To what extent does the system adjust or allow adjustment for individual preferences?

How easy are such adjustments to locate and to manipulate?



Will this product be capable of delivering perceived value if the user fails to consistently manually enter data?

If not, what rewards does the user receive for data entry?



Does this product depend non-primary users such as doctors to accept this product?

If so, how have you verified that they will be willing to do so?



Does the product in any way add to user daily work load?

If so, what indications are there that the benefits are sufficient for time invested?



Can the user gain benefits when they use product without having to have invested effort on previous occasions?

If not, how much effort will they need to invest, and why will the user do so?



How much effort per day will users have to invest in order to attain benefits? How is this request for user time justified?

Is this product meant for frequent usage?

If so, can it support user needs without requiring significant cognitive effort?

If this product requires continual use to deliver benefits, how much effort does each use require?

Is this product meant as a daily usage tool?

If to what extent do benefit surpass required effort?



How useful for your user is the information presented?

What actual user problem does it solve?



Does the system offer actionable explicit information? If not, why not?

Could the user be better served by more processed data?



If the system displays significant retrospective data, in what ways does this assist actual user needs?

If less data were visible by default, would the user still be able to complete their task?



Are any extra elements such as sound effects adding to the user experience?

Can they be customized or turned off if they are intrusive?

If they add essential information, are there alternate ways for the user to receive this information?



Does the product assist with an actual user need? What is this need? How is the user assisted with this product?

Can the system offer benefits with a glance from the user? If not, why not?

Can the system offer benefits in a glanceable manner?

How intuitive is such use?



Are elements such as gamification appropriate to the context of use?

How can this be verified?



Does your product add to daily workload?

If so, what rewards does the user receive to justify time and effort?

Does your device systems allow the user to alter, adjust, or exchange components to meet their needs or preferences? If not, how is this justified?



Concerns CA&U __

Could this system or interface create feelings of stigma or vulnerability in specific situations? e.g. date, job interview, public space, etc.

How could it be made more sensitive?



How does the interface display sensitive or undesired?

How does it alert user to important situations, without creating undue stress?



How does the UI signal to the user non-favorable or undesirable information? Has the UI been tested with such information? How could it be more sensitive to user's vulnerable states?



Are design element colors sensitive to the feelings of the user?

Has the use of alert colors like red been properly tested for emotional reaction from users?



Are the design choices such as color, sounds, and interface motivating or demotivating?

How has this been tested in a way appropriate to intended usage?



Have you adequately researched how the information or feedback you provide impacts your users emotionally?

What strategies do you have in place for delivering data in a way that minimizes undue stress?



How might your product or service create stigma in specific contexts?

How might this stress be lessened?

Is it possible to design to allow the user to discontinue and continue usage in such situations?





Concerns

CEI-

Does the interface help to access or jog users existing knowledge? If not, how could this be improved?

If the system offers retrospective information. to what extent does such retrospection serve user needs? Is this data always needed or just in specific cases?



Could information presented give a false impression of actual data? (For example, interpolated graphs or averages that conceal deviation)



If the user becomes confused by the system, what means are in place to help them understand it?

Does the interface present all information needed for task simultaneously, e.g. a single screen? Why not? Could it be changed to allow this to happen?

How much effort is required for the user to interpret the interface? Could the complexity be reduced without reducing essential function?

In what ways does this interface prevent confirmation bias?

Could this product add to confusion or delays in critical situations, such as with complicated or multiscreen interfaces? If so, how is this risk justified?

Could users become unnecessarily dependent on this product for decisions? Could the product assist them in making such decisions with minimal interactions?

Does this product support in-the-moment decisions without undue effort?

Does this product help users to correct and adjust their decisions according to specific contextual need?

Does this product help users to access knowledge they already possess in a fluid and flexible manner?

Are interface elements easy to understand and assist user's in assessing how their actions could impact outcomes?

Does this product assist users in recognizing problems or irregularities? How does it assist them in understanding the nature of the problem?

How does this product help users to question, explore, and test their assumptions? Could this process be better supported?

In what ways does this product help users to identify and make sense of patterns?

In what ways does this product help users to form new ideas about how best to manage challenging situations?



Which aspects of the system are you most concerned about? What would you change if you could?



Does the proposed system have a system of consent which helps the user to easily control who, when, and for what purpose each of their different data types will be used? If not, how do you justify this? How could vou implement such measures?



Does the proposed system have a system of consent which helps the user to easily control who, when, and for what purpose each of their different data types will be used? If not, how do you justify this? How could vou implement such measures?



Does your business model involve using individual's personal data for targeted marketing or use by 3rd parties? If so, how do you protect the user from any harms that may result?



