# Presentation:

## Intro:

First name the team members for Find AR, and then introduce the core concept for the project.

The key points being:

* An app that can store locations of ‘common items’.
* An app that can be used to ‘find these common items’ via ‘using AR to show a beacon at the stored locations’.
* The project is a key example of the ‘limitations of current AR technology’ in ‘absolute positioning’.

It may be recommended to create a slide for each point to rapidly fire through, instead of one slide that is more inaccessible.

## Main Section

This will be divided into the ‘what’, ‘so what’, ‘how’ and ‘now what?’.

### What was the project about?

This is to expand on the limited overview from the intro.

#### Premise:

* In one’s day to day life, remembering and recall can be taken for granted. When this ability degrades, your independence gets hampered.
* Forgetting where your keys are, where your medicine is – this issue can be a growing annoyance.
* Therefore, wouldn’t it be in their interest if they had some easy-to-use implement that can keep track of these things for them?

#### From this:

I.e., create a motivation to fix a problem. The problem is forgetting.

* Our brief proposed a solution. To use ‘AR’ to map out ‘tags’ saved at the locations of these important items.
* We needed to make it accessible.
* It should easily be integrated in their lives with the idea of ‘placing’ and ‘picking up’ tags on demand.
* It should help them remember to place tags back down when they pick them up.

**The aim is for a ‘no-frills’ app that solely aims to solve its singular purpose – finding your things in AR.**

### Why does it matter?

This will be relatively short, as this has half been covered in passing above.

* We are not saying we want to solve memory loss. This is afterall, only an app.
* But it can always be said that forgetting where something is, whatever that thing is, is an aggravating experience.
* Whether that happens more often or not, is dependent on the person.
* It can thus be said that we just want to create an option for those that feel they want a bit more ‘accurate’ management in their life.
* A ‘record’ of their things, and where they are.
* Such an irrevocable truth can bring comfort for those that are in chaos
* ...or are mildly inconvenienced a bit too often (can be a ‘joke’ 😊😊😊😊).

### How did we do it?

**The core of the presentation**. Encapsulates part of the ‘how’ along with our challenges and our execution.

First start with the website.

#### A website, not an App.

* Our goal was for it to be accessible.
* Lightweight.
* Unimpressive, in a sense that it doesn’t overwhelm or confuse the user.
* So, we went with the easiest implement that can achieve such an ideal.
* A ‘web app’.
* A website, designed to be used on mobile.
* Can be used on any mobile.
* Active development in AR with Three.js and AR.js.
* A new framework called ‘Svelte’ that removes the idea of ‘baggage code’.
* Expand by denoting the idea as ‘Svelte website are delivered in pure js’, whereas typical frameworks deliver a ‘unreadable language’ which is ‘translated on the fly’ with a ‘massive block of code’.
* **Important,** if this is deemed too technical, use analogies. Say svelte hands a ‘single piece of paper written in English’ to the user, whereas typical frameworks ‘give you a page in Latin and then a dictionary to translate it’.

#### Basic Values for our web app

* To be easy to use, the website must be responsive.
* We need to minimise redirects and the number of pages, so that it is straightforward to use.
* It must be reactive. The user must know when something is happening.
* Not waiting without feedback.

#### A blue design

* Blue is friendly, bright.
* So, we chose blue.
* We needed account screens (briefly explain it has accounts)
* We needed a tag screen.
* We wanted an easy overview of all your tags, and so we listed tags in an ‘expanding selection’.
* You can find tags, you can pick them up, you can place them down, you can edit them, you can add them.
* Tags are the core, the staple, so we streamlined it as much as possible.
* Everything occurs in the tags page, except AR.

Next, focus on AR, and its challenges…

#### AR really is not built for absolute positions

* When moving into the AR development, there was the core problem of ‘how do you record position?’
* Typical applications of AR involve ‘things happening around you’, ‘relative to you’.
* But our goal is to show tags ‘relative to the world’. We want to show them in the same place, no matter where you are.
* To do location tracking, most apps use GPS. It is not hard to understand why, as it is the only method to get where you are.
* In fact, fundamentally we either must use GPS, or implement **annoying** steps into the AR process to improve this accuracy.
* If we don’t want to use GPS, say we want to have the user walk to **an exact location in their house**, **in the exact same orientation**, and then **trust the phones sensors** **that everything will not veer off into infinity once you start moving –** what would the viability of a solution such as this be?

#### Realistic Options

* To first know what is possible, look at what has been done.
* Generally, there were three areas to pursue.

1. Use AR.js, which has a method for placing items in AR with geo-coordinates.
2. Use Unity AR. Seems to use ‘mapbox’ to attain better compass accuracy, but this service is paid, and the development of this AR method has stalled for 5 years.
3. Develop our own system with an unknown solution, unknown accuracy, and unknown timeframe.

* We picked the first option.

#### Conclusion

* With the data from GPS, it could probably find your car.
* ‘Room’ level accuracy and can be used to get a ‘general idea’ of where something is.
* Thus, with this, we can add it into the tag management website, and form a ‘complete’ solution

## Demo

* Show the website without ar on laptop.
* Have a QR code to show the audience so they can test it out.
* Try to cast phone?