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Master's Thesis

PLATFORM MODEL DESIGN IN THE FOOD SHARING ECONOMY: DECISIONS FOR SUCCESS

AN EXPLORATORY MULTIPLE-CASE STUDY IN THE FOOD SECTOR

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ABSTRACT

The objective of this research is to gain insights on how platform model design decisions can impact the success of sharing platforms in the food sector. Using a qualitative research approach an exploratory multiple-case study was carried out. Case selection was based on a purposive sampling strategy, whereby 9 food-sharing platforms were selected based on variations in operating status, market orientation, customer segments, and the core value unit shared through the platform. Primary descriptive data was collected via an online investigation and organised according to the business model canvas which was mapped with multi-sided platform design considerations.

The findings suggested that success is depended on the platform's ability to establish trust between users, and the level of trust required is dependent on the type of food shared and whether the food sharer is a business or private individual.The contribution of this study is a guiding principle for food-sharing platform design: Where the food being exchanged has been subjected to a higher the level of preparation, the higher the platform design focus should be on establishing and building trust between peers such as strengthening governance rules to regulate participation. Similarly, the food sharer also plays a role in the platform model design decisions. Where the food sharer is a business entity, the less consideration is required on designing the governance system.

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1. INTRODUCTION

Since its emergence in 2008, the sharing economy has seen immense growth - once worth US$15 billion in year 2014, Brookings Institution India Center has now predicted the economy will reach a staggering US$335 billion by the year 2025 (Yaraghi & Rav, 2017). The force behind the growth of this new market model which focuses on allocation of underutilised goods and services between peers through a more collaborative, non-ownership consumption approach - has largely been facilitated and driven by the increasing availability and accessibility of real time, internet-based mobile and social networking technologies (Botsman and Rogers, 2010).

Despite the growth forecasted for the sharing economy sector, it should also be noted that the outlook may be bleak for some as not many sharing platforms actually survive, and only a few are (or will be) economically successful (Constantiou et al., 2016). An area where this is seeing true, is the food sector. Although there has yet to be released any solid statistics on the numbers of food-sharing platforms which have failed since the emergence of the sharing economy, these occurrences of failures have been widely evident via headlines and articles published online by food-technology media outlets such as foodtechconnect.com and eater.com. To date, investigations have not been conducted to seek an understanding of why sharing platforms specific to the food industry struggle to survive and hence insights behind the reasons for food-sharing platform failures have not been gained and therefore still unclear.

The premise of why such investigations into the food-sharing economy is important can be seen from a macro-level as the sharing economy has been asserted and described as a potential channel for solving 'wicked' problems in the world such as overconsumption and income equality (Munoz & Cohen, 2017). The sharing economy has also been touted as a compelling way to counter issues pertaining to environmental sustainability, materialism, global food security (Belk, 2009) and the way forward for improving social communities and economic efficiencies (Schor & Fitzmaurice, 2014). Even so, given these potentially positive, wide-scale impacts of the sharing economy, there is also an obvious lack of empirical data to support these visionary claims (Schor & Fitzmaurice, 2014), thus leaving these benefits as largely assumed. Furthermore, in order to investigate the impacts of the sharing economy or substantiate these visionary claims, successful instances of platforms need to be prevalent in order for such macro-level benefits to be quantified, bringing forth the importance of addressing the issue for food-sharing platform failures.

To understand why food-sharing platforms fail, the research is taken from a platform model design perspective. It is then my objective to examine sharing economy platform models of both successful and failed food-sharing businesses in order to gain insights on how platform model design decisions can enhance or hinder the chances of survival/success in the food sharing economy.

The intended contributions of this paper to the science community include preliminary insights on how certain multi-sided platform model design elements - when taken in the sharing economy context – require further platform design decisions depending on the characteristic of the physical product being shared between platform users, as well as the mode of sharing/consumption between users. The results are meant to spur further research into different sharing economy industries where challenges arise when the practicalities of sharing different types of underutilized goods are not as easily manageable when compared to sharing durable goods which have a high economic value such as cars or housing.

With hopes of seeing a future with a successful food sharing economy, it is also intended that the outcome of my research provides current food sharing platform owners and future entrepreneurs looking to enter the food-sharing economy with suggestions on how to design platform model to enhance the chances of survival according to the targeted user segments, and certain characteristics of the food being shared such as level of preparation and processing the food was subjected to, and the mode of sharing and exchange.

1.1 Motivation for Research

As part of a course I took – 'social entrepreneurship, sustainable business practices and developmental economics' – the assessment involved creating a business plan for a social enterprise (an organisation whose objective is to transform the socioeconomic environment through applying commercial strategies). It is the idea that businesses can also promote change in society through making changes in their internal practices. My social enterprise idea was to establish a juice company that produce juices made from only surplus and unwanted fruits and vegetables sourced directly from farmers and retailers. The idea behind the business came from discovering an extreme amount of waste in the fruit and vegetable industry was generated at both primary production and retailer links in the supply chain. Concito's 2011 report on hidden food waste in Denmark estimated that the total amount of edible fruit and vegetable wasted per year amounts to a total of 739m DKK with the most waste being generated from the retail industry (428m DKK) – particularly due to unsold surpluses, followed by the primary sector (311m DKK) from produce not meeting strict marketing aesthetic specifications set by retailers.

The objective was for the juice company to connect with those suppliers who have unwanted produce could thus become a mechanism to alleviate the amount of unnecessary waste produced throughout the supply chain thus benefit the society and environment. From this inference, the concept of collaborating and connecting spare capacity with demand has sparked my interest to investigate how the sharing economy could be applied in the food sector.

To add to the motivation for this research topic, examining platform model design in the sharing economy aligns with my academic interest in business and IT as the sharing economy platform can be viewed as a definitive example of the interplay between business economics and information technology.

1.2 Project Outline

The structure for the remainder of this report is as follows. Chapter 2, the research domain provides the backbone of the study. This includes a review of sharing economy literature and the current state and application of the sharing economy in the food sector. Chapter 3 covers the theoretical foundation and analytical framework that forms the basis of the investigation, leading to the problem definition and research question in Chapter 4. Chapter 5 describes the research methodology used and thereafter, the analysis and research findings are presented in Chapter 6, followed by a discussion of the findings implications in Chapter 7. Finally, the report concludes with an outline of the directions for future research (Chapter 8) and the overall conclusion of this thesis (Chapter 9).

2. RESEARCH DOMAIN

This chapter is divided into two main sections: Section 2.1 presents a review on existing literature on the sharing economy and Section 2.2 presents a review of the current state of sharing economy application within the food sector as well as arguments for its relevance.

2.1 Sharing Economy

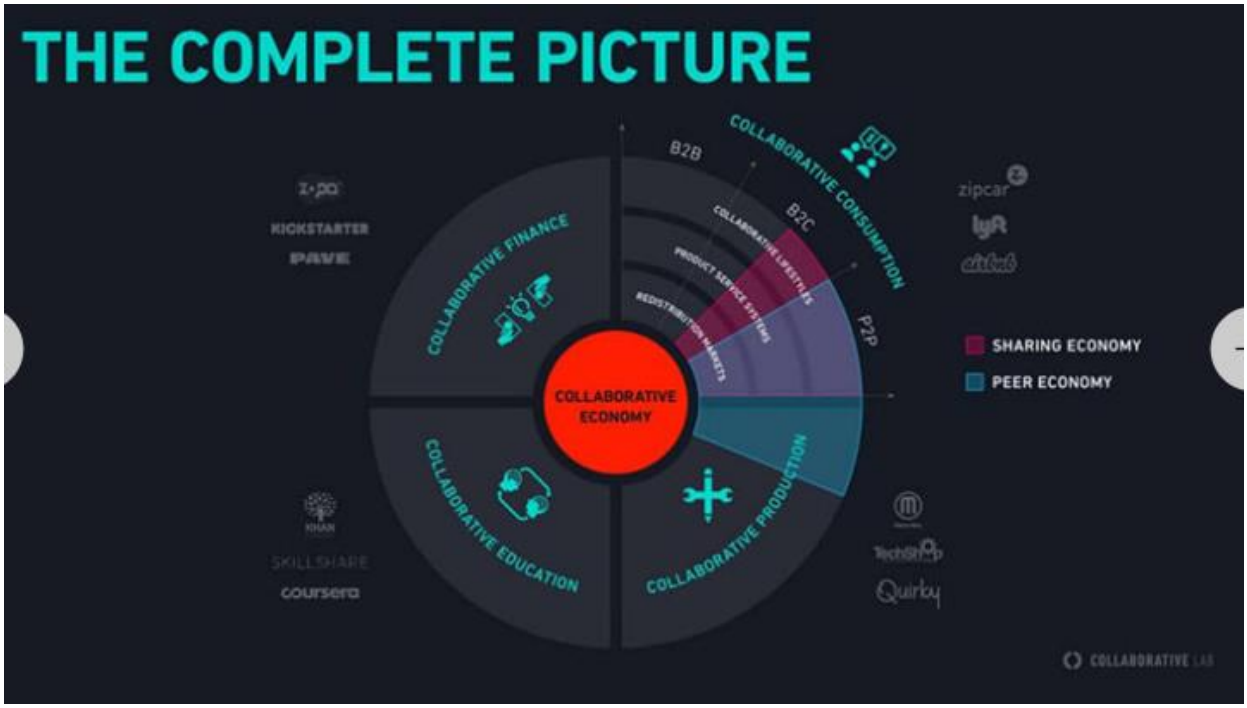
This section presents a review of the existing literature on the sharing economy to including definition and scope, the concept of sharing and the sharing economy platform model design.

2.1.1 The Sharing Economy

When it comes to defining the sharing economy, there is an obvious lack of consensus on what it actually constitutes. The sharing economy has frequently been interchangeably labelled or referred to ‘collaborative consumption’, ‘connected consumption’, ‘the collaborative economy’ ‘access-based

consumption', 'peer economy' or described as an all-encompassing umbrella term for the aforementioned labels. As case in point, Codagnone and Martens (2016) – in an attempt to define the sharing economy have systematically reviewed a large set of data surrounding the sharing economy to confirm that the sharing economy is still not rigorously defined nor has there been a consensus reached about what the sharing economy should constitute. With aims to sort through some of the terminology confusion, Botsman (2013) has created a 'complete picture' (Figure 2.1.) illustrating how collaborative economy, collaborative consumption, sharing economy and the peer economy fit together.

Figure 2.1 – The Complete Picture



Source: (Botsman, 2013)

As indicated by Figure 2.1, we can see that the sharing economy falls under the collaborative consumption and overlaps with the peer economy (see Table 2.1 for definitions). The sharing economy covers 3 distinct systems: collaborative lifestyles, redistribution markets, product service systems, and is focused on both P2P marketplaces and B2C market organisations.

Table 2.1: Botsman (2013): Collaborative Consumption, Peer Economy and Sharing Economy Definitions

Collaborative consumption	"An economy model based on sharing swapping, trading or renting services enabling access over ownership – it is not reinventing what we consume but how we consume."
Peer economy	"Person-to-Person marketplaces that facilitate the sharing and direct trade of products and services built on peer trust."
Sharing economy	"An economic model based on sharing underutilised assets from spaces to skills to stuff for monetary or non-monetary benefit. It is largely focused on P2P marketplaces."

Although collaborative consumption, peer economy and sharing economy terms have been used interchangeably, all have the same underlying values of collaboration, empowerment, openness, humanness, and the same driving forces: technology, shifts in values, economic realities, environmental pressures (Botsman, 2013). This coincides with some distinct attributes which others have described as essential to the sharing economy. For instance, PwC (2015)'s 'core pillars' of the sharing economy model includes: digital platform that facilitates connection between spare capacity and demand, access-over-ownership transactions, collaborative forms of consumption and branded experiences that encourages social connection. Similarly, Constantiou et al. (2017) mentions the key sharing economy attributes to include: access over ownership, peer-to-peer economy and allocation of idle resources, whilst Botsman's (2013) defines the sharing economy essentials as peer-to-peer economy and sharing of underutilised assets.

Table 2.2: Key Criteria of the Sharing Economy and Definitions Mapped

Key criteria	**Technology innovation**	**Consumption Mode**	**Purpose**	**Humanness/ Empowerment**
Botsman (2013)			Sharing underutilised assets	Largely P2P
PwC (2015)	Digital platform	Access-over ownership*	Connect spare capacity & demand	Social connection
Constantiou et al., (2017)		Access-over ownership*	Allocation of idle resources	Peer-to-Peer economy
*Access-over ownership mode of consumption is a commonly agreed as a characteristic of the sharing economy, however what actually constitutes as access-over ownership and how that relates to 'sharing' concept can be debated				

Evidently, there is incongruence when discussing the key characteristics of the sharing economy. For instance, whether the sharing economy should include only peer-to-peer marketplaces or B2C or B2B, or whether it's imperative for sharing economies to be oriented for-profits or non-for-profit, and also what actually constitutes as access-over-ownership/sharing transactions – all these key characteristics of the sharing economy are yet to be agreed upon which leaves the boundaries of the sharing economy

definition to be up for interpretation and possible misuse of the label. The 'finer' characteristics and attributes if and when narrowly defined, delimits the scope of the sharing economy and will fundamentally and automatically exclude many businesses who have labelled themselves as being part of the sharing economy.

However, what can be agreed upon is that the sharing economy overall, has a key objective of optimising the use of assets and resources which may be idling or underutilised or in more simple terms: its purpose is to connect spare capacity and demand. With regards to connecting those with spare capacity to those who have a demand for it, it is assumed that the use of a digital platform facilitates this interaction and therefore technology plays a key role in the sharing economy. The human value of the sharing economy - to foster social connections and build communities - is also a generally accepted characteristic which stems from the concept of 'sharing' being a "long-established positive normative load which inspires visions of both individuals and the societies they build and live in" (Codagnone & Martens, 2016). In general, both the objective to optimise use of assets through digital technologies and the vision to foster social bonding have been consistent characteristics when defining and scoping the sharing economy phenomenon.

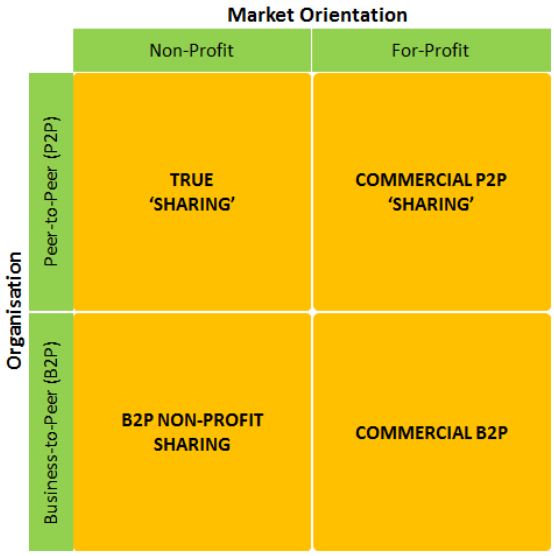
Concerning what constitutes as access-over ownership or non-ownership transactions, PWC (2015)'s Core Pillars of the Sharing Economy Model defines it to include: renting, lending, subscribing, reselling, swapping and donating. These types of transactions do not have an explicit link to the concept of 'sharing' (the sharing concept will be discussed further in section 2.1.2.) giving rise to the challenge that contemporary consumers may have different interpretations of what 'sharing' actually encapsulates - an issue echoed by Belk (2010) thus causing different contexts/businesses to be categorised as the same phenomenon. For instance, reselling as a mode of transaction can be argued as similar to a market exchange (re-circulation/redistribution of goods) and not 'sharing' this mode of transaction includes the transfer of ownership. The need for a clear framework to distinguish what types of sharing transactions or non-ownership modes of consumption that the sharing economy covers would be useful to discourage businesses from misapplying the sharing economy label (Habibi et al., 2016).

Concerning market organisation of the sharing economy, the views of whether it should only encompass peer economy or whether it should also include business-to-customer markets have been somewhat inconsistent. Furthermore, regarding market orientation – views on whether sharing platforms that involve monetary benefits during sharing/exchange (for-profit) can be considered as 'true sharing' is not

not yet clear, although as asserted by Codagnone & Martens (2016) market orientation of the sharing platform can be seen as a "'proxy' for the true sharing spirit".

Therefore, for exploratory research purposes, the sharing economy definition and scope will be left broad and will include all of which can fit in the platform typologies as conceptualised by Schor & Fitzmaurice (2014) in Figure 2.2, that is to include all sharing economy platforms regardless of market orientation (profit vs. non-profit) and market organisation (P2P or B2P). Note that, Codagnone & Martens (2016) have developed a similar typology for sharing platforms in which I have merged the grid naming into this matrix. Both original typologies can be seen in Appendix 11.2. This decision to be all-inclusive will be reflected later in Section 5.4.1 when the logic behind the sampling method is presented.

Figure 2.2 – Sharing Platform Typologies



Source: Adapted from Schor & Fitzmaurice (2014) and Codagnone & Martens (2016)

2.1.2 The Sharing Concept

> *[Sharing is] the most universal form of human economic behavior, distinct from and more fundamental than reciprocity. . . . Sharing has probably been the most basic form of economic distribution in hominid societies for several hundred thousand years.*

- Price 1975 (as cited by Belk 2009)

Sharing is thought to be the oldest mode of consumption and its subtlety and pervasiveness have led to this act going unnoticed or wrongly perceived as a form of gift-giving or economic exchange (Belk, 2009). The boundaries between sharing, commodity exchange and gift-giving are indistinct which adds to the confusion between the different modes of consumption. Furthermore, the distinction between these different consumption modes has been further complicated in recent years with mentions of such 'sharing' practices such as access-based consumption, access-over-ownership consumption, non-

ownership consumption, collaborative consumption, commercial sharing systems, and so forth (Belk, 2014).

