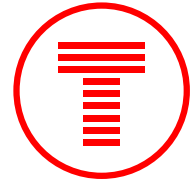


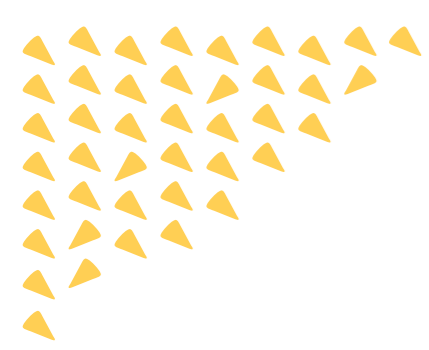
KEOLIS



Big Lemon | Transport for Wales Lab

Accelerator Case Study

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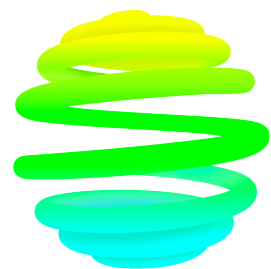
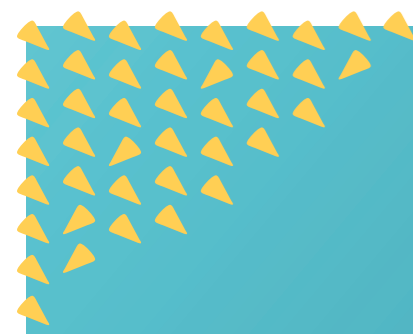


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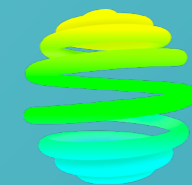
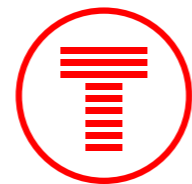
We're Big Lemon, we build meaningful digital products that empower change makers to deliver positive change. They've solved challenges with original creativity and intelligent technology to make tech a force for good and with purpose.

We build products that focus on purpose, not the bottom line — helping others in their ambitions for a better, fairer, cleaner world.





KEOLIS



LAB

Joining the Accelerator

It is always our intention to build products we enjoy working on as a team; this opportunity allows us to build something that not only aligns with our ethos but allows us to push the boundaries of what's technically possible.

Collaborating with TfW, a national organisation, enables us to deliver real impact and make a difference to people's lives.



What we learnt in the early weeks

Primary and Secondary Research

When we initially joined the accelerator programme, our concept was just an idea and a hypothesis.

During the first few weeks, we focused on refining our approach to meet the needs of the challenge. We worked with the AltLabs team and initial TfW stakeholders to identify where our concept aligned within the challenges identified.

We began by outlining as many possible user scenario cases as possible, where a digital product could help. Then cross-referenced with the challenge cases we discovered in the first few weeks of the programme.

We were soon able to narrow our focus on two areas;

- **Education on how small personal acts can affect the carbon emissions on a user's journey, predominantly focussed on rail travel.**
- and,
- **Encouraging active travel, to and from stations and beyond.**

Both of these outputs aimed to change the habitual behaviour of rail passengers to impact their personal CO2 usage, and allow TfW to access data on how users interact with the rail network.

Results of research

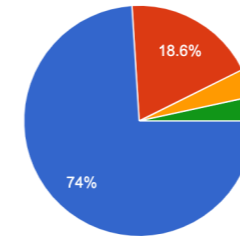
From here, we began with one hypothesis;

‘People want to be rewarded for green and active travel on TfW services.’

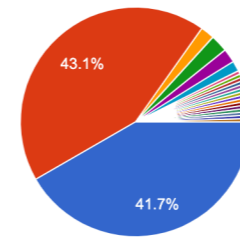
We worked with TfW stakeholders on conducting primary research to identify if people wanted to be rewarded, and if so, how. We created a questionnaire to be shared internally within TfW and externally to passengers.

