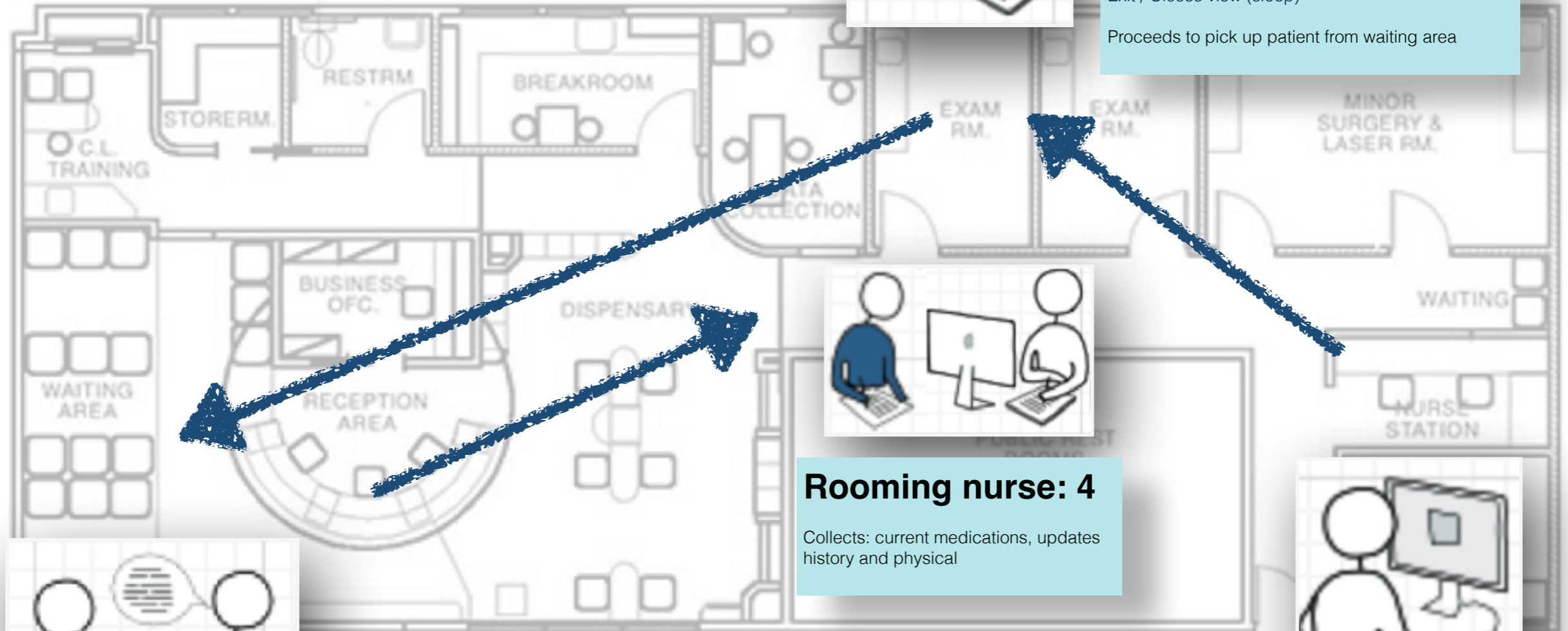


Rooming nurse: 1

Tracking the schedule the nurse anticipates the next patient and their problems

The scheduling interface alerts her that the anticipated patient has arrived

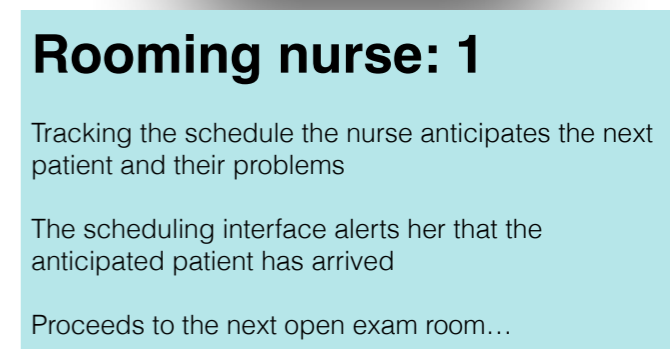
Proceeds to the next open exam room...



