Hot, prepared revolution

A summary of two years work looking at takeaways

October 2018

Shift

Product design for social change

Contents

Why hot, prepared food?

Unhealthy weight gain is the default outcome for people living in western developed consumer societies. Our evolutionary biological and psychological processes, which evolved to cope with scarcity, are at odds with the modern food environment.

62% of the adult population is now overweight or obese[1] and the latest figures show 34.3% of year 6 children (aged 10-11) are also overweight or obese[2]. The prevalence of obesity is disproportionately expressed in the most deprived areas with 26.8% of children obese compared with 11.7% in the least deprived areas. Severe obesity is of particular concern with levels 4 times higher in deprived areas and the national average has increased by a third since 2007 to 4.2% of year 6 children.

Over a similar timescale (2010-2018) the number of hot, prepared food outlets in the UK has grown by 34%[3] and the work of The Centre for Diet and Activity Research (CEDAR) in Cambridge has demonstrated the connection between hot, prepared food consumption, the prevalence of outlets and obesity[4]. Hot, pre-prepared food has been the fastest growing sector in food retail, with forecasts for continued growth, particularly in the share of the market accounted for by online ordering and delivery[5]. How this market develops and matures will determine its growing influence in people's food intake and therefore the issue of unhealthy weight gain.

Through a series of developments since 2013, including running Box Chicken[6], Shift have developed a detailed understanding of the nature of the independent takeaway market, the motivations of its business owners and the role it plays in the lives of low income families living in deprived inner city areas. This is the environment where unhealthy weight gain is most significant.

62%
adults now overweight or obese

34%
year 6 children overweight or obese

1 "Health Survey for England, 2016 - NHS Digital." 13 Dec. 2017, https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england/health-survey-for-england-2016. Accessed 26 Oct. 2018.
2 "Record high levels of severe obesity found in year 6 children - GOV.UK." 11 Oct. 2018, https://www.gov.uk/government/news/record-high-levels-of-severe-obesity-found-in-year-6-children. Accessed 26 Oct. 2018.
3 "More takeaways on high street despite anti-obesity push - BBC News." 23 Oct. 2018, https://www.bbc.co.uk/news/uk-45875294. Accessed 26 Oct. 2018.
4 "Takeaway exposure associated with increased consumption and obesity." 14 Mar. 2014, http://www.cedar.iph.cam.ac.uk/blog/takeaway-obesity-link/. Accessed 26 Oct. 2018.
5 "The changing market for food delivery | McKinsey." https://www.mckinsey.com/industries/high-tech/our-insights/the-changing-market-for-food-delivery. Accessed 27 Oct. 2018.
6 "Box Chicken: Providing some healthy competition to fast ... - Shift Design." http://www.shiftdesign.org.uk/content/uploads/2013/12/SHIFT_BoxChicken_evaluation.pdf. Accessed 27 Oct. 2018.

What's been happening?

The takeaway market is complex, low income families' lives are complex. Shift has developed the UK's most detailed understanding of takeaway food, families' relationship with it, the role hot, prepared food plays in their food behaviours, the economics of outlets and the motivations of their owners. Possible avenues for positive change have been tested and the way forward is clear.

In September 2016 four organisations came together (Esmee Fairbairn, Mark Leonard, Birmingham City Council and The London Borough of Tower Hamlets) with a shared interest in the impact of the takeaway market on the food habits of families from inner-city deprived wards. Jointly, they partially funded a 2-year programme of work to interrogate and test 'live' approaches to develop a scalable response to reduce the calorie impact of these habits. The foundations of which was Shift's work since 2013[7] in the field, including Box Chicken. Since then 3 other organisations (Guy's and St Thomas' Charity, The London Borough of Hackney and Just Eat) have joined and funded the consortium.

The work began with a hypothesis that independent hot, prepared food outlets could be motivated to improve the healthiness of their menus through a combination of measurement (a health score), a series of changes they could make and a source of motivation to do so. Over the intervening 2-years the following work has been undertaken:

- A quantitative analysis of the nutrition profile of 277 main meals and 78 sides sampled from the takeaway market[8]
- Quantitative and qualitative research into 91 independent hot, prepared food outlets and the motivations of their owner/operators[9]
- 'Live' trials of interventions to improve the healthiness of menus[10]
- Immersive ethnographic research with 24 families and 20 young people[11]
- Concept development workshops with young families on a budget
- Online testing with 350,000 people across Birmingham, Manchester and London
- 'Live' prototype testing of a new meal service in Erdington, Birmingham.

This report summarises the key findings from this work and recommends a strategy and next steps for meeting the ambition that the consortia began with - to reduce the health impact of takeaway food on the low income families from deprived wards.

7 "Shift's healthier fast food adventure - Shift Design." 28 Feb. 2018, www.shiftdesign.org.uk/shifts-healthier-fast-food-adventure/. Accessed 30 Oct. 2018.
8 Fast food outlet nutritional Data: Exploratory analysis, Feb 2018 drive.google.com/file/d/0B0Ydj04Fr6FuZFFYSU1zajExTFo5cUhMakMwbFdibnV1Y2Nr/view
9 Hackney Fast Food", May 2017 www.shiftdesign.org/content/uploads/2017/05/MappingFastFoodHackney.pdf
10 "Stealthy Fast Food: Phase 2 Evaluation Report", July 2018, https://shiftdesign.org/content/uploads/2017/12/Stealthy-Fast-Food-Phase-2-Evaluation-Report.pdf
11 "Families and Food: How the environment influences what families eat" May, 2018 http://shiftdesign.org/content/uploads/2018/09/Families-and-food_v4-1.pdf

What's the context?

The growing role of hot, prepared food in our diets is a natural progression of an overall convenience trend that has underpinned developments in most consumer markets over the last 50-years. In food, the pace of this trend has been accelerated by emerging technologies and the lack of 'headspace' in low income families. The challenge is that the independent takeaway market is not well placed to respond to these changes in broadening the variety of meals available.

Families, Food and Takeaways

Unhealthy weight the default outcome?
Those working in the field of obesity have spent 12+years developing individual cognitive behavioural interventions aimed at losing or maintaining a healthy weight. These haven't worked in a way that can deliver population scale benefit. As a result, there is a growing belief that unhealthy weight gain is the default outcome in our consumer society - that we live in an obesogenic environment.

Those that maintain a healthy weight have the capacity (money, time, absence of other pressures) to engage in an ongoing cognitive process to balance calories in and out through the amount and type of food they consume and their level of physical activity. For those experiencing scarcity of capacity[12], who are particularly represented in families of lower socio-economic status (SES), this resistance to the default outcome is much more challenging. The result is a higher percentage of people living with unhealthy weight. The contextual, behavioural and biological contributors operate intergenerationally further reducing the likelihood of successful resistance in families.

Expenditure on Food is becoming more fragmented (harder to budget)
The average weekly household income of the families participating in our research was £350, slightly above the UK poverty line for a lone parent household with two children of £320[13]. The families in our sample spend spend 25% of their of their weekly household income on food, as shown in Table 1 below. This is a much higher share of household budget than the national average; the average household in the UK spends 11% of its budget on food[14].

While these numbers should be treated with some caution as they are largely based on self-reported data, it suggests that families are spending a considerable portion of their income on food.

12 "The psychology of scarcity: Why having too little means so much ...." 13 Nov. 2014, https://www.youtube.com/watch?v=oMqZg2TrAqA. Accessed 28 Oct. 2018.
13 www.cpag.org.uk/content/uk-poverty-line
14 www.gov.uk/government/publications/food-statistics-pocketbook-2017/food-statistics-in-your-pocket-2017-prices-and-expenditure#trend-in-share-of-spend-going-on-food-and-non-alcoholic-beverages-in-low-income-and-all-uk-households-2003-04-to-2015

Average weekly household income	Average weekly spend on groceries *(% weekly income)*	Average weekly spend on hot, prepared food *(% weekly income)*	Total weekly spend on all food *(% weekly income)*
£350	£60 (17%)	£27 (8%)	£87 (25%)

Table 1: Average spend on food among participating families (n=21)

Everyday Takeaway adopted as an ideal solution
Low incomes are just one of the pressures that the families participating in the research face. Additional pressures experienced include concern over housing stability, financial security, mental health problems, physical pain, stress around employment/finding work, difficult family relationships, personal security, worries about child behaviour or school performance, and low energy.

These pressures reduce parents' mental bandwidth - headspace that would otherwise go to planning ahead and problem-solving. This creates what sociologists have called a 'scarcity mindset'[15]. For low income families in this situation, hot, prepared and convenience foods provide an in-the-moment solution to feeding children quickly, affordably and safely. This temporarily relieves some of the pressure experienced by parents, particularly lone parents and provides specific benefits.

Many of the parents who do cook at home like to use shortcuts when cooking from scratch, such as ready made lasagne sauces and pre-prepared vegetables, even though they often cost more. However from the parent's point of view the time savings outweigh the additional costs.

The photo food diaries captured in our research revealed that most families have a fairly limited range of meals that they eat throughout the week. The most common meals recorded in the food diaries were bowls of cereal, jam on toast, pasta and sauce, rice and chicken, and chicken nuggets and chips. Parents liked these foods because they are easy and quick to assemble and invariably enjoyed by the children.

"When money was really tight a few years ago, every month before payday we would do what we called 'freezer surprise' for the children."

Mother of three children aged 10, 12 and 16

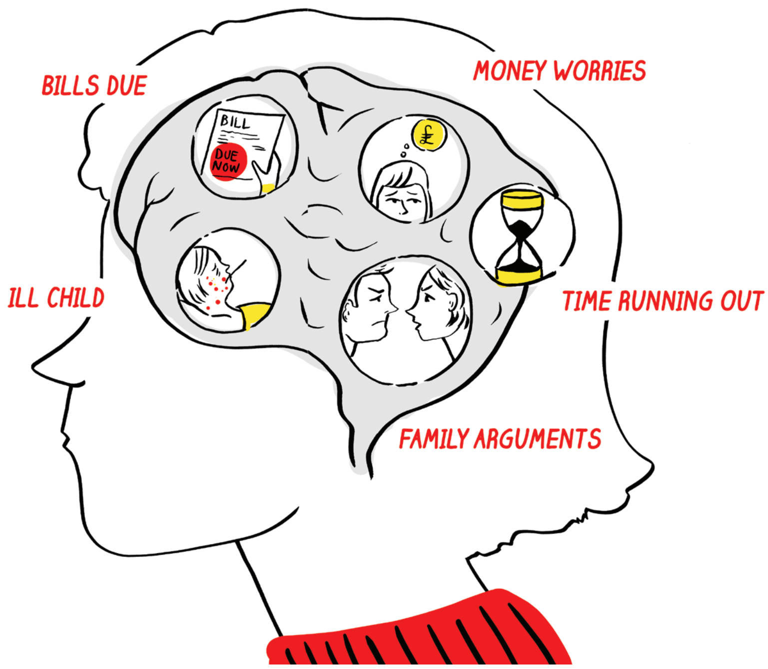


Image 1: What cooking has to compete with

15 Mullainathan & Shafir (2013), Scarcity: The True Cost of Not Having Enough, London: Penguin Books

"If I'm being really organised then we won't have takeaway for a long time. But if life's all over the place and it's just me looking after the kids, then I can have a 'something's gotta give' moment and get takeaway."