The aim was to collect data on a series of topics;

- **How passengers get to and from stations, their barriers to green travel.**
and,
- **If/how passengers would like to be rewarded.**

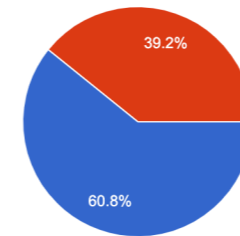


Results from this research indicated that 92.6% of passengers lived under 5 miles of their local station, yet only 44.1% used carbon-neutral forms of transport to get to these stations.



We also discovered that 83.8% of passengers surveyed would like to be rewarded for using TfW services and that 60.8% would like to know more about improving their environmental impact on all journeys.

[Full breakdown here.](#)



Further research also indicated that 65% of under 25-year-olds will prioritise greener transport methods, with this number increasing the younger the participant.

How this shaped what we worked on

Our Ideation process

We began creating a concept that aligned with the key discoveries in the research phase.

The product had to promote and reward users for greener and active travel, but it also had to:

Be accessible

Given only 4% of passengers use the current TfW app we needed to build something with a larger outreach.

Be simple to use and understand

The information on the platform had to be easy to digest, so we needed to translate what x amount of CO2 was equal to.

Be accurate

For users to understand the results and for the platform to reward users, the data on CO2 savings had to be accurate.

Integrate with existing tech

With a new TfW native app being launched, this concept had to seamlessly integrate, eliminating the need for another download.

Reward users with incentives they want

Past experience in similar products tells us that the rewards need to align with the needs and values of the user.

Have bilingual/multilingual capabilities

In line with the government's 2050 guidance.

Gamify the process of saving CO2

Allowing users to see their progress compared with friends, family and other passengers.

Have a positive outcome

The user has a sense of achievement, they are contributing to a wider purpose in their everyday life. Provides a feel-good factor.

Align with the outcomes of the Future Generations Act

The Act 'requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change.' It's an opportunity for innovative thinking, to prevent long term problems, meet long term needs, and collaborating.

Report on habitual data

Supply TfW with key information about how passengers interact with the service.

How the product would impact TfW

Our concept development process

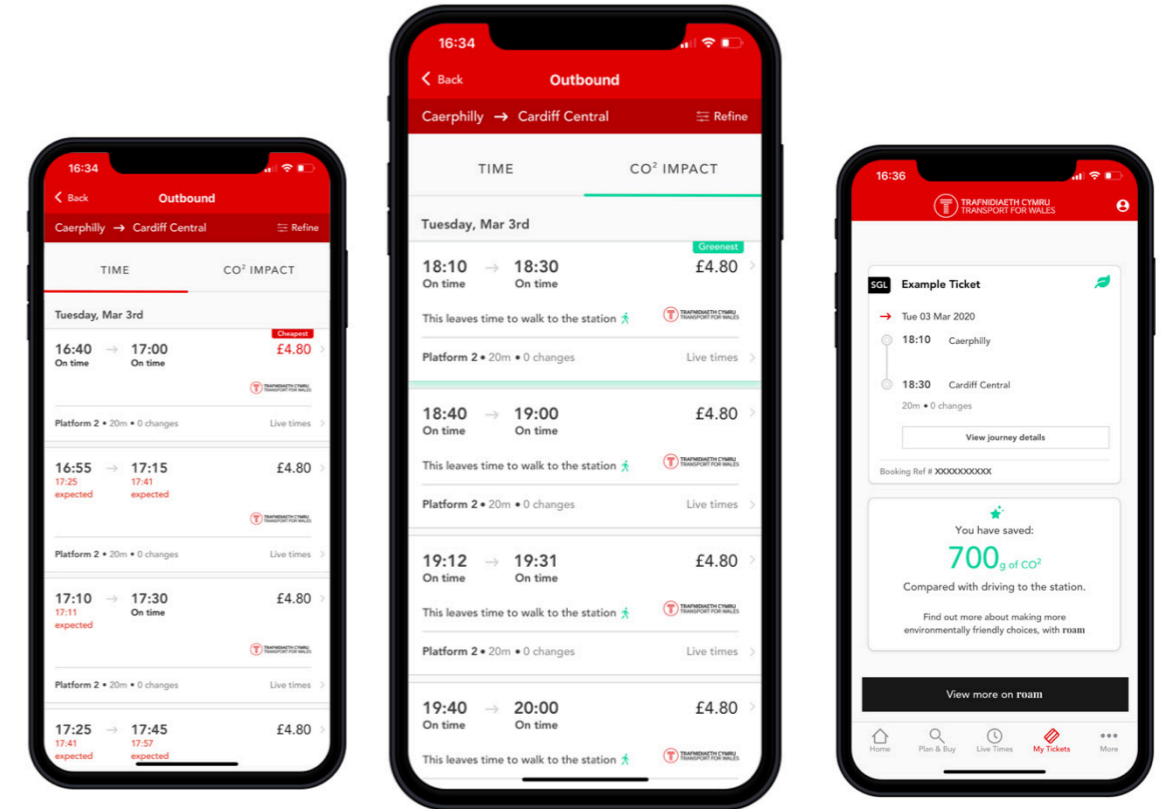
The Proof of Concept (PoC) we developed during the 12-week accelerator consisted of 3 unique selling points (UPS):