Rooming nurse: 3

Validates patient identity

Explains the rooming process



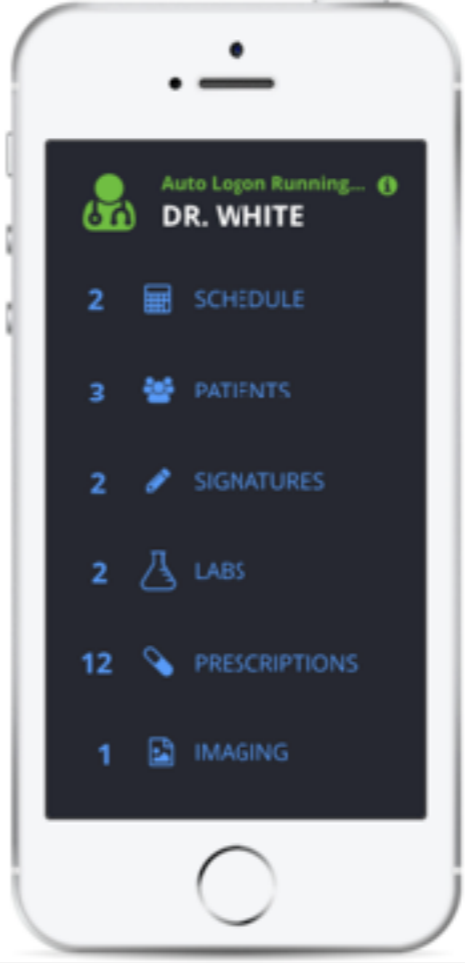
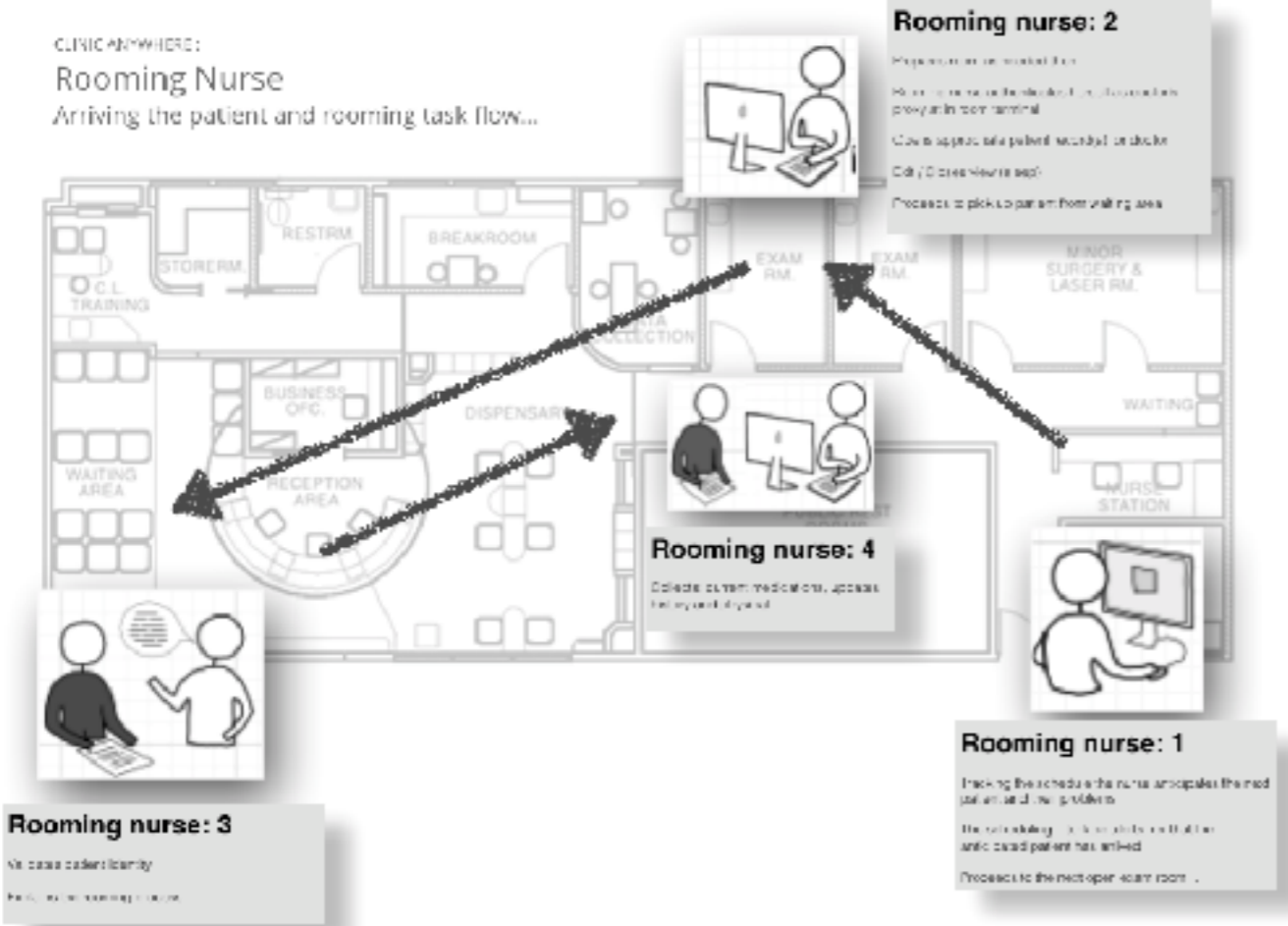
Problem: Up to 80 typed authentications required per user per shift...

THE Auto Login App...

This is an app that lives on your phone

The app can auto - authenticate a predefined secondary computer: exam room, your doc break room, home office, traveling laptop....office desktop / in room laptop or PC tablet / PAD

Security: facial recognition, secondary technology, like overlapping auto driving technologies RFID, bluetooth....