Mother of five children aged 10 to 17

Visual analysis indicates that over two thirds (68%) of meals and snacks recorded in our families' diary entries contained ultra-processed foods[16], higher than the UK national average of fifty per cent[17]. Only one third of diary entries contained visible fruit or vegetables (32%).

Our observations of meal preparation suggest that poor quality cooking equipment, such as blunt kitchen knives, can substantially increase the time it takes to prepare food. But even if preparation time were reduced, there would still be the washing up time.

"It annoys me that in recipes they will say it takes 20 minutes to cook but in reality it is 30 minutes because they haven't included the time it takes you to do all the washing up."

Mother of one child aged 5

Families prefer to stick with foods they already know

Families are creatures of habit. Throughout the week they travel along the same routes in the local area as they go about their lives, and rarely go anywhere new or eat anything new. This means that families are often not exposed to other food options available in the area.

"Everything that I've got in my basket I've bought hundreds of times before. Except these crackers, these are new. They were on offer."

Mother of two children aged 4 and 8

The decision to buy the same foods is influenced by both conscious and unconscious factors. When asked, parents say they prefer to stick to the same foods because it means that they know their children will eat it. Refused food is wasted money, a risk most families cannot afford.

"I'm not one to venture out. I'll stick to where we know. Which is McDonald's, Subway and another takeaway shop called Capital."

Mother of one child aged 6 months

Going grocery shopping with parents showed that many of the decisions about what goes into the shopping basket are made on autopilot. We observed that when parents scan shelves, they do so quickly, their eyes drawn to familiar products. Most of the time unfamiliar products seem to be largely 'invisible', unless there is a yellow special offer price label.

16 Shift researchers used the NOVA ultra-processed food classification to visually analyse food diary entries.
17 www.cambridge.org/core/journals/public-health-nutrition/article/household-availability-of-ultraprocessed-foods-and-obesity-in-nineteen-european-countries/D63EF7095E8EFE72BD825AFC2F331149

Case study:

Easier choices

Meryem, 35, is a single parent with three children aged 9, 10 and 15. The family lives in a three bedroom flat on an estate. Meryem moved to the UK from Turkey when she was 11 years old. Meryem's childhood was difficult and she ran away from home at a young age. Her life is more settled now but she suffers from anxiety and depression. Meryem's annual household income is currently around £15,000, excluding money she borrows from her mother.

Meryem grew up not knowing how to cook and taught herself using YouTube videos as the children became older. Cooking for her children gives her a lot of satisfaction and makes her feel like she is being a good parent. However there are some days when Meryem does not feel physically able to cook. She suffers from back pain and the pain relief medication she takes makes her feel tired.

On these days, she gets waffles and chicken nuggets out of the freezer for the children's dinner or takes them to the chicken shop which is only two minutes away. Knowing that these options are available gives Meryem the comfort of knowing that it will always be possible to feed her children, even on the days when life feels toughest.

> **"I always toy around with the idea of trying something new but I usually do end up buying the same thing."**

Mother of one child aged 5, White British

Parents therefore have a fairly limited repertoire of foods that they will consider when shopping, even though the shop itself may be well stocked with a wide selection of products.

The fact that families are generally on autopilot when it comes to everyday food decisions means that changing habits is hard. However new food habits are naturally created during moments of lifestage change e.g. having a baby, starting secondary school, moving to a new area. At these moments of change, old routines are disrupted and people have to make new choices about things they have not done before.

Local options can feel limited in range

There is a high density of hot, prepared food outlets and convenience stores on many of the streets regularly visited by the families participating in the research. Although there are many food outlets, the range of convenience foods on offer that can be prepared quickly and cheaply is relatively limited. While families like having hot, prepared food and convenience outlets available, the limited choice is most frustrating for the families that regularly eat this kind of food out of necessity.

These families express a desire for convenient options that feel like homemade family favourite foods (such as pasta dishes or chicken and rice dishes) and not like the usual 'greasy takeaway' or microwaveable ready meal. However they must also offer the same benefits of convenience, experience and affordability as current meals.

> **"Because I don't feel like I can cook, as it's not my kitchen, I get us a lot of takeaway. But what I do is get lasagna from the pizza shop as it feels more like the kind of food I want to eat everyday - it doesn't feel like a 'normal' takeaway. It feels more homemade than a ready meal, like someone has cooked it"**

Mother of one child aged 10, White British

Image 2: Some of the outlets and convenence stores visited by the families taking part in the research

Online delivery is expanding the reach of hot, prepared food

The online takeaway market is rapidly growing, and it is now a common sight to see Just Eat signs and Deliveroo couriers on the streets. Of the 24 parents who participated in the research, sixteen reported using online delivery within the last month. Only four reported that they either never use it or had used it more than a year ago.

There is higher usage of online delivery services than online grocery shopping among the families who participated in the research. The lower usage of online grocery shopping is due to the minimum order thresholds being higher for online grocery shopping than hot, prepared food, and because families reported not trusting staff to pick out the best quality grocery produce when fulfilling online orders.

Usage of online apps such as Just Eat, Deliveroo and UberEats is higher among the younger parents taking part in the research. These parents, in their 20s, have grown up with online shopping and find it both normal and convenient to buy food online. Older parents are more likely to express hesitancy about the idea of having certain types of fast food delivered to home.

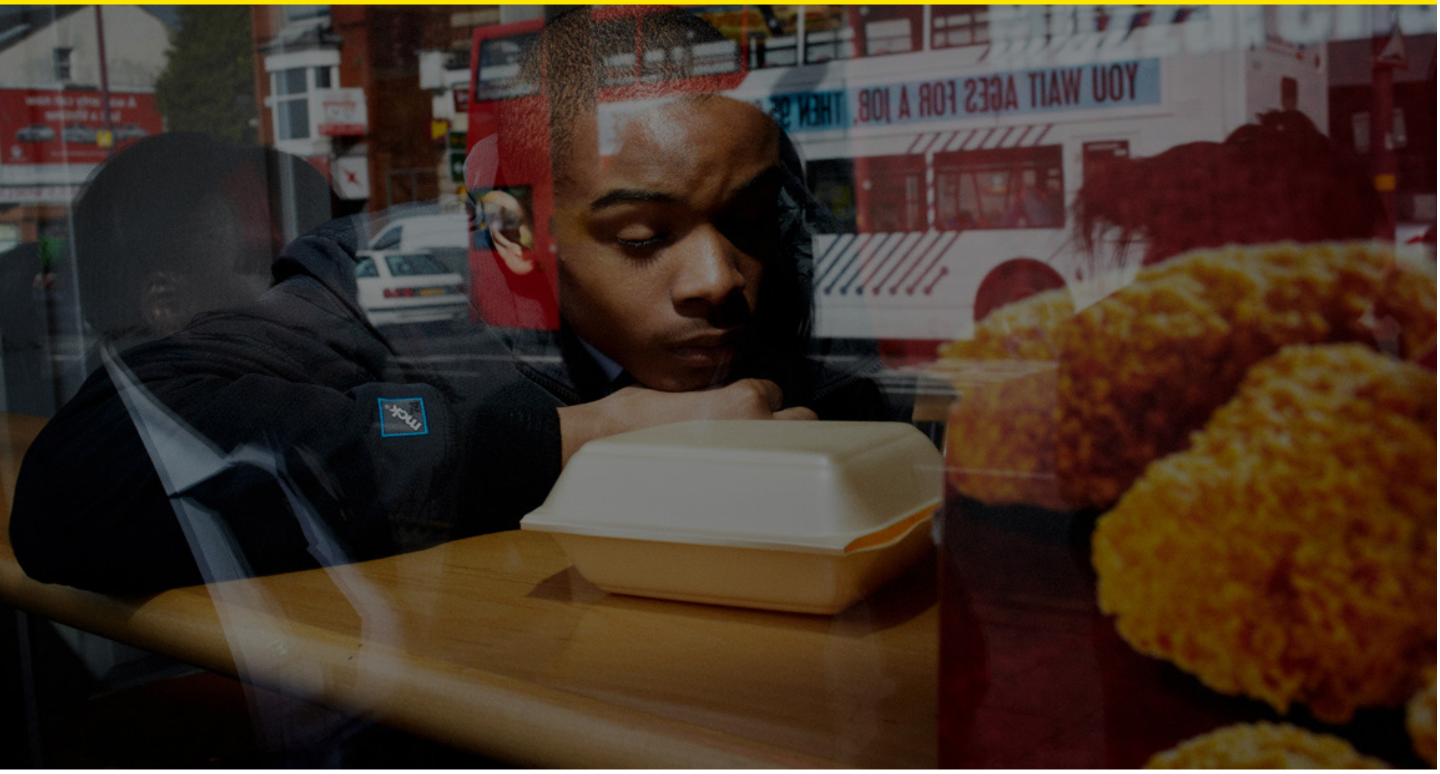
The expansion of hot, prepared food online has mixed consequences. On the positive side, it had increased the range of food options available to local families. However other families feel that online delivery has made hot, prepared food too accessible and too easy to order, particularly due to app features such as storing payment details. As a result, they reported spending more money on hot, prepared food and buying it more spontaneously.

"The idea of going down the online delivery route frightens me. There are some things you shouldn't have delivered to your home. It's just not right. Even though we used to get it as drive-thru."

Father of three children aged 10, 12 and 16

"I deleted the Deliveroo app because when I had a few weeks of feeling ill I started using it a lot, too much. So I deleted it to make it harder for me to order us a takeaway."

Mother of two children aged 3 and 13



Case study:

Creating the market

Ihsan, 37, is a single parent and has two sons aged 3 and 13 years old. Ihsan works full time as a childminder. Her annual household income is around £19,000.

Ihsan is a confident cook and cooks a mixture of West Indian and British food. However she suffers from a physical condition which can sometimes flare up and cause her a lot of pain. Last year, she went through a period when it was really bad and she started using Deliveroo to feed the family. She continues to use it and sometimes feels bad because of it, saying that her mother disapproves.

However Ihsan is keen to point out the food she buys on Deliveroo is healthier than the food she would be getting if she went out to get a takeaway in the local area. She likes to get the kind of food that she would make herself if it didn't take so long.

