Interview 1:

Product owner of the whole of Zenya. and input from part owner of Infoland.

Manages what actually is being made, so very valuable insight.

5 modules:

- Doc: document management.
- Flow: Notify system.
- Check: controls and questionnaires.
- Risk: risk management.
- Can all be used on their own, and alongside each other.

Documents really hard to read on AR glasses.

- Even in the app its far from optimal, let alone on a smartwatch or glasses.
- Might be able to find creative solutions:
  - No endless scrolling.
  - Working in small steps.

Smartwatch scenario:

- Smartwatch is a handy solution.
  - Handsfree without needing to get out your phone.
  - You always have the watch on hand.

- Huge benefit of AR glasses is having your hands free.
  - Glasses are very expensive, and might not be the best fit for every use case.
  - However, not as advances as expected.

- Infoland tried an application where a second person can watch alongside the person wearing the glasses on a second device, and give pointers that immediately are displayed in the field of view of the glasses wearer (and audio).
  - Given example applications: surgeon from within a hospital helping out ambulance- and trauma helicopter personal during emergency treatment.

- Smartwatch concept: started out focused on doc, but now covers multiple modules (or even multiple different smaller concepts).
  - Since Zenya manages to-do lists, the watch is a great solution for prompting users with reminders, the list, etc.
  - Possible link with doc: you currently have to do this, these documents might be relevant for you.

- Question from owner: but then what is the advantage of the watch over your smartphone?
    - A watch on your wrist is a lot more accessible than a phone in your pocket.
        - Very easy to have a quick glance without having to interput what you're doing.
        - Great for small, quick interactions, e.g., completing a step on a todo list.
    - Notifications on the watch are a lot less likely to be missed or dismissed.
    - Note: This application is not AR, but it is an interesting scenario in the sense of making the usage of zenya, and handling something you need to do easier. I think that's very interesting. You can also take that a lot further, e.g., getting checks/reminders that you have to complete to enforce a protocol. This could be a task that you need to complete, or a questionnaire that needs to be filled out.
    - Note: He recalls joking with clients about implementing reporting incidents where, when coordinators or managers didn't correctly check everything, that the clients could press a button to shock them. The clients loved it.
    - Note: the concept started out as someone using the glasses, but they didn't add enough to make the cons worth it: especially costs. The watch doesn't have this problem and, although not AR, was a better solution.
        - Owner: People don't want to wear glasses the entire day.
    - I think the low barrier in this scenario where you have to complete certain checks using the watch on your wrist, although not AR, is very interesting. However, I'm sure there are scenarios where the use of AR and glasses is worth it and the right solution.

AR glasses surgeon scenario:

- I expect someone having to complete a task with a patient or a certain machine while having your hands free without having to turn your wrist to look on a watch, since in these cases you will need both hands without having to lift or turn your wrist to look on the watch. In that case the information can be projected in your field of view.
    - Note: glasses are still being developed and improved.
    - The watch scenario, which is focused on checks (e.g. check this and indicate if everything is O.K.) is very cool, but this concept is definetly more about AR and displaying information in someone's field of view and really taking someone through a process. The handwashing scenario here is very realistic, and, although people generally know how to wash their hands, in more complex scenarios like performing actual surgery or repairing a machine, it is extremely usefull if you can search for past steps or other relevant information that is not initially provided.
        - This also really provides a link with doc.
        - Again, information won't be properly readable on glasses.
    - While currently manuals are structured as big walls of paragraphs of text, you have to look into making this usable by the client during their task.
        - Owner: this gets really close to a decision tree.
        - Or a process flow, with small steps that you go through 1 by 1.
    - The current practice is to structure information as text, but visualizing it might be a better solution.
        - You probably won't resolve this using a simple AR technology. This is a bigger problem when creating documents.

        - These problems definetly go hand-in-hand.
    - Owner: for someone just turning screws on a machine, glasses are a very expensive solution.
        - There are industrial clients of us that work on extremely complex cylinders. That goes further than just turner a screw. However, I don't really know these processes, but it's about the principle. I think, in those scenarios, that these glasses could be very interesting.
        - The problem is really how documents are structured (refering to big laps of text).
    - What is really interesting, you also make the step to making a note in our flow module. That's pretty much an incident that has to be reported.
        - It would be really cool if you could use voice to text to create these reports.
            - Owner: and include a picture.
        - These are, however, two separate scenarios.
            - I would advice to focus on one or the other.
            - Owner: pretty much everything you do using the glasses can be done using your phone. The only real benefit is that you have both your hands free. So these scenarios really showcase the benefits of AR.
                - But is that not the case with any new technologies. You can do everything on your phone but also your smartwatch. So the thing is that you really benefit from not having to hold anything.
                    - Owner: So, having your handsfree has to really be a benefit in the scenario. Phones just have really huge benefits of better readability and accessibility (everyone has one.)
                        - Sure, but while glasses are currently still very expensive and would be important when a hospital decides to implement this, it's not relevant for a proof of concept. Cost doesn't play a role in the question of "can we, using ar, provide users information in an easier, more accessible way so we provide more comfort/convenience to the user?".
                            - Owner: True, but since we offer this as a commercial product that is important.
    - Owner: makes the same point about the helicopter scenario where an expert can help through the use of glasses.