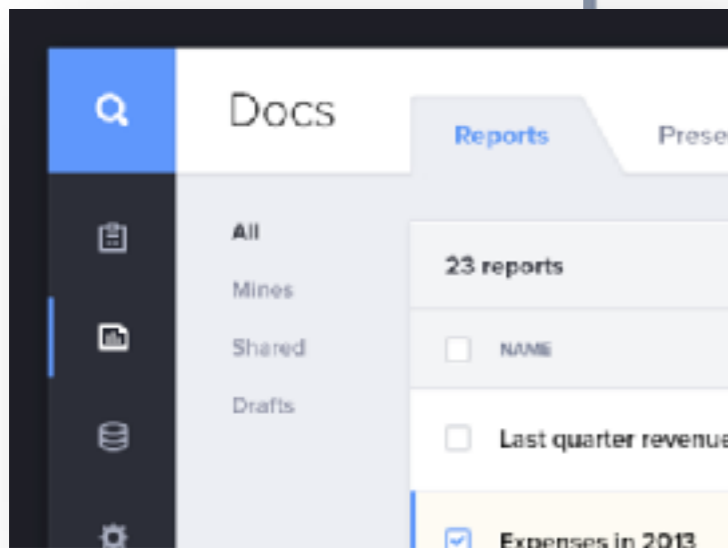
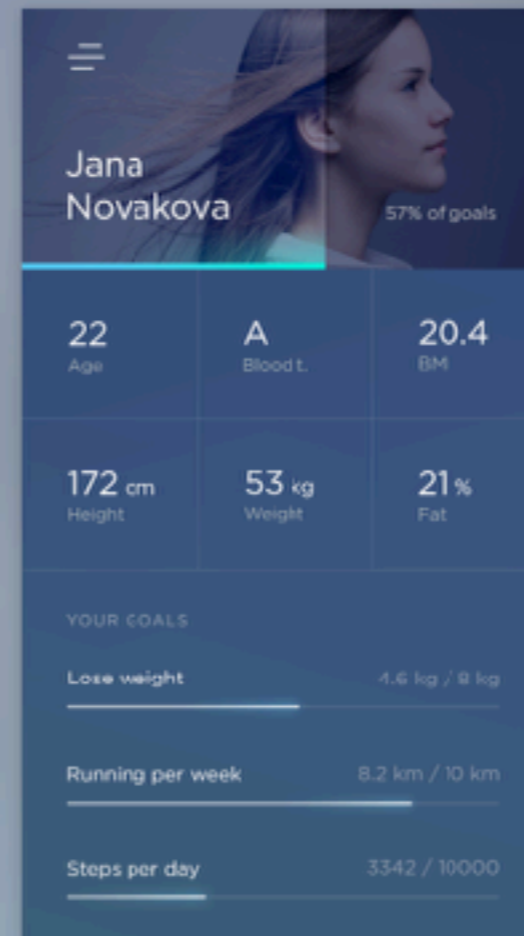
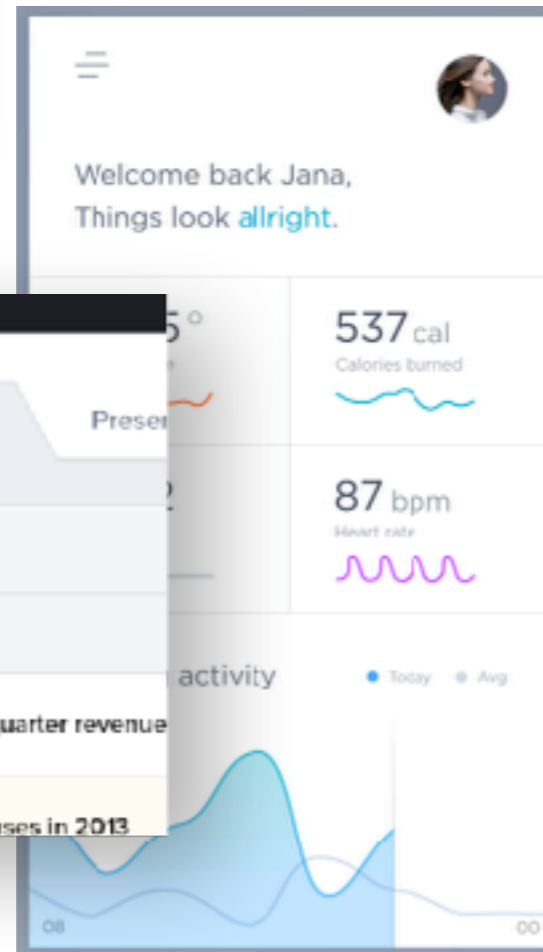
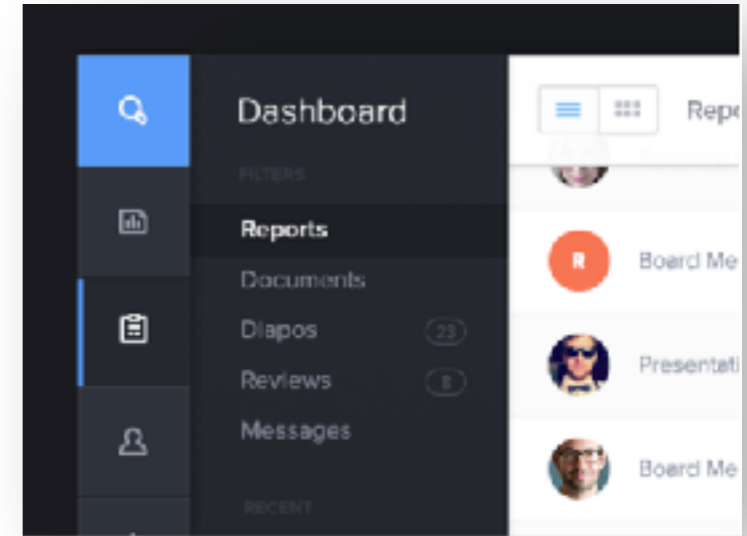
With this application, organizations can configure an ecosystem of devices that will communicate with team members according to roll, i.e., doctor, rooming nurse, MA, specialist, diabetic educator in a

IOT opportunity for Hand washing monitoring, coffee dispensers, lunch payment, conference room access, light settings, music, X-Ray display, application settings, doctors only areas, parking lots, Gym, etc.

