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Geo-Aware Food Sourcing v 0.1

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Expected Funding Requirement for Phase 1	Budget for 2 Quarters
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Associated architectural repository	See here

Objectives of this Document

- Provide context on the project's drivers
- Define KPIs and success criteria for the initiative
- Define commercially sensitive timelines
- Clarify high-level objectives which satisfy Foosus' product goals.
- Ensure alignment between technical and product teams

Background Context and Drivers

Foosus' legacy platform has reached a point where our technical teams spend most of their time fire-fighting rather than delivering new value to our business. Cycle-times for new work have dramatically reduced, resulting in missed targets. The consequence of this has led to both brand damage, as well as a drop in sign-ups to the platform. Internal metrics have indicated that some of our customers are now opting to by-pass the Foosus platform in favour of ordering their products from an en-mass e-commerce retailer, lacking our expertise and dedication to sustainable eating.

Several years of development has resulted in a complex technical solution, which is clearly not scaling with the business and possibly impeding our growth.

Commercial analysis of competitors and the market indicate a desire in our customer base to be able to buy local and support local growers.

This is a niche untargeted by our competitors and so we're keen to build on the learning of the past three years and create a platform which not only connects customers with great food sources but also provides recommendations which favour local producers.

Project Objectives

We acknowledge that the existing platform cannot be decommissioned while we drop tools to build a fresh. Further, in order to temper our reduction in sign-ups and customer retention, we need to unshackle new delivery from the technical debt which we keep paying on our existing platform.

Our goal is to unleash the creativity and experience of our technical teams; allowing it to shine through in a new platform which is designed to take our customer base into the next million registered users and beyond. **We want to drive Foosus marketing campaigns in a number of major cities, with the confidence that our platform will remain usable, responsive and deliver a first-class customer experience.**

We have identified several high-level objectives which need to be satisfied by any new technical direction taken towards improving our business capability.

Business Agility

A key lesson over the past three years is that we need to be in a position to continuously learn about the needs of our customers and pivot, either gradually or with immediacy.

While providing the exact capability required three-years ago, the current platform has been designed in such a way as making it very hard to change any of those historic decisions.

The new platform should allow our product teams to rapidly innovate by repurposes existing solutions, experimenting with change and provide ease of integrating with internal and external partners.

Scaling with Our Customer Base

The technology stack **must** be designed to scale naturally with our customer base. We've witnessed numerous outages caused by our software system not being able to cope with spikes in customer usage or marketing drives.

The performance constraints of the existing system could not cope with the expected engagement following our planned marketing drives.

A Secure, Usable and Responsive Platform

We plan to drive Foosus campaigns in several geographic regions and do not just want the platform to cope, but naturally scale to handle increased loads. Further, we need the platform to be easy to localise and meet the usability requirements which best engage our customers.

In the past, we've focused on usability but at the cost of security. This has nearly impacted our reputation a number of times. We are averse to the risk of brand damage and require an approach which ensures that security is thought of early and accounted for with every increment to our platform.

Transparent Technology

It is no longer acceptable to bring the platform down for a new release or a change to the database schema. In a market where we're targetting cities around the glove, we no longer have a quiet hour in the middle of the night. We are *always on!*

Every release needs to be small, low-risk and transparent to our users. We succeed when our users love our product and don't know or care about the software and release process under the hood.

Users in different regions should expect similar performance. We want to target consumers in developing countries with lower bandwidths, and any solutions to be responsive to this.

Failing Fast

In the past year, 12 our outages were down to large changes released by one or more teams which didn't behave as expected when released.

We've been stung many times by each team working for months on unrelated changes to our platform, only to discover issues in integrating their work with that of other teams who have also been making changes.

We should be too small a company to have these issues. The real problem involves the time it takes before any new software version is seen by other teams, or tested in our live environments. We need to close the time between when a line of code is written and when it gets proven in an integrated environment. This can also help us learn about our customer' reaction to new features as we develop them.

Experimentation

Our product teams would like to be able to perform multi-variate or A-B to try differing solutions with users and compare them.

This not only means that we need visibility into how our software is used, but also that we need to be able to easily reverse architectural decisions when it is still cheap to do so. Or iterate towards a platform which meets our ability to experiment with new products in lines with our our-arching business goals.

Success Metrics

| Metric	Desired Change in Metric
User Sign-ups Per Day	Growing from 0.8 to 1.5
Food Producer Sign-ups	Growing from 1.4/Month to 4/Month
Average feature* cycle times	Reduced from 3.5 weeks to under a week
Rate of P1 production incidents	Initially: Down from 5 a week to under 1 a month.

Initial Wires for Geo-Aware Food Sourcing 0.1

Food Supplier Search

The most critiqued feature of the existing platform is our food supplier search feature. Currently learning indicates that 48% of journies start with a search but drop off before a customer has even looked at a Food Offer from one of our suppliers.
The UX and CX teams have tested a new design which relies heavily on prioritisation of local producers and artisans based on geo-location.