This section attempts to clarify the sharing concept within the context of the sharing economy. The need to address the sharing concept is due to the murkiness that surrounds the label 'sharing' and what kinds of activity that includes in the sharing economy. As a case in point (and also mentioned earlier), a key characteristic of the sharing economy is the modes of consumption or sharing activities. Generally, it has been promoted that the sharing economy includes access-over-ownership modes of consumption, which according to PwC's (2015) and Constantiou et al., (2017) include transactions such as: renting, lending, reselling, swapping, donating, trading, redistributing – some of which do involve the transfer of ownership in the technical sense (for instance: reselling, trading, swapping, and donating).

The confusion surrounding the semantics of 'sharing' label and what sharing activities actually encompass has led to (whether knowingly or not), businesses promoting themselves as part of the sharing economy when in fact, their activities do not contain a communal sharing element or a feeling of shared ownership which is indicative of 'sharing' – when this is the case, the business is known to be pseudo-sharing (Belk, 2010). For instance, a commonly referred to case is Zipcar (Belk, 2014; Codagnone & Martens, 2016) owns the cars they rents the cars out to customers who pay a yearly membership and additional hourly fees. Although facilitated via a digital platform and self-promoted as a sharing business (Zipcar, 2018), it was asserted by Bardhi and Eckhardt (2012, as cited by Belk 2014) that Zipcar customers are unlikely to feel a sense of shared or communal ownership of the car because customers are not required to maintain or take care of the car in anyway. Furthermore, even if the pseudo-sharing business benefits all parties involved as well as the environment, it cannot be considered as 'sharing' if no communal sharing is involved regardless if the business has classified themselves under the sharing umbrella (Belk, 2014).

Therefore, the difference between economic exchange and sharing is the focus on creation of social connections communal bonds with other people – again the human and social aspect of sharing needs to be brought to the forefront when discussing what is covered under the sharing economy.

2.1.3 Sharing Economy Model Platform Design

Research into sharing economy platform model design is still nascent; however literature on platform theory, in particular multi-sided platform model design is abundant. In discovering so, Codagone and Martens (2016) has in their report, questioned whether the sharing economy platform is just another case

of multisided platforms (MSPs) and whether sharing economy platforms could be analysed the same way as multisided platform models.

If it is the case that both sharing platform and MSP models are considered the same, then it would be permissible to apply MSP's analytical and theoretical approaches to sharing economy platform, thus multisided platform model design considerations would also be applicable to food-sharing platforms. This is the assumption and approach taken for this research paper in hopes to gain insights that can clarify (if any) the existence of differences between MSP and Sharing economy model design considerations.

Constantiou et al. (2016) case study on Airbnb (which is considered a sharing economy platform) identified two phases that enabled this sharing economy platform to successfully evolve into a sustainable business: 1) creating the network of users and 2) augmenting the platform. These phases are in line with Evans & Schmalensee's design considerations for building a multisided platform. This alignment further supports the suggestion and the assumption that sharing platforms is just another case of multisided platform (MSP). Similarly, Constantiou et al., (2017) suggests that for the most part, the sharing economy platform follows the same logic of MSPs, that is, facilitating interactions between parties/sides, however with the fine distinguishing factor that sharing economy platforms are facilitating P2P rental/sharing (access-based consumption) of goods and services as opposed to selling/buying of goods between users as enabled by MSPs (using eBay as an example).

The gap when it comes to considering multi-sided platforms and the sharing economy platforms as the same is where actual non-digital provisions are consumed/shared, which have not been taken into account in these MSP design principles previously. In particular, the characteristics or quality of the goods shared, whether it is in terms of durability or economic value, is not factored into the MSP design principles and thus can be speculated to have an impact on platform model design success.

2.2 The Food Sector

This chapter highlights the relevance and importance of investigating the sharing economy within the food sector and also defines and scopes what it is meant by 'food sector' in this research paper. Further included, is an outline of how sharing platforms are currently applied in this food context.

2.2.1 Empirical research on Sharing economy and Food

Most empirical research on sharing economies have selected platforms such as Uber and AirBnB, as case studies whereby the underutilised asset is of high economic value and ownership cannot be transferred. In literature describing the sharing economy, often food surplus and generally food as an example of idle resources to be shared is mentioned briefly but not so much examined to the extent as other industries such as mobility (car-sharing) or accommodation (house-sharing).

To date, the only found empirical study regarding food and the sharing economy found was conducted by Malone et al., (2016) in an experiment which attempted to investigate the link between sharing economy practices and food waste reduction. Although the very first of this type of experiment, there were two fundamental experimental limitations: 1) the consideration of digital platforms in the sharing practice was not taken into account and 2) the experiment was conducted with students living in the same household - which does not align with the current sharing economy phenomena where sharing is facilitated between strangers. The lack of empirical research of sharing economy in the food sector does not diminish the importance and need for research in this field, but in fact reveals a noticeable gap in sharing economy research. More specifically, viewing food as the underutilised asset to be shared is characteristically different when it comes to modes of consumption and durability aspect when compared with other assets such as cars, tools, accommodation or skills which are commonly consumed or shared in the sharing economy.

If it is widely assumed and envisioned that through the sharing economy we can have a more sustainable environment, improved social relations and economic efficiency – what is it about the sharing economy business model that differs so much between industries and sectors? With the view that food sharing is a way for bonding with others, reducing waste, and thus the epitome of idea behind the ‘sharing’, why is it that food sharing between users does not translate successfully when facilitated by digital sharing platforms when compared to platforms which share cars, accommodation or skills?

Using a platform model design perspective, it is hope that through investigating successful and failed food sharing platforms, it can reveal whether there particular elements in the sharing platform model design which require more focus when considering a food-sharing business.

2.2.2 Relevance of the Food Sector

It is approximated that in the EU alone, 88 million tonnes of food are wasted annually with estimated costs of 143 billion euros (FUSIONS, 2016). With the global population predicted to grow up to 8.4 - 8.7 billion by year 2030 (UN, 2017), paired with the increase demand for food and the limited amount of natural resources, the current levels in which food is being wasted in developed economies is no longer environmentally, economically nor socially sustainable. In response to this looming encroachment, food has been identified as one of the key areas of focus (along with mobility, energy and housing) for Sustainable Consumption and Production (SCP) action by the Sustainable Consumption Research Exchange (SCORE!) (Tukker et al., 2008, as cited by Falcone & Imbert, 2017).

In line with achieving a more sustainable approach in the food sector, is the rhetoric of the sharing economy as the promoted solution to reducing food waste. Through connecting those with surplus foods found along the production, distribution, and consumption stages of the supply chain, with people who are in need of food, this method of surplus redistribution is said to be a 'win-win-win' on the environmental, economic and social fronts (Mourad, 2016).

Although food redistribution systems have existed for a long time, Midgely's (2013) study on UK food redistribution practices found that these practices are subjected to the same logics that have given rise to the issues of food insecurity and food waste in the first place. For instance, some regional food surplus redistribution centers are charging an annual subscription fee of £650 (back in 2013, at the time of research) to members who wanted to receive surplus foods such as community kitchens. This monetary based access-restriction increases social inequalities by disregarding communities who cannot afford the fee thus mirroring the capitalist food system whose inefficiencies and market failures caused food waste/poverty in the first place.

With these dual extremes of food waste and food insecurity existing in today's world, the inefficiencies in the food sector bears much relevance and importance for further developments using a sharing economy approach which takes power away from a capitalist system. With food-sharing platforms which exist with the purpose of reducing food waste this could be viewed as the beginning of structural changes in the whole food chain as well in consumers' attitudes and behaviours with the participation in the sharing economy. And thus for this reason, the food sector can be justified as a relevant area of interest when researching the sharing economy.

2.2.3 Defining the Food Sector

'Food industry' and 'food sector' are sometimes used interchangeably to refer to a complex network of global activities and diverse businesses that facilitate 'processing, conversion, preparation, preservation and packaging of foodstuffs' (Malagié et al., n.d.) to supply food consumed by most of the world. In saying so, there is a difference between the two terms which has to do with the scope of classification. 'Industry' as a general concept is the umbrella term to cluster businesses involved in production or processing of similar goods, whereas a 'sector' has a wider scope which includes groups of companies (from various industries) based on broader categorisation (Langager, 2017). The argument to use a broader classification, and thus 'food sector' as the case study, is to cover the basis that the interested units of analysis - food-sharing platforms - consists of meal-sharing platforms (see section 2.2.3) which could be classified under food services in the hospitality industry. With respects to needing to define the context in which the instance of the investigated phenomenon belongs to when conducting a case study (Starman, 2013), the context can be then described as covering segments of both the food and hospitality industry when looking at food-sharing platforms. Although the food industry has been defined to include consumption and catering of food products and services (Economy Watch, 2010), this blurred overlap between the food and hospitality industries is recognised when considering where food-sharing platforms can belong, thus for semantic purposes of this report and by Langager's (2017) definition of 'sector', I will use the term 'food sector' to label the research context for this study.

2.2.4 Scoping the Sharing Economy in the Food Sector

Figure 2 shows an excerpt from Oywang's (2016) Collaborative Honeycomb (for the full Honeycomb, see Appendix 11.1) - here we can see the three contexts in which the sharing economy is currently applied in the food category: food delivery, shared food, and shared food prep. This paper's focus is on food-sharing, with food being the core value unit of transfer (Choudary, 2015) - thus from here on, when referring to the 'food-sector' and the food sharing economy, only platforms whose core unit offer is 'shared food' are within scope, and all platforms whose main business purpose is food delivery services or food preparation services are omitted.

Figure 2 – Food category excerpt from Oywang's Collaborative Honeycomb (2016)

In principle and both from a macro and micro perspective, food sharing may have a positive impact on all three dimensions of sustainable development by boosting savings, helping to create and/or consolidate existing social relations and by reducing waste generation.

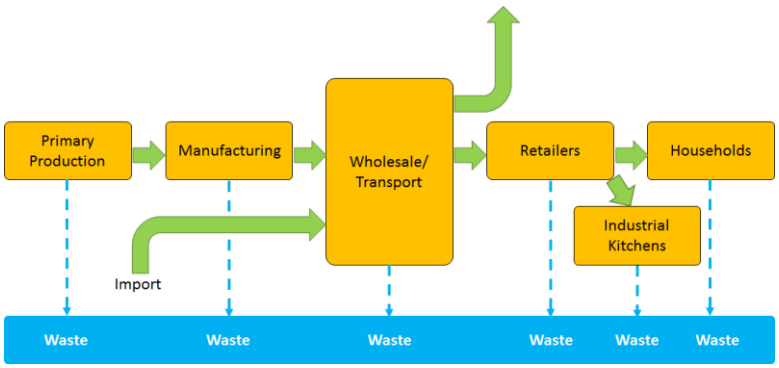
- Falcone & Imbert (2017)

As outlined by Falcone & Imbert (2017) in the aforementioned quote, food sharing has the potential to benefit society through improving social connections, reducing waste whilst increasing savings. With this in mind, the following section will, on a micro-level, touch upon how the sharing economy has been applied to the food sector – specifics to food-sharing platforms aimed at reducing waste, increasing social relations and creating economic opportunities.

Food-Sharing Platforms with a focus on Reducing Food Waste

Figure 2.3 shows a simple food supply chain illustrating where food waste occurs. Currently, there are food sharing platforms attempting to capture the 'waste'/surplus produced at each supply chain link and share (redistribute) the excess resources for further use which would have gone to waste. These platforms include peer-to-peer markets, B2C as well as B2B. Yume is a sharing platform in Australia that facilitates the sales and donations of surplus foods from primary producers, wholesalers, industrial kitchens to commercial buyers and charities, hence B2B. TooGoodtoGo is a non-profit sharing platform founded in Denmark that facilitates sales of surplus or unsold foods from retailers, cafes, restaurants, bakeries and other food businesses to private customers, hence B2C. OLIO is a UK-founded sharing platform that allows sharing of unwanted food items (and non-food items) between private users and also from food businesses to private users hence both P2P and B2C.

Figure 2.3 – Waste in the Food Supply Chain



Source: adapted from CONCITO (2011)

Food Sharing Platforms with a focus on Building Social Relations

Sharing platforms have also emerged where the main focus is building social relations over food or meal sharing experience (note that food is still shared in this context thus within scope of this research). These platforms connect strangers with the purpose of sharing a meal together, or other dining/food experiences. VizEat is a global based platform that offers location based food events such home-cooked dinners, food tours and cooking classes. The local foods and home-cooked meals are not the only things shared, as the purpose is also to connect with locals, make friends with other travellers and share a general passion for food at these events. Similarly, CasseroleClub is a government initiative that connects locals who are willing to cook and deliver meals to the elderly people. The purpose is to counter social isolation and also share the nutritious meals with the elderly.

Food Sharing Platforms with a focus on Economic Opportunities

Some sharing platforms within the food sector have a focus on creating economic opportunities for their users. While it might not be the primary value proposition offered, economic opportunities may follow as a secondary benefit of using the platform after other value propositions such as those relating to social and environmental benefits. It should also be noted that user participation could be economically motivated. TooGoodToGo creates economic opportunities for businesses to earn extra sales revenue and save on disposal costs.

Although these aforementioned food-sharing platforms are successful – in that they are still active – there are many which have failed to attain critical mass and have now ceased to exist. With a successful food sharing economy touted to have a 3-pronged impact on ecological, economic and social levels, the evidence of so many failed food-sharing platforms gives rise to the problem field of this research paper.

Figure 2.4 – Remaining Flow of Report from Theoretical Foundation to Discussion

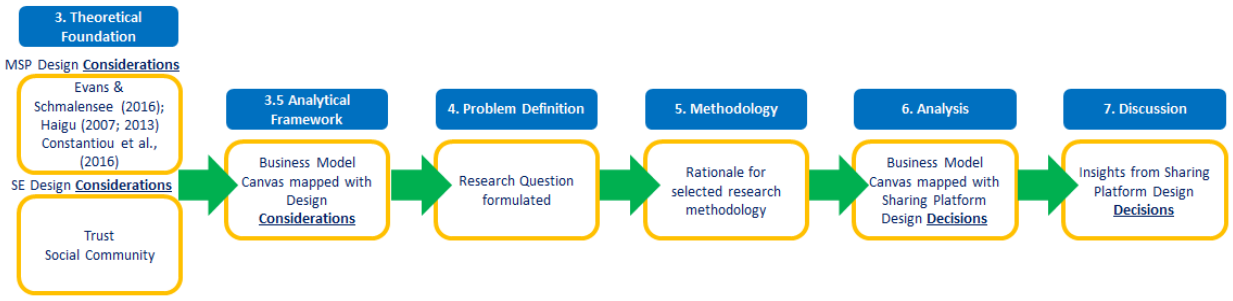


Figure 2.4 depicts the flow of the remainder of this report from theoretical foundation to analysis to discussion of the research findings.

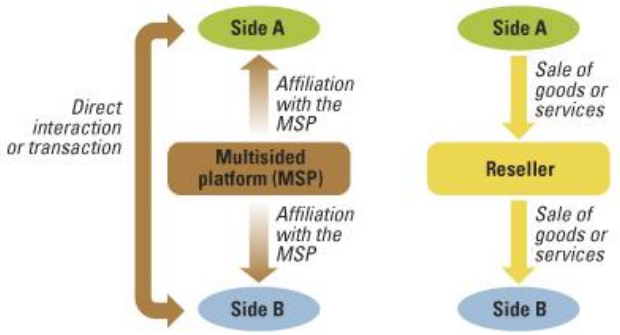
3. THEORETICAL FOUNDATION

This chapter introduces the key concepts of multi-sided platform and the sharing economy (with application considerations in the food sector) from a platform design perspective. The purpose is to provide the context in which the analytical framework is constructed which will be used in analysing the food-sharing platforms.

3.1 Multisided Platforms (MSPs)

A multi-sided platform is a business that operates a digital (or physical) place to help bring together and facilitate direct interactions between two or more distinct but interdependent groups of customers (Osterwalder & Pigneur, 2010). There are two fundamental characteristics for a platform to be considered an MSP as pointed out by Haigu & Wright (2015): (1) each customer side must be 'affiliated' with the platform in some 'meaningful' way and (2) interactions between customer groups must be 'direct'. Figure 3.1 shows the difference between the MSP and reseller business model (note that in the reseller model, there are no direct interactions between customer groups).

Figure 3.1 – Multisided Platform Model vs. Reseller Model



Source: Haigu (2014)

The platform acts as the digital intermediary, cutting out the 'middle man' thus allowing platform-affiliated customer groups to directly interact and transact with each other. 'Affiliation' with the platform means that each customer side is required to 'platform-specific investments' (e.g.: creating an account, paying a fee to join the platform etc…) in order to be able to interact with other users (Haigu & Wright, 2015). For a multisided platform to be a 'true MSP', it is an essential requirement that it exhibits indirect network effects (Haigu, 2007), that is, when the addition of one type of user on the platform increases/decreases the value that the other type of users receive – for instance – on a meal-sharing

platform, having many dinner *hosts* offering enticing meal experiences increases the value for diners as they have a variety of meal experiences to consider to and sign up for.

