



# NHSXGSA

## using wayfinding to create a reassuring presence

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# brief

This project was the third collaboration between NHS and GSA. The subject for this year was Endoscopy. An endoscopy is a procedure where the inside of the body is examined using an instrument called an endoscope. As it is both a procedure and an experience and involves a wide range of interconnecting relationships, we aim to explore, gain insights and propose design opportunities concerning patient journeys involving before, during and after endoscopy procedures.

the team





the hospital

# The Royal Infirmary of Edinburgh



The University of Edinburgh  
Consort Healthcare



WAY OUT

WAY IN





# field & desk research

As one hospital dropped out towards the end, three people per group needed to stay in Glasgow to do desk research while the others headed to the hospital in Edinburgh to make their observations. I was part of the desk research team. We investigated different social research strategies, learnt about user journeys and browsed the internet for interesting studies concerning endoscopy.



We mapped all the information that we processed on the wall and presented it to the others. As the desk-research team, we noticed how it could be valuable for the field researchers to organise these two days of research prior going into the hospital. This way, a group of unorganised students making casual observations, could become a prepared research team, using different social research strategies.

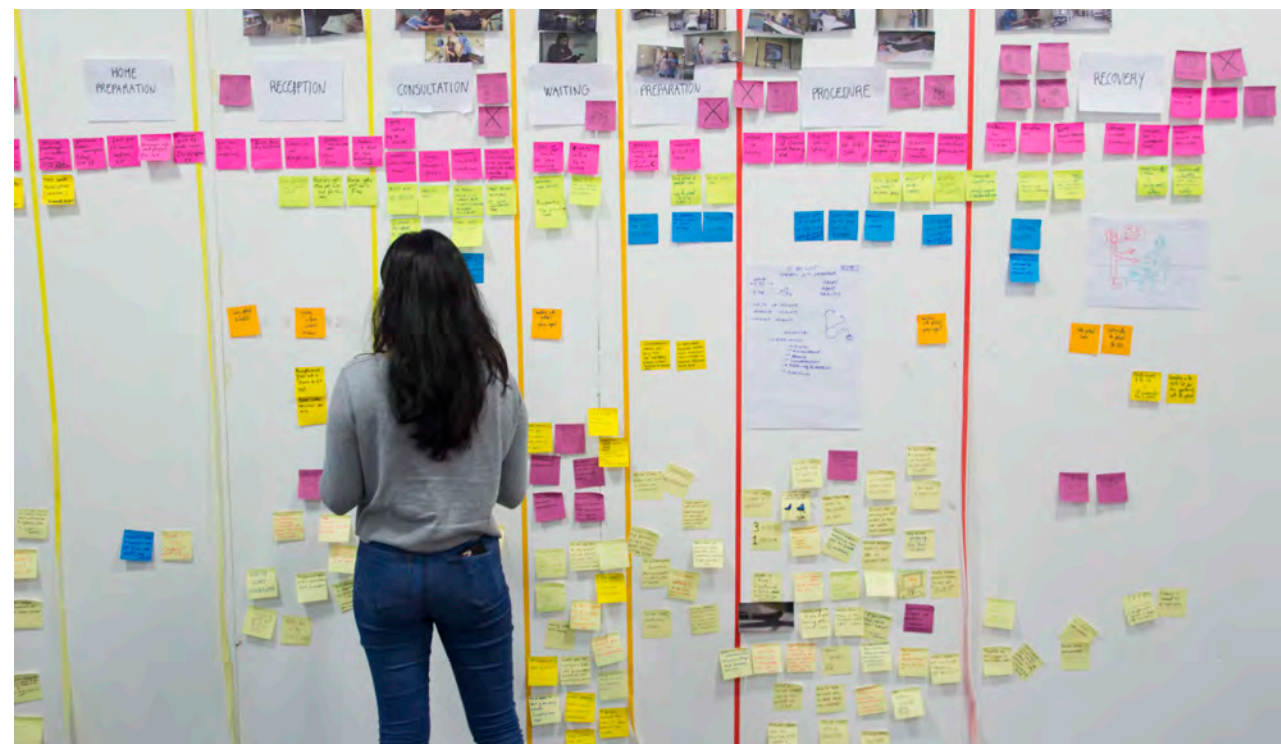
# data organisation

Everyone came back with a ton of observations that they wanted to discuss. But how to organise the info? We started off by making mindmaps with the different rooms being main themes. We quickly noticed the static character of paper, turning to post-it notes to increase flexibility.

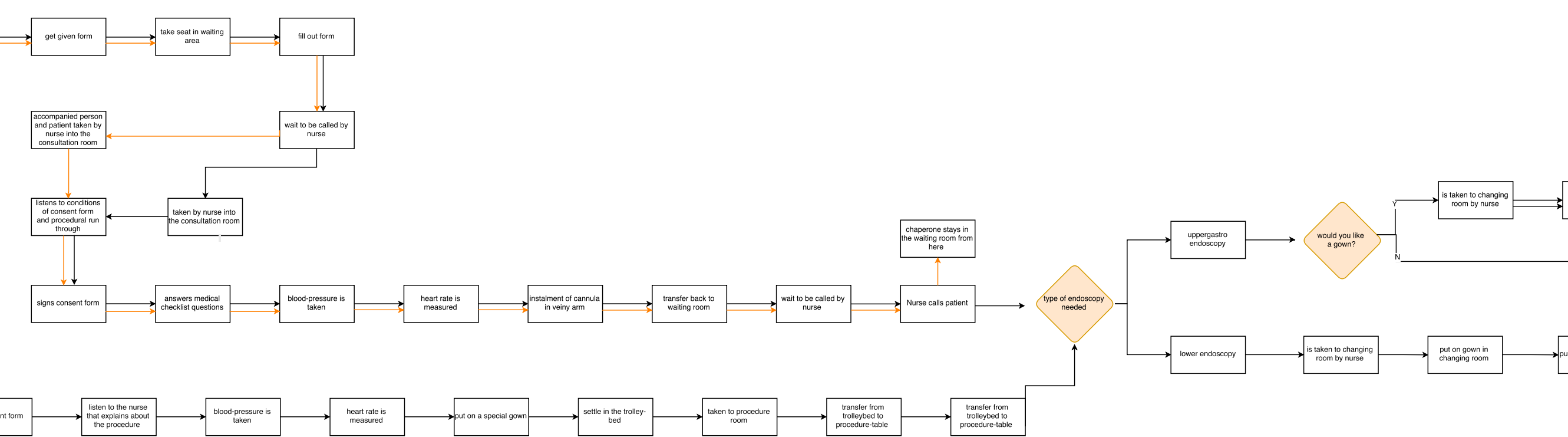


# patient journey

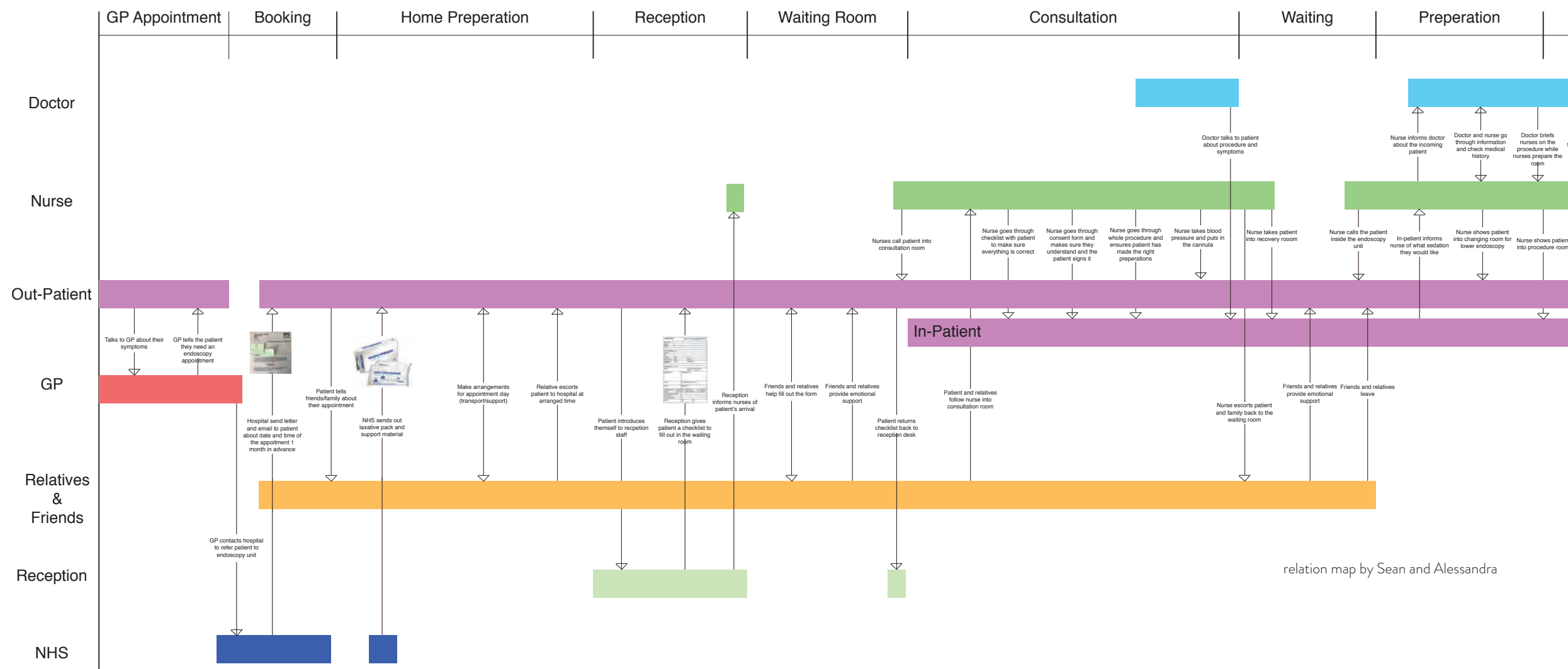
The pink post-it line represents every single step the patient undergoes during the complete endoscopy procedure, from the referral by the GP to back home. Other colours are other actors, like the nurses and doctors. Underneath the actions, we summarized our insights. Using post-its was great to start off but we rapidly decided we wanted one big data map where the patient is central, describing the different steps, mapping the relationships between different actors and adding an emotion line.