Improving our search capability using the target state technology stack is the intended outcome for Q1.

Initial testing of wireframes has produced the two following structures, both of which give prominence to a supplier's proximity to the user.
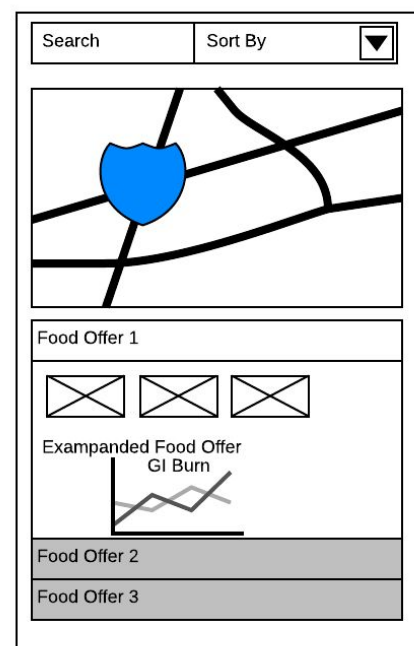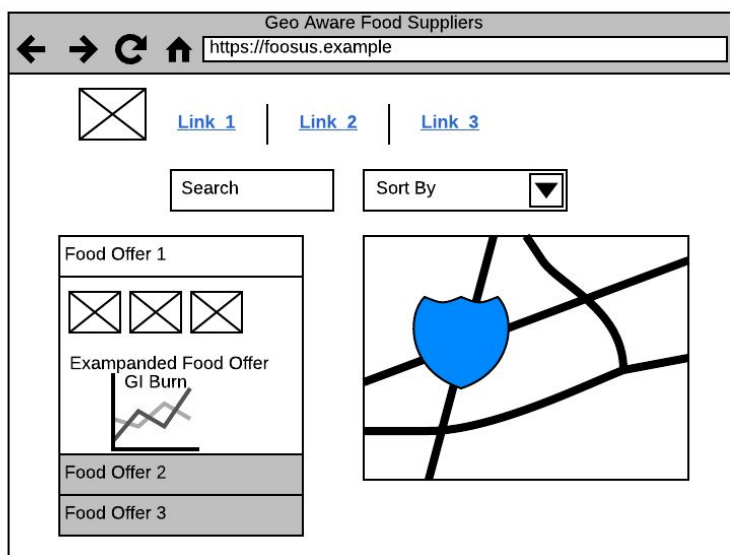
Specific behaviour can be elaborated when creating backlogs with the product teams, however, any new design should account for:
- Location of food offers provided by suppliers
- Proximity to the currently searching user
- Visualisation of secondary, industry-based, statistics relating to the food item; for instance, details pertaining to its [Glycemic Index](#)

Food Offer Ordering

While our current order process is under review, it has generally received positive feedback and we plan to base any new designs on the existing process which involves the following steps:
- Search and identify foods required
- Add food offers to basket
- Seek agreement to pay on delivery
- Email delivery instructions and a commission invoice to food supplier.

In the longer term, the product vision is to ultimately, modify those last two final step so that we can:
- Integrate with third-party payment providers
- Handle all communication with Food suppliers in a custom UI.

Any platform should support our eventual move to such solutions, however, these have been deprioritised for the time being.

Structural Changes

The four development teams will be restructured based on feedback from the new architect, based on capabilities which we need to represent and build. We are conscious of the impact of Convey's law and are open to team realignment which best supports our future success..

Assumptions

- Rather than further investment in the existing platform, it is more economically viable to only preserve in maintenance mode; that is no new features will be developed for the legacy platform.
- Team level attachment with the existing platform means that leaders need to actively avoid taking false-shortcuts by implementing new behaviour into the existing system.
- The initial offering will involve co-existing two platforms and empirically ramping up the volume of users who migrate to the new platform as the product evolves. This will be incremental as functionality involves.
  - For instance, early users might **opt-in** to utilise the new search features integrated with the existing checkout process.
- GEO-targeting if modelled early in the new platform will allow further innovations based on a user or food supplier's location.
- A lean approach to architecture can be tailored to fulfil this roadmap so that it doesn't disempower the teams or threaten rapid release cycles.

Open Questions

- How best to preserve team participation and ownership, while still benefitting from the architectural safeguards of more explicit governance?
- Metrics to continuously measure our platform's architectural health, so we can avoid a repetition of the issues we've seen previously.
- Cloud vs on-premise hosting has been a hot topic but requires guidance to ensure that any decision is data-driven.
- Until a new guardian for our Enterprise Architecture is brought in, we have yet to confirm whether our initial Architectural Vision is achievable. Ideally, a new architect can be source who is able to respond with an appropriate Architectural Requirements Specification.

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