Presentation Script

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Team Introduction

I am Ann Barr, I wrote on my CV that I'm a tenacious problem solver and I think that's about right. I don't always know how to solve a problem but I'm usually confident that I can find a way to solve something. I also don't believe in reinventing the wheel or fixing something that isn't broken so I try to keep an eye on the big picture, see if someone else has solved it already and avoid solving something which might not be a problem.)
I am Ignacio Mattos (write a few words about me and what I brought to the team).
I am Saba Nuk (write a few words about me and what I brought to the team).

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And we are Always Curious.

Slide 3 - How do we find the location of things that are important to us?

Often we want to find the location and details about a variety of objects. Imagine that you want to know the latest last posting time of postboxes in your area, or which childrens' playgrounds are close to the place you are visiting (and whether they have a zip wire!) or where the nearest accessible toilets are, or maybe you want to know which local pharmacies are open late or offer delivery?

Some of this data is available to us, but it may be in a more fragmented form or directs us using a postcode that sends us to the other end of the street or the wrong side of the road.

So our idea started to form. An existing free app, What3Words, maps the world into 3 metre by 3 metre squares identified by three unique words. Suddenly we could find our way right to the playground at the back of the field off the A50, to the accessible toilet inside Chester Zoo or work out which pharmacy 10 yards apart on Drillfield Road is the one offering delivery.

Welcome to Finder - map your world, the things relevant to you, data displayed in an easily accessible form and which can be amended or deleted. For our MVP we chose to map pharmacies.

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Finder

So why did we choose this project?
what does this application do?
how did we deliver the project
and
where could the project go next?

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Why?

Why this project?

> We all have things we'd like to be able to find, postboxes, playgrounds, bus stops, accessible toilets …..
>
> This project allowed us to showcase our learning from Our Journey into Tech and to extend that learning into understanding the wider JavaScript ecosystem and integration with other applications. This project also allowed us to develop our growth mindset, stretching ourselves beyond just what we have been taught and being willing to fail and try again.
>
> This project allows us to investigate crowd sourced data, mobilising a crowd to find and assemble information to create collective resources.
>
> The application also allows potential for future development, enabling us to view it as the first iteration of a software development process.

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Why What 3 Words?

> We made use of What 3 Words for geolocation in our app as it describes itself as ‘a really simple way to talk about location.’
> What3Words have assigned each 3m square in the world a unique 3 word address, allowing mapping of far greater resolution than a postcode for example and mapping of more remote locations.
> It’s now used in over 170 countries, is available in 35 languages and applied across industries from automotive to logistics, travel, emergency services and disaster response. In the UK it has received much recent press coverage including recommendations from emergency services. It has the potential for becoming the Google or Hoover of addressing systems, (the brand name becoming synonymous with the object).

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What?

Our app provides a kind of tell and show!
A responsively designed React application integrating with Auth0 for login and What3Words for geolocation. The app calls Auth0 for authorisation and authentication allowing the user to connect with the app within their private profile that will allow them to interact via an Express API gateway and AWS Lambda to an AWS hosted MySql relational database.

Slide 8-13 (probably not used as we’ll do a demo)
The application could be used to map any type of things but for our proof of concept we’ve chosen to map pharmacies.

The application consists of 4 key elements, user login using Auth0, Add pharmacy, a total of all the pharmacies currently listed in the database and a list of the pharmacies where the details can be updated or a pharmacy can be deleted.

We've implemented Auth0 for the authentication process to a centralized login page in the same way that Gmail, YouTube, and any other Google property redirects to accounts.google.com whenever a user signs in.
A user will be authenticated and Auth0 will generate an identification token and an access token that will be returned to our application. The access token can be used to call our API and thus be able to interact with the database (at the moment in development only) for this demonstration we're already signed up so I'll login with GitHub.

To add in a pharmacy, a user will need to know the three word location of the 3m by 3m square. Currently this will found separately by a user, using the What3Words app or website. In future iterations, we plan to integrate with the What3Words API.

So I know that a local pharmacy is located at 'soil.fumes.code' so I am going to use this information to add in a new pharmacy.

So I type in the location, you will notice that I cannot submit a new pharmacy until both the location and town have been completed. The town for this particular pharmacy is Warrington so I'm typing this into the town textbox.

This pharmacy does not offer late opening or delivery but does accept e-prescriptions and does vaccinations so I am using the check boxes to add in the details. And I will add a comment into the optional comment box.

Once I am happy with all my details I will submit them.

Now the total number of pharmacies has increased and the pharmacy is listed at the bottom.

Currently the list is just of the pharmacies as they have been added, another improvement for future iterations.

I can see the details of a pharmacy and if I click on the What 3 Words logo, [click to demo, will open in a new tab] the location on What3Words will open in a new tab and I could use this for navigation in Google maps, Waze, Apple maps or my Mercedes Benz satnav!

To update the details of a pharmacy, I can use the toggle switches to change it. So let's say my Warrington pharmacy now offers late opening, I will change that toggle switch and click the update button, then confirm the updates and the changes will be applied.

And if a pharmacy needs to be deleted then this can by done by clicking the delete button and confirming the delete.