3.2 Multisided Platform Model Design

The success of multisided platforms not only depends on pricing strategies but also on strategic platform design decisions such as product offerings, service provisions and governance rules regarding user participation and interaction also play a critical role in a platform's success (Evans & Schmalensee, 2016; Hagiu, 2007).

The platform design consideration works of Haigu (2007, 2013), Evans & Schmalensee (2016) and Constantious et al., (2016) will be used in developing the analytical framework of this report. These researcher's design considerations are briefly summarised below and are discussed more in depth in later in this section.

Evans & Schmalensee (2016) presented 6 design decisions that multisided platforms should address: 1) Identify areas of opportunities where an MSP can reduce significant transaction costs which keeps buyer and sellers apart; 2) Secure critical mass in order to ignite the platform; 3) Getting the pricing structure right; 4) Ensure the MSP is well integrated to the broader ecosystem including how many customer segements to connect; 5) Design of the physical or virtual space where participants get together; 6) Governance system deciding how participants interact. Similarly, Haigu (2007) contends that there are 3 decisions to make when designing and expanding a MSP: 1) Decide who the relevant platform constituents are; 2) Decide which activities the platform should perform for these constituents and which activities should be foregone; 3) Decide the trade-off between the scope of the MSP and its functions when considering expansion. Furthermore, Haigu (2013) proposed that there are 4 strategic design decisions to consider for MSP: 1) Decide on the number of sides to bring on board; 2) Design in terms of features and functionality of the platform, 3) Pricing Structure, and 4) Governance Rules. Constantiou et al. (2016)'s study on the evolution of a sharing platform into a sustainable business found that the success of a platform relies on two phases: 1) Creating a network of users through providing value adding services to customers sides and 2) Augmenting platform through incremental improvements and extending value adding services. The latter phase focusing on platform growth and expansion.

Table 3.2 shows an attempt to consolidate the overlaps in multisided platform design considerations proposed by Evans & Schmalensee (2016), Haigu (2013; 2007) and Constantiou et al., (2016). Note that Constantiou et al., (2016)'s research was based on sharing platform. The overview indicates prior to consolidation, there were 7 design considerations that were of importance when building a multisided platform whereby consideration G is explicitly directed at designing for growth and expansion by Haigu (2007) and Constantiou et al., (2016).

Table 3.2 – MSP Platform Design Considerations

	PLATFORM DESIGN CONSIDERATIONS						EXPANSION
Multisided Platform	**A**	**B**	**C**	**D**	**E**	**F**	**G**
Evans & Schmalensee (2016)	Opportunity for decreasing transaction cost	Securing critical mass	Integration to a broader ecosystem	Pricing Structure	Design Virtual/ Physical space	Governance System/ Partipation Interaction	
Haigu (2013)	Platform functionality design		Number of sides to bring on board	Pricing Structures		Governance rules	
Haigu (2007)	Choice of platform functionalities/ fundamental services of the platform		Choosing the relevant platform sides				Deciding between breadth of users or depth of functionality
Sharing Platform							
Constantiou et al., (2016)	Creating the network of users through providing value adding services to customers sides						Augmenting platform through incremental improvements and extending value adding services
Consolidated Platform Design Consideration	***1) Consider what market friction reducing services/ functions to provide to the customer sides***	Securing critical mass is a result of implementing design decisions and not a platform design consideration in itself	***2) Consider the relevant sides to bring on board***	***3) Consider how to get the right price structure***	***4) Consider how to design the virtual and physical interaction space***	***5) Consider what are the governance rules and how to enforce them***	Expansion design considerations are out of scope for this research paper

Through reviewing each design consideration and the overlaps between them, I have reduced the total number of considerations from 7 to 5 (see last row of Table 3.2.) Note that design consideration B was omitted as securing critical mass is not so much a design consideration in itself, but more the result of implementing certain platform design decisions such as how many sides to bring on board and pricing structure.

Design consideration G was de-scoped as it deals with platform expansion and growth. The 5 consolidated multi-sided platform design considerations are explained next.

3.2.1 Consolidated MSP Model Design Considerations

1) What market friction reducing services & functions should the platform provide to its customers?

This design consideration is about identifying, choosing and providing value-adding platform services and functionalities that aim to reduce transaction costs and are most appealing for the multiple customer sides.

Transaction costs are the costs incurred when making an economic exchange in the market – when these costs are high, it will make it more difficult or costly for the market participants to find and interact with each other. There are two types of transaction costs in which an MSP can reduce: search costs and shared costs. Search costs are incurred by the multiple sides before they interact, and shared costs are incurred during the interactions themselves (Haigu, 2007). Multisided platform can create value by identifying these opportunities where there are significant market 'frictions' or impediments keeping market participants apart and reducing these frictions by facilitating direct interactions between these market participants and thus reducing transaction costs (Evans & Schmalensee, 2016).

It is through this design consideration that the largest possible search/shared costs savings can be gained thus leading to indirect network effects - whilst keeping conflicts of interest on all customer sides low (Haigu, 2007). Furthermore, the strategic design of the platform model 'hinges crucially on the choice of platform functionalities' (Haigu, 2007).

2) What are the relevant sides to bring on board?

This design consideration is about identifying the number of relevant constituents for the multisided platform while taking into account the broader ecosystem of the platform. This means considering other businesses, institutions, and other environmental factors that could (positively or negatively) impact the value generated for the platform participants (Evan & Schmalensee, 2016). Sometimes the industry itself will constrain the number of relevant sides (Haigu, 2013) for instance for many food-sharing platforms, the two sides are: buyer and seller, cooker and eater, diner and host.

Attracting more sides to the platform increases the need and complexity of managing and balancing the interests of the many distinct sides thus can spread resources thin. This in turn, prevents deepening of

platform functionalities and services provided to each side, and overall, constrain the MSP's ability to innovate and augment, thus hindering growth and success (Haigu, 2007).

3) How to get the right pricing structure?

This design consideration is about finding the right distribution structure of revenue/price contributed by the different platform participants. Pricing decisions, including decisions on which customer sides to subsidise, has been deemed the primary determinant of multisided platform success (Osterwalder & Pigneur, 2010; Tiwana, 2014; Haigu, 2009). The right pricing structure not only attracts users thus leading to critical mass, but also ensures that the platform is profitable enough to be able to further develop its functionalities or attract more sides to provide services to, thus evolving into a more sustainable business.

4) How to design the virtual and physical interaction space?

This design consideration is about designing the space where participants get together (to interact be it a physical or virtual space), with the intention of enhancing the value of same-side and cross-side network effects between the participants (Evans & Schmalensee, 2016). For instance, designing an online support community for home-cooks can enhance the value of same-side network effects – that is, the addition of an additional home-cook into the community group can increase the value to other home-cooks as they are able to receive more support.

5) What are the governance rules and how to enforce them?

This design consideration is about determining how to regulate platform participants' behaviour and interactions. As multisided platforms create value through facilitating interactions between participants, it is important that the interactions are regulated and rules are enforced in some way otherwise negative behaviour externalities can affect the value of the platform's proposition to customers (Haigu, 2013), that is, the quality of the product or service being delivered. Access/participation and interactions/activities regulation are the two major non-priced governance rules in which MSP's can instil governance on their different customers. Access regulation pertains to: who is allowed to join the platform? And interaction regulated pertains to: what are the different sides allowed to do?

This consolidation of MSP design consideration works from Haigu (2007, 2013), Evans & Schmalensee (2016) and Constantiou et al. (2016) sets the foundations of the framework used to analyse the food sharing platforms.

It must be noted that these design considerations should not be taken as separate, isolated decisions. It is the careful balance and alignment act between all design considerations that is critical for a multisided platform's success in which Evans & Schmalensee (2016) has compared it to "the business equivalent of walking a tightrope while juggling". For instance, deciding who the relevant sides to bring on board the MSP (consideration no. 2) and identifying what services the platform needs to provide for these customer sides (consideration no.1) are critical for the success of a multisided platform prior to launch and pricing decisions (Haigu, 2007).

Similarly, when identifying what services and functionalities to provide to the different sides (consideration no. 1) the interaction design space (consideration no. 4) and governance rules/systems (consideration no. 5) should be considered and aligned together in order to reduce transaction costs while maintaining an audience.

3.3 Sharing Economy Platform Design Considerations

"The social component, the community building that is a crucial part of the sharing economy…"

- April Rinne (as cited by Lacy & Rutqvist, 2015)

The intention of this section is to identify any platform design considerations that should to be taken into account when dealing with the sharing economy. As already discussed, the sharing economy model is assumed to be the same case as a multisided platform and thus only features or components distinct to the sharing economy will be identified and discussed here.

As identified by Schor & Fitzmaurice (2014), the characteristics in which makes the sharing economy 'special' and different from previous forms of sharing includes: the platform's ability to facilitate sharing between strangers rather than among kin or within communities, the need for establishment of trust, strong reliance on digital technologies – that may favour offline activities (Codagnone & Martens, 2016) and participation of high cultural capital consumers. While April Rinne, a sharing economy expert,

believes the characteristic crucial to the sharing economy is the emphasis on the social component – the community building – as per quote mentioned.

Similarly, Codagnone & Martens (2016) also echoes that building trust between strangers is a key driver for platform success but also a key challenge. And within the food context, findings have shown that a lack of social relationships led to a lack of trust and thus impacted food sharing practices negatively (Lazell 2016; Farr-Wharton et al. 2014, as cited by Falcone & Imbert, 2017) implying that by enhancing social components in a sharing platform, this can lead to increased trust between users and thus increased likelihood of platform success.

It can be inferred that the design considerations which touches upon the issues of establish trust between strangers and building social connection are particular to platform businesses in the sharing economy.

3.4 Business Model Canvas

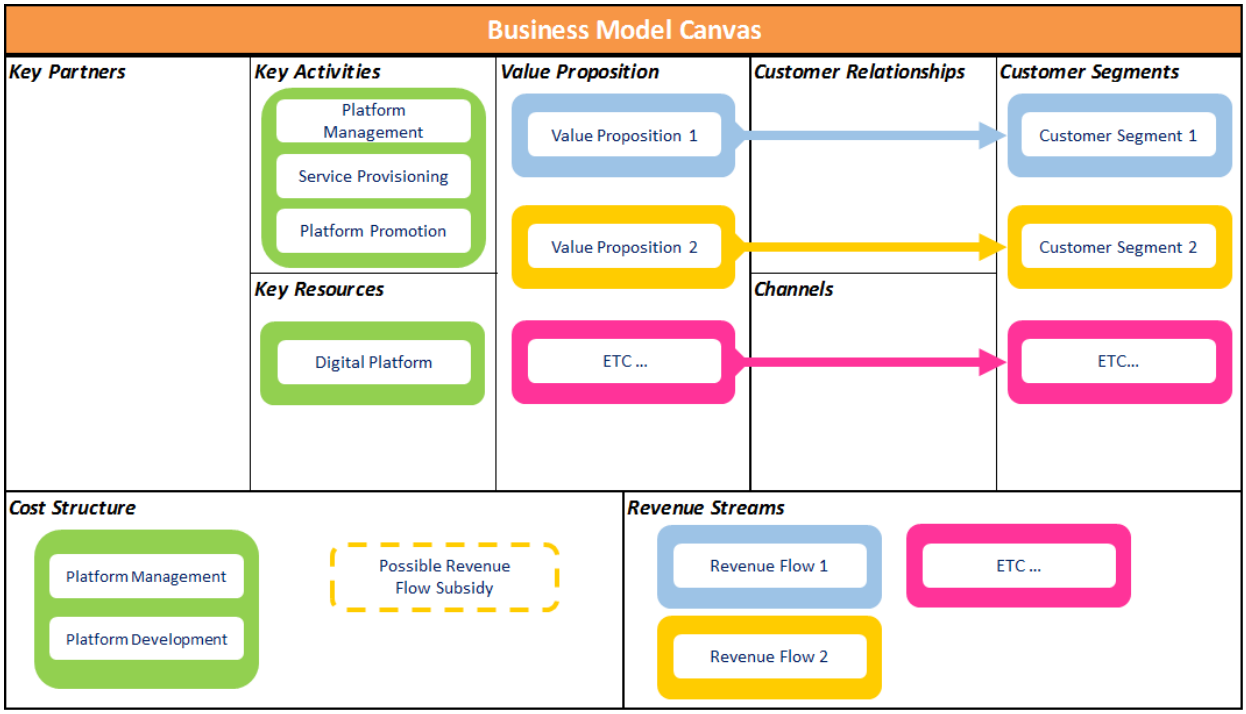
A business model describes the logic of how an organisation creates, delivers and captures value (Osterwalder & Pigneur 2010). The business model canvas is a tool used to map and display the information derived from strategic choices made by the organisation's decision makers (Osterwalder et al., 2005). Moreover, to further support the use of the business model canvas as an analysis tool, Haigu (2007) states that multisided platform design decisions *directly determines* the choice of business model, and therefore, through explicitly mapping the sharing platform models into the business model canvas, we are able to trace what design choices were made. Therefore, the business model canvas will be used as an analysis tool in Chapter 6 (Analysis).

The business model canvas is comprised of 9 building blocks. Their definitions are briefly described in Table 3.4 and are taken from Osterwalder & Pigneur (2010).

Table 3.4 – Business Model Canvas Building Block Definitions (Osterwalder & Pigneur, 2010)

• **Customer segments**: different groups of people or organisations a business aims to reach and serve
• **Value propositions**: bundle of products or services that create value for a specific customer segment
• **Channels:** the ways in which a company communicates with and reaches its customer segments to deliver a value proposition
• **Customer relationships**: types of relationships a customer establishes with specific customer segments
• **Revenue streams**: represents the cash a company generates from each customer segment
• **Key resources**: are the most important assets required to make a business model work
• **Key activities**: are the most important things a company must do to make its business model work
• **Key partnerships**: is the network of suppliers and partners that make the business model work
• **Cost structure:** describes the cost incurred to operate a business model

Figure 3.4 – Business Model Canvas – MSP Pattern



Source: Osterwalder & Pigneur (2010)

Osterwalder & Pigneur (2010) have also identified a distinct 'pattern' for multisided platform models which focuses on 6 building blocks: value proposition, key resources, key activities, customer segment, revenue streams and cost structure – this is depicted in Figure 3.4 and described in Table 3.5. Although these six components make up the structure of a multisided platform, each sharing platform analysed in Chapter 6 will be mapped onto all building blocks of the business model canvas in the case that the identified MSP pattern does not fully represent the sharing platform models.

3.5 Analytical Framework

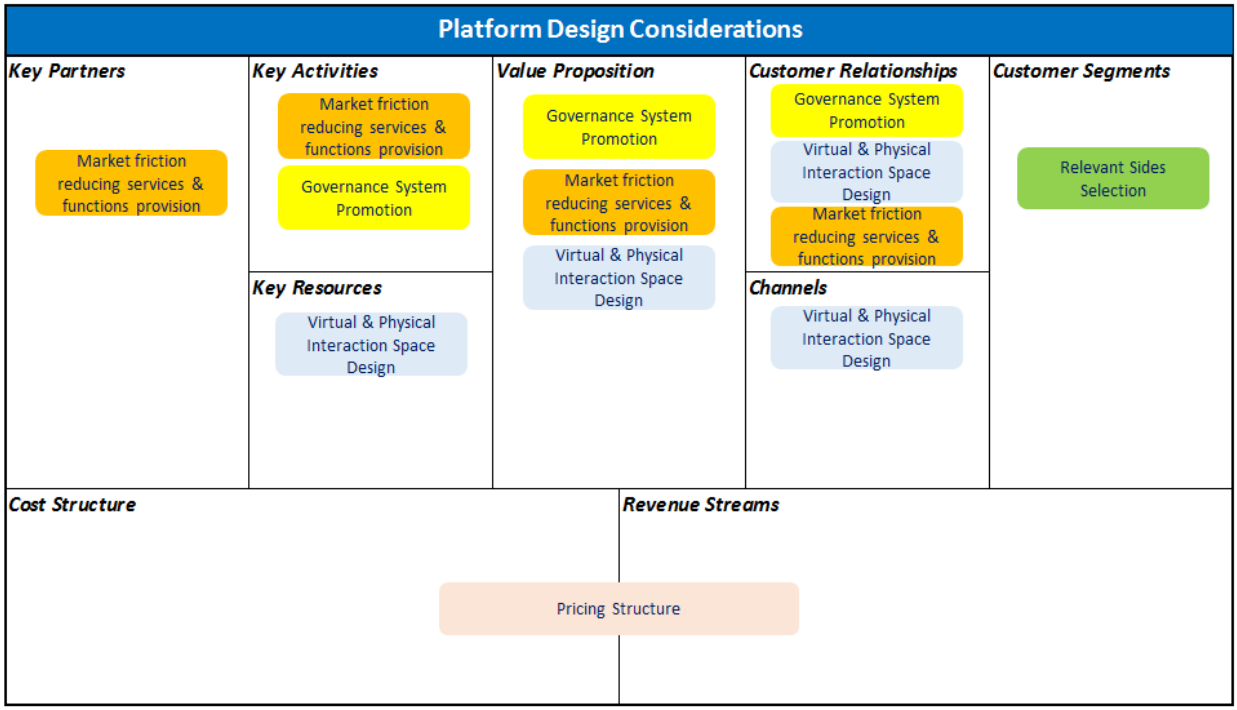
To analyse the food-sharing platform model design decisions, I have constructed a framework that merges the work of Haigu (2007; 2013), Evans & Schmalensee (2016) and Constantiou et al, (2016) on platform design considerations which are critical for success. Figure 3.5 shows these design considerations mapped into the relevant building blocks of the business model canvas. Where the design considerations are classified under several building blocks, this suggests that these considerations can be applied in many areas. For instance, a value-adding service provided under key activities could be reviewing home-cook applications, while a value-adding service provided under customer relationships could be 24 hour personal customer support for diners.