She says that Deliveroo is restaurant quality food that is healthier than traditional takeaways, so she thinks it is an easy way to make sure the children are well fed, although it can get expensive. However because she was using it so much she decided to pay £7 a month to upgrade to Deliveroo Plus, which means she no longer has to pay delivery fees.

Market Development

The takeaway market continues to grow
In 2016, we spent £9.9bn on takeaway food making the market larger than telecoms (£8.1bn) and entertainment (£8.6bn). The market has grown 34% since 2009 (£7.4bn) and is projected to grow by a further 11% (£1.2bn) by 2021 to £11.1bn, with an increasing share accounted for by online ordering. Hot, prepared food served over the counter (OTC) still accounts for the majority of purchases (40%) with orders by phone and online roughly equal at 30%, whether collected or delivered.

Recent analysis by the BBC based on data from the Office for National Statistics suggests that the number of outlets has grown by 34% between 2010 and 2018[18]. Precise figures on the number of outlets in the UK are difficult to determine and vary significantly depending on the definition of takeaway and its overlap with sit down restaurants. An estimate of 37,000 dedicated takeaway outlets[19] is broadly consistent across a number of data sets but does not include mixed restaurants/ takeaways. In terms of number of outlets, independents dominate the sector with chains accounting for less than 2,000 outlets or 5% of the total.

New developments favour a greater market share for online ordering
New developments, facilitated by online platforms, will further change the nature of interactions between families and hot,prepared food. 'Dark kitchens', such as Deliveroo Editions[20], which provide delivery only services, and don't have a retail shop front, provide a means to reduce the costs of premises (25% of operating costs) and facilitate low-cost expansion for businesses. The ability to have 2 or more online listings at the same physical address in the same platform allows food business owners the opportunity to run multiple 'brands' from a single location. In our work we have already come across one example of this where a restaurant was serving fried chicken to the high street and top-end sushi to Canary Wharf over UberEats. Effectively this will uncouple the 1:1 relationship that has historically operated between kitchens and restaurants. One button ordering is already available on the Just Eat platform which simply re-orders the last meal you bought. This combined with the emergence of voicebots on platforms such as Alexa and Siri which can be linked to on-screen advertising are likely to reinforce the current habitual nature of food behaviours.

Do independent outlets play a role in reducing poverty?
The existence of the takeaway market creates other economic activity through the supply chain in terms of business to business transactions and in the spending of employees from the sector itself and its supply chain. Evidence has emerged of localised micro-economies, such as a high proportion of independent outlets sourcing graphic design from within their community who in turn buy printing locally. Given poverty is the single biggest determinant of health inequality these localised economies, that keep money circulating within the communities, are of particular note.

In Shift's engagement with the media, the business approaches of corporates such as KFC or McDonalds tends to be assumed across the whole market. The underlying narrative is one of corporate greed taking advantage of low income communities The reality is more nuanced. Many independent outlets are local, family concerns with a single restaurant, low margins and a relatively precarious existence. It is estimated that 20% of independent outlets exist on the edge of insolvency at any one time. The market represents one of the few highly fragmented consumer markets where the cost of entry is relatively low and can be a source of income if other forms of employment are not accessible. In some ways this market can be seen as the 21st-century inner-city equivalent of subsistence farming.

However, this market composition creates a series of specific dynamics which are barriers to the uptake of healthier foods across outlets' menus.

95%
of takeaway outlets are independently run

34%
growth in number of outlets 2010-2018

37,000
dedicated takeaway outlets in UK

18 "More takeaways on high street despite anti-obesity push - BBC News." 23 Oct. 2018, https://www.bbc.co.uk/news/uk-45875294. Accessed 28 Oct. 2018.
19 "The Takeaway Economy Report - National Federation of Fish Friers." http://www.federationoffishfriers.co.uk/userdata/files/takeaway_economy_report_2017.pdf. Accessed 28 Oct. 2018.
20 "Deliveroo Editions: Bringing The Best Restaurants To You - Deliveroo ...." 22 May. 2017, https://foodscene.deliveroo.co.uk/promotions/deliveroo-editions.html. Accessed 28 Oct. 2018.

Food Business Owners (FBOs)

FBOs are not homogenous

The relationship of the outlet owner to their business and the community where it is based influences their perspectives on health and takeaway food. We came across two types of relationship between owner and the community: the ‘community outlet’ (owned and managed by people who have a connection with the local geography and community) and ‘anonymous outlets’ (owned by people with fewer ties to the local community and often responsible for multiple businesses). Three different types of owner were also identified: The Trader, The Entrepreneur, The Manager.

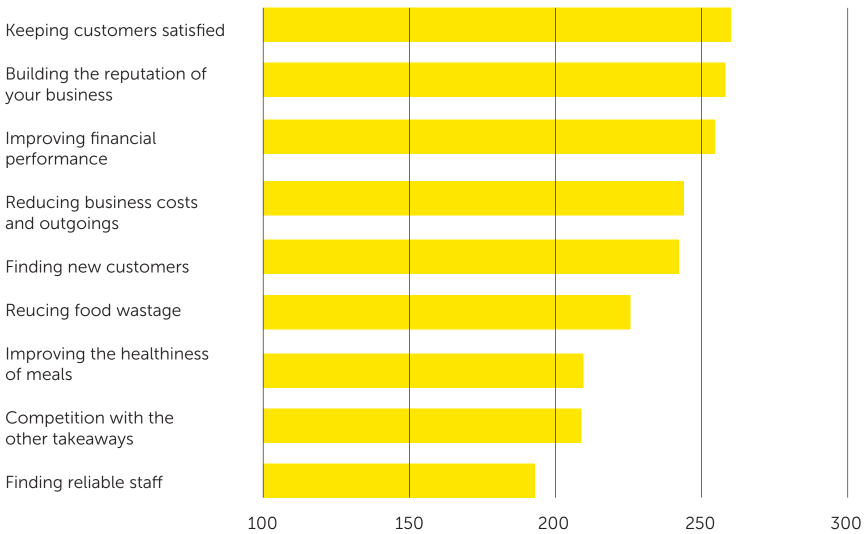
The nature of the relationship to the community and the type of owner determines their perspective on new ideas and the degree to which they feel a responsibility for their customer’s health.

It’s all about their regulars

70%-80% of an independent outlet’s customers are regulars, reflecting the habitual nature of food purchasing. It is therefore not surprising that protecting these relationships is the single most important issue for FBOs, followed by building their reputation and improving financial performance.

Keeping customers satisfied and building reputation within the community were the main foci in terms of improving loyalty, whilst reducing cost of ingredients was the primary mechanic for managing financial performance.

The importance of reputation has led to mixed feelings amongst FBOs regarding the development of online ordering. Whilst they recognise the opportunity of extending their reach beyond passing trade they perceive these customers differently to OTC customers, even though they can be the same people. A key driver of these perception differences are online reviews and the lost revenue through the margin taken by the online platforms. With OTC customers, FBOs have the opportunity to manage dissatisfaction directly with the customer without long term impact. No such opportunity exists with negative online reviews and these reviews remain visible indefinitely. There is also some well founded suspicion that some of these reviews are fake. As a result, online customers are perceived more negatively than the OTC, who they frequently have a social relationship with.



Highest ranked priorities:

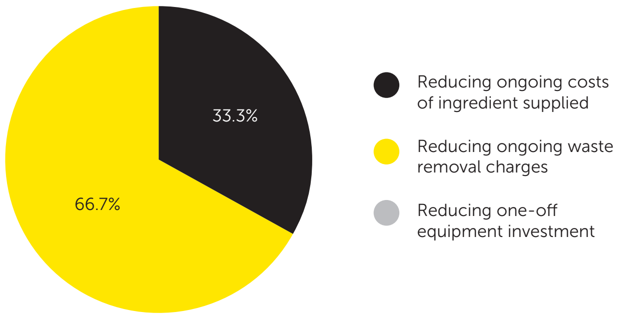
1. Keeping customers satisfied
2. Building reputation of business
3. Improving financial performance

Improving healthiness of meals served is ranked 7th out of 9 issues (i.e. pretty low)

Diagram 1: Business priorities ranked by importance for outlets

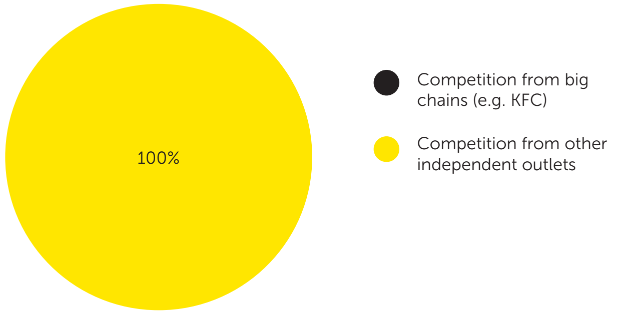
The Trader	The Manager	The Entrepreneur
• Harder to find and talk to • Suspicious of outsiders • Primarily profit focussed - quick money • Keen to buy the cheapest ingredients • Take less pride in the food • May buy in ready-made foods if they’re cheap, heat them up and send them out • Copycating other outlets • Will undercut competitor prices by finding cheaper ways to sell food	• Day-to-day business managers • More likely to be partner to entrepreneurs • Present and prominent in the business • Face of the business to customers and staff • Fire fights daily problems • Takes great pride in the business • Focused on the today • Perceive online customers as less forgiving • Believe they’re serving what their customers want	• Strategic thinkers • First to try new things • Driven to make a success of their business • Likely to have multiple businesses • ‘behind the scenes’ role • Less ‘front of house’ • Innovators • Curious • Seek new ideas by looking both locally and further afield

Table 2: The three types of food business owner



Reducing ongoing costs of ingredients is considered more relevant than waste removal and equipment investment costs.

Diagram 2: Cost reduction priorities



Competition from other independent outlets is more relevant than competition from big chains.

Diagram 3: Competitive focus

Competition is complex
The number of outlets in the takeaway market, particularly in inner-city areas, means that competition is fierce and yet the relationships between outlets can be simultaneously competitive and collaborative. Competitors are seen as those offering the same food (e.g. chicken shops, pizza shops) and are limited to independent outlets and not national chains. As a result, FBOs don't perceive themselves as competing for overall consumption of hot, prepared food but only within their specific food offering.

Competition expresses itself predominantly in terms of price and portion size. A lead mechanic is the £1.00-£1.50 childrens meal, such as 1 or 2 wings and fries, which is as much consumed by adults as a snack as it is by children. There is some, but not conclusive, evidence that increased competition, such as new outlets opening, expresses itself in increased portion size and reduced ingredient costs to offset the lost margin across all outlets. This presents a double challenge to the meals' nutrition as bigger portions means more calories and cheaper ingredients tend to contain more fats/sugar or absorb more during preparation.