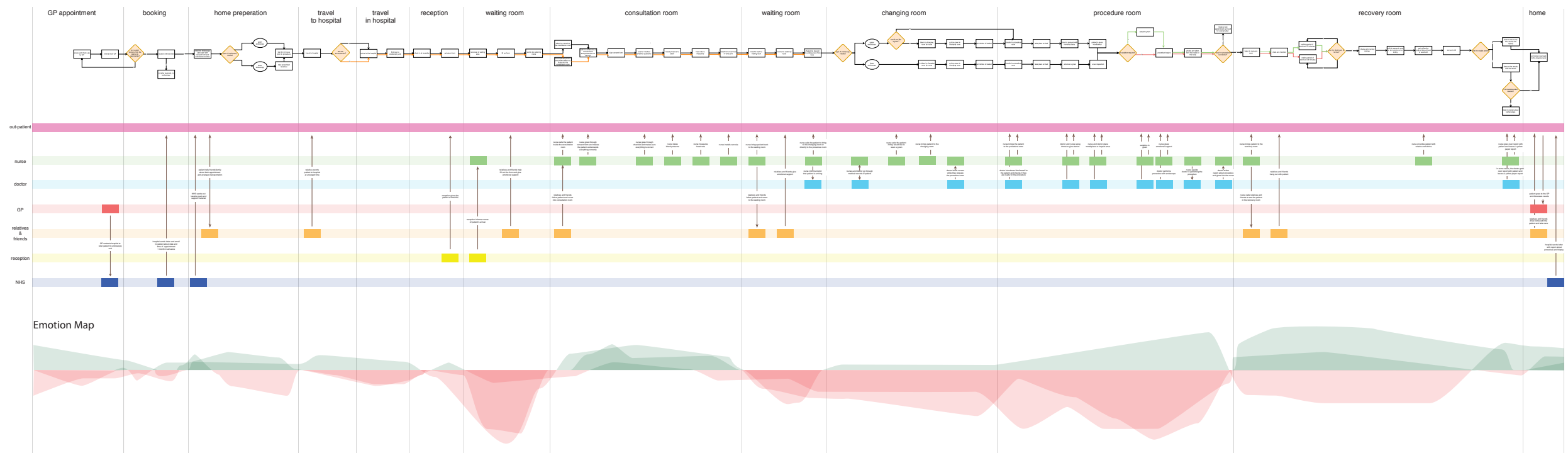




In a collaborative effort, I mapped the different steps in a flowchart, a tool which is mostly used by programmers to keep an overview of the different actions. This way, we could incorporate every single step without losing the overview. Simultaneously, two others made a relationmap that emphasized the different interactions between the actors involved in the endoscopy procedure. I brought the two maps together and later, an emotion line was added.



relation map by Sean and Alessandra



I thoroughly enjoyed the mapping experience as I had never mapped such a complicated environment. Although it is not perfect, nor was it used by many, it was the mapping itself which made me understand the procedure and its underlying relations. In our miniteam, we later used the map to define design opportunities.



# defining opportunities

Clustering insights and summarising them into concise and tangible cards, helped us defining a design direction. We managed to organise all of our insights in 12 themes. The benefit of the physical cards was the possibility to reorganise them. We analysed four umbrella themes which we divided among four groups.



At this point in week two, the mini-teams were born. Together with Alison and Tony, we decided to take on three opportunity cards and develop a mission statement from these. We realised we needed to constrain ourselves and define a more specific design challenge. But what do we want to spend the next four weeks on?

1

**Wishaw General Hospital**  
30 Ballerston Street  
Wishaw  
ML2 0DP  
Date: 21/06/2017  
Appointment Booking Office Direct 2

**our reference**  
You are now due to attend the Endoscopy Unit for a REPEAT INVESTIGATION of your stomach. We would be pleased if you would contact us within 48 hours of the letter on 01224 777290, Monday to Friday between 9am and 5pm so that we can make the necessary arrangements.

**10am and 12pm  
2pm and 4pm**

Please note that this telephone number can, at times, be very busy. Please leave a message and someone will call you back within 2 working days. We apologise for any inconvenience caused and thank you for your patience.

**Describe the opportunity?**  
The patient would be reminded through different mediums about the procedure appointment in the weeks preceding it. Also they would be reminded about the diet to follow and their medication plan.

**Where and how did you get the insight from?**  
This opportunity arose from noticing that at least one patient per day doesn't show up for the procedure. Also at times patients show up but cannot have the procedure because they have not followed the diet or medication plan.

**Who are your users, and how would they benefit from it?**  
NHS: Reducing the chances of patient not showing up helps NHS save money and resources.  
Patients: They get their procedure done at the right time.

**Any additional information you would like to add?**  
In other countries, patients are constantly reminded multiple times via text, calls, etc. before the procedure.

**Appointment reminders**  
Reducing the risk of patient forgetting procedure or medication

2

**1 patient - 1 nurse**  
Humanising the bond between patient and nurse

**Describe the opportunity?**  
Reorganise the schedule of each nurse so that each patient is assisted by at least one same nurse throughout the whole process.

**Where and how did you get the insight from?**  
This opportunity arose from noticing that the patient doesn't see the same nurse. Some patients find this lack of point of reference adds to the anxiety that comes with the procedure.

**Who are your users, and how would they benefit from it?**  
Nurses: Nurses get to connect with the patient and have more human centered practice.  
Patients: Creating bond with the nurse would help patient to go through the procedure with a calmer mindset.

**Any additional information you would like to add?**  
Italy hospitals tend to let the patient have one nurse of reference follow throughout the whole process.

**1 patient - 1 nurse**  
Humanising the bond between patient and nurse

3

**TO A MORE HOMELY ENVIRONMENT**  
How can we make the different rooms feel more homely?

**Describe the opportunity?**  
A lack of natural light, a strong bright artificial light and not really pleasing colors or materials are all current hospital characteristics that give this clinical and cold impression when you enter in one. An impression that we could modify by designing from it.

**Where and how did you get the insight from?**  
We observed that within the endoscopy unit, the fact that the hospital environment always looks pretty much the same and always surveys the clinical impression.

**Who are your users, and how would they benefit from it?**  
The users are mainly the patients for whom a more homely environment could help them to relax and feel more comfortable along their journey within the endoscopy unit. But the staff might benefit from it as well because it's their everyday working environment.

**Any additional information you would like to add?**  
Even though we probably won't be able to change either the light or the main colors of the environment because of the high cost it might be expensive, we can intervene in other ways such as adding small and nice touches that details for a reasonable cost.

**TO A MORE HOMELY ENVIRONMENT**  
How can we make the different rooms feel more homely?

5

**VISUAL COMMUNICATION**  
Entertain/Inform ME

**Describe the opportunity?**  
The information given to patients is very text heavy, more visual cues could be used in several parts, this would help keep a diverse range of readers a better understanding of the process.

**Where and how did you get the insight from?**  
Most of the paper documentation doesn't have any images, and is hard to maintain focus with its dry content.

**Who are your users, and how would they benefit from it?**  
All users particularly patients will become more informed, as they find that there is less to read and is more stimulating.

**Any additional information you would like to add?**  
patient information forms present a large variety of opportunities to create visual layouts, such as the pre-procedure food consumption time line. How can we make this document more interactive, to help engage the patient with there procedure.

**VISUAL COMMUNICATION**  
Entertain/Inform ME

6

**WHAT'S IT LIKE ON SEDATIVE?**  
Harness the feeling of being on sedative to create a new experience.

**Describe the opportunity?**  
Patient's getting an endoscopy most of the time would choose to be given the sedation to make them feel more euphoric and relaxed during the procedure. This medication has an effect on the patient's perception and design intervention could go a long way here.

**Where and how did you get the insight from?**  
All of our observers seen the way patients act on the sedation. We saw how the sedation makes the uncomfortable procedure easier to cope with.

**Who are your users, and how would they benefit from it?**  
If certain considerations were made to be perceived from the point of view of someone on sedative - we could create conditions that will enhance the euphoric or relaxed feeling further.

**Any additional information you would like to add?**  
Although patients may not remember their procedure because of amnesia side effects, this doesn't mean that it shouldn't be improved. It would benefit the NHS staff having a calmer patient and the patient will not have a bad experience.

**WHAT'S IT LIKE ON SEDATIVE?**  
Harness the feeling of being on sedative to create a new experience.

7

**A SIMPLE GUIDE TO MEDICAL JARGON**  
Can we remove the language barrier of medical terms between patients and doctors?

**Describe the opportunity?**  
There are several words of which they have to explain to patients in a simple terms, but there are still many long words which doctors and staff have to use medical jargon, which could confuse and keep them on the edge. Can we have a simple guide for the patients to understand the jargon and make a better understanding experience for the patient and also convey the doctors message.

**Where and how did you get the insight from?**  
On observing the procedure we noticed patients struggling with some of the terms used and during and after the procedure.

**Who are your users, and how would they benefit from it?**  
The target audience of this improved opportunity would be the patients. They can understand more about the procedure and be more relaxed. It may also be useful for further communicating to the staff for onward procedures.

**Any additional information you would like to add?**  
Often, Patients are forced to agree to the doctors about medicines and procedures without fully understanding them. But we really know what we are agreeing to? To have a simple guide to bridge the gap between what's said and understood? Any patients able to reflect on their request once away from the hospital and back?

**A SIMPLE GUIDE TO MEDICAL JARGON**  
Can we remove the language barrier of medical terms between patients and doctors?

9

**APPOINTMENT CANCELLATION**  
Relatives affect the patient's journey

**Describe the opportunity?**  
Relatives or close ones to the patients, would have to spend sometimes hours and hours in the hospital premises while the patient is going through the procedure or they might not be able to drop off or pick up the patient and then that could lead to the cancellation of the appointment.

**Where and how did you get the insight from?**  
A close look and chat with some of the relatives that would be around in the hospital, will give us enough insight.

**Who are your users, and how would they benefit from it?**  
The first users here are the relatives but they have an immediate impact on the patients. Also on every appointment cancellation there is some sort of waste of the NHS as the numbers are up to £300m annually. Looking into a solution, would benefit both parties.

**Any additional information you would like to add?**  
Most of the times the relatives are as or more tensed or even scared about the procedure that the actual patients could be. Finding a better way to deal with it could easily affect the patients state of mind therefore ease the procedure.

**APPOINTMENT CANCELLATION**  
Relatives affect the patient's journey

10

**good distractions.**  
'just try not to think about it.....'

**Describe the opportunity?**  
Patients spend the majority of their time in the unit waiting, be that for the procedure itself or to go home afterwards. In the silent and unstimulating waiting areas and recovery room worry and anxiety about what is going to happen builds.

**Where and how did you get the insight?**  
From observing the waiting area at the start of the process we saw that people are just sitting in almost silence. There is nothing much to encourage any interaction and the only entertainment provided is the TV placed in front of the only window, and a selection of uninspiring artworks and magazines- these do little to distract you from where you are and keep you relaxed.

**Who are your users, and how would they benefit from it?**  
As endoscopy is generally a diagnostic procedure patients are nervous to find out what may or may not be the problem for them, on top of this the procedure itself is invasive and uncomfortable. If we can use this waiting time in a productive way we can enhance the patient experience by distracting the patient from the waiting.

