Rider Core

Operating Model (aka Rider Intelligence) Design approach

TLDR;
There are currently two systems that riders use to access work through the Deliveroo platform;

- ***Free login****: a system that allows riders to go online whenever and wherever Deliveroo is operating to make themselves available to receive orders.*

- ***Self-service booking (SSB)****: a system that requires riders to book into sessions. If a rider has a booked session, they may go online but if they don't, they cannot.*

For the previous two years, it has been assumed that SSB is the future of Delivery and has been developed with varying degrees of success at this time. Conversely, free login has been seen as a legacy system and has received no tech support since the launch of SSB.

This aim of this workstream is to identify which of these systems provides the best experience for our riders, customers and restaurants, and the steps required to optimise these so that we deliver on our corporate goals.

What is the project Phase?
Handing off

Experience team
DRI: Ben Brewer
User researcher: Rebecca Finnegan
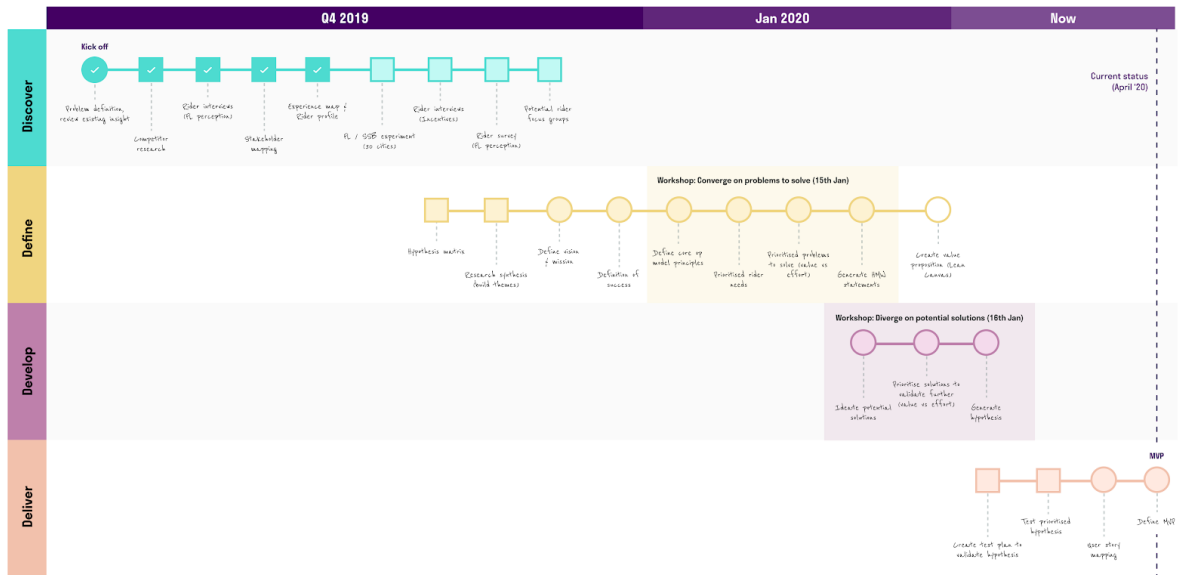Content designer: Sophie Allcock
Product designer: Ben Brewer

Current status

[ ] Defining the problem
[ ] Research and exploration
[ ] Outlining a proposal
[ ] Executing on deliverables
[*] Handing off
[ ] Live in production

See the [project plan](#)

Resources

Documents

- Removed

Useful links

- Removed

Phase I: Defining the problem

What problem are we solving?

See the Discovery deck and Exec update for further context.

In a nutshell, the needs of the business are misaligned with those of the rider, in that riders want flexibility of work, but we require a level of certainty and control around working hours in order to meet order demand and uphold both customer service levels and rider wages.

Free login gives riders more **flexibility** of when to work, but *can* come at the **cost of earnings** and security of work (if the zone is flooded with riders). It also gives the business the ability to absorb **growth**, but makes **forecasting supply and demand very hard**.