Patients could wear one ID so that Patient / Physician accuracy is secured

UX Process

AESTHETIC MOOD BOARD

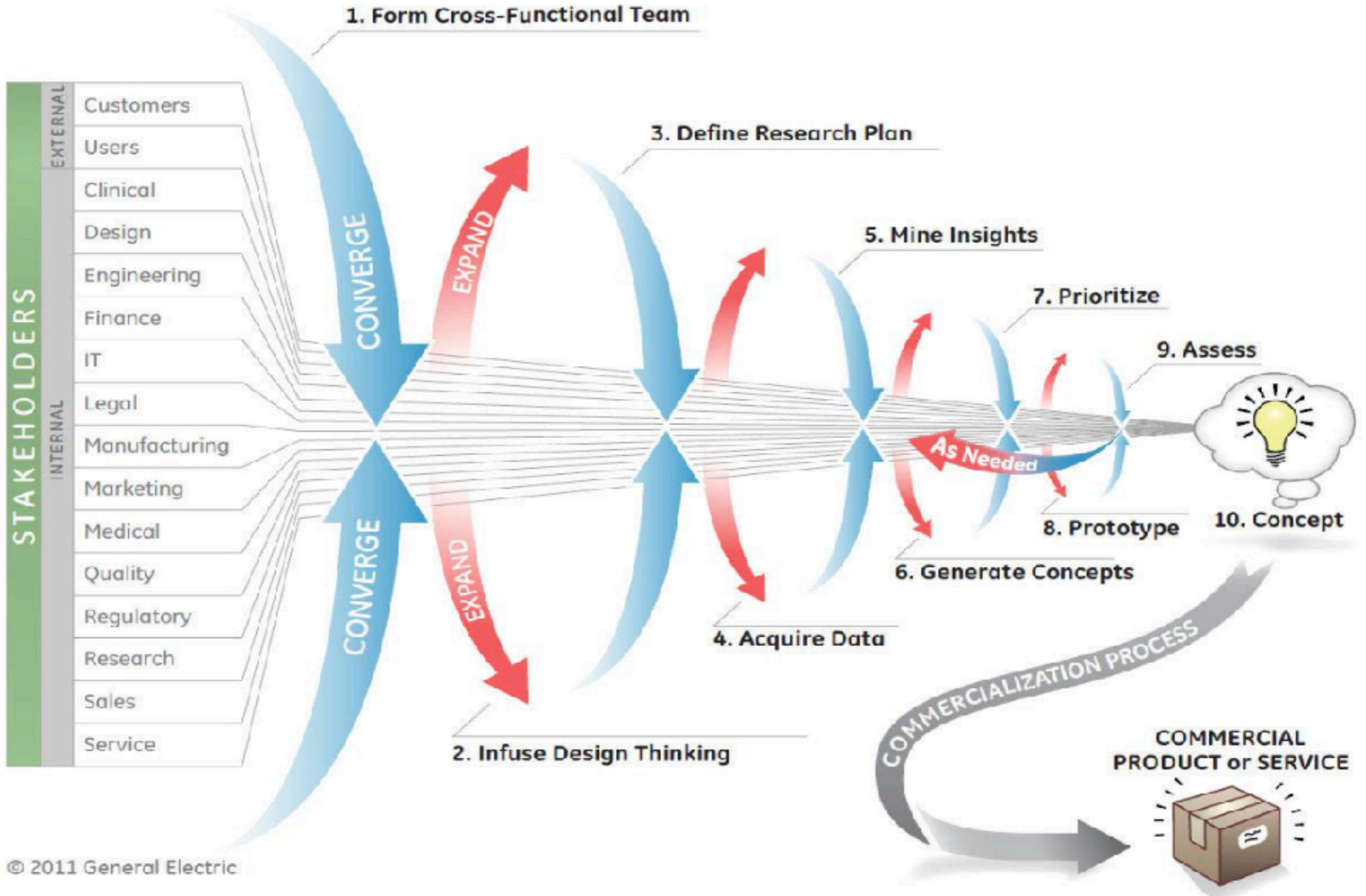


Coalesce & Align

Understand

Ideate

Assess



THE GLOBAL DESIGN USER EXPERIENCE BEGINS WITH...

IMMERSION...