**Any additional information you would like to add?**

**good distractions.**  
'just try not to think about it.....'

11

**The Patient as the priority.**  
'Hellooo.....?'

**Describe the opportunity?**  
Presently the endoscopy procedure feels a bit like getting your car fixed, how can we make it a more human, patient focused experience?

**Where and how did you get the insight?**  
Throughout the process it feels as though the priority is on the procedure and fixing the specific medical issue instead of on the actual emotions and feelings of the patient themselves. Additionally the environment is focused on the equipment and staff instead of the patient. Even the term 'the patient' feels very un-human.

**Who are your users, and how would they benefit from it?**  
A happier patient makes for an easier and more relaxed procedure. This would benefit both the patient having a more positive experience and also the medical staff having an easier procedure to carry out.

**Any additional information you would like to add?**

**The Patient as the priority.**  
'Hellooo.....?'

How might we place the patient at the heart of the process?

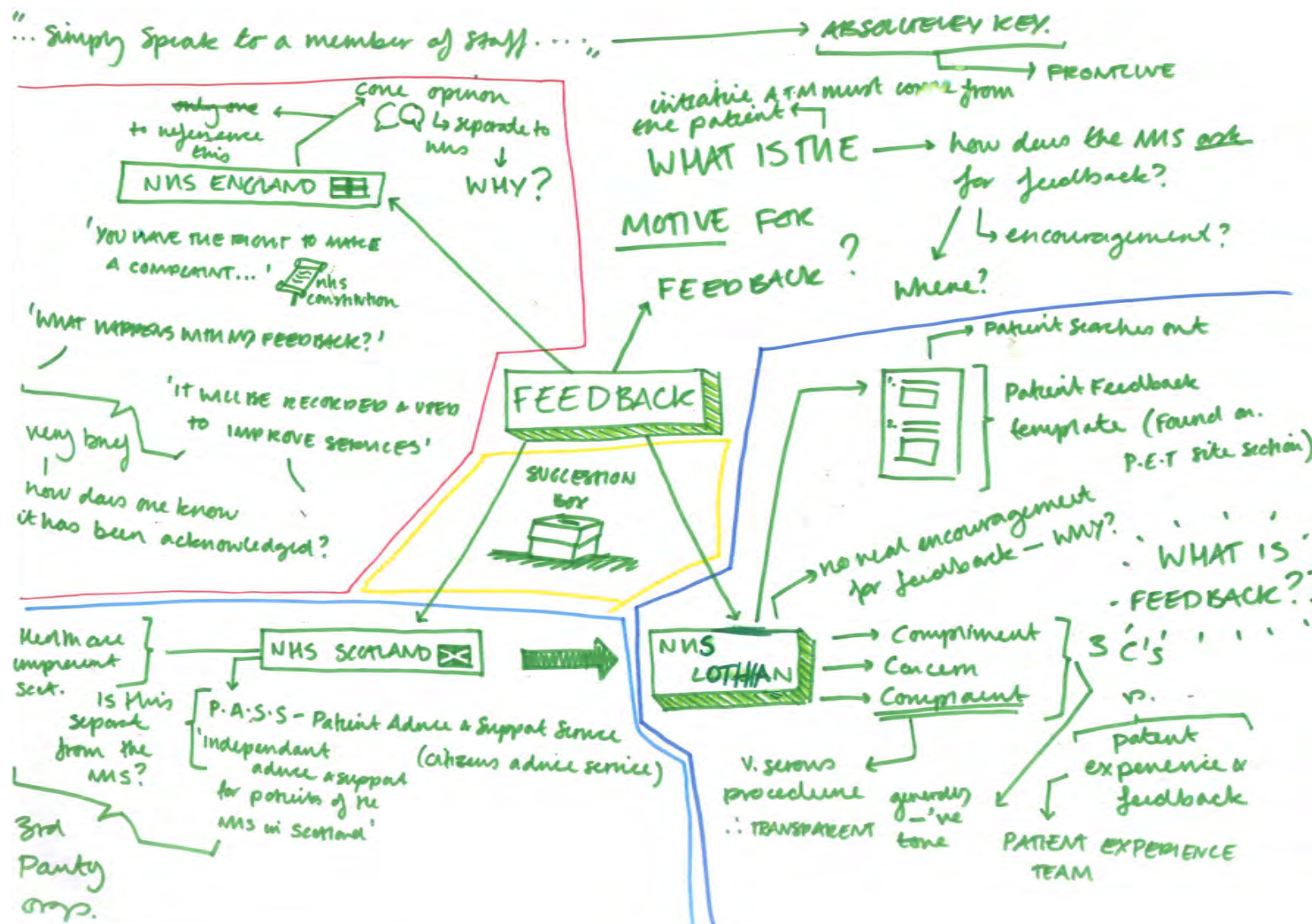


# feedback



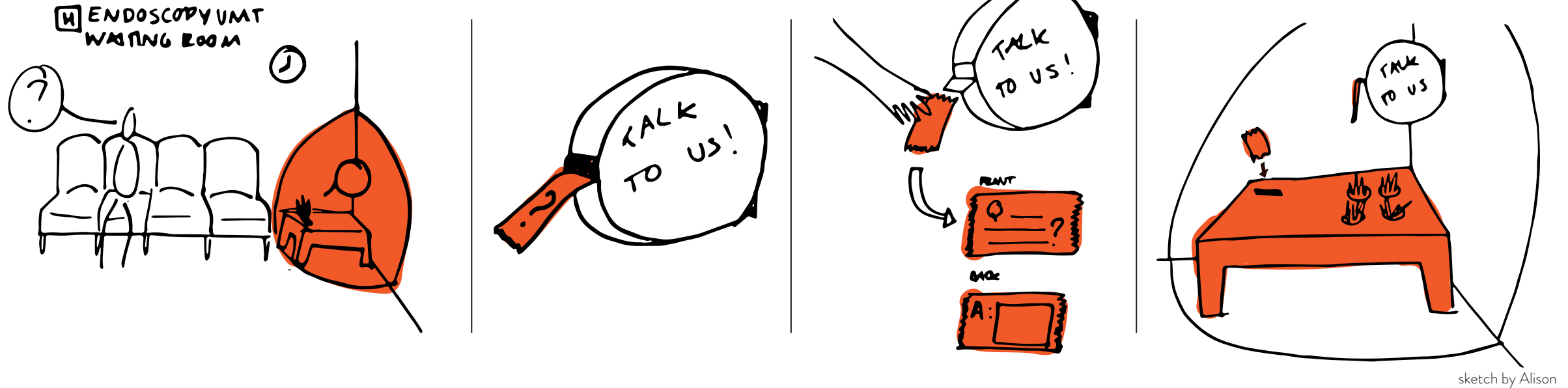
The following day, we spent mapping all the different elements that lead to patient centred care. We looked at things such as “patient expectation” and “patient involvement”, discussed hierarchy and the “tone of voice” of the communication towards the patient. And what about feedback? We believed that by stimulating a feedback culture, we can make the patient feel valued.





For one morning, we screened the web, trying to figure out how the NHS deals with feedback. Also this time, we ended up with a mindmap to summarise our research. We noticed that the NHS seems to pretend to care about feedback, because they have to as a major institution, but don't really know how to deal with it. First of all, they weren't getting any feedback. And if so, it was a compliment to the nurse or a general complaint. The suggestions box in our endoscopy unit made room for the christmas tree so the last trace to feedback was erased. We decided to do something about that and developed three concepts to stimulate patients to give valuable feedback and therefore feel listened to.

# Feedback Lottery



Giving feedback sounds boring from the start. The dry feedback forms with scary open questions don't really stimulate patients to tell the NHS how they feel. Therefore, we developed the feedback lottery, with questions formulated in bitesize bits on little tickets. The patient can rip a ticket from the roll, answer the question on the back and drop in the feedback station. The character of the questions gives the patient the opportunity to envision their own healthcare and simultaneously distracts anxious patients in the waiting room.

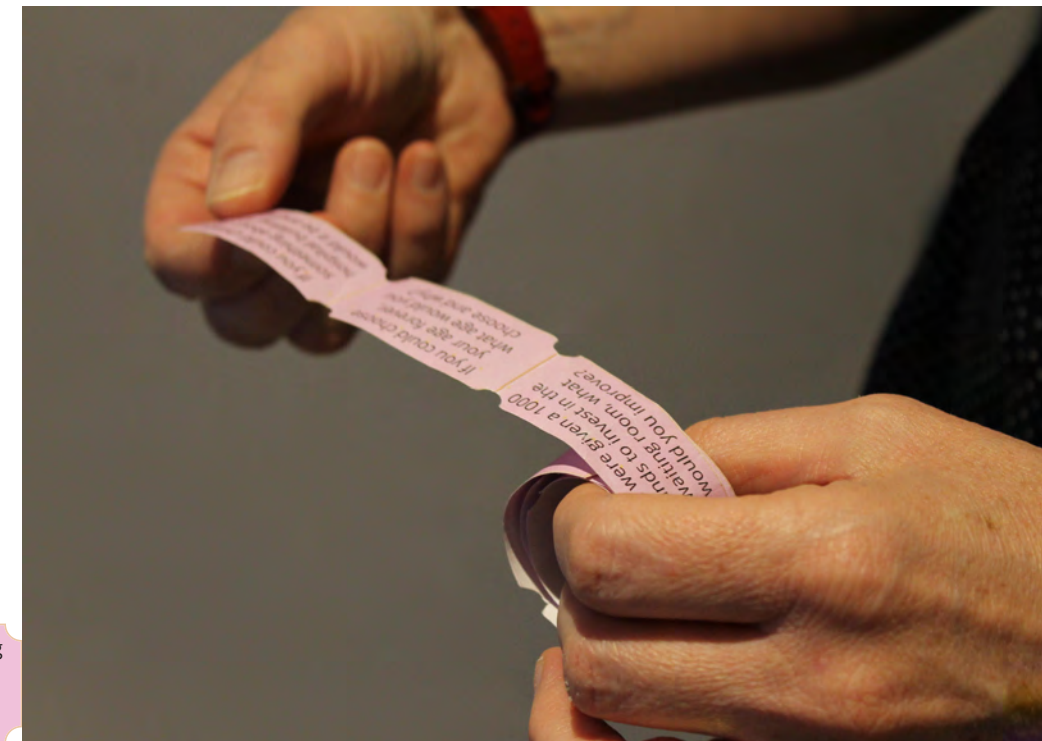
What are the reasons, despite the very low risk, that endoscopy is a feared procedure?

If you were given a 1000 pounds to invest in the waiting room, what would you improve?