However SSB gives *some* riders increased **security** of work and more **consistent earnings**, at the **cost of flexibility**. It also theoretically allows the business to better **match supply and demand** (although it's far from perfect), at the cost of being able to absorb growth.

Business problems

- **Legal risk:** Any work that Deliveroo provides access to should not exert control over how and where riders work. The self service booking product could be perceived as contrary to this.

- **System complexity:** Both technically and experientially the SSB system is massively complex. As a result, the product - which is fundamental to the rider experience for 80% of riders - has been barely built upon since it was first shipped 2 years ago.

- **Scale of system exploitation:** Riders exploit the rules within the SSB system (attendance etc.) that are required for such a system to work. Yet these rules cannot be enforced. Ghost riding to game statistics makes up 10% of all hours worked, increasing in times of network stress.

- **Participation at super-peak:** With Free Login, riders often choose to work sociable hours, and not peak hours such as Fri, Sat and Sun 19:00 - 21:00. During these times, demand will exceed supply, resulting in customers waiting longer for their food to be delivered (increased unacceptable lates), and reduce restaurant selection.

Rider problems

- **Lack of flexibility:** A core proposition of the Deliveroo rider experience is the flexibility of the work that's offered. However, the rider experience within the SSB system is contrary to that. Due to several factors (attendance, the need to book, super-peaks etc.), a rider's pattern of work within the SSB system is inflexible. They may not be able to access shifts that work for them, and cannot work outside of the zones they've booked into even if demand is low.

- **Opaque system:** Riders care about statistics but don't understand them – or once they think they do the system changes or is unfair. For example, my segment can change without my statistics changing. When they're good actors and the statistics don't reflect that, they lose trust in it. It's a huge cause of write-ins to local ops teams and creates fear around making changes

- **Discoverability of work:** Both the SSB and free login systems don't provide riders with the tools to find where good work is. A rider's view is largely constrained to their current zone. Much of this is caused by the product's information architecture is largely based on our zone-based business logic, and the demand status is based on imperfect data models such as ERAT, regardless of restaurant level order likeliness. A zone based system also drives an increase in cross-zone order unassignments. Additionally, the current homescreen UI shows riders where online restaurants are, but NOT where actual orders are available. Therefore riders have a

misconception that dots on the map indicate orders, and become frustrated when they move towards these dots but receive no orders.

- **Earnings**: As Free Login is an uncapped model, there can be times of over supply, meaning riders can receive as little as 1 order per hour.

- **Zones**: We've educated riders about zones (through our comms policy, booking system and app UI) so much so they have built up a behaviour where they're unwilling to work in zones outside of their own. Even for those riders who are happy to take orders in neighbouring zones, our dispatcher does not allow riders to move flexibly between zones. Instead they'll only be assigned orders from the zone in which they logged in.

What does success look like?

The success of a new operating model can be viewed from all sides of the marketplace, where we meet the needs of our riders, customers, restaurants and the business.

Rider needs
More details can be found here: Experience map, Hierarchy of needs, and Rider jobs.

- **Earnings**: Achieve their desired earnings target as quickly as possible, and be paid fairly for their effort.
- **Flexibility**: Work whenever and wherever they want, to "be their own boss"
- **Security**: Have reliable and consistent access to work

Measurements include: average earnings per hour, hours worked, RET and rider satisfaction scores, rider churn.

Customer needs

- **Delivery speed**: Recieve their food hot, all of the time
- **Reliability**: For the order to arrive when it said it would
- **Restaurant selection**: To have a maximum selection of restaurants possible

Measurements include: B10 orders (customer complaints), customer churn, EOD vs AOD, KCT, OMDNR orders, NPS.

Restaurant needs

- **Maximize earnings**: Restaurants want to hit their revenue targets for this period, based on order growth and throughput.
- **Reliable service**: For riders to arrive when they say they will, every time

Measurements include: Restaurant satisfaction scores, rider wait at restaurant time.

Business needs

Success for the business would mean having enough riders online to meet order demand levels, especially during super peak times, as to not impact customer experience.