Maintaining competitive parity leads to very close observation of other outlets. This creates a very effective mechanism for rapid change in the market as perceived advantage is replicated rapidly. This was witnessed during the outlet intervention trials when an outlet in the study area introduced a halal English breakfast with pork products replaced with turkey based equivalents. This was a significant success and was copied by all the relevant outlets locally in only a few weeks.

Whilst competitive, collaboration also occurs on a day-to-day basis with issues such as ingredient sharing if people run out during opening hours and similar support. This behaviour is more evident in community outlets over the more distant anonymous outlets and isn't limited to same food type outlets. There is a sense of collectivism when issues emerge at a level above individual outlets eg. support for an area's development by local councils.

Happy to grow healthier sales
Independent outlets associate making health improvements to their menus as directly and negatively impacting their greatest concerns - customer satisfaction and cost increases.

These concerns are magnified by the dependency of outlets on a limited number of menu items. Data from the EPOS systems we installed as part of the trials showed that, despite some outlets having menus with 40+ items, 75%+ of revenue is reliant on a small number of meals (4-6). These meals therefore represent the vast majority of the calorific impact of the outlet and the dishes that are most protected from change.

Engaging outlets in making changes proved time consuming and provided limited success. Even with the active involvement of local community activists and the local Environmental Health Officers, which had relationships with the 18 outlets in the trial area, only 4 agreed to take part in trials after 2-months of regular (thrice weekly) interactions. The mechanics the participants favoured were focused on new sales opportunities such as introducing new menu items or

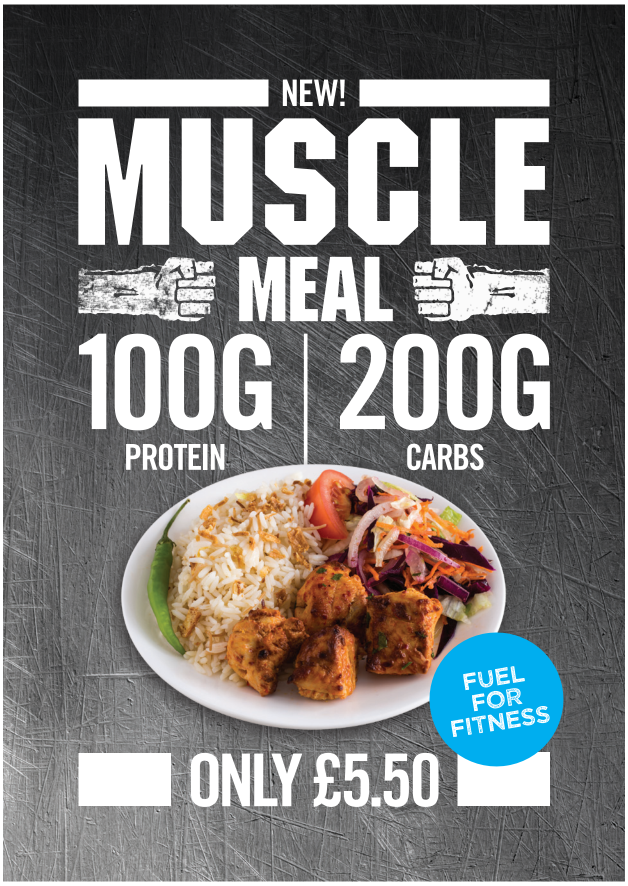
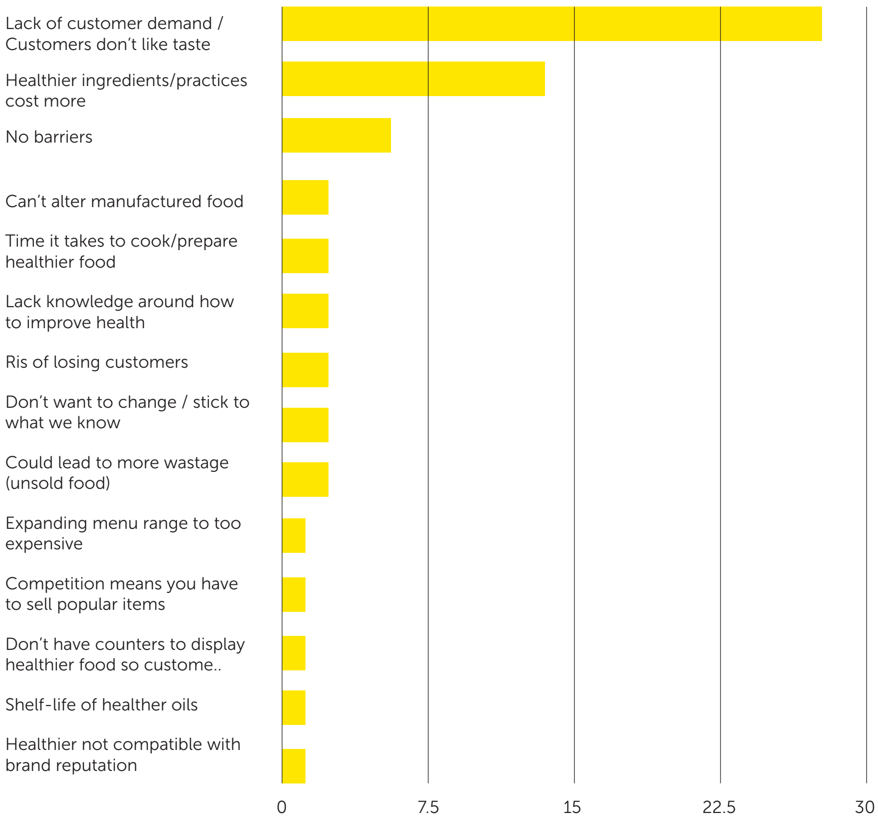


Image 3: Example of poster tailoring existing offerings to particular local audiences.



The main barriers to improving healthiness are a perception that that taste of the food will change (which customers won't like) and a perception that healthier ingredients cost more – which can't be passed onto customer as there is low demand for healthier food.

Diagram 4: Barriers to making health improvements

Image 4: Trialling 20% reduced volume chip packaging.

tailoring existing offerings to particular local audiences, such as a 'Muscle Meal' for young men who frequent the outlets after going to gym at the local leisure centre. Although these interventions had impact on the sales, the scale was small in comparison with the sales of the dominant meals referenced above.

The one trial that affected all meals, the 20% reduced volume chip packaging, was noticed by customers and although not rejected led to request for additional fries to be added. The trial was stopped by the outlet before completion due to concerns over reputation and the alternative packaging was not used for deliveries.

Interventions that help grow sales and deliver incremental profit are valued and there is no resistance to these sales coming from healthier meals. The impact of these is likely to be modest in the short-term.

What also emerged was that some FBOs believe that health improvements need to be made higher up the supply chain The growth of pre-packaged meals purchased frozen from wholesalers and the shortage of skilled labour means that the burden of cooking is being removed from some outlets. Manufacturers and wholesalers in particular have a greater influence on outlet healthiness than in the past.

The Food

The market dynamics prefer less healthy food.
The underlying dynamics of the food system differentially prefer and promote food that is high in fats, salt and sugar. The level of competition in the food sector combined with the short-term expectations of shareholders has driven down prices whilst requiring margins to be maintained or grown[21]. This has necessitated the consolidation and internationalisation of food organisations, seeking centres of low cost production. The price competition and extended supply chains have increased the use of sugars and salts as low cost bulking and keeping agents in highly processed foods. The margins realised through high volume and low cost manufacture have been invested in building strong brand affiliations. This has enabled these products to be differentially promoted through advertising to increase appeal and, via in-store promotion, to drive impulse purchase. The development of overtly branded healthier options has been seen as a means of generating incremental margin through premium pricing, separating healthy food from normal food and further distancing good nutrition from those of lower SES both financially and socially.

50% more calories than recommended (for an adult meal)
The food in the independent takeaway market, as offerred to low income families, was designed as occasional treats and has changed little in last 25-years, despite the innovation (e.g Leon, Pret, Itsu) that has occured in meeting the needs of high income citizens. Meals (eg. chicken wings and fries) from the takeaway sector contain on average 933cal (n=277), 50% more calories than the 600cals recommended by the Food Standards Agency (FSA). Table 2 below shows the calorie range for different meals types from 500cal for a sandwich to 1158cals for a pizza. What is notable is the degree of variation in calorie count within a meal type, for example on average kebabs contain 1040cal but have a standard deviation of 460cals. The drivers of this variability will be covered below.

21 "The Growing Price Gap between More and Less Healthy Foods - PLOS." 8 Oct. 2014, https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0109343. Accessed 27 Oct. 2018.

Main dish	Number of meals (n)	Average total calories	Standard deviation
Chicken burger	41	958.8	182.8
Sanwich	46	501.7	186.6
Curry	34	836.9	205.9
Chicken wings	35	1133.5	225.0
Dessert	12	849.6	244.1
Biriyani	17	975.1	299.0
Pizza	49	1157.9	329.2
Kebab	43	1038.6	460.3
Total	**277**	**933.9**	**359.1**

Table 3: Average total calories by meal type with their standard deviation

Pricing not driven by numbers of calories
Given that 25% of an independent outlet's costs are related to ingredients it might be assumed that as total calories increase, so do cost of ingredients and with that retail price. Analysis of the data disproves this hypothesis with the exception of pizzas and sandwiches. Infact the coefficient data in Table 3 below suggests that there may even be the opposite relationship in chicken burgers, chicken wing meals, kebabs and currys, ie. price goes down as calories increase. Although not statistically significant, it does align with market observations that outlets use portion size, hence more calories, as a competitive response to improve value for money.

Main dish	Coefficient
Biriyani	0.00088
Chicken burger	-0.00071
Chicken wings	-0.00047
Curry	-0.00122
Dessert	-0.00230
Kebab	-0.00007
Pizza	*0.0025
Sandwich	**0.00347

*p<0.05, **p<0.01, ***p<0.001

Table 4: Price increase (£s) per 100 calorie increase by main dish type

Actor	Supply chain	Restaurant			Consumer		
Category	Raw ingredients	Recipes (menu)	Preparation	Portion size (pack size)	Sauces	Rate of sale	Consumption impact
Chicken (6 wing meal)	Chicken Wings Breading Marinade Battermix Fries	40% 7% 3% 7% 28%	Oil	465g	Ketchup 30ml	150 sales a day	= impact
	RAW 165 kcal/100g (58%)		COOKED 121 kcal/100g (42%)	TOTAL 286 kcal/100g 1333kcal	CALORIES ADDED 30 kcal	(1333 kcal + 30 kcal) x 150	= 204,450 kcal a day

Table 5: The Health Equation

60%+ of calories are upstream in the supply chain
The nutritional profiling work led us to the question of where in the supply chain calories come from. This was prompted when considering how to reduce calories in pizzas at outlet level. Pizza is the no.1 food type in the UK and yet the preparation method at outlets - baking in an oven - has virtually no impact on calorific value. What therefore would be a suitable intervention for pizza takeaway beyond portion size (see below). As a result, the idea of the health equation was developed that broke down nutritional profile into its components components and contributors.