Table 3.5: MSP Pattern Building Block Description (Osterwalder & Pigneur, 2010)

Value proposition: creates value in three main areas: 1) Attracting user groups (e.g.: customer segments); 2) Matchmaking between customer segments and 3) Reducing costs by channelling transactions through the platform
Key resources: the platform
Key activities: platform management, service provisioning and platform promotion.
Customer Segment: they have 2 or more customer segments, each with its own value proposition and associated revenue stream. Moreover, a customer segment cannot exist without the others.
Cost Structure: Main costs: maintaining and developing platform
Revenue Stream: Each customer segment produces a different revenue stream. One or more segments may enjoy free offers or reduced prices subsidized by revenues from other customer segments.

The issue of trust is deemed to have been considered in the sharing platform model design if any value propositions, activities, resources which are relevant for developing trust are featured in the canvas such as reputation systems, certification/verification of platform participants. Similarly, social connections is deemed to have been considered in the sharing platform design if any value propositions, activities, resources, customer relationships which are relevant for building social connections within and between customer segments are featured in the canvas such as communities and messaging systems.

Figure 3.5 – MSP Platform Design Considerations Mapped into Business Model Canvas



4. PROBLEM DEFINITION

"While we're hungry for more, the realities of our business leave us no choice but to conclude this chapter."

- Ian Ferguson and Brendan Marshall (Kitchit founders, 2016)

While Uber and Airbnb have seen great successes in the sharing economy, Kitchit is just one of the many examples of failed food-sharing businesses in the sharing. Despite having received over US$8 million in funding since being established in 2011 (of which US$7.5 million was granted in 2014), Kitchit's funds ran dry in 2016 and the platform business was forced to shut down. What realities of *their* business are causing food sharing platforms to fail despite having received substantial amounts of funding and media attention? From already having defined the problem field and theoretical foundations, the next section

formulates the paper's research question, and also outlines what is not within scope of the research (topic delimitation).

4.1 Research Question

Given the assumed positive claims of the sharing economy's ability to reduce waste, build communities and improve economic efficiencies in the food sector, it is unfortunate that many food-sharing platforms have failed or are struggling to survive. With hopes to see the food sharing economy thriving in the future, it is the intention that this research provides insights on how platform design decisions can potentially influence the success of food-sharing platforms. Therefore, the research question can be formulated as follows:

How can platform model design decisions influence the success of food-sharing businesses in the sharing economy?

Whereby 'platform model design decisions' refers to the choices made by platform owners/decision makers that dictates how the business creates, delivers and captures value (logic behind the platforms existence and purpose) and 'success' defined - on the most basic level as a business which is still existing and functioning. Success can be defined in more specific measures such as number of years active and how many countries does the platform exist in (degree of internationalisation or scalability), however for openness, this report defines 'success'- in essence - as 'currently existing and active'.

It must be noted that the choice to have one main research question and no additional sub-questions is intentional and does not necessarily disqualify the investigation from being sound research. There are no rules that sub-questions are required when What is crucial when evaluating research question is that the question is sound, clarified and formulated in such a way that it can be answered given the framework of analysis and available resources (Flick, 2014), which has been established in this case.

4.2 Topic Delimitation

The objective of the paper is to investigate how certain MSP model design elements can impact the success of food-sharing businesses. In examining sharing platform model design decisions, it should be stated that the emphasis is not on the process or rationale upon which the decisions were based or derived from, but what the end design choice was. For instance, when examining the pricing structure design, the decision is taken at a descriptive level and will not delve into why the platform has decided to select that particular pricing structure/strategy over another. Furthermore, it is assumed that the resulting platform

model design decisions influences the success of a platform. It is also recognised that platform model design is not the sole and defining reason impacting a platform's success as other factors such as resource capability constraints (financial or human), poor leadership, not adapting with the competitive environment are all factors that could play a role in impacting a firm's success.

Another delimitation to note is that in this research paper, platforms are viewed from a market-oriented perspective instead of a technology-oriented perspective. That is, platforms are considered as "markets, where users' interactions with each other are subject to network effects and are facilitated by a common platform provided by one or more intermediaries" (Eisenmann et al., 2011) whereby its purpose is matching supply and demand (e.g.: Airbnb, Uber, Facebook). The technology-oriented perspective view platforms as software platforms such as Apple App store where the purpose is to enable co-creation of value and innovation in the ecosystem by complementors. The technology-perspective will not be pursued in this paper.

To reiterate the case study's scope of the sharing economy in the 'food-sector', the research is limited to platforms who is focused on sharing food/meals (including food experiences), meaning that there should be a provision or transfer of food that takes place during interactions between the platform customer groups. It also should be also noted that the food-sharing platforms of interest caters towards the consumption end of the food supply chain, i.e.: platforms which involves retailers, industrial kitchens and households (see Figure3.1)

Finally, there will be no attempts to investigate how the sharing economy in the food sector impacts the labour market and any regulatory issues surrounding the food sharing economy, nor does it endeavour to examine user behaviours or motivations for participating in the sharing economy. Moreover, the potentials or extent to which the sharing economy actually contributes to improving social connections, economic efficiency, socio-economic inequalities and environmental concerns will not be investigated.

5. METHODOLOGY

This chapter presents the justification for the research methodology and methods employed to answer the research issue at hand. Firstly, the philosophical assumptions underpinning the research methodology is presented, followed by the rationale behind selecting a case study as the research strategy and design to investigate the research question. Thereafter, the methods for data collection and analysis are described. This chapter concludes with a section addressing the quality of the research, in particular the limitations

and challenges of the research approach taken in terms of validity and reliability of the research design and the generalisability of the results.

5.1 Research philosophy

In order to justify the research methods and techniques used throughout this study, it is generally required to state the philosophical standpoint underlying the research methodology and methods. Crotty (1998) asserts that typically, social researchers do not start with epistemological considerations to inform the theoretical perspective to then derive the research methodologies and methods used in the research but rather use a bottom up process whereby the research methodology and methods are selected according to the research questions that requires answering, and thus the philosophical stances are explained.

This research's epistemology is rooted in constructionism where it is viewed that knowledge (and therefore meaningful reality) is created by the social actors and their interactions in their social context (Crotty, 1998). It views that there is no single objective truth waiting to be discovered (as in the case for objectivism), but rather the 'truth' is constructed in the minds of social actors which stems from interactions and engagements within their realities of their world, leading to the idea that when dealing with the same phenomenon or event, there can be many different interpretations of reality and versions of 'truth' (Crotty, 1998).

Constructionism is rooted in the interpretivist theoretical perspective and interpretivism informs the logic behind the methodology chosen for the research problem. Interpretivism asserts that reality cannot be measured using natural science (unlike positivism) but requires interpretation to understand the meaning behind the social actors' realities.

In terms of the sharing economy phenomenon, the social actors are considered to be the sharing platform owners/decision makers and the sharing platform model design can be viewed as the result of platform owner's socially constructed realities. As the research is concerned with understanding how platform model design can influence platform success, the objective is to not understand how and why the platform owners arrived at the design decisions that they did, but rather understand how the platform model design decisions have led to the platforms success or failure. In doing so, I seek to study and understand the constructed realities in terms of the sharing platform model design. Crotty (1998) explains that web pages "show the social construction of reality and specific issues", thus if platform

model design data can be derived from data found on platform web sites, interpretation of this data can reveal how platform model design decisions can influence platform success.

5.2 Research Approach

In investigating *how* platform model design decisions influence platform's success, a qualitative research approach is the natural selection. Grounded in an interpretivist theoretical perspective and thus rooted in the constructionist epistemology, the qualitative approach involves an inductive process for reasoning logic (bottom-up approach). This means that from the specific data collected and analysed for each sharing platform case, inductive reasoning involves identifying emerging patterns from specific case data and drawing instructive untested conclusions with the intention to develop theory.

As no research has been performed on food-sharing economy platform model design, the objective to understand how design decisions play a part in platform success or failure requires a qualitative, inductive approach with aims to propose insightful and new ways to understand sharing platform model design.

5.3 Research Strategy and Design

The research strategy can be seen as the process or plan to carry out the investigation in order to answer the research question. It is the underlying logic that links the choice and application of methods to the desired outcomes (Crotty, 1998). Following the interpretivist perspective, my choice of research strategy is an exploratory case study. The case study strategy was chosen because it allows the researcher to "investigate contemporary phenomenon within its real-life context, especially when the phenomenon and context are not clearly evident" (Yin, 2003) whereby the contemporary phenomenon for this investigation is the failing food-sharing economy, and the real-life context is the food-sharing platforms.

The approach or type of case study is exploratory as no research attempts to understand how platform model design decisions impact food-sharing platform's success has been conducted before. With no preliminary research to go by, this means that the results derived from this exploratory study is to offer analytical richness, and to gain insights and new understandings to "establish plausibility among different variables" as defined by the researcher (Flick, 2003). Furthermore, exploratory case studies can be viewed as a pilot of future causal or explanatory research designs (Streb, 2010).

The case study design is: multiple-case study as a series of food-sharing platforms (units of analysis) will be investigated. The rationale for this is explained in later sections whereby purposive sampling for maximal variation (5.4.1) and theoretical generalisation of results (Section 5.5.1) is discussed.

5.4 Data Collection and Analysis

This section describes the data sources in which platform data and information were collected from, the sampling rationale, the process in which the units (food-sharing platforms) were selected for analysis and the qualitative technique used to analyse the data collected.

5.4.1 Sampling Method

Due to the exploratory nature of this research, a purposive sampling method was employed. Reiter (2013) explains that selection of cases for exploratory research should not be at random, but instead needs to be purposeful as the aim is to analyse the "richest and most telling case". More specifically, in order to gain an understanding of how platform design decisions influence success across the diverse types of food-sharing platforms, the logic behind case selection is to gather maximal variation (heterogeneity) in the sample for better contrast and comparison, whereby the varying dimensions underlying the basis for purposive sampling included platform's market orientation, the type of core value unit transferred, and the status of the platforms (active or inactive) to understand the food-sharing platform economy as a whole.

In terms of sample size, the number of cases studied is less influential than the range of variation (heterogeneity) between the case studies chosen when it comes to theoretical generalisation of the results (Flick, 2009). As the research is not concerned with statistical (numerical) generalisation, given the qualitative and exploratory nature of the study, given the sample selection of 9 food-sharing platforms for analysis does not limit theoretical generalisability, but rather indicate purposive sampling for maximal variation. The case selection process is detailed next.

5.4.2 Food-Sharing Platforms Selection

In order to purposefully select the food-sharing platforms for analysis, I followed a three-step process: 1) Developed a pool of food-sharing platforms, 2) Mapped the platforms according to market offering, and then 3) Selected the platforms for analysis based on logical reasoning. These steps are detailed below:

1) Developing a pool of food-sharing platforms

To start the search, a query in Crunchbase was performed with keywords: "sharing economy" or "collaborative consumption" + "food" in the descriptions field (Crunchbase is a portal/database which holds master record data on the world's most innovative companies). This yielded 27 hits – food-sharing companies whereby food was not the core offering (e.g.: food delivery services) or B2B platforms (agricultural & farming related) were automatically omitted from the pool.

When searching for "food" and "sharing economy" in Google, any platforms mentioned in articles from food-technology news sites were also added to the pool. Also added were some Danish food-sharing platforms which were known to me prior to this research study. A total of 23 platforms were added to the pool.

2) Mapping food-sharing platforms

To help with platform selection for analysis, the platforms were mapped according to its market organisation (peer-to-peer or business-to-peer), status (active or inactive), and according to the food type offered. Categorising the platforms by food type offered could help to reveal if the different gradation of food is an influence that can impact the platform model design and its success. The three categories (including examples) in which I have mapped the platforms are:

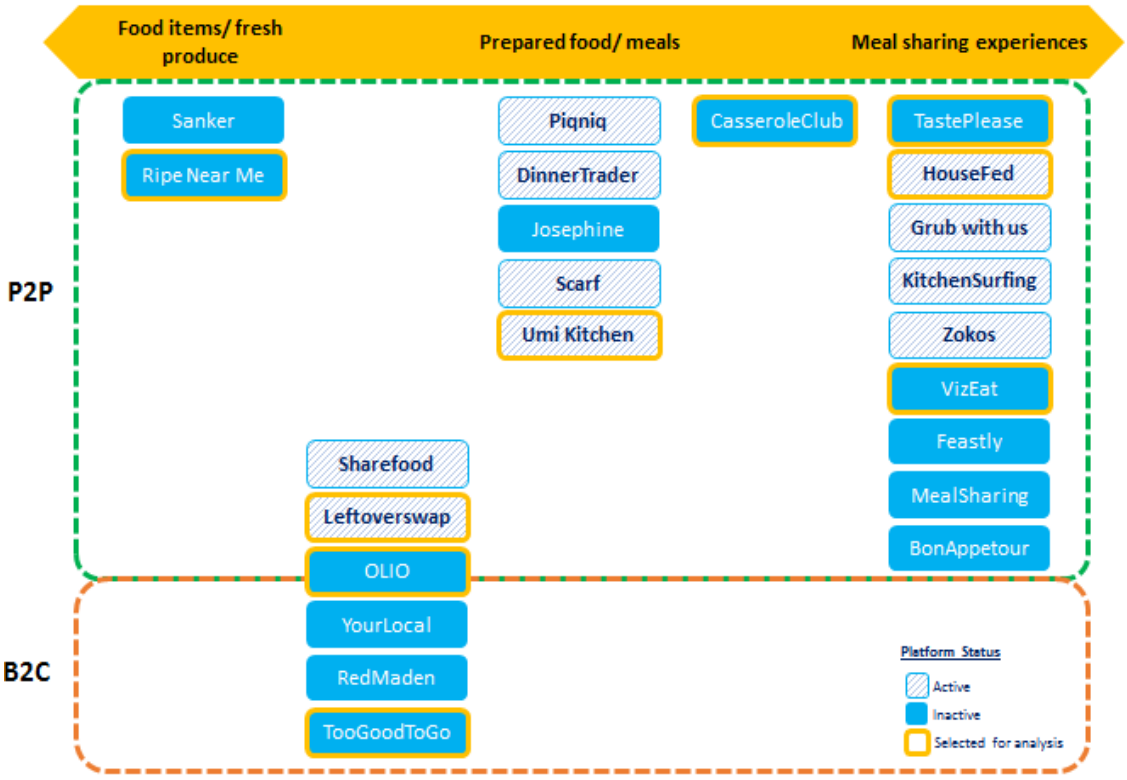
- **Food products/fresh produce:** food items you can generally buy in the supermarkets; example: fresh fruits and vegetables, uncooked rice, pasta, dairy products, bread, cakes, candy, spices, uncooked meats, snacks, drinks, canned foods
- **Prepared food/meals**: foods and meals found in cafes and restaurants; example: pasta dishes, pizza, curries, stir-fry dishes, mixed salads, sandwiches, home-cooked meals
- **Meal sharing experiences**: food events where there is a social exchange; example: dinner get-togethers, food tours, cooking classes

3) Selecting Food-Sharing Platforms for Analysis

From the pool of 23 platforms, 9 were selected for analysis (6 active and 3 failed platforms). In order to cover the different food-sharing platforms model designs applied in the food sector, I purposively selected platforms belonging to each of the category of type of food offered, and by market organisation

(P2P or B2C) for both the active and failed platforms. It must be noted that another factor considered when selecting failed platforms for analysis was the amount of perceived available information online as it was quickly discovered that many of these inactive platforms left behind very little trace of ever existing. Furthermore, as the interest of this study is platform model design, any inactive platforms which were shut down due to government or legal battles were not selected. Therefore, from this three-step process, the food-sharing platforms selected for analysis are: RipeNearMe, OLIO, TooGoodToGo, Umi Kitchen, CasseroleClub, TastePlease, HouseFed and VizEat. The platform mapping and selection results can be found in Figure 5.3

Figure 5.3 – Food-Sharing Platform Mapping and Selection Results



5.4.3 Data Sources

The data used in this research is predominantly primary data. Being that there have been no empirical studies performed on food-sharing platforms to date, and accessibility and resource issues have prevented the performance of interviews with platform owners, all data collected was via the Internet.

Food-sharing platform model data was found primarily from their own official websites. The argument to use web pages and other forms of internet documents as the source of primary data is that they represent a "presentation of self in everyday life" (Goffman 1959, as cited by Flick 2009) and can be considered a timely form of communication. Timeliness of communication is not represented in all internet documents, especially for food-sharing platforms that are no longer active – but it could be argued that the mere shut down of a platform's website is indicative of timely form of communication). In the case where it was difficult to obtain data from failed-sharing platforms' official websites, apps and social media accounts – due to inactivity or the fact that they no longer existed – therefore in these cases, descriptive information was gathered mostly through historic online articles which have described the sharing platform model in the past.