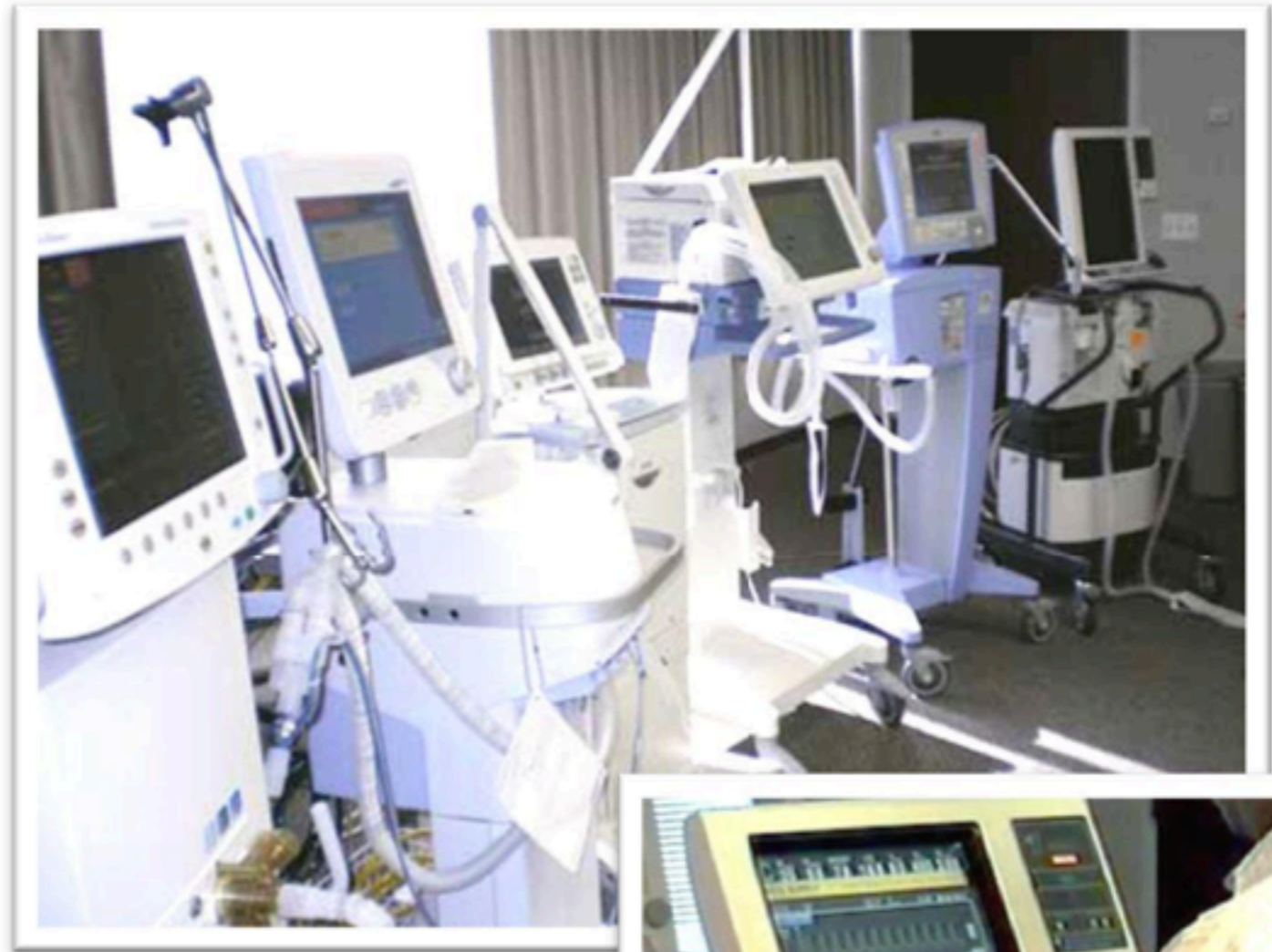
- CREATE A CROSS FUNCTIONAL TEAM
- PRACTICE "DESIGN THINKING" – THROUGH BRAINSTORMING, SKETCHING , QUICK PROTOTYPING, AND STORY TELLING
- THEY PRACTICE DESIGN WITHIN THE CONTEXT OF LOCAL BUSINESSES: A HARLEY DEALER, A GAS STATION, OR A WOMEN'S' FASHION BOUTIQUE
- AT THE END OF THIS SESSION, THE GROUP CREATES A TEAM "EXPLORATION" PLAN TO DISCOVER WHAT OPPORTUNITIES EXIST...



THE TEAM IS THEN ENCOURAGED TO...

EXPLORE...

- EVALUATE THE COMPETITIVE LANDSCAPE
- DISCOVER NEW IDEAS AS A TEAM
- REVIEW ADJACENT DOMAINS – FOR EXAMPLE - AUTOMOTIVE INTERFACES
- CREATE SUMMARIES FOR NEXT SESSION



HANDS ON REVIEW
SIX COMPETITIVE VENTILATORS



AUTOMOTIVE
USER INTERFACES
CHICAGO AUTO SHOW



THE TEAM COMES BACK TOGETHER TO...

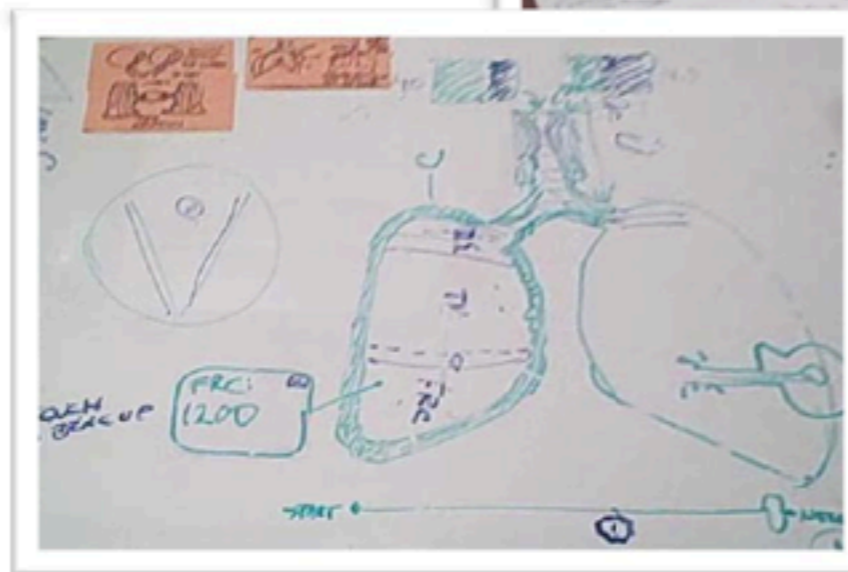
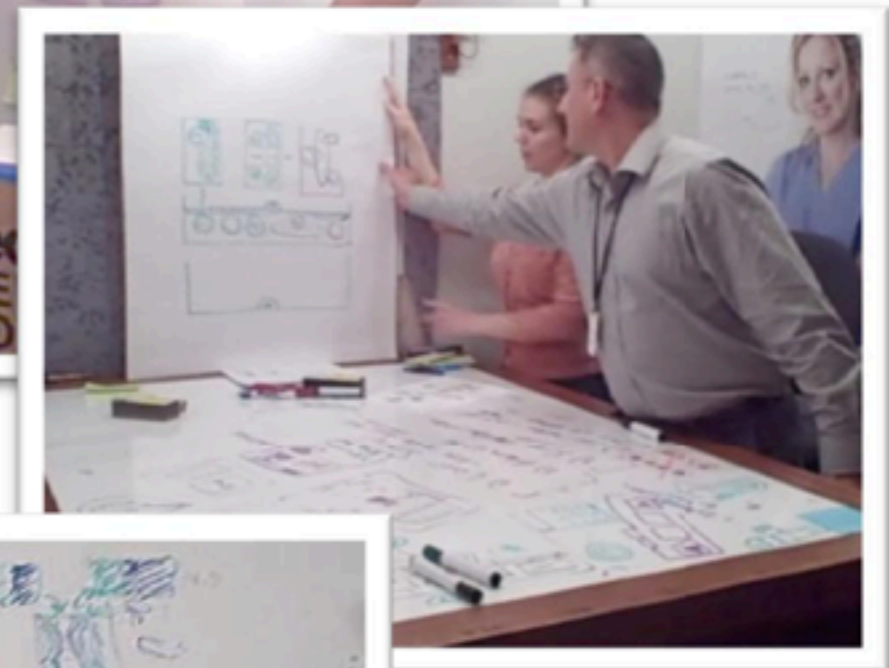
CULTIVATE GROUP GENIUS