Is the information collected by your system visible to any stakeholder other than the primary user? How do you:

- -mitigate feelings of surveillance
- -enable user to pause monitorina
- -allowing user to control how data is presented



Does your product provide user data to medical personal? If so:

-what controls does the user have to manage when and which data is visible?

-could such controls be modified quickly during an appointment to allow discussion of a specific topic?



Does your product or service make use of GPS data? In which ways do you protect the user from vulnerability, such as being identified, or having that data associated with their medical data?



How transparent is how the user's data is being used and who might have access? How could you better inform the user?



Why should the user trust your product? What assurances can you promise, and how can you guarantee they will be followed?



Are there information flows seem overly unbalanced or exploitive?

Are there any stakeholders that the user is unaware of?

Do you consider the patient the primary stakeholder? If not how is this justified?



Can the interface help users to react quickly in crucial situations? If so, in what ways could the system assist in the user reacting without needing this device?



Does the system try to enforce a structure on the user, such as a set daily time schedule? If so, how is this justified? Can the user easily adjust it?

Could this product in any way interfere with user action in critical situations? If so, how could such risks be minimized?

Does this product help users to act quickly in critical situations? How could it better assist in such instances?

Could this product interfere with the user engaging in necessary actions? If so, how is this justified?



Smartphone



Sensors GPS

Fingerprint
Barometer
Three-axis gyro
Accelerometer
Proximity

Ambient light Camera

Compass

Notes

Monthly costs



Smartwatch



Sensors

GPS

Altimeter Heart rate Accelerometer

Accelerometer Gyroscope Ambient light

WiFi/ LTE

Notes

18 hr. battery life



Pad



Sensors etc.

Camera
Ambient light
Accelerometer
Gyroscope
Compass
Barometer
Fingerprint scanner

Notes

3G (some models)



Laptop



Sensors etc.

Camera Microphone WiFi/Blue Tooth Notes



Cloud Computing



Notes



Cloud Documents



Notes



Cloud



Notes



IoT Health Device



Notes



IoT Health Device



Notes



Network Data Base



Notes



Desktop Computer



Notes



Fitness Band



Notes



LAN



Notes



Networked Drive



Notes



Local Drive



Notes



Server Farm



Notes



IoT medical device



Notes





Notes



Medical



Notes



Services

Health Coaching



Notes



Clinical Support



Notes



Services

Education



Notes



Services

Remote Monitoring



Notes



Services

Diagnosis



Notes



Services

Medical Evaluation



Notes



Services

Analytics



Notes



Services

Big Data Analytics



Notes



Peer Support









Patient



Age: Gender:

Needs/ Vulnerabilities:



Family



Age: **Duties:**

Needs:



Friend



Age:

Gender:

Responsibilities:

Needs:



Parent



Age: Duties:

Needs:



Co-Worker



Duties:

Needs:



Medical Worker



Responsibilities:

Concerns:



Startup



Goals:

Duties:



Company

Com-01

Health Insurer



Goals:

Duties:



Company Com-02

Tech Company



Goals:

Duties:



Company

Com-03

Care Provider



Goals:

Duties:



Company Com-04

Corporation



Goals:

Duties:



Company

Com-05



Goals:

Duties:



Company

Com-__

Data Stream



Exercise	
Step counts	
Blood glucose	
Behaviors	
Locations	
GPS	
Insights	
Medical Records	
Sensitive data	
Advice	
Sleep	
Goals	
Peer support	
Financial data	
Alerts	
Encryption	
Messages	
Advertisements	



Goals



Habit Change Social Interaction Stress Reduction More Exercise Save Times Coping **Emotional Support** Sell Product Maximize Profit Collect Data Sell Service Improve Health Improve Diet Improve Biomarker Reduce Risk Earn Money Improve Outcomes



Actions



Analyze Data Change Goal Exercise Eat/Drink Sleep Pressure Encourage Comment Collect Data Invitate Adapt Algorithm Reflect Exercise Sense Read Control Take Medication



Traits



Health Condition
Proprietary
Secure
Vulnerable
Gender
Cognitive Disability
illness
Learning disability
Physical disability

Emotions



Fear Anger Sadness Jov Disgust Surprise Trust Anticpation Suspicion Shame Envv Love Worry Concern **Vulnerability** Stress Calm Humor

Hatred

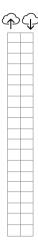
Attributes

Atr-05

Responsibilities



Financial
Emotional
Familial
Professional
Social
Monitoring
Household
Maintenance
Management
Recording
Coordination
Facilitation



Attributes

Atr- _

Data

Exercise Step counts Blood glucose Behaviors Locations **GPS** Insights Medical Records Sensitive data Advice Sleep Goals Peer support Financial data **Alerts** Encryption Ads Messages

Data Direction



Data Direction

Attributes

Atr-01