In addition to platform official web sites, a combination of different computer-mediated data from reputable sources was used to gather descriptive data on the food-sharing platform model design including: online articles found on food-technology media outlets, the platforms' own marketing videos available online (youtube.com), social media updates via Twitter and Facebook, Crunchbase, and in some instances, online interviews with platform founders or blog posts from platform founders themselves. Also utilised were platform's mobile app reviews found on Google Play and iTunes App Store. In addition and where possible, subscriptions to weekly newsletters (delivered via email) of active food-sharing platforms were signed up for in order to receive any extra information such as announcements, special deals and other notifications. Moreover, a single interview TastePlease founder did take place and is used as a complementary source of data to the TastePlease website.

5.4.4 Data Analysis Method

As explained in Section 5.2, a qualitative research approach is employed in this study to find out how platform model design decisions can influence the food-sharing business' success. The relating data analysis method is qualitative (descriptive) content analysis which calls for the summarising of informational contents of both verbal and visual data (Altheide, 1987; Morgan, 1993 as cited by Sandelowski, 2000) and presenting the summarised descriptive informational contents in an organised logical manner (Lambert & Lambert 2012). As the business model canvas is structured in a logical manner, presenting the platform model design data within the canvas template is a way of summarising and analysing the informational contents found online.

This method of data analysis involves an open coding process in which the platform data found online via such sources as websites and other internet documents are categorised into one or more building blocks of the business model canvas. The building blocks as defined in Table 3.4, serves as pre-assigned codes for the platform model data to be organised and mapped into.

It should be noted that Flick (2009) warns against relying on websites to make statements about the website owner/content creator (whether an institution or person) and strongly advises the triangulation of data collected from websites with other techniques such as interviews and observations where real-world contact with the subjects occurs. Even so, it is not my intention to make statements about the platform owners themselves but rather gather descriptive data to achieve an overview of the platform model design which, as mentioned earlier is considered to be the result of platform owner's socially constructed realities. Again, I would emphasise the research is not about how or why platform owners decided to designed the platform the way they did, therefore I would argue that taking the 'surface' or descriptive data found online to map into the business model canvas will yield similar data if collected through interviews with the platform owners – hence employing triangulation in this situation may be obsolete.

5.5 Quality of Research

As with all qualitative research, the exploratory multiple-case study used to carry out the investigation can contain several potential sources for biases and errors which can affect the validity, reliability and generalisability of the findings. In understanding these quality concerns, measures have been taken to mitigate and limit the effect of these quality issues.

This chapter addresses the quality concerns of the research design, data collection process and data analysis method in terms of validity, reliability and generalisability.

5.5.1 External validity and Generalisability

External validity is concerned with whether the findings of a case study can be generalised beyond the specific case itself. Limitations in generalisability is often an issue if the research is based on a single case as it offers a weak foundation for generalisation (Yin, 2003) – even more so when generalisation is based on theoretical understanding which can be mitigated by using multiple cases in the study (Flick, 2009). This concern was addressed through applying a purposive sampling method (as described in Section 5.4.1) in order to gain maximal variation between cases for analytical generalisation where the researcher's goal is not to replicate results for generalisation to a larger population and thus show that the

results are representative (statistical generalisation) but rather "generalise a particular set of results to a broader theory" (Yin, 2003) or a previously developed theory. Therefore, having performed purposive sampling and choosing multiple-cases for study, external validity and theoretical generalisability concerns are addressed.

It should be noted that internal validity concerns are not an applicable quality criteria when it comes to exploratory cases (Flick, 2009). This is because exploratory studies are not intended to determine relational causality between factors but rather to present new and different insights on aspects of a phenomenon which have not been studied yet, but rather act as a preliminary step for future causal or explanatory research designs (Streb, 2010).

5.5.2 Reliability

For the research design to be considered reliable, the data collection and analysis methods protocol should contain minimal bias and errors that can affect the quality of the research findings. Reliability is concerned with whether or not the results of a specific case study is replicable, meaning if the same research design was carried out by another researcher on the same case, findings yielded should be the same as what the original investigator yielded thus indicating that the research protocol was design with little to no error and thus results are reliable.

As this study was heavily reliant on publically available data found online, it is acknowledged that there is the risk that the data found may be taken out of the context to what it was originally derived for. Moreover, there is the possibility that the data required for the intended research purpose may be more difficult from online sources compared to if it were from interviews with the platform owners themselves which can in turn impact the quality of the research resulting in unreliable findings. I counter argue on the basis that qualitative descriptive analysis is concerned with collecting straight and unadorned descriptions or 'facts' whereby low-inference interpretation is required and thus likely to result in easier consensus among researchers (Sandelowski, 2000).

Saunders et al. (2003) suggests that as long as the data collected is from a verified quality source and aids in answering the research question, then it is considered to be suitable for the research purpose. As platform-owned or produced information was used, this qualifies as a verified quality source.

Furthermore, it is contended that the qualitative descriptive analysis itself can be repeated and produce consistent results as this approach does not require the researcher to move as far from what is stated in

the data compared to other qualitative methods (Lambert & Lambert, 2012), meaning that the qualitative descriptive data collected is basic, unadorned and not highly interpretive and do not require high levels of inference (although some interpretation is unavoidable through human perception, Wolcott, 1994 as cited by Sandelowski, 2000). This therefore mitigates the issue of reliability.

It should be noted that repeating the research protocol on the *same* case defeats the intention of achieving maximal variation in results when analytical generalisation is the aim of the research – therefore, replication of same research protocol on *different* cases can contribute to theoretical generalisation.

6. ANALYSIS

To analyse the selected food-sharing platforms, the business model canvas is used as a tool to present the data collected. This allows the descriptive data found to be organised in a logical manner that depicts each food-sharing platform's model design decisions. Again, it is important to note that this analysis does not seek to understand the rationale (why) or the process (how) the decision-makers of the food-sharing platforms have arrive at these design decisions. The analysis seeks to capture the design choices made giving rise to the sharing platform model design. Furthermore, each sharing platform will be analysed also according to how the issue of trust and social connections has been incorporated into the platform model design.

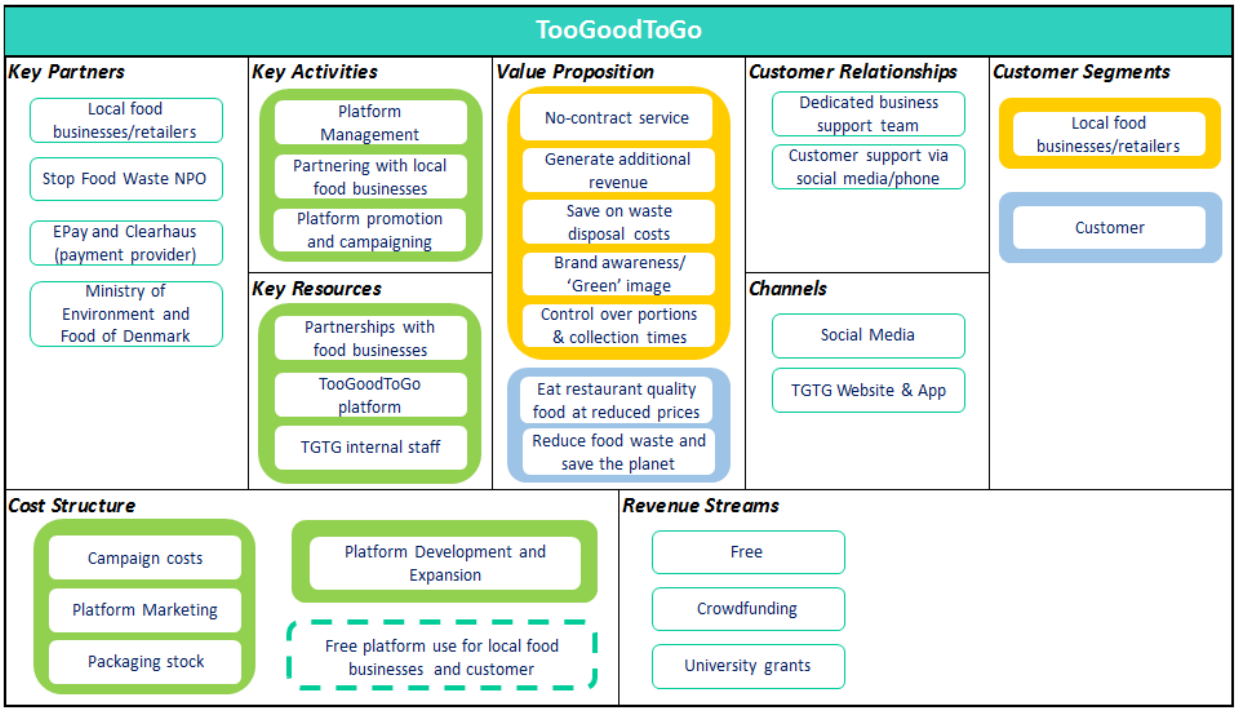
6.1 Active Food-Sharing Platforms

The six active food-sharing platforms which are examined in this section are: TooGoodToGo (TGTG), CasseroleClub, RipeNearMe, TastePlease, VizEat and OLIO. Each will have their respective platform model design mapped onto the business model canvas and a summarised description of the business with highlights of some platform features.

6.1.1 Too Good To Go

TooGoodToGo (TGTG) is a non-for profit, B2C platform aimed at connecting buyers with local food businesses that have surplus foods at the end of service that would otherwise be thrown away. Throughout the day, a business can advertise the number of portions that will be available at the end of business hours. Buyers can then reserve and pay for the number of portions they wish to have and drop by the business during the designated collection times (usually 10-30 minutes before closing time) unless the store has sold out in which they need to cancel the order placed by the customer 2 hours before pick-up time. The businesses are provided with TGTG packaging and businesses are free to decide portion

sizes, collection times and pricing of each portion (within 20-40 DKK). The types of food exchanged are mostly bread & pastries, salads, sushi, sandwiches, buffet type foods, fruits and vegetables.



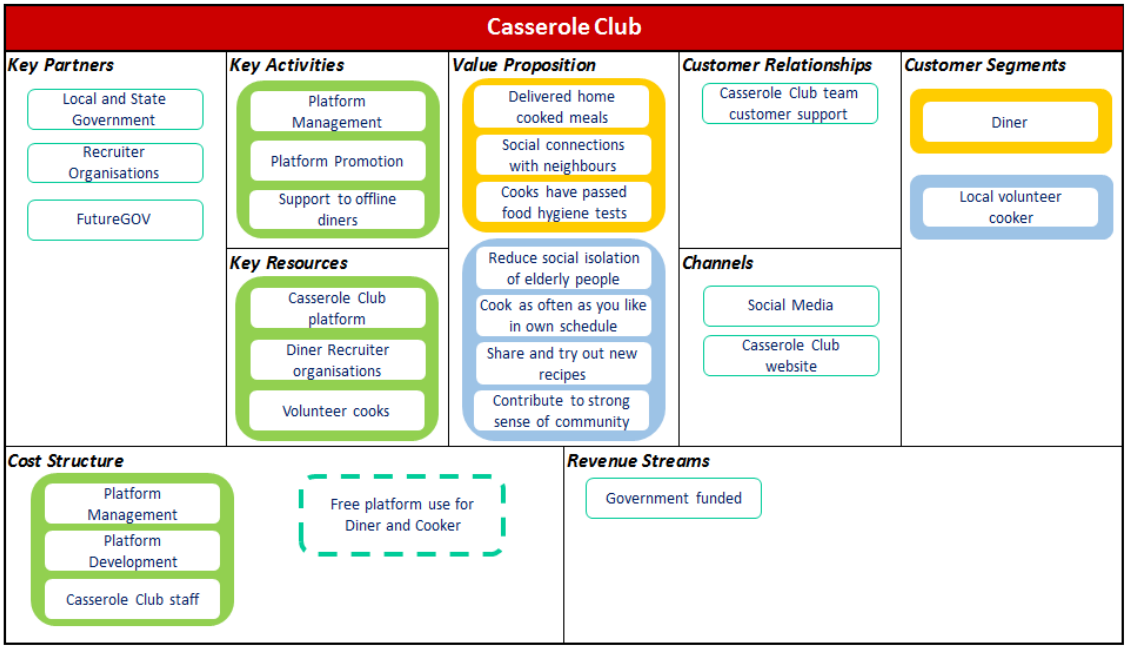
It is free to use the platform for both customer segments and thus TGTG rely on university grants and crowdfunding to fuel their growth and expansion. Most of their costs go towards campaigning activities to fight food waste, platform promotion and also packaging inventory to provide to the local businesses (TGTG on Crowdfunder, 2016).

It is evident from the key activities, value propositions, customer relationships that TGTG is focused on attracting local businesses to the platform first. Also it is clear that the value created for both local businesses and customers are focused on economic opportunities and then environmental benefits. No social value propositions or design elements promoting social connections is observed. Furthermore, there are no user reputation systems in place, except for a feature that allows customers to 'heart' a business thus adding them to a list of favourite places to buy from. User reviews of the platform can be found in the app stores. Governance and interaction rules are available for viewing in the Terms & Conditions page on the website.

6.1.2 Casserole Club

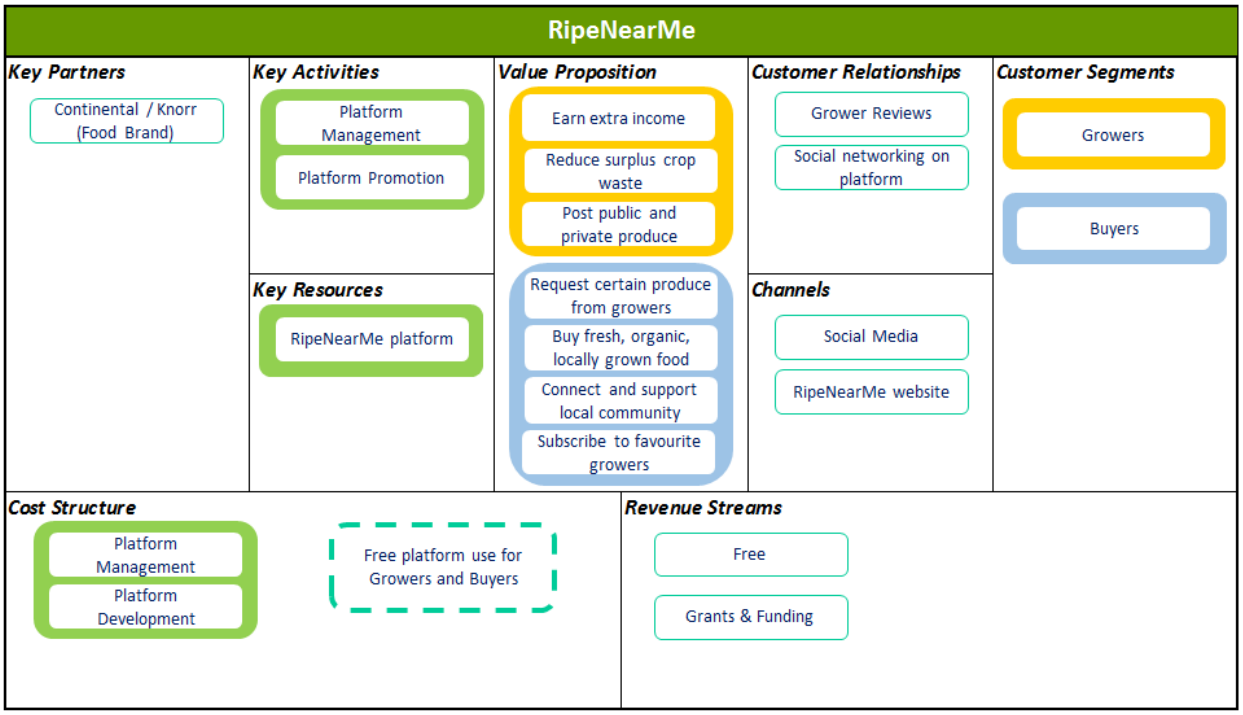
CasseroleClub is a P2P government initiative platform that connects local volunteers who are willing to cook or share extra portions of their home-cooked meals with elderly diners in the neighbourhood. When a residential volunteer signs up, they create a profile, go through a check, and pass an online food hygiene quiz. The volunteer can search for diners they would like to cook for and share extra portions of their meals. The trust element is in the food itself as the objective is for home-cooks to serve extra portions of their own meals. Therefore it is the belief that the volunteers would only serve food they would be happy to eat themselves. Volunteer cooks have the flexibility cooking on their own schedule and as often as they like. Cooks also have the choice to drop-off the meal, share a meal (eat together) or just simply stay for a chat after delivering the meal to the diner. CasseroleClub relies on recruiter organisations and also referrals from friends and families or trusted organisations to attract diners on their platform. For diners who are not online, CasseroleClub team who is a key resource in the platform model provides offline support to these diners to order meals, and connect/pair up with local people.

CasseroleClub's objective is not only to reduce extra demand on traditional services like 'meals on wheels' – and thus benefit economically - but also to improve and strengthen neighbourhood communities whilst decreasing social isolation, mental health and malnutrition among the elderly (Craker, 2015). This indicates that there is a large focus on social relations and community-building in this food-sharing platform, as evident by the value proposition.



