Digital Menus: Solving Food Wastage in London Chain Restaurants

Identifying the Problem

Projected Population of London 2025

With a population of 8.79 million, London is by far the largest city in the UK. The Office of National Statistics predicts a 12.7% population growth, which means that by 2025 London's population will reach 9.8 million people.

The UK is currently experiencing an 'eating out revolution' with at least 40% of individuals eating out weekly[1]. Eating out is even more common in London with the average Londoner eating 3.75 meals out a week (a 2.2% rise since 2012)[2].

Food wastage is one of the main problems faced by the UK restaurant industry. Currently, 3,415,000 tonnes of food is wasted each year, of which 1,473,00 tonnes are sent for disposal. Restaurants and pubs are responsible for a staggering 41% (600,000 tonnes) of the waste sent for disposal[3].

Why does food wastage occur?

Food wastage primarily occurs for three reasons:

- **Inefficient buying cycle** Restaurants are unable to efficiently forecast customers' preferences and purchasing trends due to a lack of data
- **Use of fresh (easily perishable) ingredients**
- **Complex dietary requirements** Consumer preferences and dietary habits are becoming more complex and diverse – in part, due to London's competitive food market

Source - WRAP HaFS sector spoilage preparation and plate waste Final Report

How can food wastage be addressed?

Digitising the food and drink industry can greatly help to improve this problem. From digital menus to apps that help chefs to analyse their output and wastage, technology is helping restaurant owners to control and monitor the dining experience.

Whether in the actual production or consumption of food, these apps allow restaurant owners to collect data about their establishments and customers. This data allows restaurants to better understand and hence tailor their offerings to customers, connect with other restaurants to share ingredients, and helps chefs understand their kitchen.

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[1] https://trajectorypartnership.com/wp-content/uploads/2015/07/SaclaReport_v19FINAL.pdf
[2]https://www.standard.co.uk/news/london/londoners-dine-out-nearly-four-times-a-week-says-study-8806093.html
[3] http://www.wrap.org.uk/content/food-waste-hospitality-and-food-service-sector-0

Case Study #1: Winnow Smart Meter

Winnow, a London-based company, was established in 2013 with the aim of helping restaurants reduce their food waste with a smart meter. The smart meter helps chefs measure and analyse the food that they're throwing away. In combination with a digital scale, this smart meter essentially puts a price on waste, which provides a clear ROI for restaurants to reduce waste.

Winnow has already had some fantastic results such as reducing Hugh Fearnley-Whittingstall waste by 1/3rd and saving Sam's Brasserie and Bar in London more than £5,000 in just four weeks![4]

Case Study #2: FoodSave

FoodSave, another London initiative, is helping small and medium restaurants to reduce their waste by conducting food audits, using data to identify problem areas, and providing practical guidance to achieve results. So far, they have supported over 200 food organisations in London. In one year, FoodSave has delivered over 1000 tonnes of food from the landfill and saved participating businesses over £550,000[5].

Case Study #3: Inamo

Inamo is London's only interactive restaurant group. It uses digital menus and interactive programs to allow customers to create unique and personalised dining experiences. While Inamo may be the most extreme form of a technological dining experience, digital menus are becoming more common in restaurants. However, Inamo does not (as far as we are aware) address the issue of food wastage.[6]

Until now, most devices aimed at reducing food wastage are B2B and target kitchen wastage. As 45% of food wastage comes from preparation, this is sensible. However, other causes of food wastage also need to be tackled.

Market Gap

34% of food wastage comes from customer's plates, but, so far, companies have not addressed this group. Digital menus have great potential to collect information about customer's preferences and dietary needs, which in turn will allow restaurants to reduce wastage by better understanding their customers.

Digital menus can also provide information to restaurants about the most commonly used ingredient and could automatically order more stock as necessary. It could also highlight excess stock so that chefs can offer dishes designed to use these supplies.