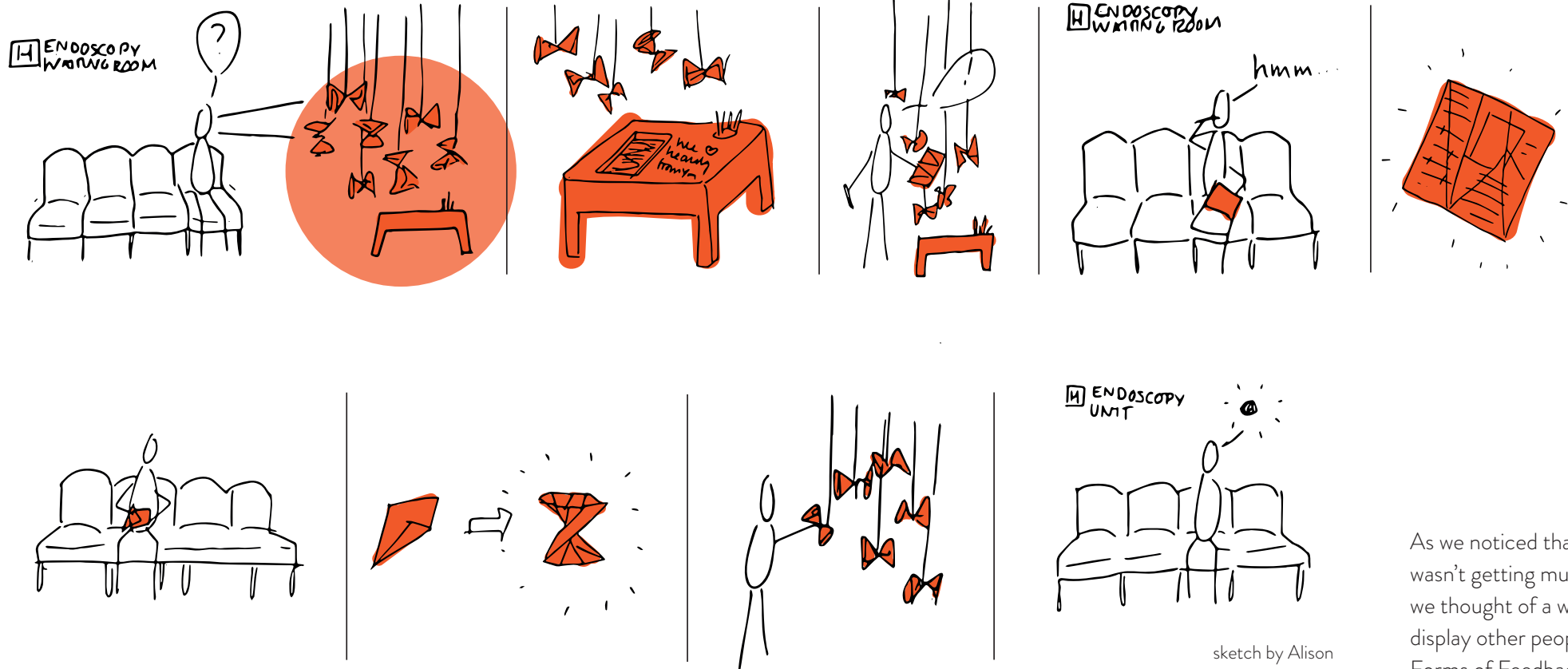
If you could choose your age forever, what age would you choose and why?

If you could change something about the hospital building, what would it be and why?

What is the nicest thing anyone of the hospital staff has done for you or said to you today?



# Forms of Feedback





sketch by Alison

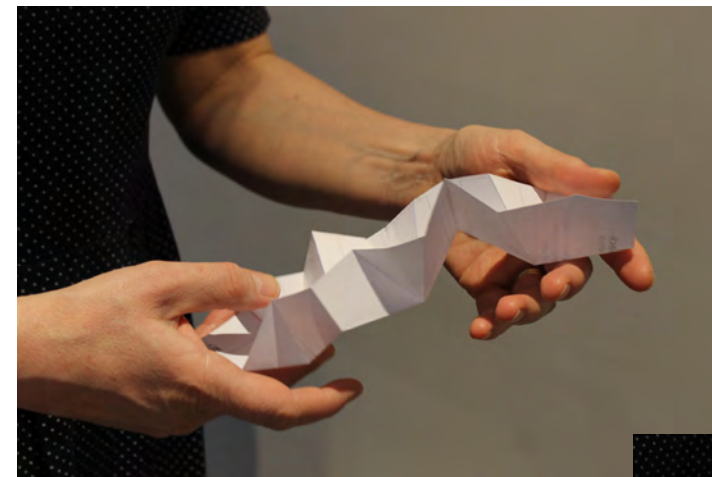
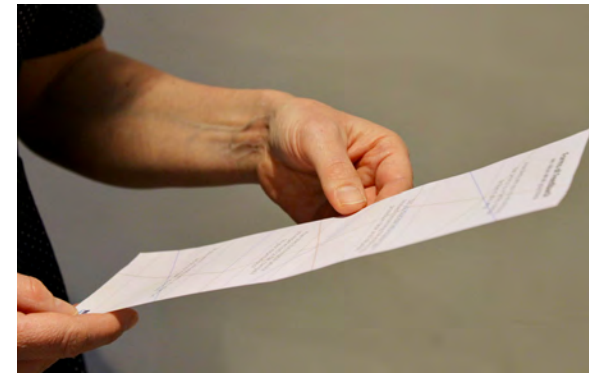
As we noticed that the suggestions box wasn't getting much care in the hospital, we thought of a way to exhibit and display other people's feedback. Through Forms of Feedback, the given forms can be folded into an abstract shape that afterwards can be hung up. By displaying other patient's stories, one might be enticed to write a feedback themselves to be able to fold the form and hang it up. Folding has a meditative character, can calm down and distract the patients during their wait.



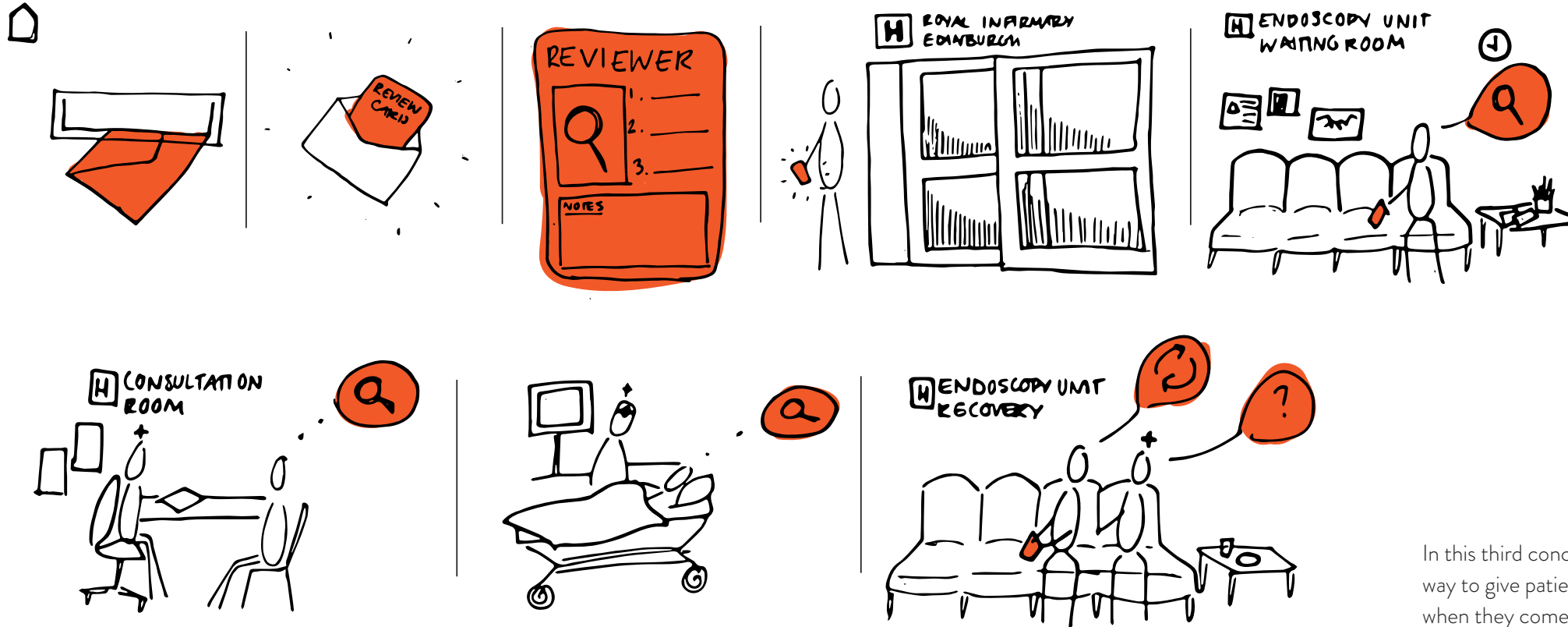
# Forms of Feedback

| Forms of Feedback<br>we value what you think   | Forms of Feedback<br>we value what you think   |
|--|--|
| How likely are you to recommend our service to a family member or friend and why?                | How likely are you to recommend our service to a family member or friend and why?                |
|  |  |
| Did you find the information you received concerning the endoscopy procedure clear and valuable? | Did you find the information you received concerning the endoscopy procedure clear and valuable? |
|  |  |
| How does the hospital service you experienced so far, compare to your expectations?              | How does the hospital service you experienced so far, compare to your expectations?              |
|  |  |
| If you were unhappy with us, what can we do to regain your trust?                                | If you were unhappy with us, what can we do to regain your trust?                                |
|  |  |



# Patient = Reviewer



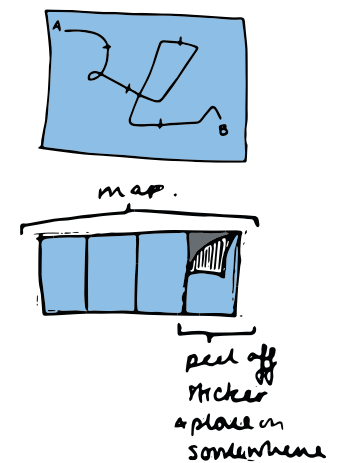
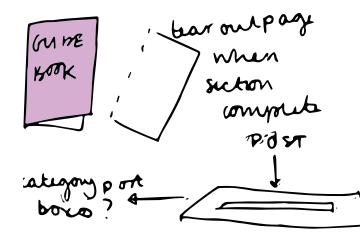
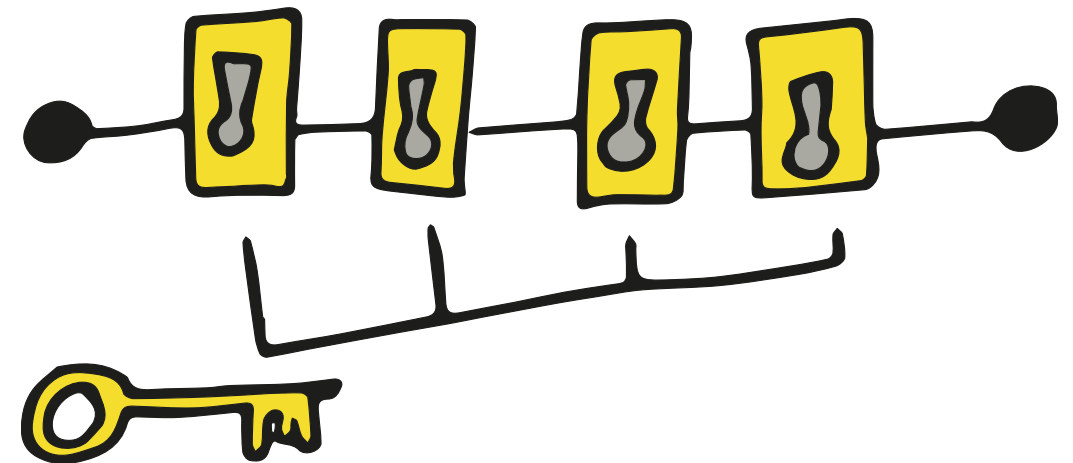
sketch by Alison

In this third concept, we thought about a way to give patients a “field of research” when they come to the hospital. Through the mail, the patient would receive a reviewer card with specific questions referring to a specific period of time or area during the procedure. After the procedure, one of the nurses sits down with the patient for a debrief, to listen to what the patient had discovered. This way, patients would feel involved and listened and it can serve as a good distraction from the procedure.