6.1.3 RipeNearMe

RipeNearMe is a P2P, non-for-profit platform connecting urban growers with local buyers to share/sell their surplus home-grown produce (e.g.: fruits and vegetables). The growers set the price of the produce and the arrangements for payments and transfer of goods occur outside of the platform. The platform is funded by the founders and also relies on grants for platform management and development costs. Buyers can 'subscribe' to their favourite growers and also request certain produce to be grown. Also allowed is posting of public produce on the platform (e.g.: apple tree in a public park).

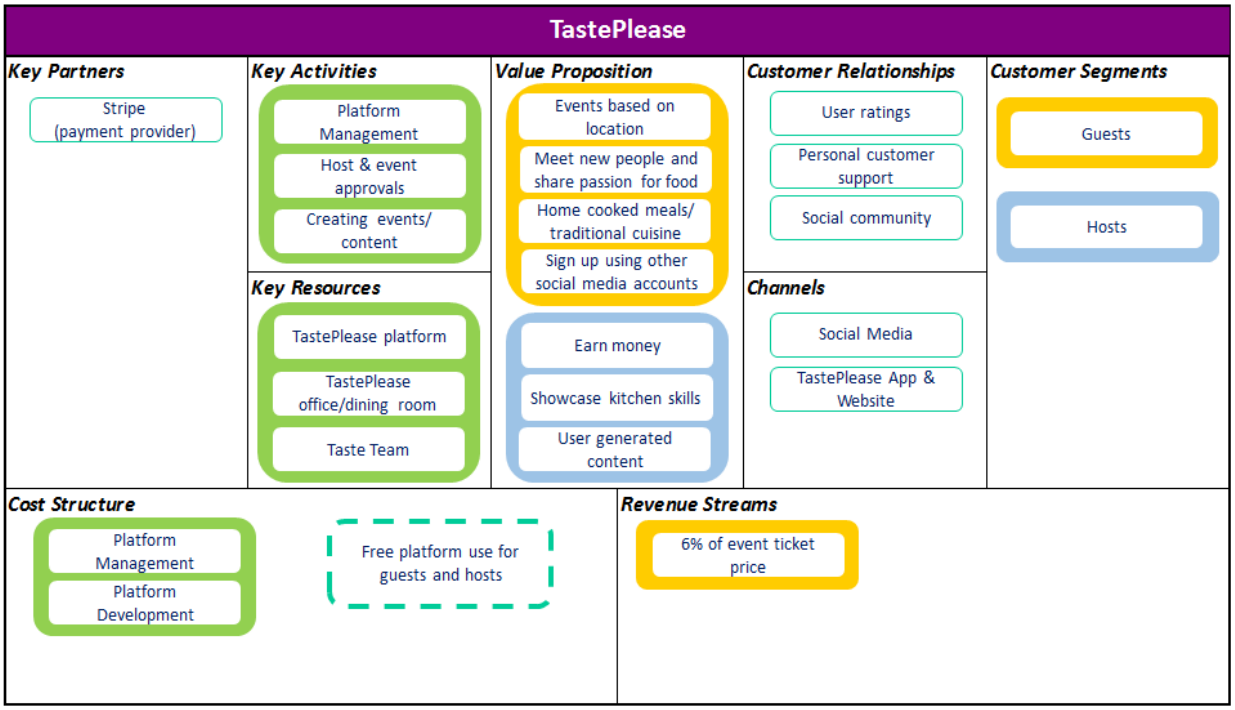


The value propositions for the growers are economic opportunities, and environmental sustainability. For buyers it is the sense of community support and also environmental sustainability. The platform supports the social connection aspect by providing social networking features on the platform whereby buyers and growers can add each other as 'friends' and chat.

Governance and interaction rules are available for viewing in the Terms & Conditions page on the website and RipeNearMe also features a user rating system (star rating, photos and text reviews) to evaluate the quality of the produce and food source.

6.1.4 TastePlease

TastePlease is a P2P platform aimed at sharing social dining experiences. The platform connects hosts and guests based on location whereby the main purpose is to meet connect with new people/travellers over sharing home-cooked meals. The platform is free to use for both guests and hosts – the guests only pay for the event ticket including a 6% surcharge which is presented to the guest during booking. The guest then attends the event when the time comes. When a host signs up to the platform, they will go through an approval check only if they have created an event. The check is performed manually by the platform founder, Frank Lantz, and the Taste Team. TastePlease provides personal customer support to its hosts and guests as it is believed that the customers "…n*eed to have instant reaction because this is P2P, they need to have humans*," (Lantz, 2017 – See Appendix 11.3).



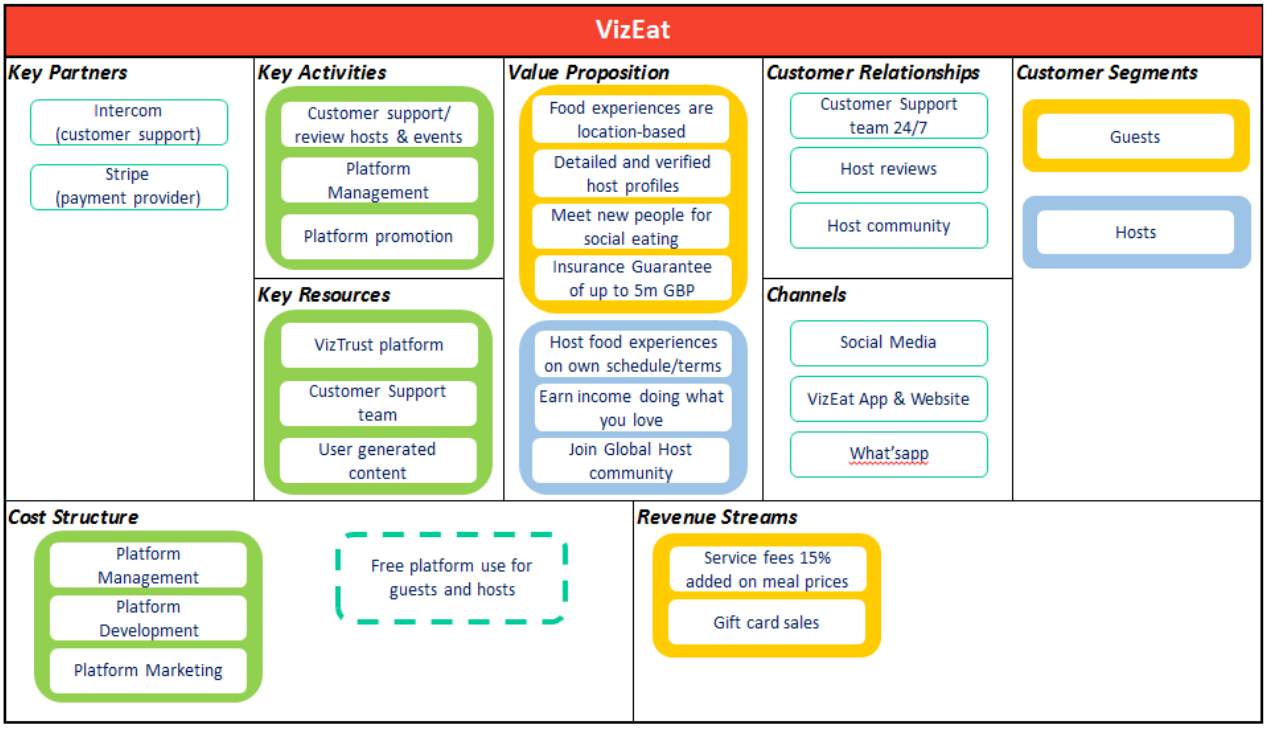
The platform is based on user-generated content meaning that the hosts themselves are in charge of producing their own 'branding' such as profile information, food photos and so forth. Guests vote the hosts after they have attended the event, with a rating system of 1-5 stars as well as a text review.

Also, it should be noted that TastePlease is a fairly new startup (age: less than 1.5 years old) thus it may not be considered 'sustainable' as yet. Evidently, through browsing their platform, most of the meal events are hosted by the Taste Team at their TastePlease office indicating that the TasteTeam and office

space are key resources at this stage of their business. This type of 'self-supply' is a tactic during start-up to help secure platform ignition (Evans & Schmalensee, 2016). Frank Lantz, the founder of TastePlease explained that producing their own events on the platformm is a way of learning: "*We need content to learn*," (Lantz, 2017). Currently, TastePlease is working on integrating a social community on their platform but also have plans to innovate their platform further by adding new customer segments (for professional chefs) and also a meal pick-up service.

6.1.5 VizEat

VizEat's is a for-profit P2P platform similar to TastePlease whereby the aim is to connect hosts who wants to provide/share location-based food experiences such as food tours, cooking classes, and meal events with guests. VizEat generates revenue from charging a 15% fee on top of meal prices and also from gift card sales – the platform is free for use for both customer sides.



VizEat provides a high level of customer support partnering up with Intercom (customer service provider) and also has a dedicated 24/7 customer support team. The platform business is contactable through all media channels including Whatsapp. VizEat also places great emphasis and promotion on trust and safety for its users with a thorough host application process, and all hosts must have a detailed

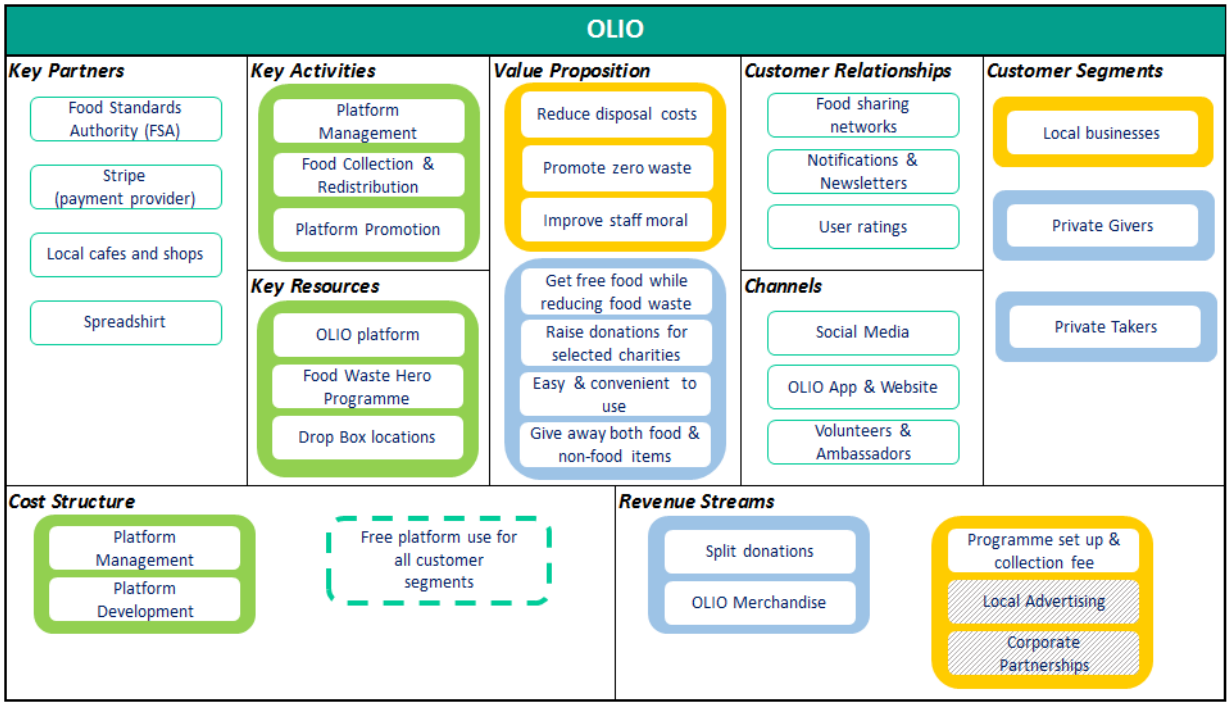
and verified profile. An insurance guarantee (VizTrust) is offered for both customer sides of up to £5 million.

On a social aspect, VizEat's value proposition includes social dining and the platform also has a Global Host community designed into it where hosts can create their own content and offer each other support. VizEat also promotes economic benefits for hosts to earn income doing what they love.

6.1.6 OLIO

OLIO is both a P2P and B2C platform connecting users to share/give away both food and non-food items. The general guideline in terms of food items allowed to be shared on the platform is "Only add food that you would be willing to eat yourself," (OLIO, 2017) however OLIO also lists information regarding Food Safety and Hygiene standards on their websites in which users are responsible for being in compliance with.

There are no fees involved for using the platform and givers are not allowed to sell their food items on the platform. There is a split donations structure in place, so takers can 'pay as you feel' for receiving the surplus foods – meaning they can choose to donate an amount to OLIO's selected charities and also split the donations with OLIO.



OLIO also provides a food collection & redistribution service utilising volunteers called Food Waste Hero (FWH) who collect surplus foods from local food businesses and posts them on the platform for redistribution. OLIO charges the businesses a FWH programme set up fee and surplus collection fee and is flexible with the collection frequency and there are no minimum levels of surplus before qualifying for this service. A key resource of OLIO are drop box locations where containers are stored at local food businesses where givers can drop off surplus foods upon arrangement with a taker, to give the option for users who do not feel safe meeting up with strangers.

OLIO relies on volunteers and ambassadors to promote the platform and also be the food sharing community built on trust. The platform has a 1-5 start user rating system which is anonymous, and users can only rate other users which they have interacted with.

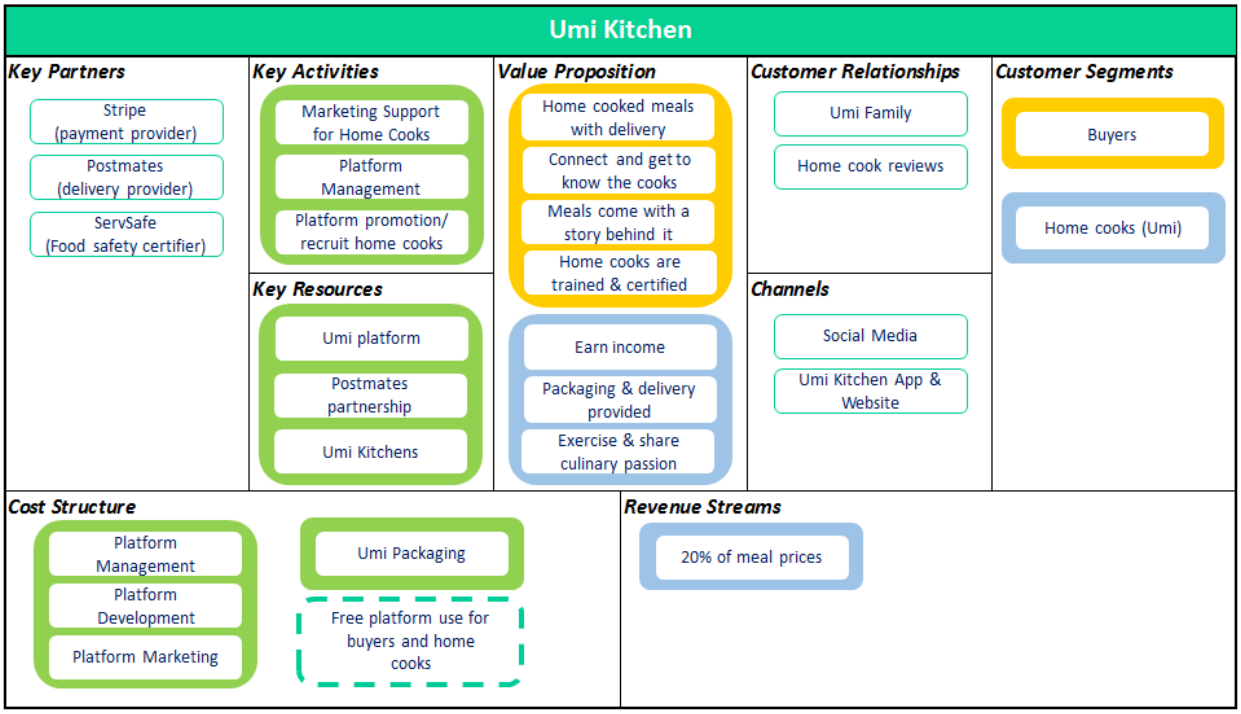
6.2 Inactive Food-Sharing Platforms

The three inactive food-sharing platforms analysed in this section are: Umi Kitchen, HouseFed and Leftoverswap. Each will have their respective platform model design mapped onto the business model canvas and a summarised description of the business with highlights of some platform features.