- **Growth**: Be able to absorb order growth and more effectively match supply and demand
- **Reduce B10 orders**: Deliver an improved customer experience to reduce the number of compensation cases
- **Reduce CPO**: Find ways to reduce the cost of order fulfillment

Measurements include: B10 orders, utilisation %, rider participation, order acceptance.

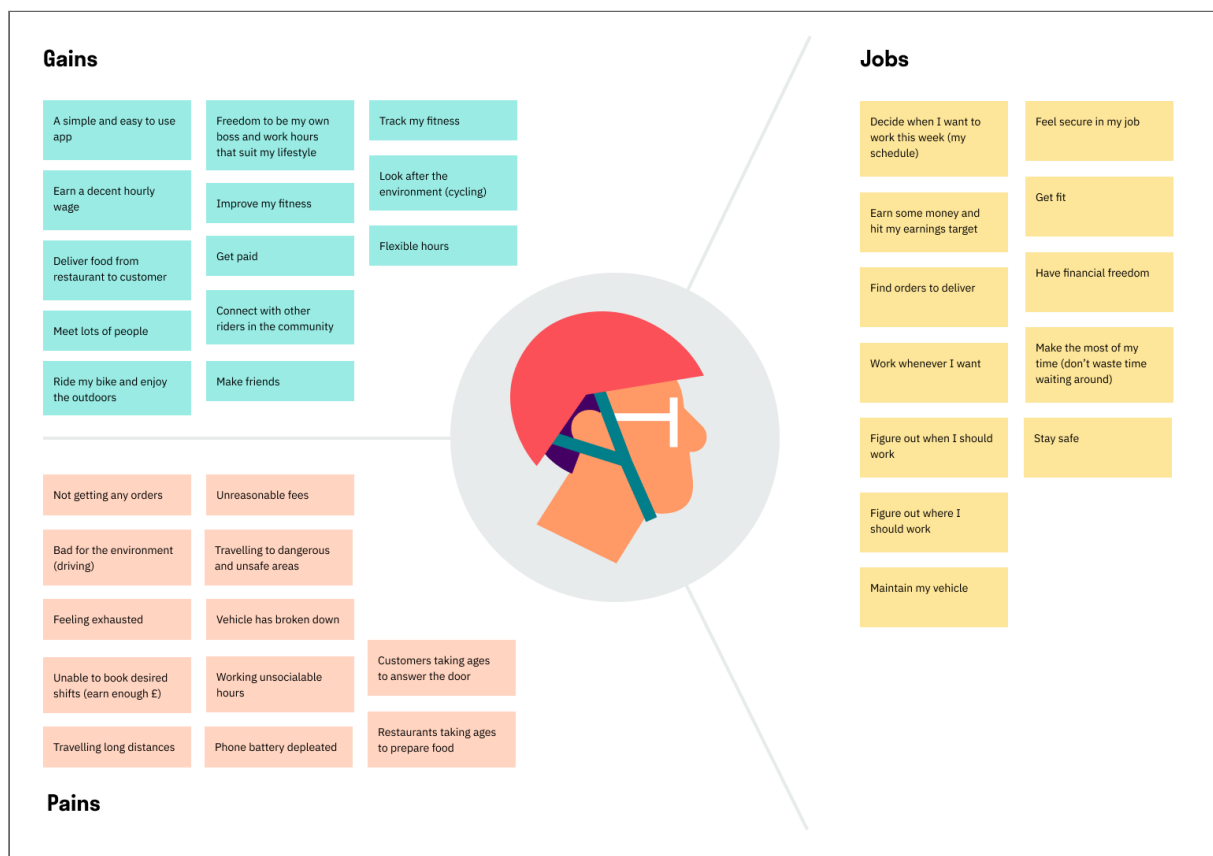# Kick-off workshop

Read the full summary | Exec update
On the 12th and 13th November 2019 we spent 2 days off-site with a number of stakeholders to explore the problem space in more detail and review a number of different operating model candidates. Essentially, we:

- Reviewed a number of different models, from both an SSB and Free Login base, and compared the potential these had for achieving the goals of our riders, customers, restaurants, and Deliveroo. These can be seen here.
- Each of these were reviewed from a legal, financial, and technical standpoint, as well as interest alignment and rider satisfaction and earnings.
- We voted on the models we believe have the best chance of winning. The preferred model was **Free login with a financial incentive**, however, there are a number of risks that we need to explore further and additional research to conduct before our decision is made. These are:
    - How do we incentivise riders to exhibit good rider behaviours? (i.e accepting more orders, delivering food more quickly, delivering better customer service)
    - How do we ensure we have enough riders online to meet demand during peak times and reduce the oversupply of riders during quieter times, to protect rider earnings?
    - How do the financials stack up? How much will we need to surge? How will we compare with our competition now that we're going head to head with Uber Eats op model?
    - How will we still maintain 2 systems whilst we transition to the new model? Will some territories always need an SSB system?
    - Will there be a policy risk if rider earnings decrease?

Rider goal	Business goal	Metrics	*Ideas (non-exhaustive)

Know the best times to work in order to hit my earnings targets, and not waste time online	Get riders online when we need them, and offline when we don't	Riders needed vs Riders online / Average earnings / Superpeak attendance	Free login / Automated fee boosting / Heatmaps (historical and live) / Soft handbrake
Maximise my earnings per hour/week	Efficient workforce	Order acceptance	Rider Tier Program
Be rewarded for delivering a great service	Deliver great service	RET / KCT / EOD vs AOD / B10 orders	Preferential Order Assignment / Post order tipping

What are our user stories?

Gains

- A simple and easy to use app
- Freedom to be my own boss and work hours that suit my lifestyle
- Track my fitness
- Earn a decent hourly wage
- Improve my fitness
- Look after the environment (cycling)
- Deliver food from restaurant to customer
- Get paid
- Flexible hours
- Meet lots of people
- Connect with other riders in the community
- Ride my bike and enjoy the outdoors
- Make friends

Jobs

- Decide when I want to work this week (my schedule)
- Feel secure in my job
- Earn some money and hit my earnings target
- Get fit
- Find orders to deliver
- Have financial freedom
- Work whenever I want
- Make the most of my time (don't waste time waiting around)
- Figure out when I should work
- Stay safe
- Figure out where I should work
- Maintain my vehicle

Pains

- Not getting any orders
- Unreasonable fees
- Bad for the environment (driving)
- Travelling to dangerous and unsafe areas
- Feeling exhausted
- Vehicle has broken down
- Unable to book desired shifts (earn enough £)
- Working unsocialable hours
- Customers taking ages to answer the door
- Travelling long distances
- Phone battery depleated
- Restaurants taking ages to prepare food

Primary jobs

Situation	Motivation	Outcome

When I'm going to start working	I want to know where I should go online	So that I maximise my earnings
When I'm currently working	I want to know where I should be	So that I maximise my earnings
When I'm not getting any orders	I want to know where I should be	So that I maximise my earnings

Not working

Situation	Motivation	Outcome
When I'm not online but open to the idea of working now	I want to know about opportunities to make extra money	So that I can decide if it's worth my time to go online
When I'm not online but I don't plan on working at this time	I want to know about opportunities to make extra money	So that I can have the freedom to decide if I want to work or not
When I'm not online but trying to predict my earnings for the future (day/week/month)	I want to know what I can expect to earn	So I can have financial freedom/confidence

Currently working

Situation	Motivation	Outcome
When I'm going to start working soon	I want to know where is busy	So that I get orders once online
When I'm not getting any orders	I want to know if I should stay online	So I don't waste my time waiting for orders
When I'm not getting any orders	I want to know if there's anywhere busy nearby	So I can move to somewhere that helps me hit my earnings targets
When I'm not getting any orders	I want to know when I will start getting orders	So I can come back then
When I'm getting tons of orders	I want to know if I should expect this at this time/in this area	So that I can adjust my working plan
When there's high demand	I want to know why	So that I understand what

but I'm getting no orders		to do

Going offline

Situation	*Motivation*	*Outcome*
When I decide to stop working	I want to know how my session was	So I can know if it's worth working a similar session again
When I decide to stop working	I want to know if I've reached my daily/weekly financial target	So I can decide if it's worth working a similar session again