Translating key data

At the core of the PoC will sit an algorithm that cross-references the user's location with the train station of choice and a database of CO2 data from the engines on that specific line.

By calculating the user's location and the CO2 impact of each journey we're able to display the greenest route a user could take.

These 'greener options' will be displayed alongside the train times in the new TfW app (using an integration in partnership with app builders Imaginet).



taith/roam



Educating and rewarding passengers

During the ticket purchasing process:

An example of how a user could make a small change would be by displaying details of a later train, encouraging the user to walk or cycle to the station, as well as displaying the engines with less CO₂ output.

The algorithm will cross-reference the journey to the station via walking, using Google Maps API, to drive and reward the user based on the CO₂ saving.

By making these green choices a user will collect points, which they can save up to exchange for various rewards.

Three example reward types include:

- Discounts at local attractions who are partners with TfW (Cadw, for example).
 - Discounts at local businesses (local to the user).
- Converting points for donations to charities/social good organisations.

Onboard:

By 2024, when the new carriages arrive, a cumulative tally of the green choices and CO2 impact will be displayed on digital totems on board the carriage.

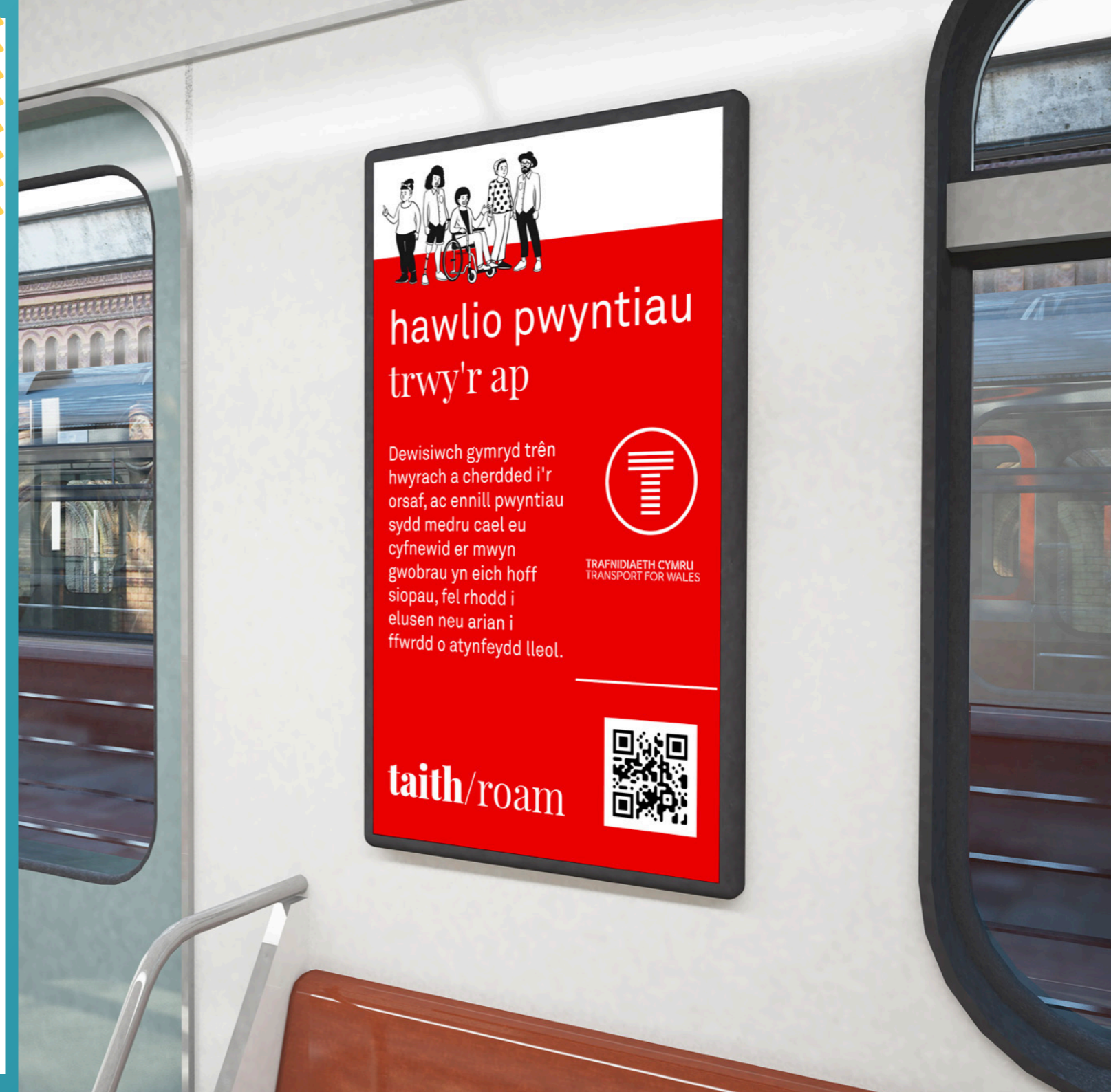
Until then, we can still allow passengers to easily find this information by creating a unique QR code to be displayed on each line.