6.2.1 Umi Kitchen

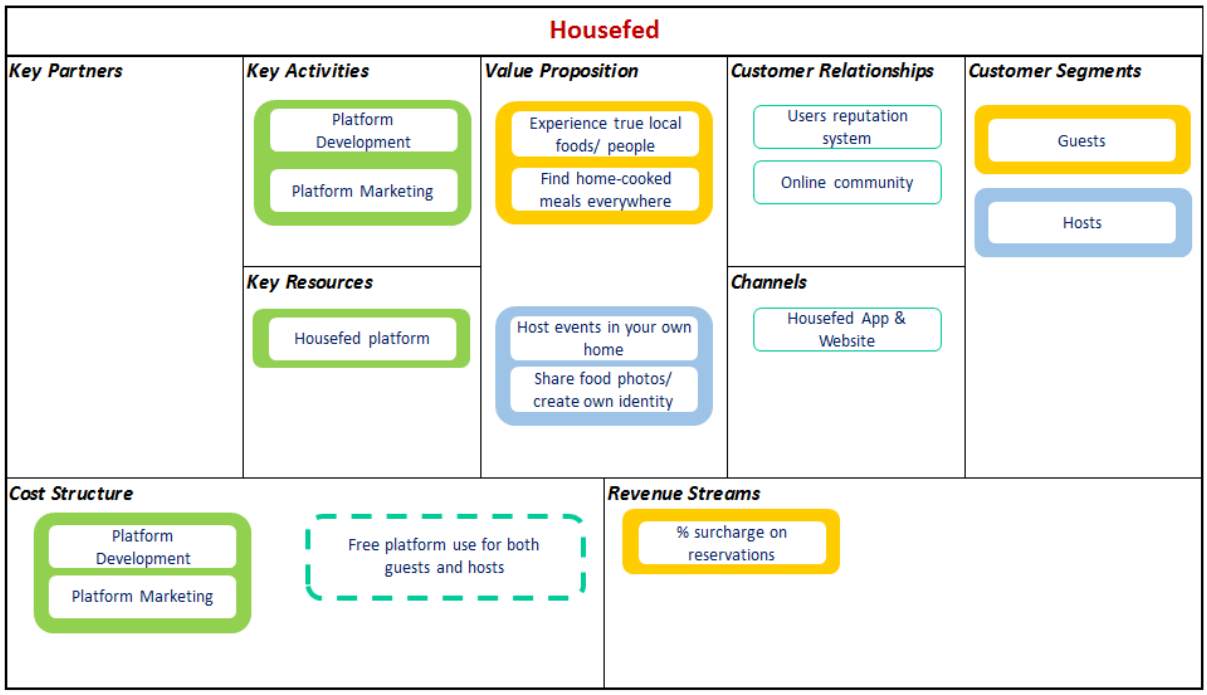
Umi Kitchen was a for-profit, P2P platform that connected home cooks with buyers to share home-cooked meals delivered to the buyer's door. There are no fees associated with joining the platform for either participant side. When a talented cook is recruited to be on the platform, they are trained and certified for food safety handling and join the 'Umi Family' which is a community for Umi cooks, however no data was found about how the community interacts with each other, or whether it is just interaction with the platform employees

Umi Kitchen provides marketing support to help the home cooks create the 'unique story behind the food' which each buyer gets with the menu purchase with the aim to foster feelings of connections. Buyers can order from the menu and select a timeslot for delivery and the food is delivered in Umi packaging. Umi Kitchen partnered up with Postmates, an on-demand delivery provider to transport the food to the buyer's door, and the delivery fee is paid by the buyer on top of the meal price, while Umi Kitchen takes 20% cut of the meal revenues from the cooks. A user review system was in place for home cooks to receive feedback for their meals. Umi Kitchen operations have stalled after only 4 months of operation (Balakrishnan, 2017, January 18).



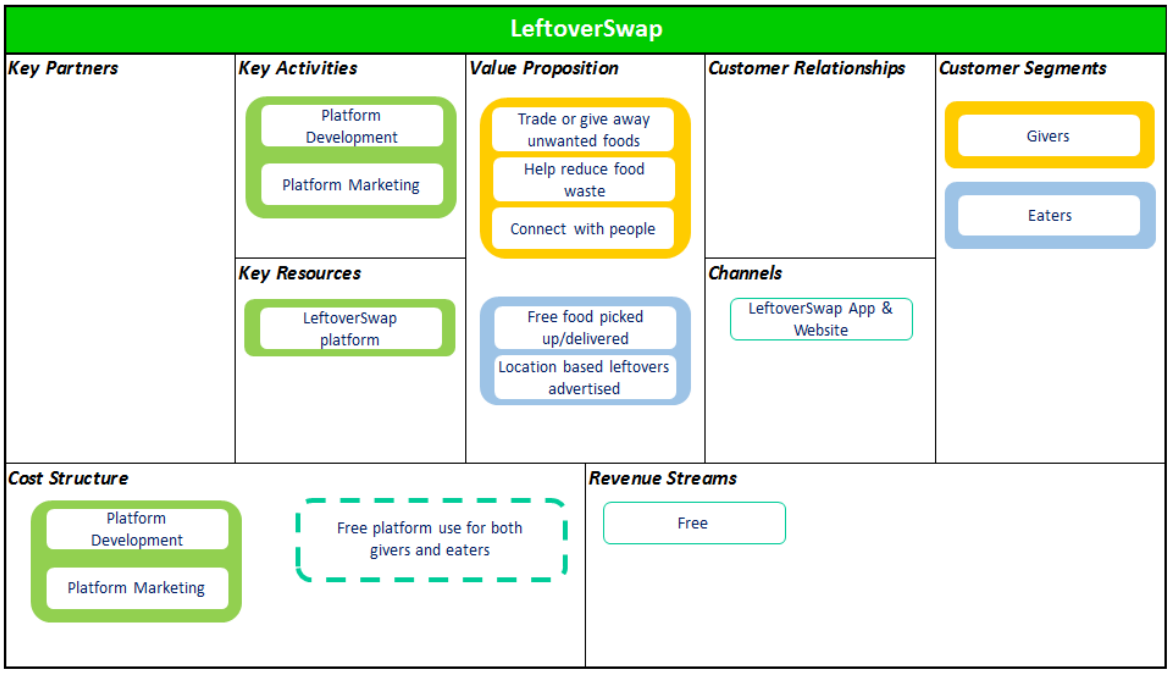
6.2.2 Housefed

Housefed was a for-profit (P2P) platform founded in the US. The business is similar to TastePlease where the platform connects guests with hosts who wanted to share a true local home-cooked meal. The platform was free to use for both guests and hosts and a percentage surcharge was added on top of the reservations cost incurred by the guests. Hosts were able to share food photos on the platform and also create their own identity on the online community space. A user reputation system also existed.



6.2.3 LeftoverSwap

LeftoverSwap was a for-profit - 'strictly a legal term' (Lagorio-Chafkin, 2013) P2P platform connecting givers and eaters to allow trading/ giving away of excess meal portions or surplus foods. The platform was free to use for both givers and eaters. Leftoverswap gave their users general guidelines regarding food safety such as: "don't give away any food that you wouldn't eat yourself; don't take any food without knowing how old it is and making sure it was kept in proper storage or properly prepare any food that you receive, like heating it to the proper temperature for a sufficient time, washing any produce, or brushing off any dust on cans," (Guerrini, 2014). The value proposition is aimed at reducing food waste and connecting with people. No data was found that could be mapped into the 'customer relationships' building block.



6.3 Active and Inactive Food-Sharing Platform Design Decisions Summary

In mapping out the active and failed food-sharing platforms design decisions on the business model canvas and describing the model, it was possible to determine how the multi-sided platform design principals and sharing economy platform design considerations have been applied to the food-sharing businesses. Table 6.3 gives an overview of the nine food-sharing platforms analysed to allow for ease of contrast and comparison of between platform model design decisions and other descriptive facts.

To give an even simpler overview, a condensed version of Table 6.3 has been generated (see Table 6.4). Both tables will be referred to during the discussion in the next chapter.

Table 6.4 – Simplified Food-Sharing Platform Design Decision Overview according to MSP considerations

Case	Core Value Unit/ Food type	Food Source	Sharing Mode	Governance System	Virtual/Physical Interaction Space	Market Friction Reducing Functionalities/ Services	Platforms
1	Food products/fresh produce	Peer	Exchange	Low	Medium	Low	RipeNearMe
2	Food products/fresh produce/Prepared food/meals	Business	Exchange	Low	Low	Low	TGTG
3	Food products/fresh produce/Prepared food/meals	Peer/Business	Exchange	Low	Medium	High	OLIO
4	Prepared food/meals	Peer	Sharing/Exchange	High	Low	Medium	CasseroleClub
5	Meal sharing experiences	Peer	Sharing	High	High	High	VizEat / TastePlease*
x	Meal sharing experiences	Peer	Sharing	Low	High	Low	Housefed
x	Prepared food/meals	Peer	Exchange	High	Medium	High	UmiKitchen
x	ALL types of foods	Peer	Sharing/Exchange	Low	None	Low	Leftoverswap

Table 6.3 – Food Sharing Platforms Overiview

Descriptive Information	VizEat	TooGoodToGo	OLIO	Ripe Near Me	TastePlease	Casserole Club	Umi Kitchen	LeftoverSwap	HouseFed
Market Orientation	For-profit	Non-For-Profit	Non-For-Profit	Non-For-Profit	For-profit	Non-For-Profit	For-Profit	For-Profit	For-Profit
Market Organisation	P2P	B2C	P2P and B2C	P2P	P2P	P2P	P2P	P2P	P2P
Status as of 01-01-2018	Active	Active	Active	Active	Active	Active	Stalling/closed	Closed	Closed
Year founded	Jan, 2014	Aug, 2015	2015	Apr, 2013	Aug, 2016	2011	2016	2013	Mar, 2011
Years Active	4	2,5	3	4,5	1,5	7	less than 1 year	3	0,5
Funding to date	€4,800,000	465,000DKK*	USD $2,200,000	AUD $25,000	€300,000	Government funded	USD $1,400,000	N/A	N/A
Sharing Impact Focus	Economic, Social	Environmental, Economic	Environmental, Social	Environmental, Economic, Social	Social, Economic	Social, Economic	Economic, Social	Environmental, Social	Social, Economic
Food type	Food experiences: prepared meal events, food tours, cooking classes	Fresh produce/ Food items / prepared food & meals	Food items / prepared food & meals	Fresh produce	Prepared Meal events	Prepared meals	Prepared meals	Fresh produce/ Food items / prepared food & meals	Prepared Meal events
Sharing mode	Sharing	Exchange	True 'Sharing'	Exchange	Sharing	Exchange and Sharing	Exchange	Exchange and Sharing	Sharing
Organisational Effort *Key activities* *Key resources* *Value Proposition*	Payment made through platform, diner meets at host location	Buyer self-pick up food, payment made through platform, food business are provided with packaging material	FWH - volunteers sent to collect food from businesses, Drop-box locations, donation systems	Users arrange pick-up or delivery and payment on their own	Payment made through platform, diner meets at host location	Cooker delivers meals to diner	Packaging provided, Delivery services via Postmates within time slot selected by buyer, payment system	Users arrange transfer of items themselves: pick-up or delivery	Payment made through platform, diner meets at host location
Trust *Value proposition* *Key activities* *Key resources* *Customer relationship*	VizTrust Insurance Guarantee Verified host profiles Host ratings system Highly selective application process Chat system	Count of how many users added a business to their favourites Sellers are stablished food businesses	1-5 star user rating system Messaging system Food waste hero and ambassador badges Food items from established local businesses Drop box locations	User reviews, stars rating, Detailed profiles Messaging system to contact growers	Messaging system 1-5 star host rating system	Cooks passed food hygiene test. Trust is in the food itself as the objective is for home-cooks to serve extra portions of their own meals to the elderly diners	Chef rating system Umi kitchen and unique food stories Trained and certified in food hygiene handling	N/A	Profile details, Reputation system, shared food photos
Pricing Structure	Hosts set price, guests incur 15% on top of price set	Businesses set price between: 20-40dkk	Free/Donations	Growers set price	Hosts set price, guest pays 6% on top of ticket prices	None	Umi cook sets price, guest pays set price + delivery fee	None	Hosts set price, guests pay for % of reservation
Degree of Inernationalisation	130+ countries	DK, UK, DE, FR, NO, CH	Global - UK, SE, US, IT, RU, AU, NL, PT, ZA, CA, FI	Global - NZ, USA, UK, Canada, Singapore, Norway, Jordan, Greece, Spain, Australia	DK, GR, SE	AU, UK	New York, USA	US	US

* total calculated from: http://toogoodtogo.dk/student/timeline
**https://startsomegood.com/ripenearme

7. DISCUSSION

The discussion is divided into 3 sections. The first section will discuss how the food-sharing platform can be designed for success and thus answer the research question, the second section will discuss the limitations of the analytical framework with reference to MSP design principals and the business model canvas, and the final section of this chapter will discuss whether food-sharing platforms can actually survive in the sharing economy.

7.1 Food-Sharing Platform Design Guidelines for Success

From analysing the 9 food-sharing platform model designs, it was discovered that there is no 'one-size fits all' design solution that will guarantee a food-sharing platform's success. Although it is acknowledged that platform model design itself is not the sole driver for platform success, as this study is conducted from a platform model design perspective, the observed platform design patterns can thus be generalised to MSP and sharing economy model design theory (analytical generalisation) as plausible influencers of platform success.

From the analysis, I proposed that food-sharing platform model design should differ the level of (on top of the same challenges already faced by MSP) requires careful consideration when designing for success

Establishing trust according to the shared food's level of preparation and the food sharer

7.1.1 Establishing Trust According to Shared Food's Level of Preparation and the Food Sharer

> *Building trust to get both sides of a market on board has been a key challenge and driver of success, even for the biggest players.*
>
> - Codagnone & Martens (2016)

Falcone & Imbert (2017) asserts that a lack of social bonds between users, and therefore a lack of trust, has been shown to heavily impact food sharing practices. This is said to be because consumers do not know how the food was prepared, stored or whether it is safe to eat. To mitigate this, and to build trust between the food provider and receiver, platform model design should focus on governance system, building social connections by designing a virtual/physical space for users to interact, and reducing information asymmetry (market friction) between users.

However, the level of focus on required for each of these design considerations will vary depending on the shared food's level of preparation, and who is supplying the food (food sharer).

By shared food's 'level of preparation', it is meant the degree of handling in which the food has incurred prior to being shared or transferred. Findings suggest that foods with high levels of preparation, namely 'prepared food and meals' – require more trust to be established when sharing compared to foods whose level of preparation is low (raw produce). This is evident when contrasting RipeNearMe's platform whose food unit is fruits and vegetables, have a very low level of preparation, compared to CasseroleClub whose home-cooked meals have a high level of preparation. Although both platforms are the same in many ways: P2P oriented, non-for-profit, and have some degree of internationalisation – CasseroleClub features a tighter governance system when it comes to access regulation as the cooks must have passed an online food hygiene test in order to be approved as a cook on the platform. This business value proposition to provide hygiene or 'quality' certification is inferred to establish trust as the cook has been qualified to provide 'safe' meals. This can also be seen in Umi Kitchen, whereby the home cooks are trained and certified in food hygiene handling before they are allowed to access the platform to provide home-cooked meals.

Another way to establish trust for foods with a high level of preparation is by offering a liability insurance guarantee for the platform participants (Codagnone & Martens, 2016). This has been the case for VizEat whose hosts not only go through a highly selective applicant process (which reflects focus on governance rules, in particular strict access regulation), but VizEat also offers both the guests and hosts an insurance guarantee which promotes a level of trust and safety for its users.

If compared to Leftoverswap platform (where the shared food could be at any level of preparation) the platform's lack of governance system, reputation system, and social networks, have failed to build social relationships between users, and thus trust which may be the reason why the platform has failed. Furthermore, Cappellini (2009, as cited by Falcone & Imbert, 2017) states that leftover foods: "are perceived as food that has lost its original qualities and aura". Therefore, if users' attitudes towards unwanted surplus foods are tainted purely because they are considered 'unwanted' it is speculated if reputation systems can leverage this attitude. When compared with CasseroleClub, where the food shared is also 'leftovers portions', attitudes towards this type of leftover does not seem to impact food sharing activities negatively as the platform is still active, even though CasseroleClub have no reputation or rating system or insurance guarantees, but an access regulation process that certifies cooks in food and safety prior to allowing them to cook for the elderly. It should be noted that CasseroleClub's 'success'

may be because the platform is government owned, thus already highly trusted. Other reasons could be that the elderly are not 'picky' diners and therefore their attitude towards food quality is not relevant as the aim is to gain sustenance/nutrition and have improved social connections.

The finding of the study also suggests the important role of food sharer in establishing trust. Fitzmaurice and Schor (2013) have previously observed during a FoodSwap that the way in which food is presented, packaged, and even the appearance of the food provider can impact whether an individual was willing to trade. This is in line with the need for trust to be established for users to feel safe enough to transact depending on the food sharer. The findings suggest that the level of governance, reputation systems, social community network (virtual interaction space for users), will require less focus in platform model design if the food sharer was a business entity compared to if the food sharer was a private individual. In the case of TooGoodToGo, which is B2C, the food type shared on the platform can also come as prepared meals, however a user rating system was not implemented – this could be inferred that when the suppliers of prepared meals are established businesses, having a functionality in place that helps to foster trust for the buyers is not necessary as the food providers are established businesses that are already certified by the governments to handle and distribute food items.

Furthermore, in a newsletter (see Appendix 11.4), OLIO reports the most popular food requests from users for 2017 are the types of food which came from businesses and whereby the foods' level of preparation is low. This goes to show that the level of preparation in which the food has incurred combined with whether the food sharer is a business or private individual will differ in terms of the level of much trust required to be established, and thus the level of emphasis or considerations required on the design of the governance system, and the virtual interaction space (reputation systems and social community networks) for the platform model.

It was also found that for meal-sharing platforms (VizEat, TastePlease), building social connections was important thus the platform design focused on building networks and online social communities such as messaging systems and user reputation systems – hence the virtual interaction space – to foster trust and social connections among the users, thus also enhance cross side and same side network effects.