# continuity is key

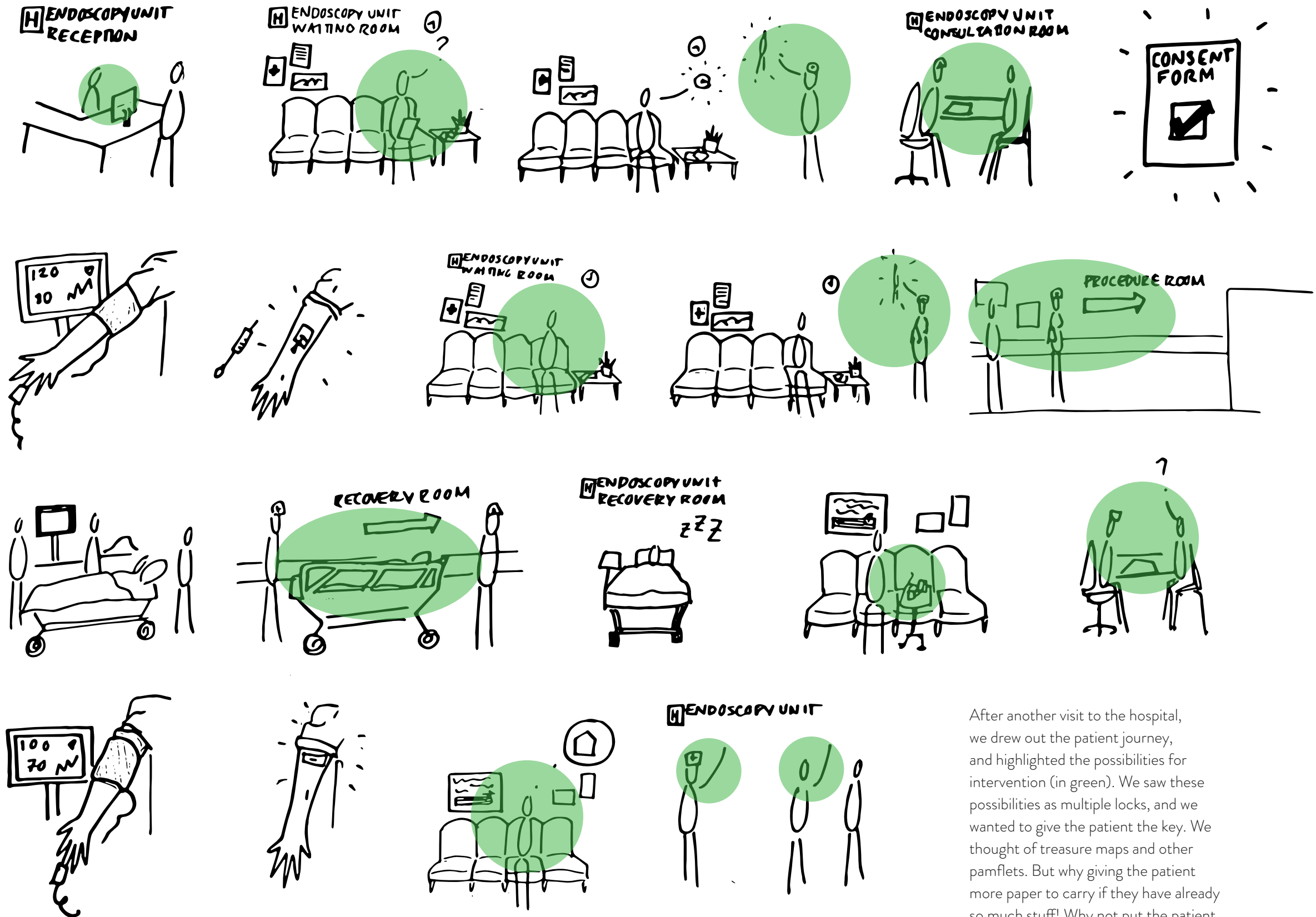
But is this really about feedback? Our concepts were all about form, and had very few to do with the actual content. We noticed we were scratching the surface and couldn't reach out to the more complex structures that are behind processing the feedback. Through conversation, we realised how the NHS actually receives a lot of feedback but has a hard time dealing with it. We decided to make a turnaround and define a new design challenge. This time with the patient central.

How can we create a reassuring sense of continuity through the endoscopy process, whilst also increasing focus and engagement?



sketches by Alison





After another visit to the hospital, we drew out the patient journey, and highlighted the possibilities for intervention (in green). We saw these possibilities as multiple locks, and we wanted to give the patient the key. We thought of treasure maps and other pamphlets. But why giving the patient more paper to carry if they have already so much stuff! Why not put the patient

# wayfinding is secondary

A bright idea of Alison gave us a starting point. Wayfinding. As the patient is the only one which is continuous through the whole journey, we thought of giving that patient a companion. Wayfinding is used to facilitate navigation but also to give people a reassuring sense of continuity, as there is only one path the patient can follow, the actual wayfinding is in our case secondary. We looked at wayfinding in different situations. From the London Underground to the Design Museum and other map systems.

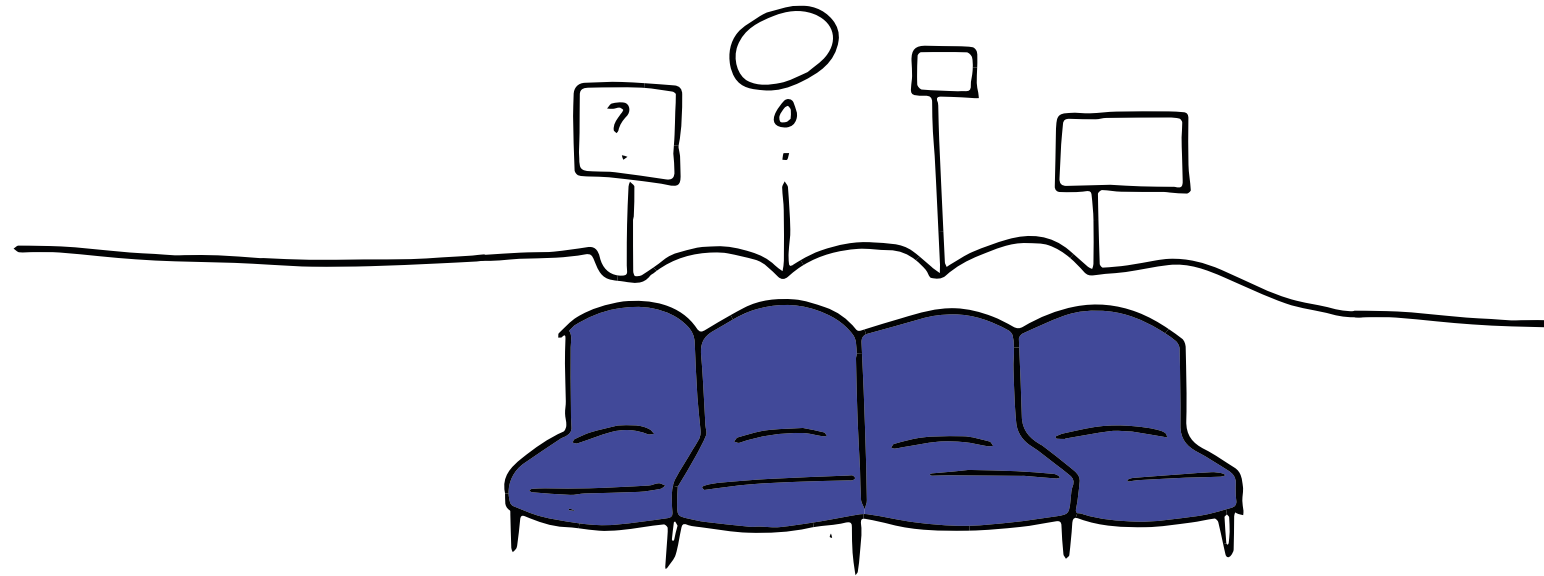


1. Here East Campus, dn&co, 2016, 2. British Road Signs, Margaret Calvert and Jock Kinnear 3. London Transport Museum 'stamper trail' 4. A Better A&E, PearsonLloyd, 2012 5. Morag Myerscough, The Design Museum, 2016 6. Jim Lambie, RA Summer Exhibition, 2014 7. London Tube Map, TFL 8. Legible London map system, TFL, 2006