The application has been designed and built with mobile-first responsive principles. This demonstration is on a laptop, so we have some screenshots to show different sized mobile devices.
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How?

On the initial formation of the team we started by meeting in person to discuss project ideas. Two ideas were discussed in detail using rough wireframing to describe the possible options. For each option we discussed the components it would likely contain in the front end and outline database table(s) to support it. We discussed the pros and cons of each idea and potential future developments in later iterations. We also discussed how each option allowed us to demonstrate the full CreateReadUpdateDelete cycle and how feasible the scope of the idea was within the constraints of time, availability and skill set of the team. At the end of this meeting we decided on the Finder application using pharmacies as the type of item for the MVP.

Because of our differing availabilities we have often been programming at different times. We have done some pair wireframing, organisation and programming and made use of VS Code Live Share for collaborative working. We split the roles according to our interests and abilities with Nacho doing all the back-end and collaborating on the front end. Saba and I worked predominantly on front-end and styling and picked up other project deliverables like the READMEs and presentation prep. We've tried to remain true to the agile manifesto by focusing on individuals and interactions and made use of Trello for creating a project Kanban board, visually identifying tasks, issues and progress. We have also made extensive use of our project Slack channel for communication. We've tried to keep referring back to the scope for this MVP stage and tried to make sure we've kept note of potential features and issues to be addressed in future iterations of the development cycle.
We created a GitHub organisation to enable collaboration and ensure version control.
All items have been code reviewed too to reduce bugs and identify improvements and efficiencies.

The back end was created using an AWS RDS instance and integration between front and back end uses Infrastructure as Code and Serverless framework to create serverless functions to be able to trigger HTTP requests. We've implemented Auth0 for the authentication process to a centralized login page.

We've created tests for the project using Jest; and ESLint to ensure clean, readable code.

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From a technology perspective, the projects uses:

- ReactJS
- JavaScript (ES2015+)
- CSS
- Bootstrap
- Webpack
- Axios
- ESLint
- Serverless Framework
- Express
- SQL
- Mysql library
- AWS Lambda and API Gateway
- AWS RDS
- Jest

We have also made use of node packages, Moment, Font Awesome, React-Dialog and React-Switch. Auth0 for user login. Logomakr for creating images for use in the project and What 3 Words for the location mapping.

From a productivity perspective we've made use of Trello, Slack, VS Code including Live Share, Google Docs and GitHub organisations.

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Challenges

Working collaboratively takes a mindset shift as it is easy to get caught up in the excitement of creating something individually and forget to benefit from the skills and experience of others. We've tried to overcome this by making sure we communicate well amongst ourselves.

Differing availabilities have meant that we are often working in relay. Using Trello for Kanban boards has really helped us with visibility of what tasks have been undertaken, which are still to be completed and any issues arising.

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Where?

So where do we go from here?
This project offers plenty of options for additional features and scalability. In a future iteration we would look to improve integration with the What3Words API especially at the data entry stage. We would look to develop improved searching facilities rather than just a data list - a visual representation of items in ‘my’ area and an ability to search by criteria. We would also like to improve user accounts for the app and consider issues such as data security and who can amend data.

We envisage that future iterations would include a ‘previous step’ which allows a user to identify whether they are finding or searching. Development into a more generic app for finding would require some UI for set up.

Capitalising on crowd sourcing for data acquisition would also necessitate some kind of social media campaign. And reliance of crowd sourced data may require some data cleansing or articulating the potential weaknesses of these data.

Conclusion

In conclusion, we’ve told you about the why, what, how and where of our Finder project. We’ve overcome challenges, challenged ourselves, learnt a lot and produced an operational MVP.

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And still, we are Always Curious.

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The application consists of 3 key components -

- Add pharmacies
- A dynamic number of the pharmacies currently stored
- A list of all pharmacies

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Add

- To add a new pharmacy, a user enters several pieces of data:
    - A What 3 Words 3 word location - at present, users would need to get their location separately using What 3 Words and manually entering the data, future developments would include greater integration with the What 3 Words API to get that data directly into Finder
    - A town as a free entry text box for the user to also identify the location
    - 4 checkboxes allowing the user to select pharmacy facilities late opening, vaccinations, delivery and e-prescriptions accepted. The default value for the facilities is ‘not available’
    - Comments as a free entry text box which a maximum of 160 characters
- Once the data have been entered, the user clicks the submit button to send the data. The submit button is disabled unless both the What 3 Words location and town fields have been completed.
- The Add section demonstrates the Create aspect of the data handling process
- This section has been responsively designed to ensure that the user interface is suitable for all devices.

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Number

- A dynamic component showing the total number of items currently in the database.
- Number demonstrates the Read aspect of the data handling process.
- For improved user experience on small devices this element is not displayed on mobile renders

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List

- The list shows the location, the town, and 4 features as entered by users.
- The list demonstrates the Read, Update and Delete aspects of the data handling process.
- For a clean UI, readable on all devices the list makes use of icons and visual toggle switches to display the data.
- List entries can be individually updated by toggling the switch for any criteria and clicking on the update button.
- List entries can be individually deleted by clicking on the delete button.

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- The location is a hyperlink to What 3 Words