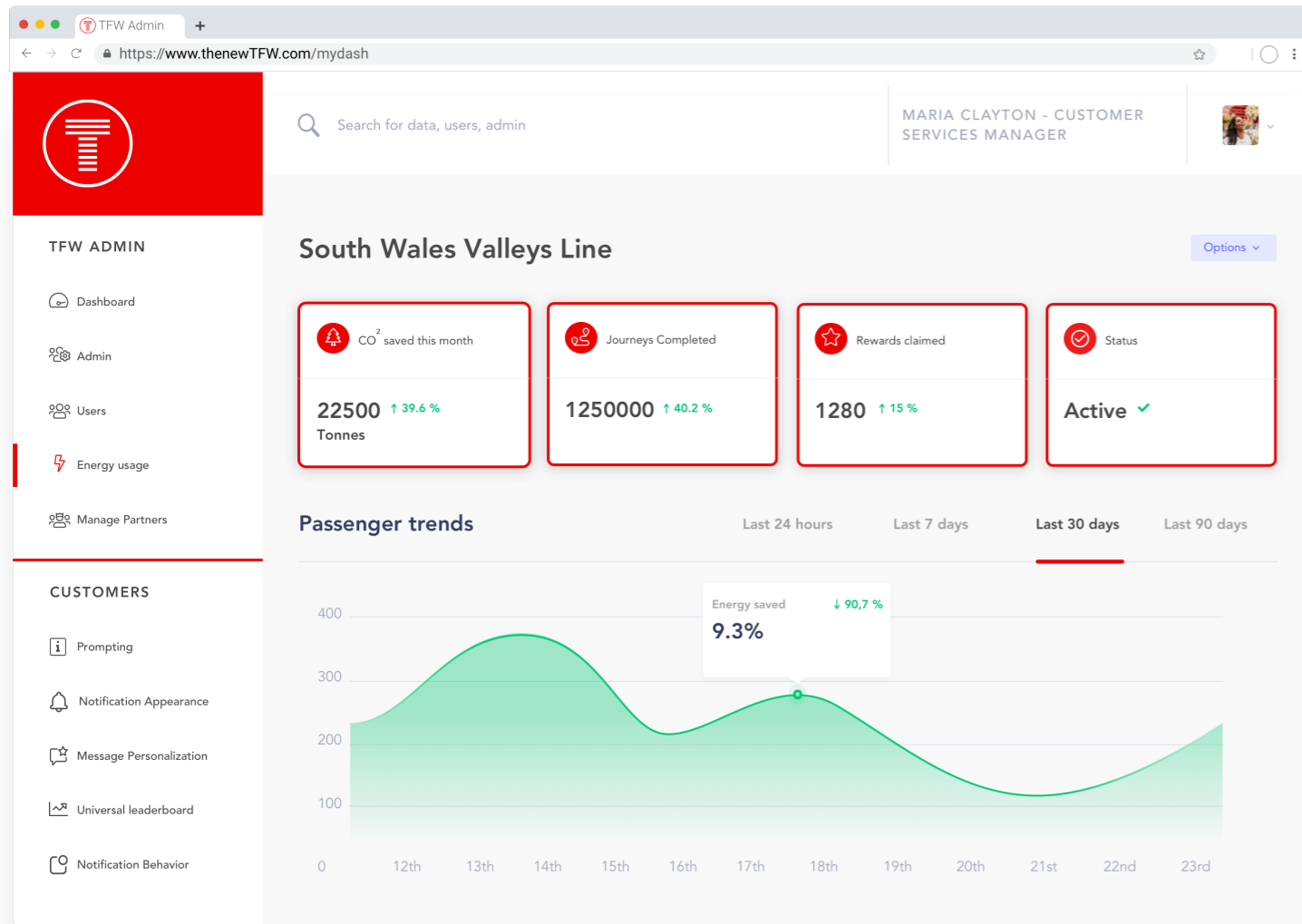
The users will be able to scan the code with their phone and find out carbon footprint information about their journey, and a live tally of other passengers who have made 'green choices' that day.

This allows the reach of the information to a much wider audience, who aren't currently using the app. The unique page that is displayed will prompt users to download the TfW app and start collecting points based on their carbon saving efforts.