- THE TEAM SHARES THEIR EXPLORATION DISCOVERIES
- THEY WORK ON VARIOUS VDOT CONCEPTS USING THEIR DESIGN THINKING SKILLS
- IN THIS SESSION INTELLECTUAL PROPERTY IS ALSO GENERATED AND CAPTURED.

VDOT IS APPLYING FOR PATENTS FOR

1. THE PAST, PRESENT, FUTURE - NAVIGATION PARADIGM
2. THE GRAPHIC TRENDS FEATURE
3. A TIDAL VOLUME AND COMPLIANCE TOOL
4. THE OVERALL DESIGN AESTHETIC

AFTER THIS SESSION GRAPHIC DESIGN AND USABILITY TESTING BEGIN RAMPING UP...



USABILITY TESTING REFINED THE DESIGN

- ROUND 1 TESTING EXPOSED SOME CONCEPT STRENGTHS AND WEAKNESSES
- ROUND 2 TESTING IDENTIFIED SOME EFFECTIVE DESIGN REFINEMENTS

USABILITY TEST ROUND 1 – GERMANY, FRANCE, UK, USA
 USABILITY TEST ROUND 2 – UK, USA



SW PROTOTYPE ENGSTROM

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 USA

Usability Test Plan

October 2010 | Version 01.00 | Status: Final

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3.3. Test Questionnaire 1st Project Phase

The questionnaire is based on the User Usability Test Plan v1.0 issued by GEHC. It has been adapted and refined by Use-Lab.

Note:
 The test questions will be updated after the European test sessions. Questions or remarks in yellow were the observer or moderator for the interview guideline and an instruction when something has to be prepared on the device to be observed. These questions and instructions will not be read aloud.
 The performance of the tests tasks will be related to the observation. In case users are not able to find a specific screen area which is in focus of the discussion the observer will show them how to navigate.

Question ID	Answer	Explanation/Observer Note
3.3.1	Discussion	
3.3.2	Yes/No	
3.3.3	Discussion	
3.3.4	Yes/No	
3.3.5	Yes/No	
3.3.6	Yes/No	
3.3.7	Yes/No	
3.3.8	Yes/No	
3.3.9	Yes/No	
3.3.10	Yes/No	
3.3.11	Yes/No	
3.3.12	Yes/No	
3.3.13	Yes/No	
3.3.14	Yes/No	
3.3.15	Yes/No	
3.3.16	Yes/No	
3.3.17	Yes/No	
3.3.18	Yes/No	
3.3.19	Yes/No	
3.3.20	Yes/No	
3.3.21	Yes/No	
3.3.22	Yes/No	
3.3.23	Yes/No	
3.3.24	Yes/No	
3.3.25	Yes/No	
3.3.26	Yes/No	
3.3.27	Yes/No	
3.3.28	Yes/No	
3.3.29	Yes/No	
3.3.30	Yes/No	
3.3.31	Yes/No	
3.3.32	Yes/No	
3.3.33	Yes/No	
3.3.34	Yes/No	
3.3.35	Yes/No	
3.3.36	Yes/No	
3.3.37	Yes/No	
3.3.38	Yes/No	
3.3.39	Yes/No	
3.3.40	Yes/No	
3.3.41	Yes/No	
3.3.42	Yes/No	
3.3.43	Yes/No	
3.3.44	Yes/No	
3.3.45	Yes/No	
3.3.46	Yes/No	
3.3.47	Yes/No	
3.3.48	Yes/No	
3.3.49	Yes/No	
3.3.50	Yes/No	
3.3.51	Yes/No	
3.3.52	Yes/No	
3.3.53	Yes/No	
3.3.54	Yes/No	
3.3.55	Yes/No	
3.3.56	Yes/No	
3.3.57	Yes/No	
3.3.58	Yes/No	
3.3.59	Yes/No	
3.3.60	Yes/No	
3.3.61	Yes/No	
3.3.62	Yes/No	
3.3.63	Yes/No	
3.3.64	Yes/No	
3.3.65	Yes/No	
3.3.66	Yes/No	
3.3.67	Yes/No	
3.3.68	Yes/No	
3.3.69	Yes/No	
3.3.70	Yes/No	
3.3.71	Yes/No	
3.3.72	Yes/No	
3.3.73	Yes/No	
3.3.74	Yes/No	
3.3.75	Yes/No	
3.3.76	Yes/No	
3.3.77	Yes/No	
3.3.78	Yes/No	
3.3.79	Yes/No	
3.3.80	Yes/No	
3.3.81	Yes/No	
3.3.82	Yes/No	
3.3.83	Yes/No	
3.3.84	Yes/No	
3.3.85	Yes/No	
3.3.86	Yes/No	
3.3.87	Yes/No	
3.3.88	Yes/No	
3.3.89	Yes/No	
3.3.90	Yes/No	
3.3.91	Yes/No	
3.3.92	Yes/No	
3.3.93	Yes/No	
3.3.94	Yes/No	
3.3.95	Yes/No	
3.3.96	Yes/No	
3.3.97	Yes/No	
3.3.98	Yes/No	
3.3.99	Yes/No	
3.3.100	Yes/No	