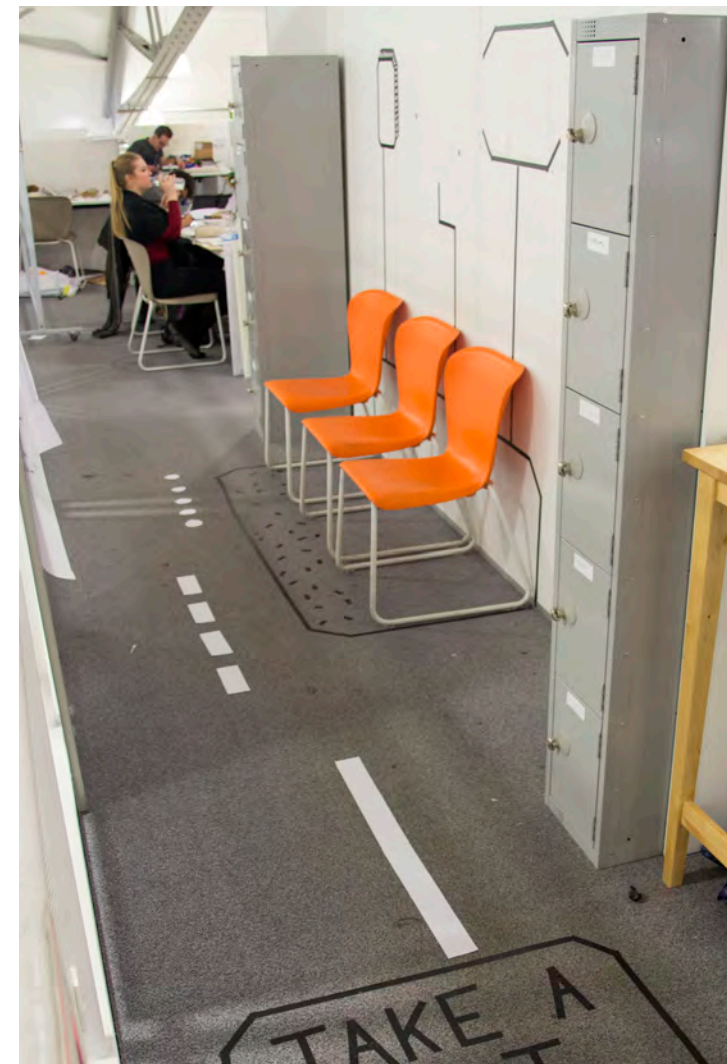
moodboard by Alison

# concept development

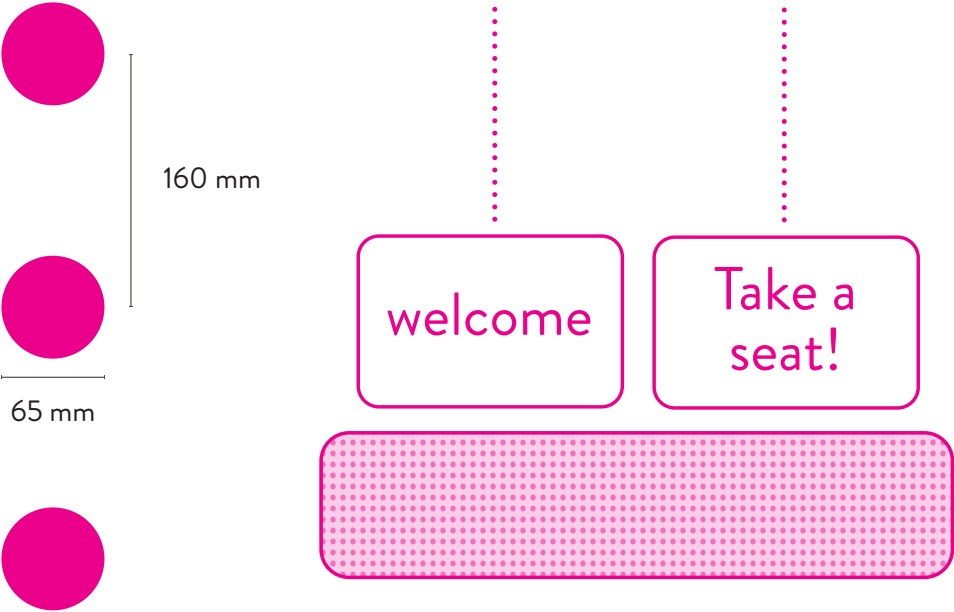
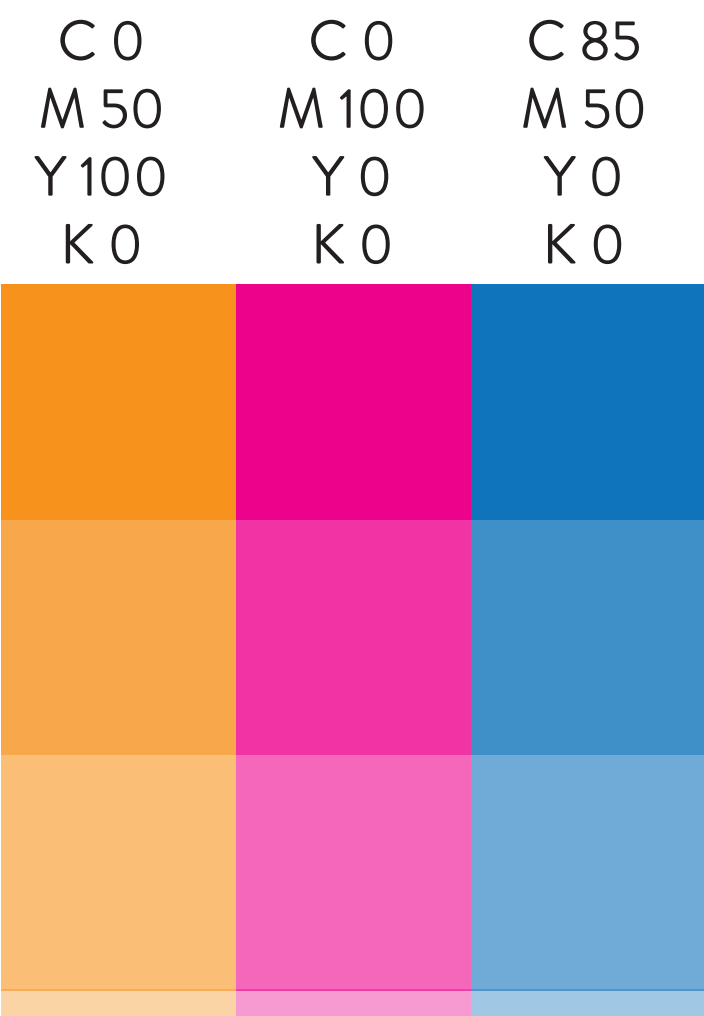
By drawing out the mental imagery that came up with wayfinding in the hospital and trying that out with tape in the studio, helped us to envision the new concept. At this moment, we started believing in the project. With only a few days left, we had to speed up the decision making process and think about ways to propose our design solution.



sketch by Alison



We agreed on using only a single colour and defined 3 possibilities. First one is blue, a safe choice, within the corporate identity of the NHS. Second one is magenta, a bold choice that would truly stand out on the cream walls. And the third choice is orange, a colour that would blend in nicely with the walls. We went for the magenta, the bolder the better. As a font, we chose Brandon Grotesque, a friendly font that would fit the rounded corners of the speech bubbles.



Brandon Grotesque Regular

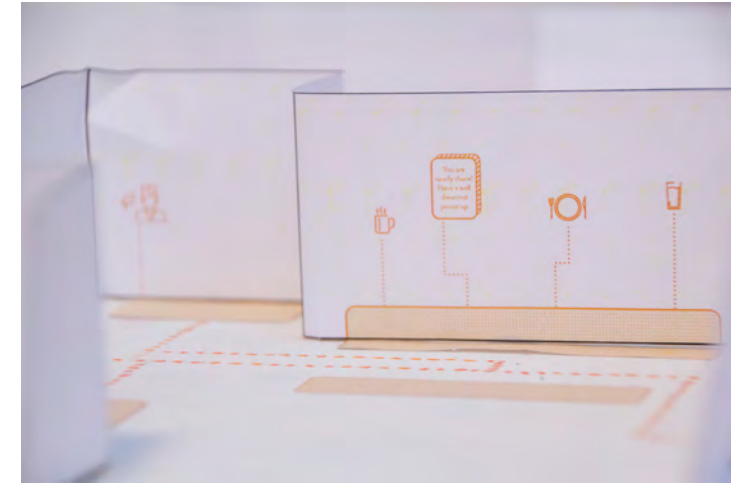
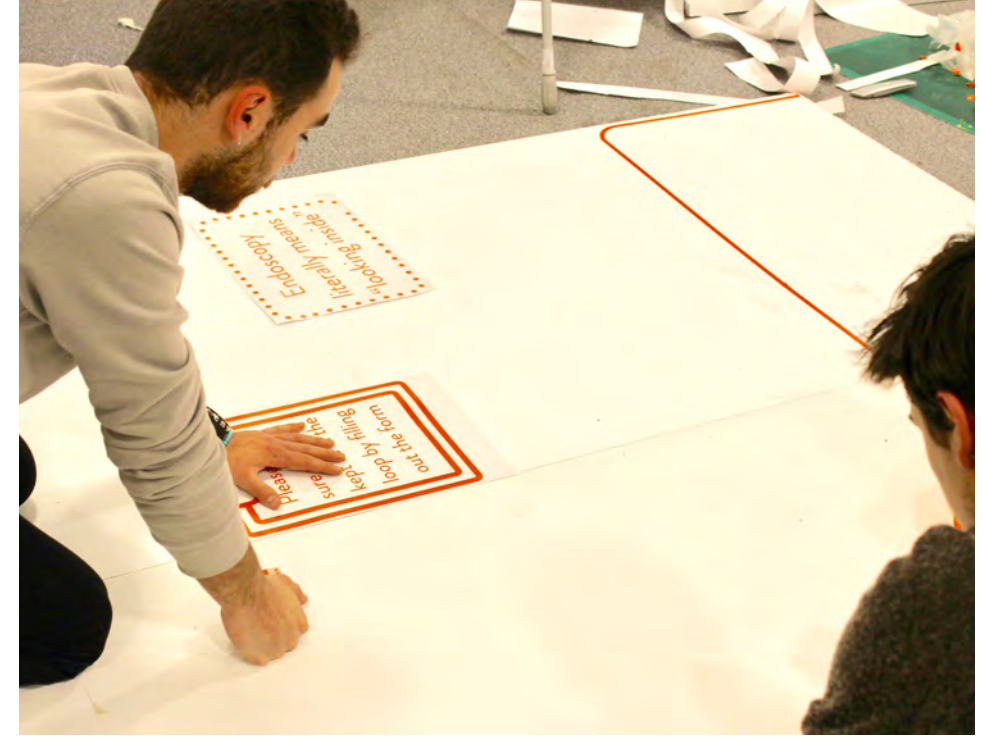
Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj  
Kk Ll Mm Nn Oo Pp Qq Rr Ss  
Tt Uu Vv Ww Xx Yy Zz

Thinking about Hans und Gretel, we decided to choose for a dotted line instead of dashed or straight line, as it pushes you forward. Inspired by the busker zones in London, we created a similar zone to emphasize the passive stations patients are in. Thinking about the doormat, we created a welcome sign. But what is going on the walls?



# prototyping

One of the tools we used to understand our own project, was making a model on a scale of 1/50. This forced us to keep the overview on the journey and to decide where, when and how we wanted to intervene. In order to clearly communicate the concept, we decided to cut a lifesize model out of orange vinyl and stick it onto white wooden boards. This would facilitate a conversation about implementation and cost.