Scan me with your smartphone camera
or [click here](#).





Data-driven improvements

As a product for passenger usage, we'll be able to gather vast amounts of data, which will be fed into a TfW admin web app.

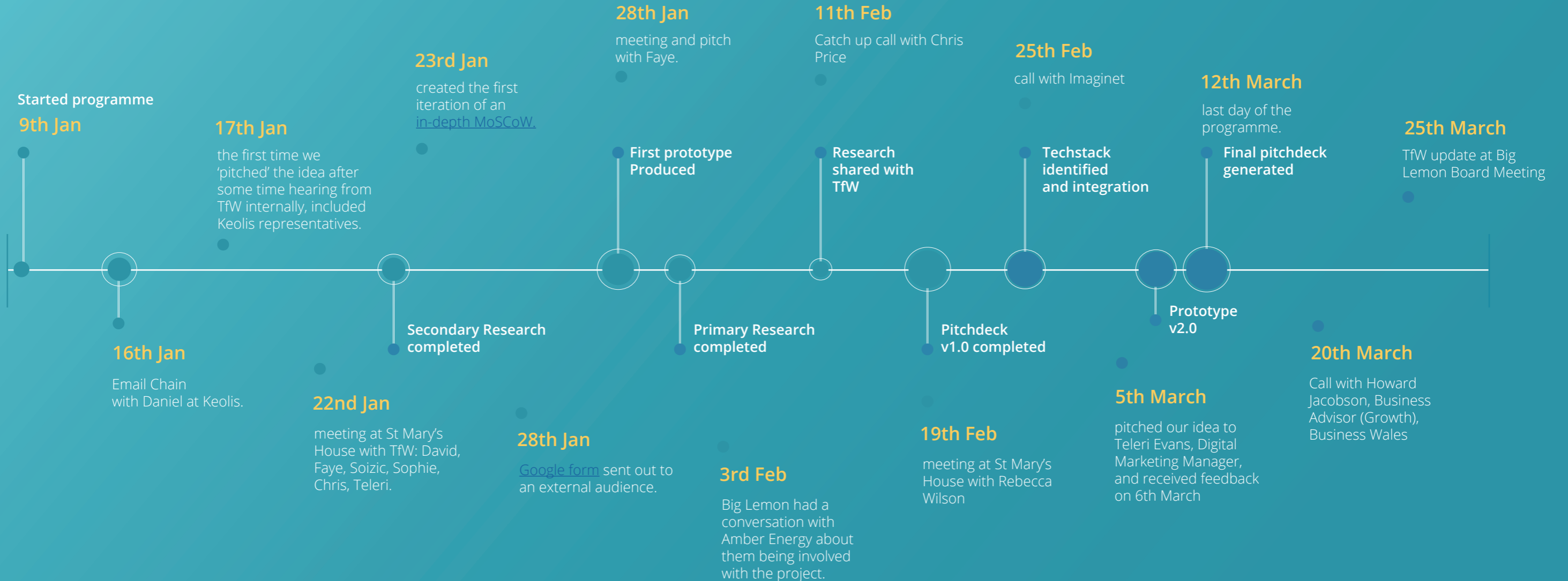
This will allow the organization to see data on things such as - environmental statistics, user behaviour, and user uptake. Which will allow decision-makers to make better data-led improvements to the digital platform and network.