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[4]https://www.theguardian.com/sustainable-business/2016/may/27/restaurants-huge-food-waste-problem- smart-meter-winnow-hugh-fearnley-whittingstall

[5] http://www.foodsave.org/about/

[6] http://www.inamo-restaurant.com/about-us/

In short, digital menus, with the right analytics, can collect data that can ultimately be used to reduce food waste. Reducing food waste is not only socially responsible, but is also financially beneficial. Companies that have reduced food waste have already seen significant ROI so it can be expected that digital menus will achieve similar results.

Strategy

Our strategy includes developing an integrated smartphone menu/stock system app that could also link to third-party providers. There are two options: an app on a phone that displays relevant content or at-table screens (i.e. tablet-based) that allow non-smartphone users to access the system in-store. A similar idea, albeit for fast food, has been developed by McDonald's and is expanding rapidly (Marketing Week video, July 2017[7]). In detail, we should:

- Develop **data-driven food ordering systems** that include:
    - Use of smartphone signals (health, personal data, personal preferences, buying habits etc.) to support data gathering programmatic marketing and enable personalisation of menus to assist those with health issues or to meet personal preferences
    - Links between ordering systems and the needs of food banks/homeless shelters to make use of food that would otherwise go to waste
    - Links between stock control systems and menus to enable communication about use-by dates, food miles, nutritional content
- Develop links with 3rd party smartphone health apps (e.g. Weight Watchers, Slimming World, Diabetes UK) to display relevant food options, thereby reducing waste on plates
- Invest in digital menu systems for at-table ordering via smartphone app and/or fixed screen to enable personalised menus and experience
- Develop programmatic marketing using customer data from ordering and smartphone use to deliver marketing campaigns focused on personal preferences and behaviour
- Focus on the Care phase of STDC framework and use smartphone app data to target loyal customers with offers. This serves two purposes: to promote near end-of-use food items that would otherwise go to waste and also provide customers with a great promotion.

Challenges to Implementing Digital Menus

Implementing this strategy will, of course, involve some challenges. There are two primary challenges: customer acceptance and infrastructure.

- A recent study showed 37%[8] of customers prefer a tech-free dining experience and, thus, may not welcome digital menus as part of their restaurant experience. To challenge this issue, it's important to minimise the impact by encouraging restaurants to hire staff for the human-element and designing systems that are not obtrusive.

[7] https://vimeo.com/225123969
[8] https://trajectorypartnership.com/wp-content/uploads/2015/07/SaclaReport_v19FINAL.pdf

- Analytic systems must be designed that can process customer signals to offer fine tuned, specific advice and recommendations to restaurants. Software must also be available to quickly deliver content and campaign updates

Regulatory Issues

Currently, there are no food and drink regulations for digital menus. However, digital menus will be subject to food safety as well as privacy regulations; for example,

- Although GDPR regulations don't come into force until May 2018, globally the hospitality industry is notoriously poor. According to the 2016 Trustwave Global Security Report, it has the second largest share of breach incidents.
    - To ensure our compliance with the GDPR, we will need to advise app users that we are collecting data about them. We should also employ best practice with regard to secure data hosting and offering our customers the chance to withdraw from our marketing database
    - We must comply with existing regulations, such as the **Food Standards Act 1999**, regarding production, processing, distribution, retail, packaging and labelling of foodstuffs. This is especially relevant for our aim of providing food near the end of its use-by date to homeless shelters and food banks.

Digital menus will also make it easier for restaurants to implement regulations. For example, the 2014 Food Allergy Law of the Food Information Regulation - EU FIR 1169/2011, which states that all food businesses must provide allergy information on any sold unpackaged food. Digital menus can update ingredient changes and provide information to customers with immediate effect and little to no cost.

Conclusion

It is essential that we address all causes of food wastage. While food wastage from preparation is currently being addressed, food wastage from customers' plates is not. We must all act to become part of the solution-- even customers.

Digital menus can make this a reality by involving customers in the process. Collecting and analysing data about customer consumption patterns has the potential to drastically reduce food wastage and save restaurants money. Therefore, digital menus are a logical next step in addressing this global issue.

If we fail to address the issue of food wastage, rapidly expanding urban areas, such as London, may become unsustainable, which may eventually lead to food shortages similar to the situation occurring in some third world countries.
We must act now.