The first  
self-illuminated  
endoscope was  
developed in 1894  
in Scotland

Please make  
sure you have  
kept us in the  
loop by filling  
out the form

Endoscopy  
literally means  
“looking inside”



# tone of voice

An important part of our project is the tone of voice in which information is shared. Out of our research, we noticed that reassuring interactions between patients and staff can be very meaningful but the message only arrives when the tone of voice is right. When a patient is anxious, some don't want to be told "You're alright..", when they are not. The style we chose for is what we call "empathetic firmness". Acknowledging the fact that it is a difficult procedure and that patients can be anxious, but empowering them to do it.

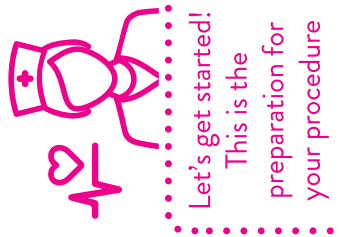
To choose this tone of voice is something that a team of staffmembers of the unit need to agree on. We did the exercise for ourselves but realised that it could be different for each unit.



1 doctor and  
3 nurses will  
take care of you



ZZZ



Let's get started!  
This is the  
preparation for  
your procedure

# concept presentation

Besides the life-scale models, we thought of a way to take our viewers through the whole journey. Therefore, we created scenarios in which we reenacted a setting in the hospital and added illustrations of our wayfinding concept. Besides that, an illustration of the floorplan from above was made, to give people a feel for the complete journey.

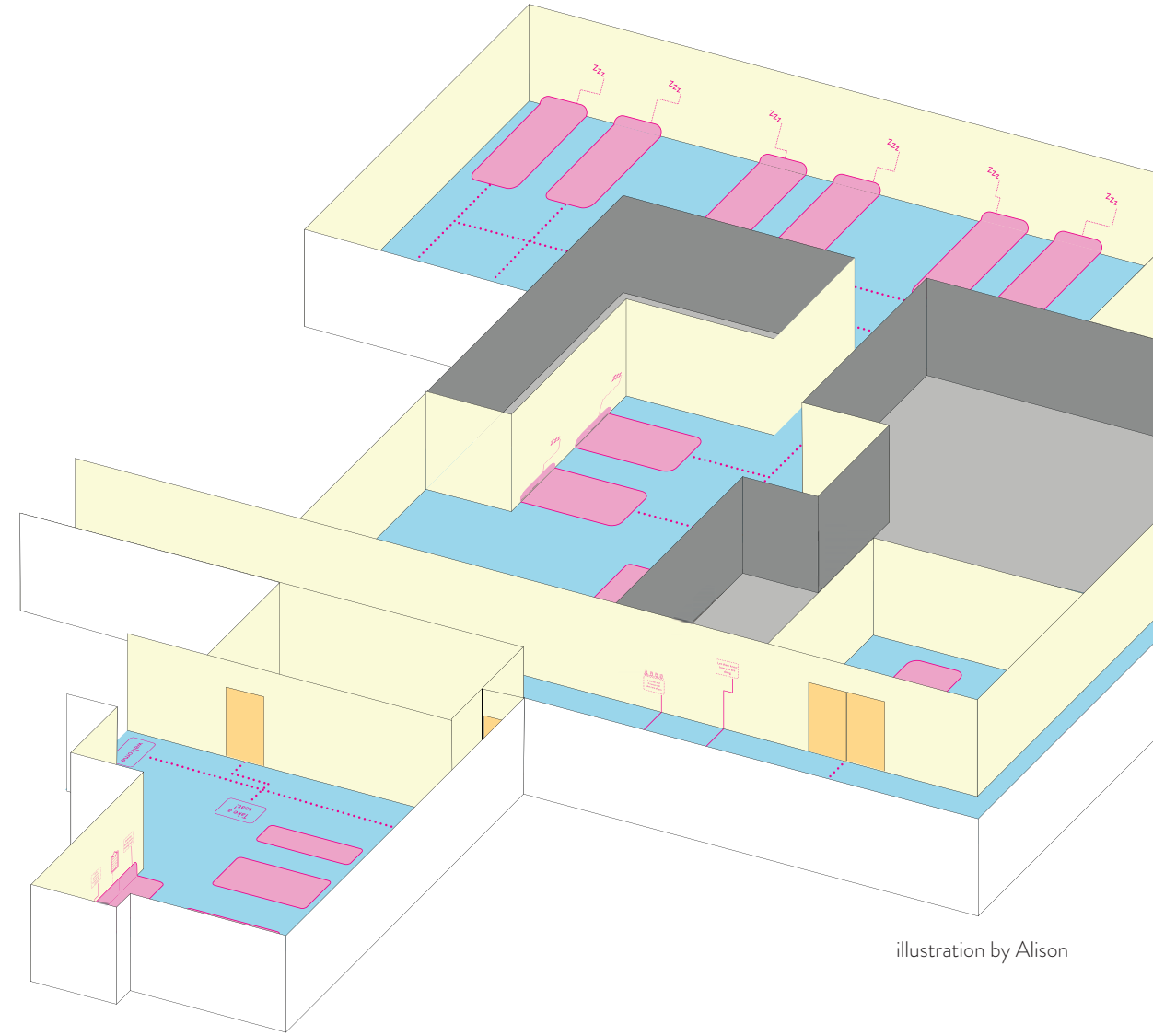
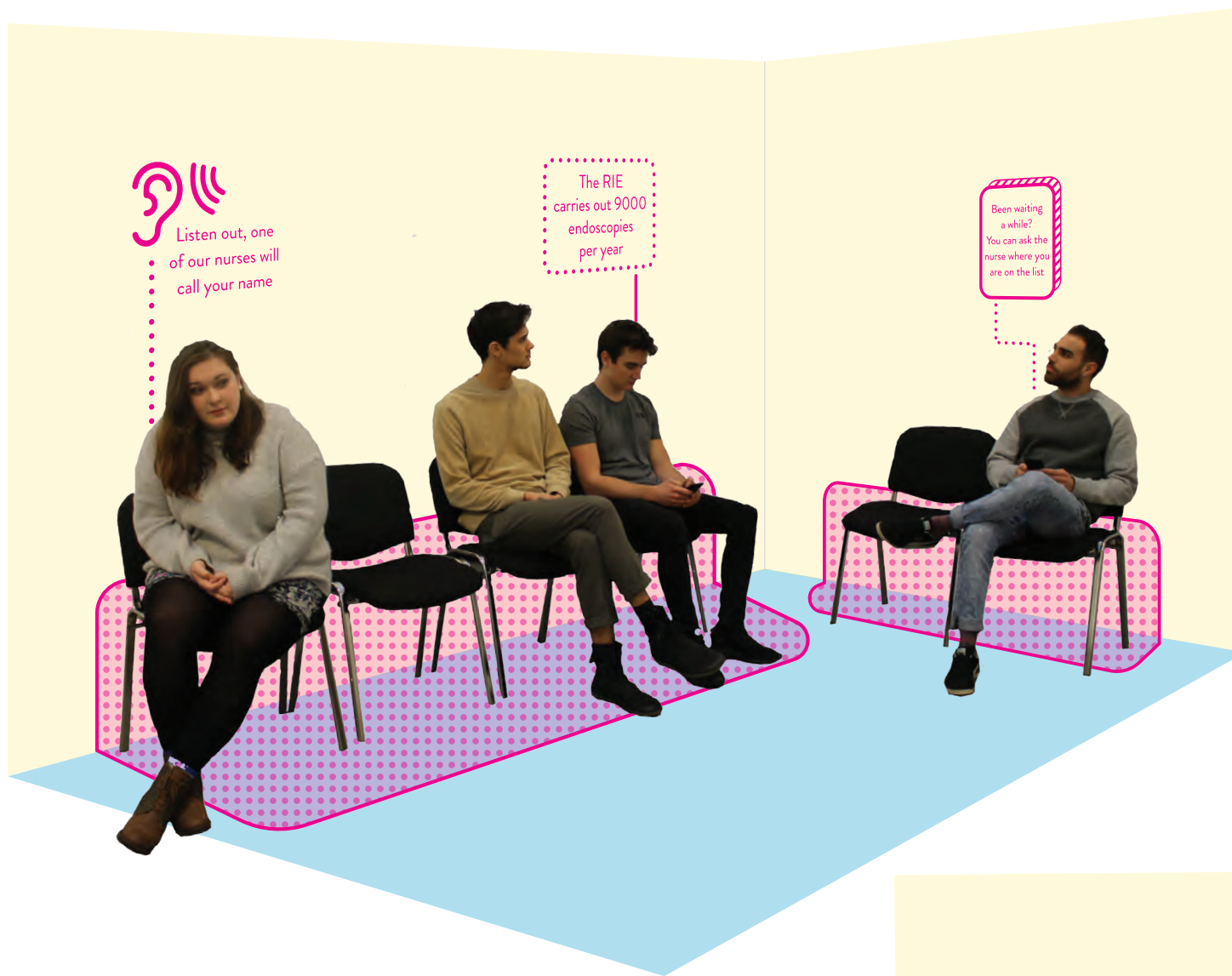