Example reporting topics:

Amount of CO₂ saved as a collective

- Passenger engagement with 'green incentives'
- Habitual data of passengers

How our product progressed



The Future - roadmap and financials

What we would do with the a portion of the prize money - Full Proof Of Concept (PoC)

As we've highlighted in past correspondence, if we were to be given a share of the prize money available we would spend the finances on adapting and developing the PoC, working with TfW stakeholders and focus groups to build out the concept, ready to develop an MVP. Full costs, waterfall and rate costings can be [seen here](#).

Funding to develop an MVP

For the concept to grow further, we would need to raise funding to develop the concept. Having thoroughly tested the market in the prior stages, we're confident that there's a requirement and need for a service like this for the rail industry.

Test on a local line and make iterations and fixes

Once the MVP is ready for Beta testing, we would be prepared for a further testing and iteration round, readying the product for a national rollout.

Nationwide rollout with Keolis Amey, and other providers

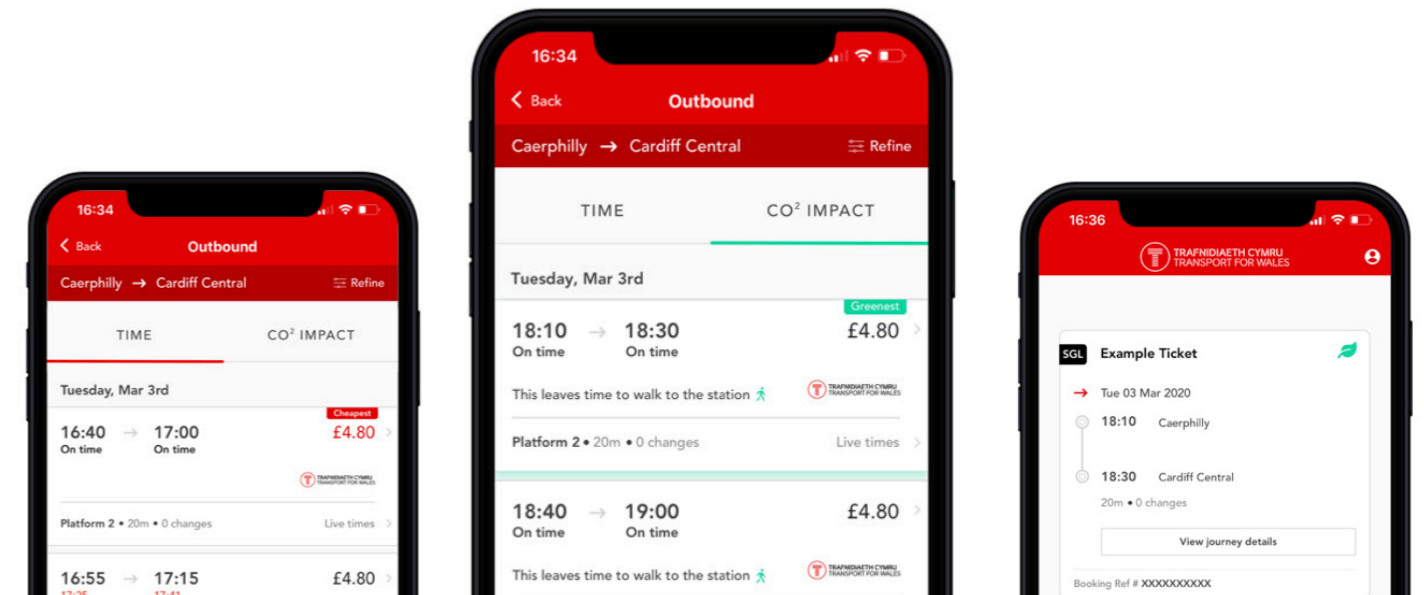
Once all the bugs have been addressed, and features of the product defined we will be ready for a national rollout. Our team will support all rollout teething issues and continue further bug fixing as the product is used in the wild.