Printer scenario:

- Zenya already has this in place.
    - Something that is not in there though, the prompt with the question for feedback.

- Would not focus on this scenario. The combination of the actual AR solution of the glasses and the accessible solution of the watch are very interesting.
- The glasses are more focused on doc since you really use that glasses to find specific documents, and the watch is more other modules - which is not a bad thing.
- Owner: have you looked at image recognition.
    - Rick gives example of face recognition at reception.
    - Ruben gives example of passing information from EMT to hospital staff.
    - Ruben gives example of recognizing a patient who is going for surgery, which would help existing protocols.
    - Owner: I was more thinking about walking through a building an the glasses, for example, recognizing an emergency exit is blocked. Or for machines that a handle is set incorrectly.
- In an ideal situation, you don't have to hang a wall full of QR codes.
    - Using speech to find documents
    - Recognizing environments using the camera
    - Joke: QR code on the patients forehead.

Question: if you could use a wish to change these two (glasses & watch) concepts, what would it be?

- It would be awesome if the glasses already know which surgery you are about to perform before even walking into the room, so you can prepare. In this case you don’t have to scan something or look for something yourself.
    - Using an agenda would be cool, so you have a surgery planned and the glasses just lets you know about the relevant protocols when putting on the glasses.
    - When using the watch, if you would walk past a point where a certain task has to be done, it prompts you to do that since you are close anyway. Would be awesome to streamline the process and make it more fluid.
- About the note creating parts of the concepts:
    - The example of the slippery floor is really something just like flow where you are reporting a (potential) incident. The same for finding the usbs. They aren't really connected to the document.

Question: is the scenario where the surgeon searches information about a procedure realistic?

- The handwashing, probably not. They already know what to do.
- The scenario where someone is performing maintenance or repairs to returned machines, then it would be great to easily access a list of things you have to check. In a lot of cases an experiences mechanic will know what to do, but sometimes he wont. In those cases, or when you are working on an extremely complex machine it would be great to easily and hands free access information.
    - Someone unexperienced working would get a lot more benefit.
    - Compares it to people turning on navigation while they already know the route.

    - While I don't have the insight, I feel a lot of clients are concerned with this yet. This is however the future. Sometimes that is because the technology is not there yet.

- The huge benefit of watches is that it is a really cheap solution to enforce the protocols for the workers.
    - Owner: indoor navigation is a problem here though. Multistory buildings can't use the location data.
        - The glasses has a camera that can recognize environments.
    - Same point about the dynamic handling of tasks.

- Owner: some time ago created an app that used image recognition on a construction site to recognize people that were not wearing their helmets, which would trigger an alarm at the manager.
    - Glasses uses camera
    - Joke: give every nurse a bodycam
    - As long as video data doesn't get stored or send somewhere externally over the internet, privacy shouldn't be an issue.
        - For example, a camera connected to a raspberry pie.

Interview 2

Guy:

- Flyers are a great first step, videos are a great next step when the concepts become more concrete.
- About zenya apps:
- Capture: make reports using pictures and your location.
    - Uses data to create heatmap of reports.
- Assist: scan a QR code to authenticate.
    - Use NFC touch, Bluetooth beacon, or qr codes to connect documents to objects, locations, etc.
- When choosing what to continue with, choose the scenarios that really show off the benefits of AR over the existing approach.
    - For example, while making the reports already exists, the security guard scenario also gives new examples of how a next person uses these existing reports - which doesn't exist.
- Moving away from just Zenya Doc really doesn't matter.
- Ruben: having users ready to observe gives us concrete use cases to base the designs on. It removes a big unknown. It also circumvents dilation when the info moves through multiple people first, or when you ask the users themselves.

Manon:

Team leader of new business, which sell the product. Gets into contact with actual customers.

Watch concept:

- The watch is a great accessible solution.
- In industrial complexes they often aren't allowed to use laptops, so they use tablets.
    - They use a group account so they can all use the same tablet, which stays at the same location.
- Currently we think in laptops, tablets, and phones - not smart watch. So that is great.
- Clients would, obviously, be a lot more willing to adopt the watches since they are so much cheaper than glasses.

Surgeon concept:

- Zenya is not yet used with glasses.
- Notes concerns about how the glasses are used:
    - Does the surgeon wear the glasses before entering the surgery room (bacteria and contamination).
    - Same for watch.
    - She likes the concept of having access to the info while having your hands free.

- What often comes up is how we could we use the existing data of the 650 customers to, for example, predict behavior.
- Customers are not yet asking for AR.
    - It would offer an opportunity to gain an advantage over competitors.
    - Again, notes the concern about the cost and willingness of adoption.
    - Willingness of the customer to adopt such a complex and expensive technology is something to take into account.

Wish question:

- Adjust security to industrial environment.
    - Security is often outsourced to external companies, just like cleaners.