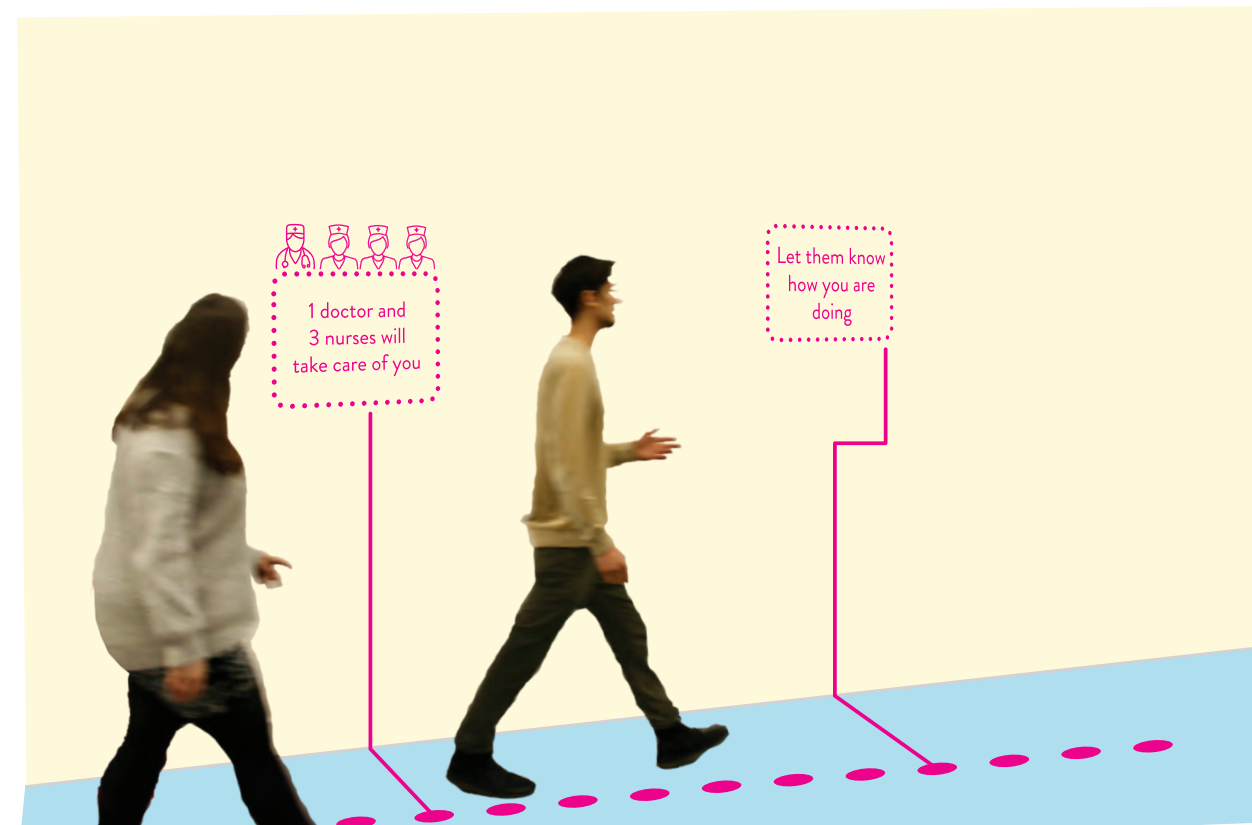
illustration by Alison



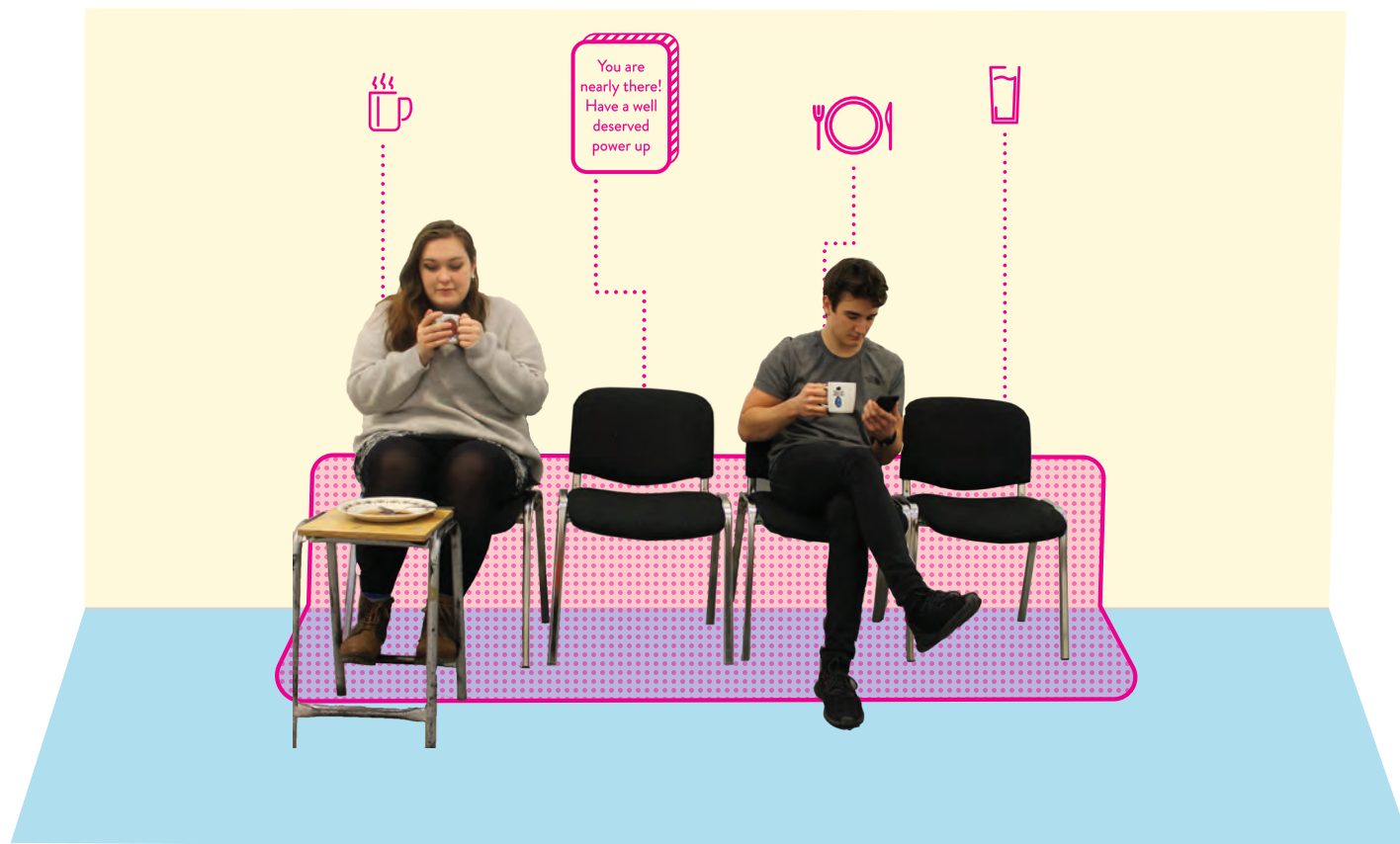
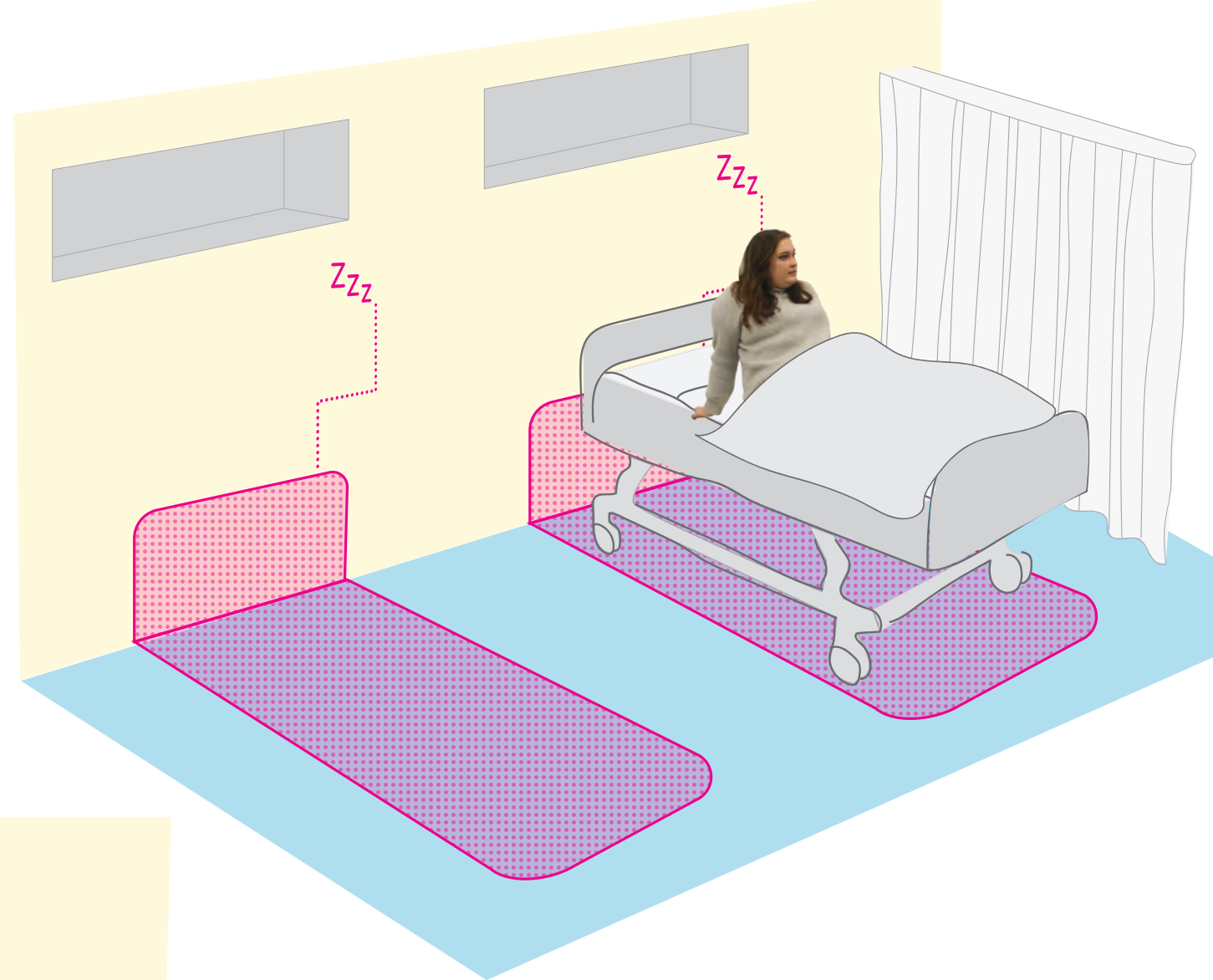


This image is portraying the waiting room. We chose for two different kinds of information to share on the walls. First, we created reassuring information about the endoscopy journey, and second, carefully selected facts about the local unit to inform and distract the patient.

Here we are on the way to the procedure room where in the hallway, we come across reassuring information about the procedure and remind the patient that they can let the doctor and nurses know how they are doing.



In this scenario, the patient is in the bed in the procedure room. The coloured zone highlights the passive station and reassures the patient that they can have a rest here.



We are still in the recovery room but after the rest, when the patients eat for the first time in the day. Again, the icons and sign highlight that they should sit back, relax and enjoy their well deserved meal.

# reflection

I have learned a lot during this project. It was nice to work in a real-life setting with real people from a real hospital. It made me realise there is work for designers in the public sector and even convinced me that this might be a direction I want to take in the future.

It was a true pleasure to work with Alison. With her great commitment, she would sense if something is within my comfort-zone and push me (and herself) beyond that point. Leading to a project I feel proud of.

Although it is said to be a collaborative project, it didn't really feel like that. NHS was the client and we were the designers. I think there is opportunity to organise co-creation workshops instead of presentations, causing dialogue instead of a monologue coming from our side. In an ideal world, I wished that it was a more interdisciplinary project, involving people with different professional backgrounds.

After we split up in mini-teams, I often organised get-togethers to maintain the communication within the bigger group. As competition vibes can get strong in GSA, I saw it as important to listen to other teams. In the fourth week, Lisa and I pursued the group to do an exhibition instead of a classic presentation in the cinema room. It was a really last minute turnaround but eventually, people were happy with the change. During that moment, I realised that this is something I learned in KISD, to take initiative. As the project was so densely organised, we produced a lot material.

This project polished my curiosity towards more complex systems within such big organisations. How would it be to redesign the waiting times in hospitals?

Have a safe  
journey home!