Version: 01.00
 Date: 01.10.2010
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VENTILATOR SW PROTOTYPE II

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 USA

Final Report

March 2011 | Version 01.00 | Status: Final

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Figure 1-10: All participants understood the difference of the icons.

80% of all participants did not understand the relation between the bottom trend line and the upper trend line. The relation of a 50-line frame to the bottom bar which is directly related to the line scale of the upper frame is not clear for them.

It would be good to have the boundaries of the frame connected to the x-axis of the other trend line.

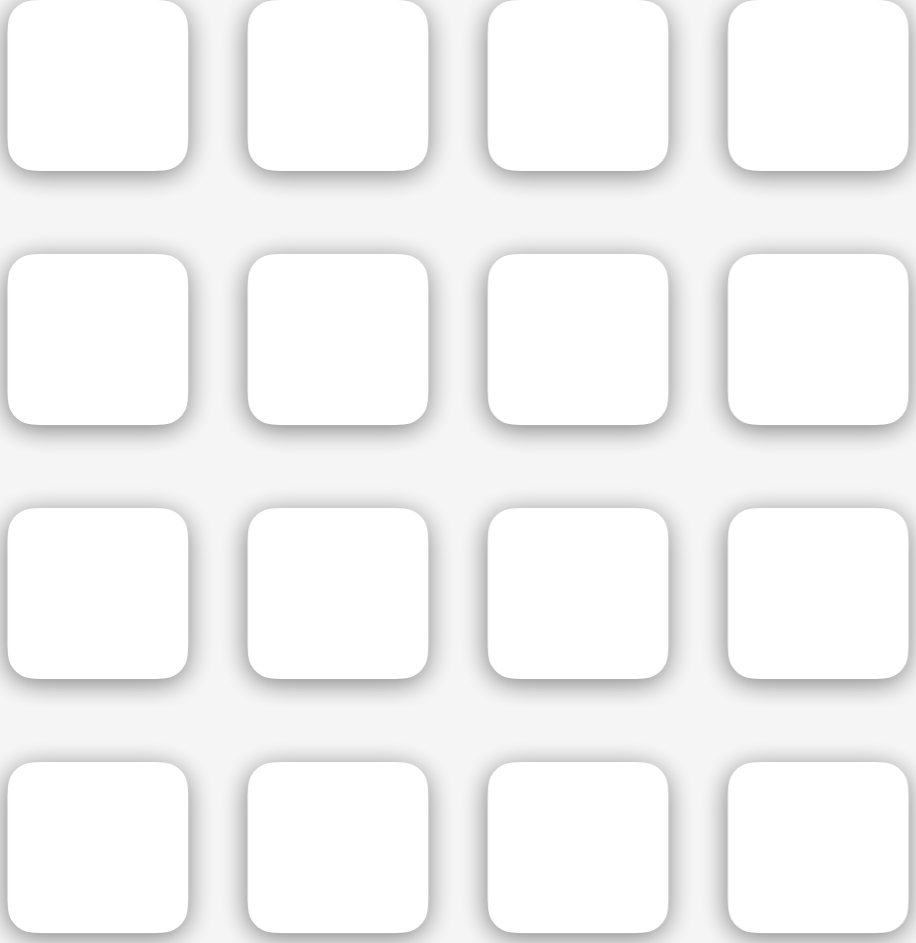
Another thing was that the position of the button for changing the time frame is in the field where there is another button. In all other time frames it is not for changing the time frame (Figure 1-10).

All participants had no problem to change the time scale from 60 to another value. It was obvious for them which button needed to be clicked.

Figure 1-10: All participants understood the difference of the icons.

Version: 01.00
 Date: 03.03.2011
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Appendix



Mail



Phone



Homework



Settings



Auto Logon Running... 