Deliveroo | Supply

Situation	*Motivation*	*Outcome*
When there's too many riders on the road	I want to rebalance supply with current demand	So that some riders go offline to protect rider earnings
When there's not enough riders on the road	I want to rebalance supply with current demand	So that more riders go online to keep service levels high
When there's not enough riders on the road	I want to rebalance supply with current demand	So that riders stay online to keep service levels high
When there's not enough riders in a particular area	I want to rebalance supply with current demand across	So that all areas have high service levels

Deliveroo | Change management / product marketing

Situation	*Motivation*	*Outcome*
When we're transitioning a zone from SSB to free login	I want riders to know the benefits of the change	So that there's no action as a result of the change

Phase II: Research & Experiments

You can see all of the hypothesis and assumptions we're validating through research and experimentation on our Hypothesis matrix and objective map.

Free login vs SSB experiment

Experiment report
In September 2019, we launched an experiment in the UK and Ireland to compare a Free Login (FL) system to a self-serve booking (SSB) system[1]. 30 cities switched to the FL model -- including Manchester, Liverpool, Nottingham and Oxford -- and 30 cities remained on SSB for comparison. The experiment lasted for 16 weeks, closing in the first week of January.

This has confirmed many of our pre-experiment assumptions, particularly…
- *Insights removed*

Competitor analysis

Competitor research was conducted with riders in the USA, some of whom operate with a free login model and provide an insight into demand for riders. Findings from research showed the following:

Showing demand on a map
- This allows riders to make an informed decision on whether it's in their economic interest to start working or not. It enables such platforms to encourage the fleet to move to higher volume areas.

- Empowers riders to make an informed decision of where to go.

- Allows riders to decide if they should continue working or not.

- Riders don't always trust what the demand map is showing them.

- The demand maps can move too slowly or too quickly for riders.

- Riders will still draw upon their experience and not solely rely on the demand map.

- Riders use their own metrics to predict uncharacteristic demand.

Competitor themes/call outs

- **Map-based live demand:** The majority of products (DoorDash, Postmates, UberEats) give riders and indication of where demand is via a map. Map-based demand looks to be an effective way to encourage riders to the right place and ensuring supply-demand is met.

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[1] The SSB zones in the experiment also introduced a new definition of 'attendance'. Riders were required to a) log into booked slots for >20% of the slot length (so usually around 12 minutes) and b) accept at least one order during the session. Previously, they had just been required to log in (without a time requirement) and had no obligation to accept an order. This definition is perceived to reduce flexibility for the rider.

- **Helping riders plan their schedule ahead of time:** All the products give riders foresight into where the best places to be are ahead of time. DoorDash and Glovo achieve this through their scheduling tool, whereas UberEats show riders the minimum surges in areas ahead of time.

- **Exact boundaries of demand:** Many of the products segment demand into defined areas (small hexagonal areas on Postmates and large zone sized areas on demand in Doordash). This might set the wrong expectation that those areas will offer that exact demand. This could be problematic in Doordash's case as it's a generalisation of demand across an expansive area. A more fluid looking representation of high demand areas might lessen that expectation. On the flipside, it gives riders an exact area to move within, potentially helping with distribution.

Competitor benchmarking review

Competitor review
We've also conducted an extensive competitor benchmarking review comparing us to various competitors around the globe, covering elements such as;
- Fee models
- Access to work models
- Fee curves
- Acceptance screens

High potential rider research

Research report
The Insights team have been conducting a range of focus groups with riders in the UK (and plan to continue this in France and Singapore) to understand why riders don't work with Deliveroo and what we'd need to do to acquire them or win them back. They've spoken to;
- Lapsed riders
- Competitor riders
- Food delivery considerers

Within the research it was discovered that some of the main reasons riders have either churned from Deliveroo, or chosen to ride with a competitor, is influenced by:

1. Our inflexible booking system (either through experience or through word of mouth)
2. Perception of poor fees compared to Uber

Understanding riders' interpretation of free login research (WIP)

Research plan | Qualitative research findings | Visual stimulus | Transcripts | Research summary deck

We also conducted additional research with riders in Manchester, Brighton, Bilbao and Singapore to better understand their needs and interpretation of free login, as many of them have recently switched from SSB to Free Login. We're also sending a survey (planned for 18th December) to riders in 8 different countries to gauge sentiment around our access to work models and potential future incentives.