With this in mind, nutritional profiling was extended to the raw ingredients for a single meal - 6 fried chicken wings and fries. What emerged was that 60% of the calorie density (cals/100g) were inherent in the raw ingredients and 40% percent added through the preparation method. For pizza 100% of calories/100g are in the raw ingredients.

It is all about portion size
What was evident from the nutritional profiling was that there was significant variation in the calorie content of individual meals within the same meal type. This suggested that healthier versions of these meals were already being served in the market, which people were willing to purchase and were financially sustainable for the outlets concerned. The question was what was driving this variability. Was it the calorie density (cal/100g), which would suggest the raw ingredients and preparation method, or the portion size (grams).

Understandably, weight and calorie density are significant of predictors of total calories, with the exception of desserts and biriyani where weight only predicts calorie content. In most main dish types, portion size is a greater cause of variation in total calories. For greatest potential impact outlet interventions should target portion size.

		Weight in grams			Calorie density (kcal/100g)		
	N	Coefficient	Intercept	% variance	Coefficient	Intercept	% variance
Biriyani	17	*****1.26**	**185.64**	**50.2%**	3.26	457.33	12.5%
Chicken burger	41	*****2.17**	**112.00**	**67.3%**	*2.69	296.51	13.0%
Chicken wings	35	*****2.23**	**200.98**	**56.5%**	**3.29	238.89	20.3%
Curry	34	**1.01	308.32	25.9%	*****3.93**	**200.71**	**37.6%**
Dessert	12	****2.41**	**206.11**	**55.6%**	0.19	787.60	n/a
Kebab	43	*****1.98**	**63.06**	**72.0%**	**3.98	198.98	19.8%
Pizza	49	*****3.15**	****-132.10**	**94.5%**	***9.29	*-1459.09	26.8%
Sandwich	46	*****2.23**	**17.96**	**66.6%**	**1.54	143.39	15.2%

*p<0.05, **p<0.01, ***p<0.001

Table 6: Predictors of total calories in meals, regression coefficients and proportion of variance accounted for by the model.

Perhaps packaging is the answer.
The potential role of packaging in influencing portion size is suggested by a detailed analysis of the nutritional profile of side orders of fries and chips. As part of the profiling, 78 side orders of fries and chips were purchased and nutritionally analysed. Our findings confirmed those of primary research in that fries are on average more calorie dense (273cal/100g) than chips (207cal/100g), which can be explained by their greater surface area and therefore fat absorbency. Yet in our sample the average total calories of chip portions (1016cals) were almost twice that of fries (543cals). This was driven by the portion size of chips being 140% greater than fries (489g vs. 201g). This discrepancy may be explained by the fact that chip portions are traditionally served in paper whilst fries come in semi-rigid cartons. Wrapped paper packaging provides much greater opportunity for oversized portions and this is reinforced by the broader distribution of portion sizes in chips found in the data..

What could be done about it?

Trying to minimise or reverse the trend to convenience in the food sector is unrealistic. How can we harness these trends to rapidly expand the variety of hot, prepared food available to low income families whilst damping the most negative aspects of current meals.

Four potential strategies could be included in a response to improve the dietary impact of hot, prepared food:

1. Reduce or reverse the growth of hot prepared food by reducing the supply.
2. Reduce the pressures on low income parents' headspace to elicit more home cooking
3. Reduce the calorie content of existing hot, prepared food.
4. Ensure healthier entrants to the market are preferred.

Based on our formative work in the market, approaches 3 and 4 above offer the best opportunity for improvement.

Don't try to hold back the tide
The scale of the trend toward convenience across all consumer markets and the growth of digital sales channels suggest that the demand for hot, prepared food will continue to develop and the market will find ways to service it. The low cost tools available to local authorities to limit the growth of supply, such as supplementary planning advice, only act to stem future outlet growth and, without unaffordable compensation packages, can't address the existing estate. The new potential to have multiple brands operating from a single location allows supply to grow regardless of the numbers of new kitchens. Choking supply is also likely to make it harder for new healthier entrants to break into the market and remove one avenue for income generation in deprived inner-city areas, potentially exacerbating poverty.

Reducing the pressures on low income parents would help create the headspace for greater food preparation at home. Although this won't necessarily be expressed in the form of healthier meals, given the reliance of families on food assembly from pre-prepared components. Furthermore the source of these headspace pressures is low incomes and this is as intractable and as long term a problem as obesity.

Apply leverage selectively
Two options emerge to impact on the calorie content of existing food. The first is to move the point of leverage upstream in the supply chain to the ingredients being made available to the takeaway market. As we have established a significant proportion (60%) of the calorie density of hot, prepared meals are inherent in the raw ingredients, prepared components or meals offered by the delivered wholesale and cash and carry sector. There are fewer organisations to interact with at this point in the supply chain and the organisations are large enough to proactively manage the reputational risk of adverse publicity. This provides an effective point of leverage to achieve change. This leverage is lacking at outlet level, where the levers available are too diffusely focused and weak to be effective and efficient.

The opportunity at outlet level relates to the packaging being used for hot, prepared food. The nutritional profiling comparisons between fries and chips above demonstrates that the use of semi-rigid 3D packaging can reduce the size and variability of portions. Again the packaging supply for the takeaway market is relatively consolidated and so an approach that ensured semi-rigid 3D packaging was in use across the sector, that sizes were standardised and that a programme of ongoing size reduction in packaging over an extended time period was underway. This type of intervention would need to be managed centrally and is most analogous to the Food Standard Agency's work on salt reduction. Given the current environmental focus on single use plastics in the takeaway sector the changes already underway may enable portion size to be addressed simultaneously.

Resolving families' tensions with Everyday Takeaway offers potential

The adoption of 'Everyday Takeaway' as a primary food source by low income families, for the practical and emotional benefits it brings, creates tensions with other needs: feeling like a great parent, not feeling guilty, confidence about food safety, family favourites, same old takeaway. Fulfilling these needs, whilst maintaining the practical benefits of hot, prepared food, offers the potential to meet Shift's 3 measures of value: social, user and financial. and deliver on a theory of change based on substituting poorer nutritional meals with better alternatives and thereby increasing variety in the takeaway market for low income families. This opportunity space was defined as:

How might we populate the online market with 'everyday takeaway' that's just as convenient and affordable, but better for you?

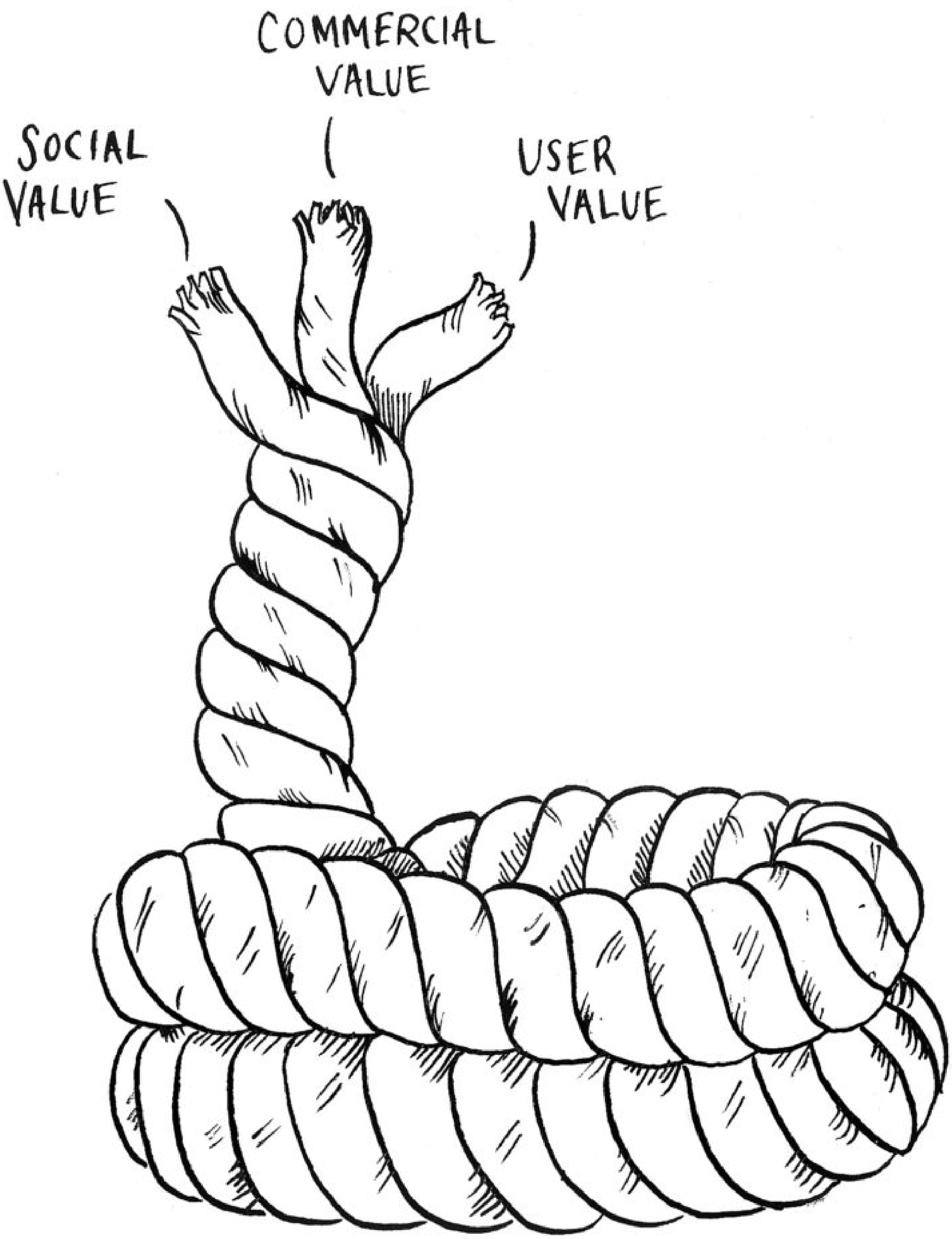


Image 5: Shift's 3 strands of value model

What have we been developing?

Solving the disconnect between the emergence of 'Everyday Takeaway', the emotional resonance of family meals and the takeaway market for low income families selling meals designed as occasional treats emerged as the strongest opportunity.