Scope for integration with more partners and onward travel providers

Our ideas for this service don't end here, we're determined to continue adding features and unique selling points to the concept. We'd aim for more integrations into active travel, and further collaborations with local and national partners, ensuring this product meets the needs of the users.

Larger release with Keolis Amey

Once the product is up and running in Wales as a BeachHead market, we would like to explore the possibilities of extending the service in the UK and beyond.

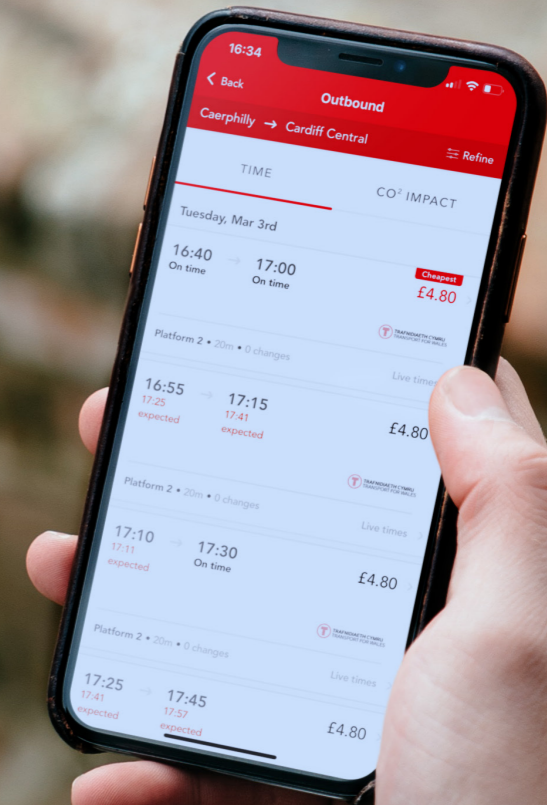


Diolch | Thank you!

to everyone who's offered us their time, energy and support during the 12 week programme.

Faye Nield - Future Generations Manager
Sophie Duggan, Environmental Co-ordinator
Soizic Renault - Future Generations Officer
David Perrett - Procurement Manager
Teleri Evans, Digital Marketing Manager
Adam Kerrigan - Imaginet, Project Manager / Product Owner
Daniel Courcol - Customer Experience Director Group, Keolis
Gareth Morgan - Safety and Sustainability Director
Helen Mitchel - Digital Transformation Director
Chris Price - Digital Marketing Manager
Rebecca Wilson - Partnerships Marketing Coordinator
Paul Tapley - Head of Marketing

Thank you to Mike Davies, Barry Lloyd, Imran Anwar, Charlotte Rogers, Adam Foster, Colin Lea and the rest of the TfW engagement and AltLabs team for sharing our enthusiasm on this journey!



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