Instabug complaints from riders

We receive complaints from riders through our Instabug tool in the rider app. Many of these are riders not receiving orders when they're online, either saying that they're close to restaurants on the map, or it says high demand but they're still not busy.

- *Screenshots removed*

Incentives research survey

We also conducted research with riders around the world to understand the types of information and incentives they'd most like to see or have access to. These can be seen in the Rider incentives research report.

Phase II: Exploration

Initial exploration - Product ideation workshop

Plan | Deck | Rough notes | Output
We ran a workshop with the engineering and product team to drive early exploration of how we could solve the above areas. This took the form of a Hopes and Fears exercise to kick start the team's thinking on problems we may face with the project and a crazy 8s exercise to generate ideas that we could take forward to form concepts.

Some of the initial exploration work can be seen here.

How Might We statements

There are a range of how might we statements (and hypothesis) to explore during ideation, such as:

Landing the change
- HMW build riders' trust in demand levels
- HMW make riders aware of the improvements we make

- HMW test if any changes we make have a positive impact

Planning work
- HMW increase clarity on the best times to work in order to meet demand, especially at super-peak
- HMW help riders understand the best places to work, and remove the constraint of zones

On the road
- HMW encourage riders to accept more orders and give a great customer service
- HMW help riders hit their earnings targets
- HMW help riders understand where they should go to find more orders, cross zone
- HMW help riders understand if they should stay online or go offline

Problem definition and ideation workshops - Jan 2020

We ran two workshops with stakeholders from product, engineering, comms, ops and experience. These were;

Problem definition and prioritisation (Jan 15th)
Problem statements | Research playback | Workshop agenda
The purpose of this workshop is to bring key stakeholders together to review all insight to date, look for themes, prioritise problems and generate HMW statements.

Ideation (Jan 16th)
Ideation workshop agenda | Workshop slides | Output
The purpose of this workshop is to take the HMW statements from workshop 1 and start generating potential solutions to those problems. We'll then prioritise these solutions, generate hypothesis and a plan for how we'll validate each of these.

See the project plan for more info.

From these workshops, we identified the first area we should focus on, something that's easy enough to implement and learn from in the short term (allowing us to iterate quickly), but also has a good chance of solving problems for both riders and the business.

This idea was 'Fixing pulse'.

Essentially, we already show basic demand information to riders, by telling them if it's low, normal, high or very high demand, however riders tell us that this information is inaccurate and doesn't reflect true demand. By fixing pulse, we'll have a clearer sense of how busy it is on the roads, and be able to more confidently help riders decide when and where they should work.

For MVP we'll be exploring how we can improve pulse, from both a signal and a communication perspective. Basically we need to know that our demand predictions are accurate before we can confidently relay this information to riders, therefore this will require work from both the NSA and Rider Core teams.