The need for a pivot midway
The programme began with the ambition to directly influence the calorie content of existing hot, prepared meals through a combination of measurement (a health score), a series of changes outlets could make and a source of motivation to do so. It became apparent that this would not be feasible as the cost of compiling a longitudinal health score was prohibitive and FBOs were not willing to put their current profits at risk by making changes to their key meals.

As covered in the interim report, the programme pivoted to look at families relationship with hot, prepared food and the trend of 'Everyday Takeaway' emerged as a source of potential large scale impact. Coupling this with FBOs' strong interest in growing healthier sales offers the opportunity for scale.

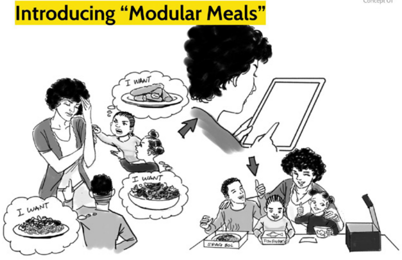
At the heart is Family Meals.
To meet the design challenge, Shift worked with low income families and a range of industry and community experts to develop 6 concepts that were taken in concept testing with families.

Two additional concepts emerged from the testing process, building on components of the original 6 favoured in the families feedback. This understanding of user value was consolidated with our evidence based theory of change for each concept along with their financial sustainability to gain an overall validation of each concept against the following criteria:

- A detailed concept that had been tested in the market
- Evidence of an unmet user need and a related value proposition
- A defined market (size and spend for our target users)
- A credible business model
- An evidence based theory of change

Concept 01

Introducing “Modular Meals”



For when all the kids are shouting for different things for dinner...

Introducing “Modular Meals”

A new digital service that lets you **build and order customised home cooked meals for each family member** - satisfying each individual taste and taking the bickering out of mealtime.

How

Just open the app and choose mains and sides separately to build your family meal and **we'll deliver them all together in one box, ready to dish up.**

Concept 02

Introducing “Good For Kids”

Concept 02

For when you're worried the food your kids are eating isn't the best...

Introducing “Good For Kids”

A new digital service that helps you **find and order the food that's good for your kids** from places that are clean. No more worrying about giving them nasty or bad food.

How

Open the app and add the criteria most important to you (e.g. cleanliness of the takeaway, quality of the meat, calories or tranfats in the food). **We'll whittle down to a range of meals that meet your criteria, then your kids can match with you what they love from that list.**

Concept 03

Introducing “Your Family Favourites”

Concept 03

For when the kids are asking for their “favourite” for dinner...

Introducing “Your Family Favourites”

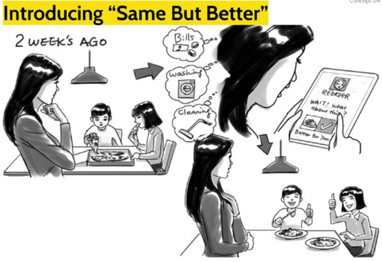
A new digital service where you can **pre-order your family's favourite meals** to satisfy your kids cravings, and give you peace of mind that they've had a filling meal full of goodness.

How

Open the app and place your order as you're leaving work or before you go to pick the kids up, then **pop into your local pickup point on the way home and your hot meal will be waiting for you.**

Concept 04

Introducing “Same But Better”



Concept 04

For when you want to eat better but it seems impossible...

Introducing “Same But Better”

A new digital service that **finds the meal you want, but an alternative that's better for you,** delicious and still for the same price or less!

How

Open up the up app, choose the meal that you fancy or would normally order and **we'll quickly show you options that are better for you.**

Concept 05

Introducing “Takeaway Tracker”

Concept 05

For when you need to cut back on your takeaway spend...

Introducing “Takeaway Tracker”

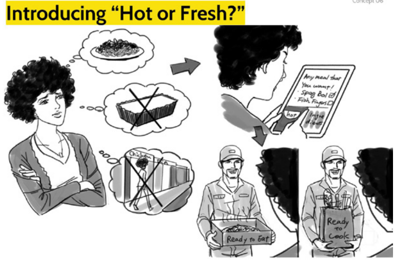
A new digital service that **exposes your takeaway ordering and spend patterns and offers alternatives that are better** for you and your kids - for the same or a lower price.

How

Download our app, order takeaway online as normal. We'll track your ordering in the background and once we get to know you, **we'll suggest alternatives meals, or swaps to parts of your meals, that are better for you.**

Concept 06

Introducing “Hot or Fresh?”



Concept 06

For when you're bored of the same old takeaway...

Introducing “Hot or Fresh?”

A new digital service that **puts you in control of what you eat** - by offering you the choice of a hot prepared meal or fresh ingredients with cooking instructions - all in one place.

How

Open up the app, choose what meal you want and how you want it. **We'll deliver either a hot prepared meal or fresh ingredients to your door** or you can pick it up.

Image 6: Concepts taken into testing

The preferred concept

What
Introducing **an alternative takaway service that delivers family meals, full of goodness**, satisfying the whole family's cravings.

How
Open the app, load it with credit or buy a family meal plan for the month. **We'll deliver you a hot, wholesome takeway when you want it – straight from your local kitchen.**

'An alternative takeaway service that delivers family meals, full of goodness, satisfying the whole family's cravings' came through the validation process as the strongest solution when considered across Shift's three measures of value: user, social and financial.

To this point, the concepts had been tested qualitatively with a small sample of the anticipated audience; young families on a budget parent(s) aged 19-35 with children aged 4-11. In order to assess the strength of the concept with a larger sample, the team devised a series of online tests initially using facebook advertising and subsequently via a mock restaurant website. This was used to test our key assumptions:

- What language would be most compelling to describe the concept.
- What level of interest was there for the proposition from young families.
- Will families buy 'family meals' as hot, prepared food.
- What price for children's and adults' portions would be acceptable to the market.

These tests reached 350,000 families and identified that the most compelling version of the proposition was "No more same old takeaway, proper dinner for you and the kids, delivered to your door". This proposition delivered a click through rate (CTR) of 1.9% versus industry averages of 0.9%.

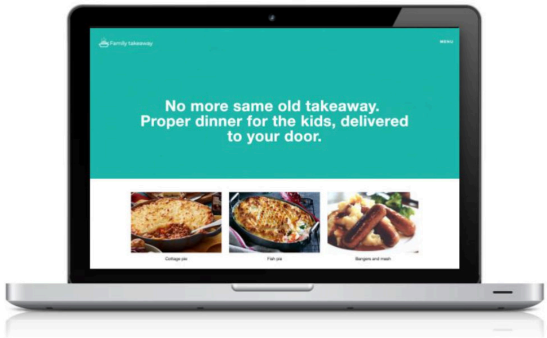


Image 7: Proper Dinner's test website

A mock restaurant website was then created to test purchasing propensity. 17% of visitors added meals to their basket, which, with a sector cart abandonment rate of 68%, would have resulted in 68 orders and an overall conversion rate of 5.5%, 120% above industry averages. Pricing testing also identified the optimum price points of £3.49 for child portions and £4.99 for adults.

This provided sufficient confidence to progress to a full prototype in Birmingham. The data was then used with other sources to forecast a series a performance metrics for the prototype to test 3 key issues:

- Were we reaching our target audience young families on a budget with high frequency hot, prepared food consumption
- Could we demonstrate demand (sales) for the proposition
- Did we elicit positive feedback in the form of reviews and repeat customers.