DR. WHITE

2



SCHEDULE

3



PATIENTS WAITING

2



SIGNATURES

2



LABS

12



PRESCRIPTIONS

1



IMAGING



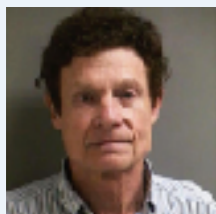
Patients Waiting



Current Location Exam B 16:25 min

Cindy D. Stafford 

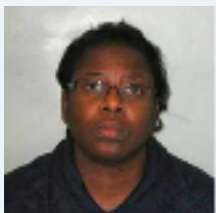
47 year old Female DOB 10/10/1970



Current Location Exam A 12:04 min

Phil T. Powers 

67 year old male DOB 04/15/1950



Current Location Exam C 08:12 min

Wanda J. Jones 

67 year old male DOB 04/15/1950



S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

all-day

Memorial Day

8:00 AM
9:00 AM



Current Location: exam B 16:25 min

Cindy D. Stafford

47 year old female DOB 10/10/1970



9:00 AM
10:00 AM



Current Location: exam A 12:04 min

Phil T. Powers

67 year old male DOB 04/15/1950



10:00 AM
11:00 AM



Current Location: Exam C 08:12 min

Wanda J. Jones

57 year old male DOB 04/15/1950



Today

Calendars

Inbox



Current Location Exam B 16:25 min

Cindy D. Stafford ⓘ

47 year old Female DOB 10/10/1970

Reason for visit

Horizontal lines for text input

Problems

Horizontal lines for text input

Allergies

Horizontal lines for text input

Care Alerts

Horizontal lines for text input



Current Location Exam A 12:04 min

Phil T. Powers ⓘ

67 year old male DOB 04/15/1950

Reason for visit

Horizontal lines for text input

Problems

Horizontal lines for text input

Allergies

Horizontal lines for text input

Care Alerts

Horizontal lines for text input



Reason for visit

Horizontal lines for text input

Problems

Horizontal lines for text input

Allergies

Horizontal lines for text input

Care Alerts

Horizontal lines for text input

Authentication Settings



Full automatic login for configured devices in your clinic ...

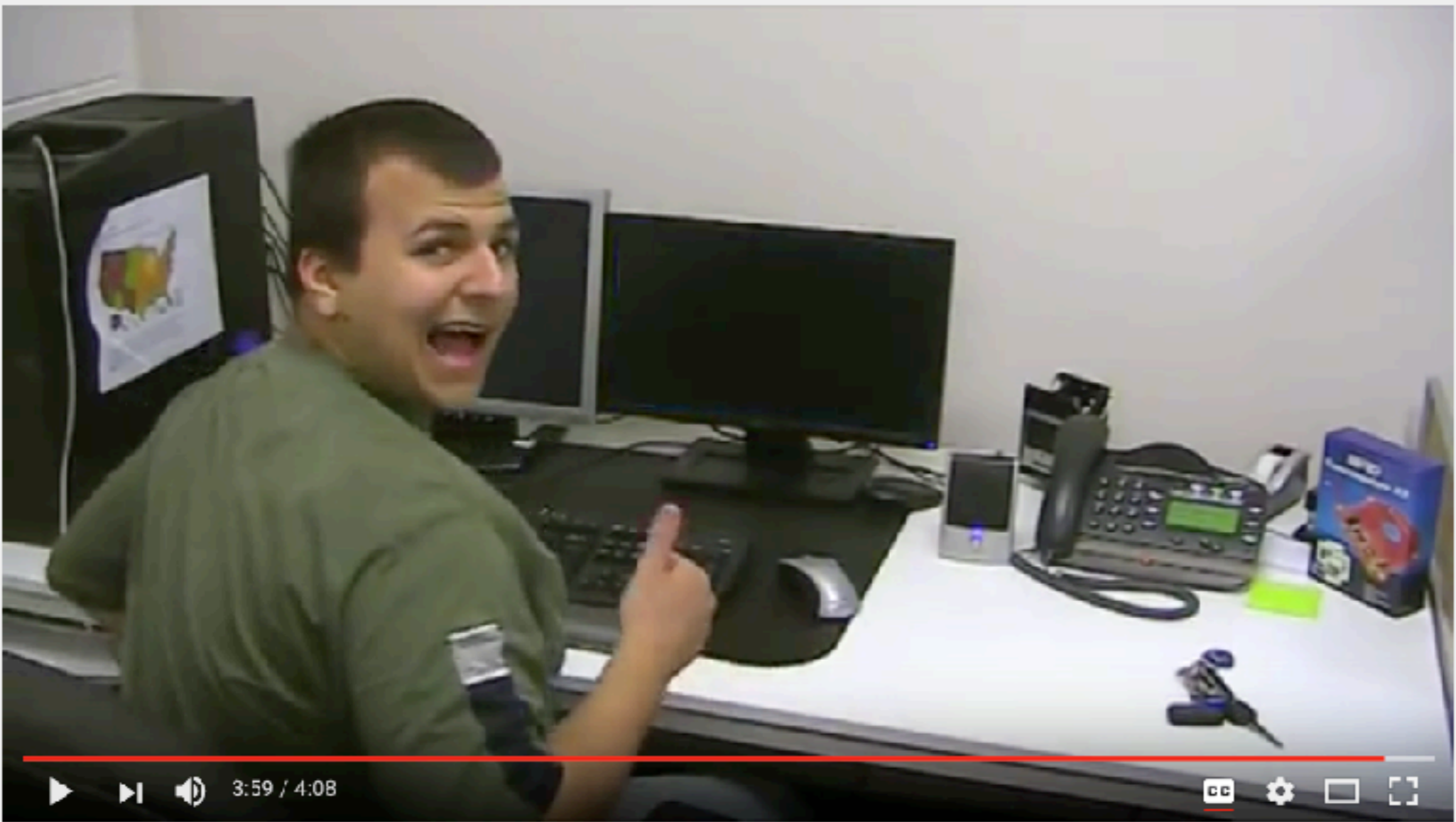
Use a second validation type for additional security ...

Off

Pause

OK

<https://youtu.be/ZaOgn21q-vg>



RFID Login for Windows 7, 8 and 10



trossenrobotics

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