Phase III: Outlining a proposal for our 'Fixing Pulse' MVP

Lean canvas - WIP

Online Experience / Offline Experience

Lean canvas - WIP

Business Problem What problem does the business have that you are trying to solve? *(Hint: Consider your current offerings and how they deliver value, changes in the market, delivery channels, competitive threats and customer behavior.)* Our SSB system carries legal risk, and could be seen to be exerting control over our riders, causing them to be reclassified as 'employee's'. There's a mismatch of supply and demand, meaning at times we're not meeting our fee policy, and at others delivering food late to customers (i.e during super-peak hours), increasing B10 orders and compensation claims (CPO rises). Our current SSB system is being exploited to gain preferential access to work (as the needs of the business does not align with that of the riders)	**Solutions** What can we make that will solve our business problem and meet the needs of our customers at the same time? List product, feature, or enhancement ideas here. We could; - Move to a free login model everywhere giving riders greater flexibility (removal of SSB) - Show a demand map, helping riders see which areas have the most orders - Show a demand forecast, helping riders plan when to work in the future - Warn riders when demand is low and it's not worth going online - Reward riders for delivering a great customer service through financial incentives such as fee boosts, and non-financial incentives - Automate our fee boosts when we predict that demand will exceed supply	**Business Outcomes** How will you know you solved the business problem? What will you measure? *(Hint: What will people/users be doing differently if your solutions work? Consider metrics that indicate customer success like average order value, time on site, and retention rate.)* We'll be able to more accurately forecast supply and demand, resulting in a reduction of B10 orders (specifically unacceptable lates), an increase in rider utilisation (especially at super-peak times), and a reduction in CPO.
Users What types (i.e., personas) of users and customers should you focus on first? *(Hint: Who buys your product or service? Who uses it? Who configures it? Etc)* We'll need to focus on a subset of all riders to monitor the impact across all of these persona types; - Free login zones vs SSB zones - New riders vs seasoned riders - Part time riders vs full time riders We'll also need to make sure the system works for our Ops teams, in order to effectivel manage supply and demand across each territory.		**User Outcomes & Benefits** Why would your users seek out your product or service? What benefit would they gain from using it? What behavior change can we observe that tells us they've achieved their goal? *(Hint: Save money, get a promotion, spend more time with family)* Riders will work with us because the system is flexible and fits to their lifestyle (more so free login). They'll be able to work whenever and wherever they want, whilst meeting their weekly earning targets. We'll see; - Increase in rider satisfaction - Increase in average earnings - Increase in hours worked / worked at peak
Hypotheses Combine the assumptions from 2, 3, 4 & 5 into the following hypothesis statement: *"We believe that [business outcome] will be achieved if [user] attains [benefit] with [feature]."* *(Hint: Each hypothesis should focus on one feature only.)* 1. We believe that by showing riders a demand forecast we will increase hours worked during super peak times and therfore reduce B10 orders. 2. ...	**What's the most important thing we need to learn first?** For each hypothesis from Box 6, identify its riskiest assumptions. Then determine the riskiest one right now. This is the assumption that will cause the entire idea to fail if it's wrong. 1. Riders trust a demand forecast. 2. ...	**What's the least amount of work we need to do to learn the next most important thing?** Design experiments to learn as fast as you can whether your riskiest assumption is true or false. ...

Defining our MVP

Once we'd settled on 'Fixing pulse' as our first product iteration for 'making free-login' work, we now needed to refine exactly what we wanted to learn from this MVP, which would therefore inform our scope. We worked closely with PMs, POMs, Ops, Comms, Legal and Engineering to define what was possible from our initial release, and all of this can be found at the links below.

Rider Intelligence MVP Presentation
How we'll calculate demand

How we talk about demand (content principles)

As part of this work, it was important for us to refine and create our content principles, ToV, and document the decisions we've made behind how we talk to riders about demand.

How we talk about demand

Defining our MVP

We tested these designs with riders, through both a qualitative unmoderated diary study using Indeemo, and a larger quantitative survey. The summary of this research can be seen below.

Rider intelligence MVP usability testing summary

Phase IV: Executing on deliverables

Rider Intelligence MVP

Our designs for MVP can be seen below.

Flows   Key screens   Prototype

Rider Intelligence V1/V2

Our designs for MVP can be seen below.

Flows   Key screens   Prototype

Rider Intelligence Vision

Our designs for MVP can be seen below.

Flows   Prototype

Phase V: Handing off

MVP experiment plan

Here's the experiment plan for validating our MVP.

Experiment plan

Rider engagement and comms

Here's more info about how we plan to gather feedback from our initial launch, communicate the improvements to riders, and educate care agents to deal with feedback and questions from riders.

Rider engagement brief
Launch comms content strategy
Launch comms designs

Phase VI: Live in production

Future states: What are your suggestions for further iteration?

Include rationale and link back to relevant findings that support your thinking. Include recommendations for further research we might need to do.

Review the project in a design retro

What did you learn? What would you do differently? Bring the project to retro and document the discussion here. Recording what we learned as individuals will help the team make better decisions and run projects better in future.

Appendix