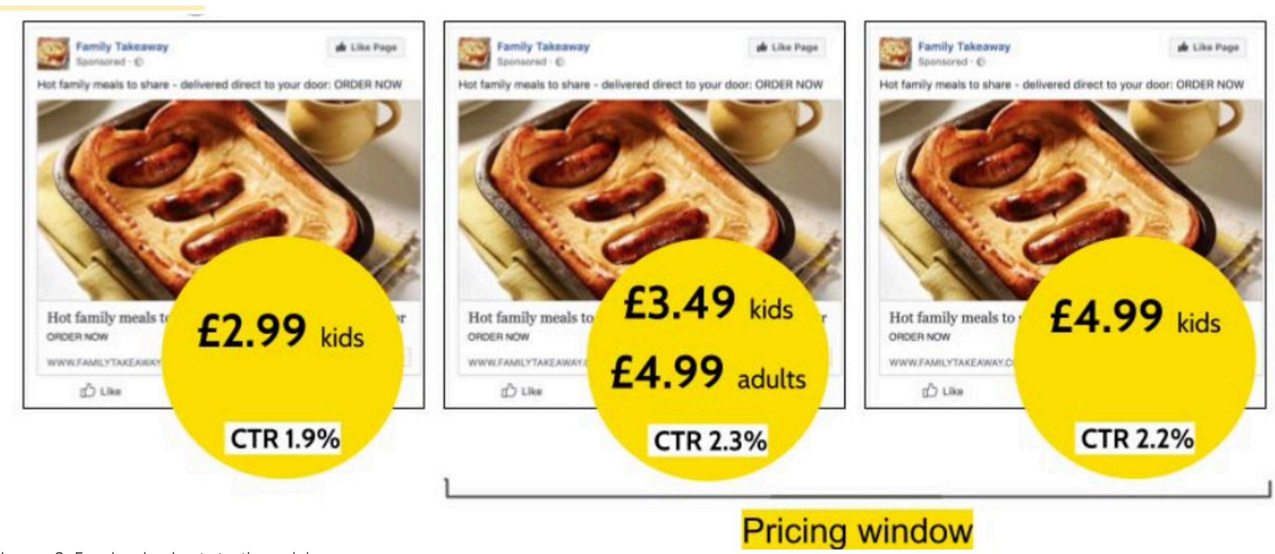


Image 8: Facebook adverts testing pricing

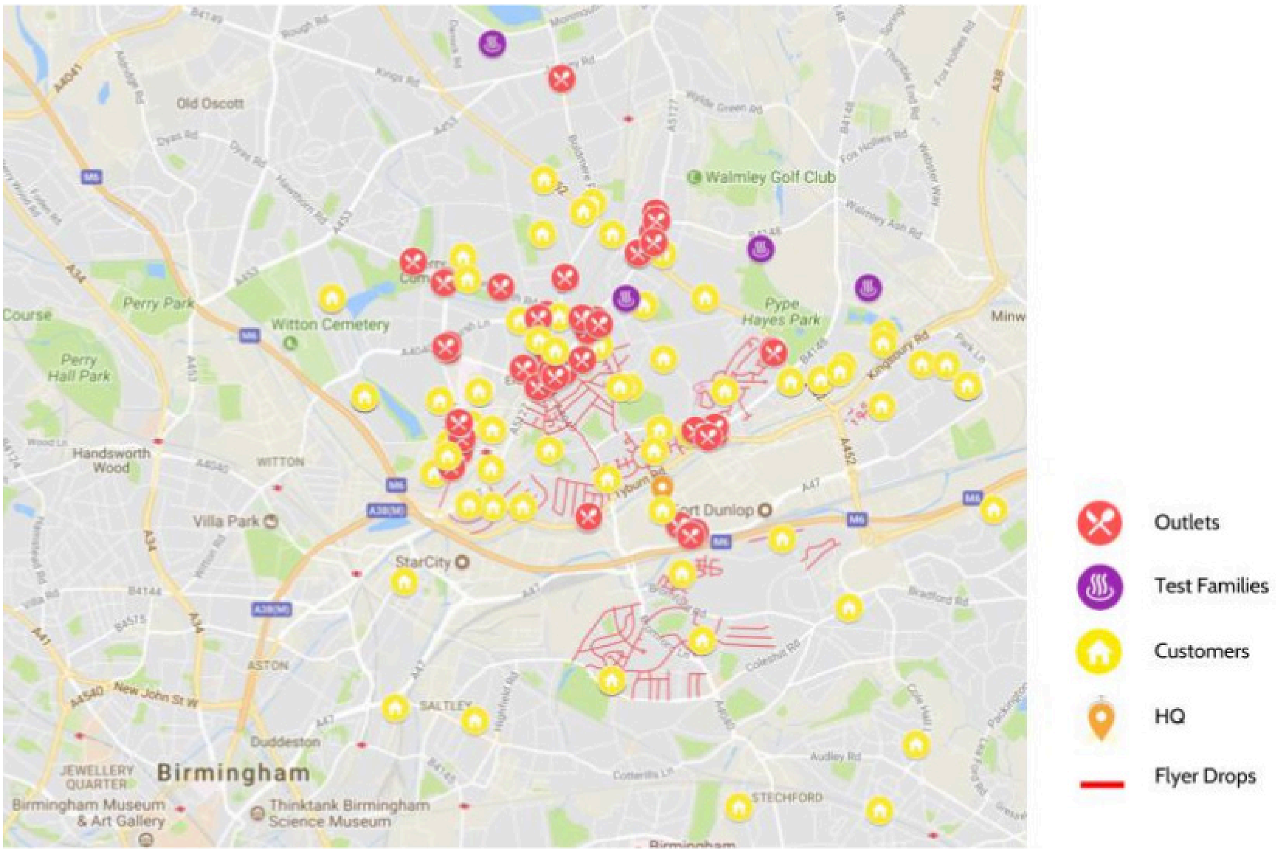


Image 9: Family Feeds distribution area in Erdington, Birmingham

Making Proper Dinners for you and the kids real
A 12-week trial was carried out which involved the set-up of a delivery only hot, prepared food outlet with a menu of 6 meals (2 x Lasagne, Shepherd's Pie, Pasta Bake, Fish Pie and Macaroni Cheese) each available in child and adult portions. Space was rented in an existing kitchen in Erdington to the North East of Birmingham's city centre. This was one of the programme's study wards, typified by low income white British families.

The food was sourced from Cook[22], a frozen prepared meal brand supplying direct to the public and via their own retail chain. The meals were selected on the basis of their sales performance at Cook and also general market sales data for retail ready meals provided by Birds Eye. A temporary brand was developed, "Family Feeds", to badge the service and a local marketing plan was put in place comprising leafleting, local PR and an ongoing social media campaign on Instagram and Facebook.

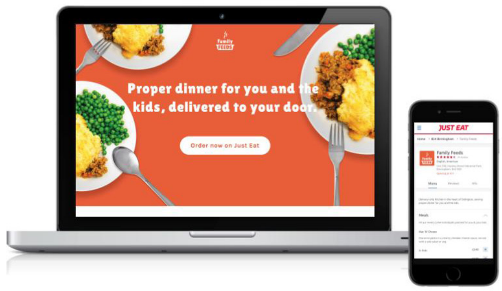


Image 10: Family Feeds website and Just Eat listing and Marketing Activity

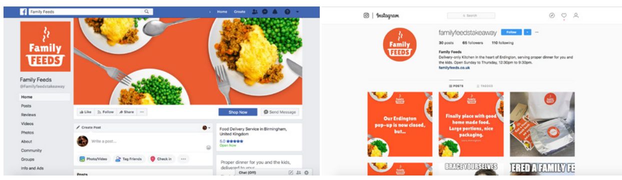


Image 11: Active Instagram and Facebook profles with 1000+ followers

22 "COOK | Frozen Ready Meals, Delivered ...." https://www.cookfood.net/. Accessed 1 Nov. 2018.
23 "There's a new takeaway selling cottage pie and ... - Birmingham Mail." 1 Aug. 2018, https://www.birminghammail.co.uk/whats-on/food-drink-news/family-feeds-healthy-meals-delivery-14970122. Accessed 1 Nov. 2018.
24 "Innovative takeaway opens in Erdington | The Birmingham Press." 27 Jul. 2018, http://thebirminghampress.com/2018/07/innovative-takeaway-opens-in-erdington/. Accessed 1 Nov. 2018.
25 "This takeaway in Erdington sells favourite family ... - Birmingham Mail." 11 Sep. 2018, https://www.birminghammail.co.uk/special-features/takeaway-erdington-sells-favourite-family-15086784. Accessed 1 Nov. 2018.

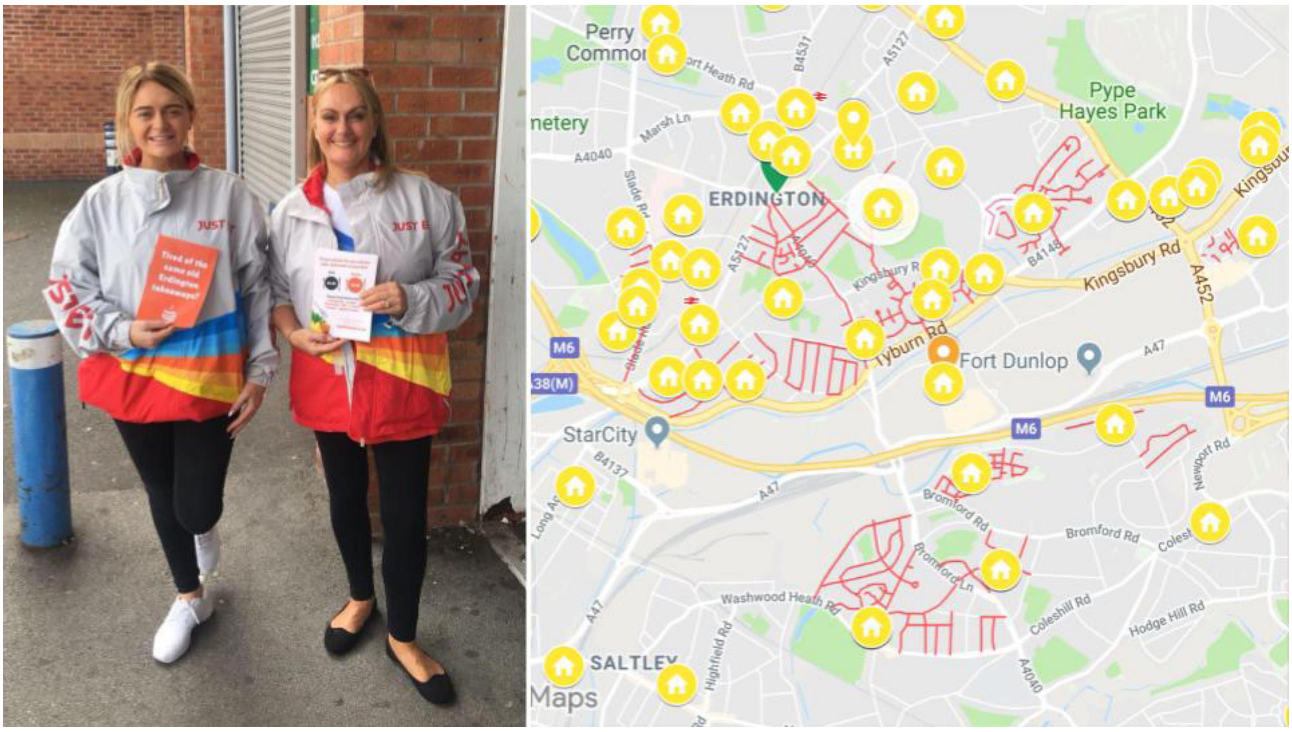


Image 12: 3000 flyers distributed

BirminghamLive NEWS IN YOUR AREA VILLA BIRMINGHAM CITY MORE

This takeaway in Erdington sells favourite family meals - and they cost less than a fiver

Family Feeds delivers hearty meals of mac 'n' cheese, cottage pie and other classic favourites straight to your front door exclusively through Just Eat. See how you could win £50 off your next Just Eat order

SHARE COMMENTS

By Becky Weaver
10:37, 11 SEP 2018 | UPDATED 13:26, 11 SEP 2018

Image 13: Local press coverage in Birmingham Press and Birmingham Mail

The outlet was hosted on Just Eat to simplify managing order taking and transactions, and as it provided access to evaluation data on our customers and the aggregated performance of other outlets in Erdington that could not be sourced in any other way.

Low income family meals substituted
Over the 12-week trial, we received 125 orders for 249 meals from 118 customers with 20 repeat orders. 88% of our customers came from the bottom 3-deciles of deprivation and 100% of them takeaways 3 or more times per month. Of our customers, 74% were families evenly split across young families (35%) and older families (39%), which over indexed versus the normal profile of customers in the Erdington by 25%.

88%
of orders from the 3 most deprived areas

100%
of customers order takeaways 3+ times a month

74%
of customers were families

249
meals served to 118 customers

30%
of customers motivated to leave a review

5.7/6
star rating

Amy 31/07/2018

Absolutely delicious! How great to be able to order proper home cooked food as a takeaway. The boys polished off their mac and cheese, fish pie and veg pausing only to tell me it was 'yummy'. I had the lasagna which was really full of flavour. Great!

Nancy 30/08/2018

First time I ordered from Family Feeds, was delivered on time,was well wrapped and hot, kids loved it, and portion sizes were just right, good value for money, would definitely recommend 😀

Tiina 04/09/2018

nice change from pizzas oriental, fish& chips, asian. Portions could be little bigger

Good taste/quality	10
Wider choice	5
Kids loved it	5
Delivery time	5
Hot	5
Good portion size	4
Value for money	2
Delivery driver	2
Healthy	2

Image 14: What customers liked

Tiina 04/09/2018

nice change from pizzas oriental, fish& chips, asian. Portions could be little bigger

Christine 22/08/2018

Food is really nice apart from my salad that never arrived with my meal but would use this place again the kids loved the pasta

Bee 14/08/2018

Food was OK nothing special.wasn't cooked fresh it was reheated. Salad could of done with abit of dressing.The portions are abit too small too. Driver was nice and polite. And food was delivered earlier than expected.

Small portion	1
Poor quality	1
Missing side	1

Image 15: What customers didn't like

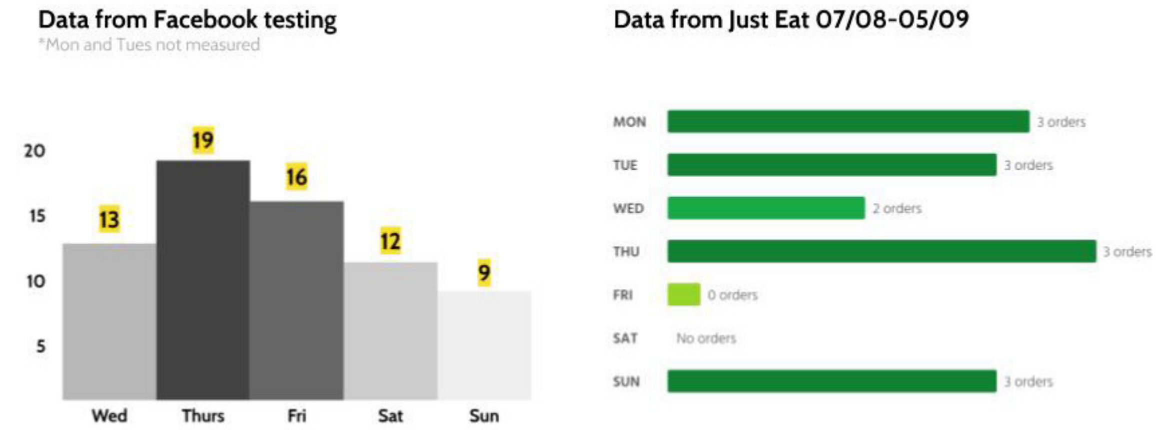


Diagram 5: Daily sales pattern

Diagram 5: Hourly sales pattern

Having reached our family audience and provided a service they loved, it also emerged that they were using the food as anticipated for family meals. Our sales were Sunday through Thursday in contrast to the general Erdington takeaway market which is Friday and Saturday. The time of day our orders came in was 3pm - 6pm whilst other outlets' sales profile in Erdington was 6pm-9pm.

Hot, prepared food outlets achieve financial sustainability by combining multiple revenues streams related to their core businesses, such as contract and event catering, as well as their core OTC business. Delivery sales through aggregators, such as Just Eat, are one of these bolt ons and in themselves are not the basis for a sustainable business. Furthermore, Just Eat is not a marketing platform but a transaction mechanism. The marketing and reputation of the outlet in the community is created independently and the platform is another means to translate this into revenue.

Kitchens and the chef's that work in them have significant downtime. Businesses are looking for other sources of revenue to take up this slack and more efficiently amortise their costs. This creates opportunity in terms of the source of meals. In turn, this facilities employing staff for 'Proper Dinners' with the more generalist skills that the service requires.

Successfully, 74% of Family Feeds' sales were to families. However, the remaining orders were received from other groups, in particular single older people, shift workers and light industrial staff. This may represent potential for further positive social impact and revenues.

Where next?

Accepting the emergence of 'Everyday Takeaway' and solving the tensions between its practical benefits and emotional shortfalls through 'Proper Dinners' offers an opportunity. Combining this with FBO's interest in growing healthier sales and providing a means to access this demand, whilst maintaining nutritional quality, provides the route to social impact at scale.

The economies of scale challenge
Our insight that the tension between the needs 'Everyday Takeaway' is fulfilling and a takeaway sector offering occasional treats could be resolved by offering 'Proper Dinner' through the same mechanics has proved correct. In doing so lower calorie meals are substituting the purchase of high calorie meals achieving our desired social impact.

Our next challenge is how to make the service financially sustainable. To do this we need to deliver customer satisfaction at the market price, which is determined by high calorie foods, whilst maintaining the nutritional quality of the meals served.

In considering this task, it is worth noting that 'Proper Dinners' are not inherently any healthier than the current meals served in the takeaway sector. To deliver on the substitution strategy that is our theory of change any scaled business model must have a means of controlling the calorie density and portion size of the meals served.

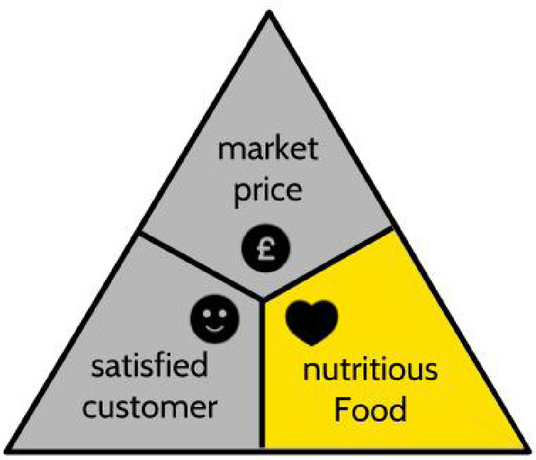


Diagram 6: Solving the triangle

The solution to the triangle above is economies of scale and the efficiencies this provides. This is the benefit corporate chains have in the market and is not accessible to the majority of independent outlets. Economies of scale come from increased volumes, centralised buying and efficient production and delivery.

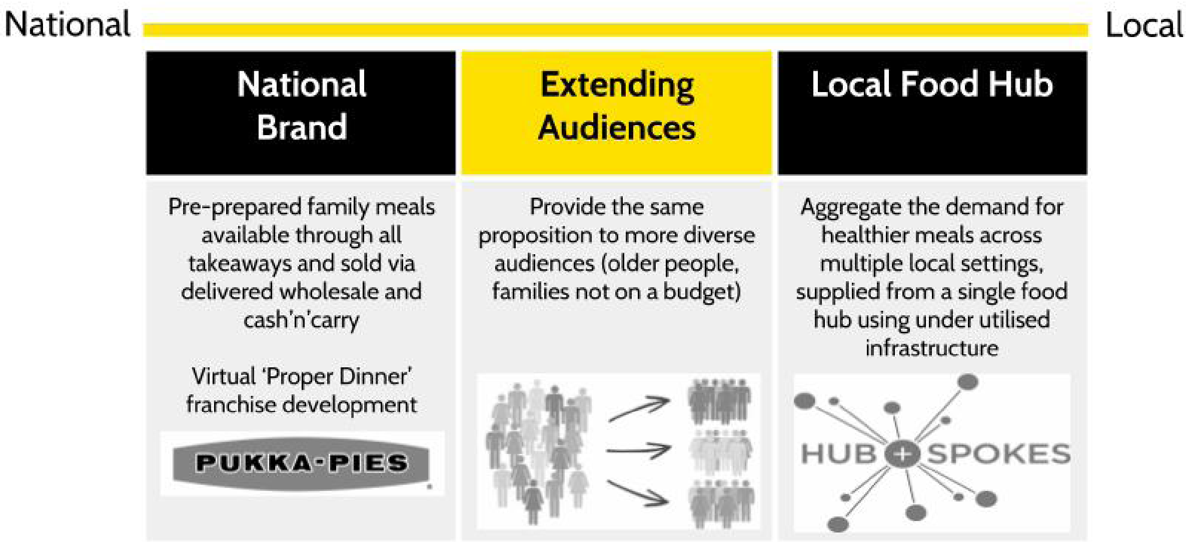


Diagram 7: The 3 business model being considered

Three Potential Solutions

The food venture team have been considering this and three business models have emerged which are under development.

Maximising revenue at outlet level
'Proper dinner for you and the kids' was explicitly targeting families on a budget yet proved of interest to other groups. We are now developing the value proposition around the core of 'Proper Dinners' to have broader reach whilst maintaining the current primary audience. The team will be using the online testing mechanics, developed pre the Erdington prototype, to investigate this in November and identify what audience stretch can be achieved and the likely social and financial value this will deliver. Testing this live in the market will be the focus of 'Proper Dinners' launch in Lambeth and Southwark in January 2019, depending on funding.

Developing a national brand
The challenge still remains on how to scale the social impact, even if financial sustainability can achieved at outlet level by extending reach. It is clear that growing a hot, prepared food business would be slow, expensive and provide only modest impact at realistic levels of market share. In addition, success could potentially create unforeseen negative social outcomes by undermining the financial sustainability of existing independent outlets. Tapping into FBO's need to grow healthier sales provides a mechanic for rapidly scaling the proposition and minimising the risk of unforeseen outcomes.

The existing success of Pukka Pies[26] in the market and the emergence of multiple online listings at a single address, provides a potential opportunity to give independent outlets access to the demand for 'Proper Dinners'. The food venture team are therefore looking at the possibility of developing a virtual 'Proper Dinner' franchise that existing independent outlets can add to their online listings. This would be supported by national marketing to create demand and a range of prepared 'Proper Dinners' sold through the wholesale sector in a similar way to Pukka Pies. In this way, the nutritional quality could be maintained whilst enabling outlets to grow healthier sales supporting their financial viability and the localised micro-economies that are dependent on them.

Aggregating place based demand for healthier meals
In general, the potential demand for healthier meals in a particular place is fragmented across traditional sectoral lines with the public sector commissioning free and paid for school, NHS, institutional and social care meals, the NGO sector organising free meal provision direct to families, in the form of Foodbanks, and the commercial sector competing for direct to public food purchases and contracts for public sector provision. This fragmentation reduces the potential for economies of scale to meet the challenge outlined above.

The Shift food venture team, GCDA[27] and Can Cook[28] is in conversation with a number of local authorities (Thurrock, Cannock, Manchester, Birmingham, Luton, Hertfordshire, Lambeth and Southwark, Greenwich), the Local Government Association and the Big Lottery Fund about a consortium to test the impact of bringing this demand together into a single source of supply utilising existing infrastructure.

A specific example of this is under discussion with Birmingham City Council and the social enterprise CityServe[29], which supplies 80% of Birmingham's school Food. The concept is to utilise spare kitchen capacity in primary schools and the families whose children attend to produce and distribute 'Proper Dinners' on a click and collect basis. Families would order their evening meal by 12:00 and be able to collect it when picking up their children from school at 3pm.

26 "At the chippy | Pukka Pies." https://www.pukkapies.co.uk/at-the-chippy/. Accessed 2 Nov. 2018.
27 "GCDA - Greenwich Co-operative ...." https://gcda.coop/. Accessed 2 Nov. 2018.
28 "Can Cook." http://www.cancook.co.uk/. Accessed 2 Nov. 2018.
29 "Cityserve | Birmingham Education Support Services." http://www.birminghameducationsupportservices.co.uk/Services/3708. Accessed 2 Nov. 2018.

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