It was also found that if the mode of sharing is more on an 'exchange' level, where food is picked up or dropped off – that is, not sharing a meal experience together, then less focus is required on features that foster social connections and bonding in the platform like social networks, but reputations systems are still important to establish trust.

7.2 Business Model Canvas – MSP Pattern

From the analysis, it was discovered that the multi-sided platform model pattern as identified by Osterwalder and Pigneur (2010), neglected to involve the building block of 'customer relationships' – which refers to the types of relationships customers have with other customer segments, where many platform model design functionalities focusing on fostering social networks, community building, reputation systems were located. This building block is important as it includes platform model elements that can increase same-side and cross-side network effects. This finding suggests that the MSP model pattern should be updated.

8. FUTURE RESEARCH

This chapter lists some proposals of possible future research venues which have been identified during this research study. Although some are driven by the design limitations of this study, most suggestions are derived from insights generated from analysing food-sharing platforms:

- As the majority of this research was conducted using publically available online data, there is the limitation that not all relevant information for the intended research question could be attained. Therefore, it is recommended that future studies collect and analyse qualitative data from both successful and failed food-sharing platform owners in the form of interviews, to understand the 'why' and the intentions and thought process behind how platform model design decisions were reached.

- It is recognised that the business model canvas as an analysis tool has a weakness of only providing a static representation of the platform model at the chosen moment. Although all endeavours were made to retrieve as timely information on the food-sharing platform design as possible, the model design representations of the active platforms could be outdated as model re-design iterations and innovation are continuous and frequent, especially for start-ups such as TastePlease and OLIO. It is therefore recommended that future research investigate the evolution of the sharing platforms considering the different model design choices made from emergence, to start-up to becoming a sustainable business – and likewise with failed sharing platforms. Following several start-ups and mapping their evolution/failure is an option to gain more insights on how model decisions from emergence to the later stages of development can impact platform success.

- Another interesting research venue could be to investigate the changes in perceived qualities of food when it moves along the supply chain – for instance, peers buying surplus foods from other peers, versus peers buying surplus foods from retailers or businesses – given the same types of foods are being exchanged, how much of the perceived qualities of food is impacted depending on the source of the giver? And how do these perceptions vary across different cultures and demographics?

- To understand why users fail to adopt food-sharing platforms - leading to platform implosion as critical mass has not been secured - research into user's motivation for adopting particular food-sharing platforms can reveal why some platform model designs are successful and why some are not. Do users participate in food-sharing platforms because of economic benefits because of 'value for money', convenience, or do they participate to gain a sense of community in shared meal experiences and making human connections? A look into the underlying user motivations for platform participation can give insights into which platform model design elements are most important to focus on to attract and retain users for platform success.

9. CONCLUSION

The objective of this research paper was to gain an understanding of how platform model design decisions can influence food-sharing platforms' success in the sharing economy. It was discovered that overall, there is no one-size-fits-all when it comes to sharing platform business models and that the design of the platform should stem from the product offering being 'shared'. Success is depended on the platform's ability to establish trust between users, and the level of trust required is dependent on the type of food shared and whether the food sharer is a business or private individual.

Where the food being exchanged has been subjected to a higher the level of preparation, the higher the platform design focus should be on establishing and building trust between peers such as strengthening governance rules to regulate participation – this can be done through providing food-handling certifications, or insurance liability scheme. Similarly, the food sharer also plays a role in the platform model design decisions. Where the food sharer is a business entity, the less consideration is required on designing the governance system.

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Sharing Platform Websites

https://yumefood.com.au/

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https://www.vizeat.com/

https://olioex.com/

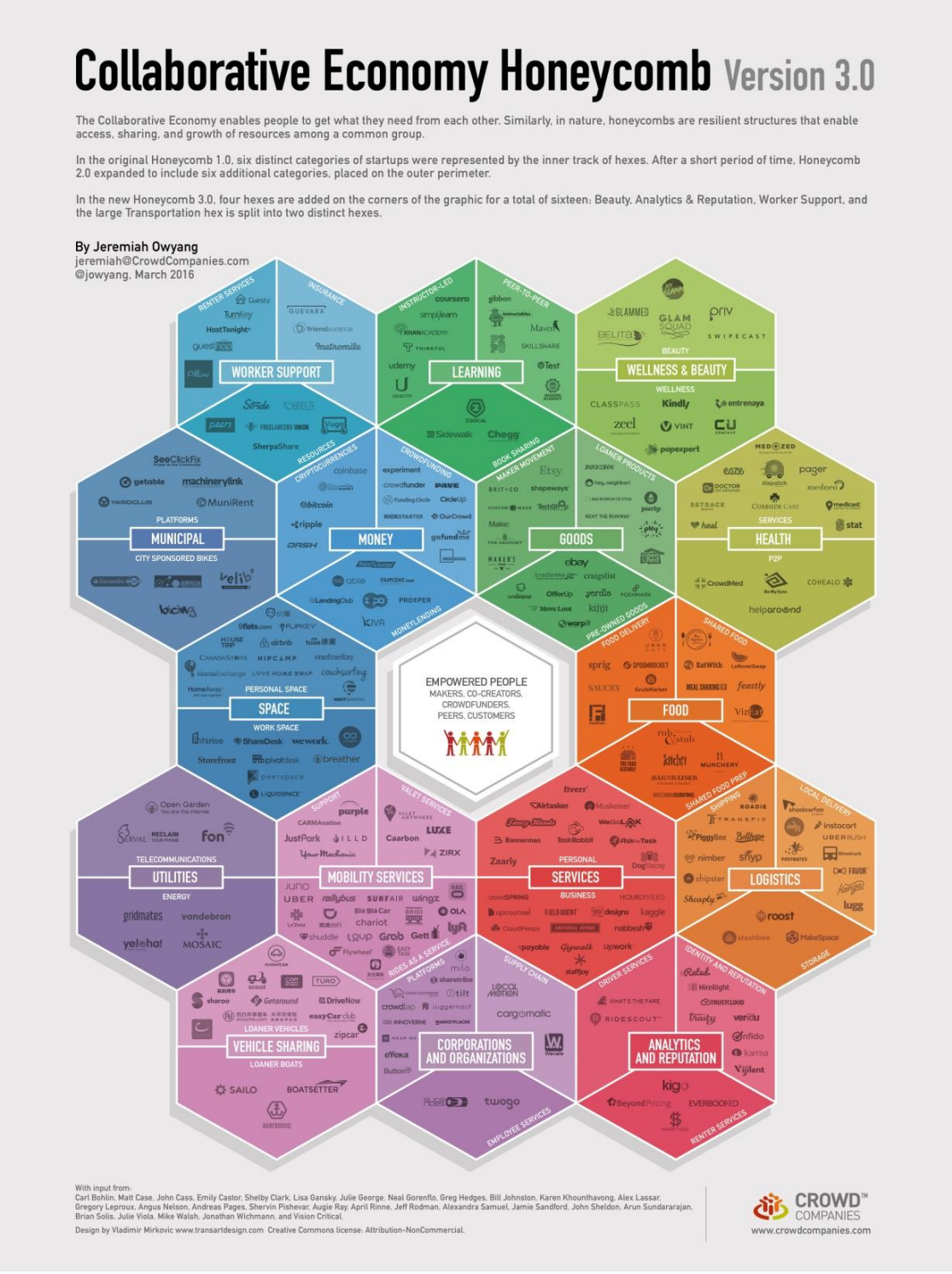
https://tasteplease.com/

https://www.ripenear.me/

https://www.casseroleclub.com/

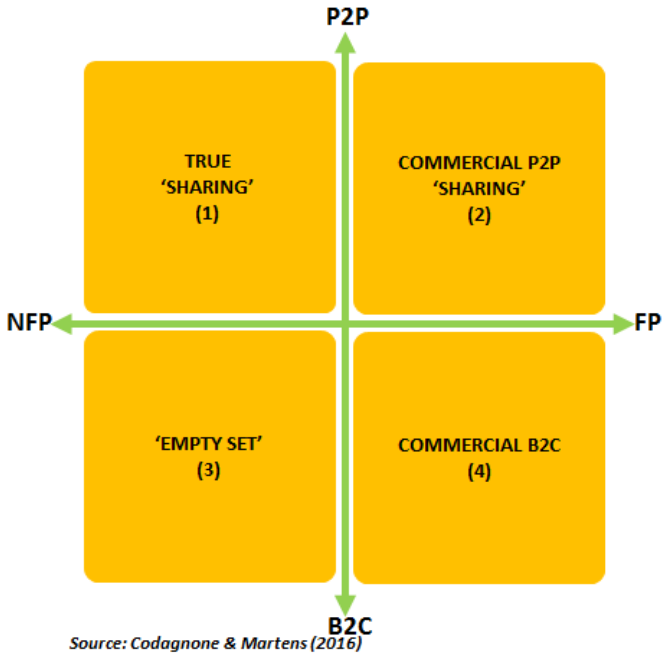
11. APPENDICES

11.1 Collaboration Economy Honey Comb 3.0

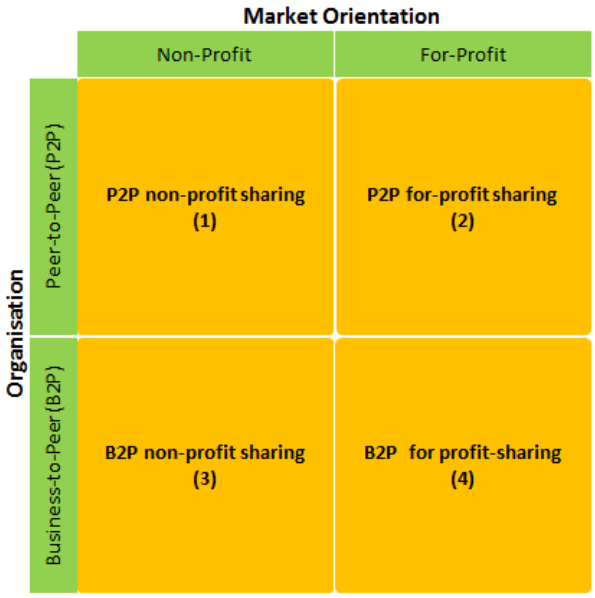


Source: Owyang (2016)

11.2 Sharing Platform Typologies



Source: Codagnone & Martens (2016)



Source: Schor & Fitzmaurice (2014)

11.3 Interview Transcript – Frank Lantz (TastePlease founder)

Could you start talking about TastePlease business model? And how did the idea came into place?

The main idea came 2 years ago when I had some friends for dinner and they brought some other friends – and we had an amazing dinner and we were 14 people and I knew half of them. Then I started thinking about the idea of having strangers over for dinner and then the idea was growing on me – I dine out very often, like 2-3 times a week. Then I start thinking about I felt we have 'lost something' because restaurants are getting very commercial, this is cool business, it's good, it's not bad but we kind of miss the original kitchen, the original people. So in order to fix that, I thought about building this platform because I think in the future there would be a huge market in the private dining area where you have private people cooking for you – either if you live local or if you are travelling abroad. Anyhow I think the idea about eating local with local people who have time to cook a meal instead of a just a business model. This will never be as perfect as a restaurant but I think there are great experiences so that was the main idea. So it's about sharing, it's about getting better experiences and asking people to invite you to their home, and just open up. I can see the main idea from the beginning was to connect people, like the old idea where you, if you see in the old photos, you can see they have the long feast and all that – but

it’s not that common anymore. So it's kind of using the modern technology to see - what can we do with that? A lot of people are moving to bigger cities – it's an urban culture – but it's also making us losing our families and I'm hoping with our project platform that we can change that and give people a new place to meet people. A lot of people go on Tinder and dating apps, not because they want to date people, it's because they just a little bored [laughs] - it's a game – so they meet some people and talk a little. For me I think it's a better way to sit on a dining table where you are 8 people, date is not the purpose – but you just meet some people – you make some connections. Some of them would be friends and some of them will not. But there's nothing attached to it because you are quite free when you go to a dinner – you don't have to call anybody the next day.

So there are no expectations?

[laughs] nothing at all.

How important is the social aspect of it? Making connections with people versus the food that is actually being provided – what is the focus?

The focus for us is actually the connection. It's the connecting people. Of course I'm a foodie - I can't run from that but I don’t think we can drive it through the food. We will have great food experiences in there but it's the connection part that's tricky. It's not the thing about going to dinner – it's the thing about going to dinner with nobody you know.

It forces you to mingle?

Yeah! And now that we of course have tried it a lot of different times – have you tried it? because it is such a great experience going into a room, with a lot of other people who are actually there to meet other people and dine. So nobody has a role. When you meet friends, colleagues, anything else, everybody has a role in life. Also at home with family, everybody knows how you are and you play into that role. When you go into [TastePlease] dinners, it's a free space and you can be just as you want and it’s so amazing. And it's kind of making people lighter, I can see it every time – when they kind of experience when they don't have this role to – they kind of [breathes out] - they don't have to talk about this, this and this, they can actually take the topics they want and talk about that. So I didn’t know it when I built it, I didn't see it. When I built it, the focus was on the food, and to create new food experiences but we got so much more – and that's great. On our platform it's not only me cooking, everyone can do it – if you want to cook, you can cook. We have a lot of dinners in Athens actually, in Lisbon, and it's just about what

people want to use it for. Future wise we will also make the pick-up food but we didn't do it yet. We want it to stabilise, get the apps working properly and you know, now the money flow is working, we want to see how the system is performing and then we will expand it. We're actually working on it right now – on a big expansion. We're building a creator, we're building a lot of new fun stuff, according to food and socialising.

In terms of the 'pick-up' food, do you feel that will start disconnecting people again?

I think it's two different things – the social dining aspect is the thing we wanted to do and the pick-up food is a request from our users. But for me it's not our main product, the main product is socialising but some of us who are good at cooking and want to use the platform to deliver some good food, so why not?

When you say users are requesting this – is it the hosts or the guests?

Both, both. And I also think it's a good idea when you build a platform like this, it's not free when you build it, so you need to see, okay, how many ways can I use it? And make some money to pay for the platform.

How would you describe the cost and revenue structure for TastePlease?

Right now we charge 6% so if you're offering a dinner to $10 then we will add 6% on top of it and present it for the customers. I'm a little tired of the confused pricing – buying airplane tickets [laughs] it's the worse example – you never know the price of airplane tickets. Price transparency is the key - I think down the track, we need to go to 10% - that's the goal in order to keep our costs away – and expand.

Do you have advertisers on your platform?

Not at the moment – it is down the track in the pipeline but the funny part is - I created this last Summer, then we started building it, then I found it had some competitors, and I thought [breathes out] "what to do?"

[Competitors] in Denmark?

No, we have very small ones in Denmark but we have some huge ones out there so we started thinking what we could do different. So we actually decided to rebuild the whole platform – so now it's a community driven platform. Because food is something you want to share, so we have events like

everybody else, but we also have a community where they share recipes. And something else they can share out of the platform – so they can share on Facebook, LinkedIn, Google – so we have the social integration. So our branding is our users.

You mentioned there were competitors, can you name some of them?

Yeah there's EatWith, and VizEat. VizEat just bought EatWith so our two biggest competitors just got a little bigger.

What's the thing that differentiates you from your competitors?

There are two things – they vote the hosts, so in order to be a host with them they need to go through an approval process. They want to build a restaurant in private homes so their focus is the food – and it's to get high level food. Our focus instead, is actually the whole idea about dining, so everybody can be a host then your guest will vote you. So instead of me sitting managing all of our hosts, we are actually leaving it to the guest, I think it's the modern way to do it, to leave it to everybody to vote each other and then the market will organise it. The 5-stars is the one competing with those guys, and the rest is just offering very good meals. Our voting system is 1 to 5 stars.

What about the 'like' system in the social media aspect of the platform? Does that also determine the quality of the experience?

No that's more about getting interaction, to get people to start working in the social community. I think we are one of the first ones building a market place with a social community integrated. The food comes second but it is driving it because [the interaction] is around the meal.

Like VizEat, are there any controls in place to ensure the hosts are qualified to provide food?

We have some standards they need to follow - I don’t think we will go that extreme but we will monitor our hosts. We check what they are offering, if it's priced well – and you can just tell, as a foodie you can read it instantly – is this good or bad, or do they know what they're doing. Then we monitor the ratings, so you can see how they perform.

Is that an automatic thing or a manual check-up?

Down the track it's automatically, right now it's manual. We check the profile, we check the links – we do a little background research on the host. We look at what kind of Facebook profile do they have, if they're on LinkedIn – just to get an idea...

So they sign up, and do you the check-up then?

You sign up as a user, and you can easily upgrade yourself to be a host, and when that process is done, we start revising it. But we don't do it before you make an event, because some people just create profiles and they want to be a host but they actually don't do anything – so we wait until they create an event.

In the case of a background check, and you find that a user seems not right – how do you go about mitigating that risk?

It depends on what the problem is – most of the problems we have with first time hosts is how they present themselves the right way – so it's more visual. If we find someone that was a problem, we just remove them.

So you don't offer some help?

Depending on/ you know there's different levels on that. If it's far from 'change your cover picture' to do something bad where I remove you – but of course there's a lot of steps in the middle. But it will be a personal judgement, then we talk about it in the team. It will be a case by case situation – because it's humans. You know, in the case of over pricing – it's also a hard one. When is the listing overpriced? When the user is not buying it? We had the case 2 weeks ago, we had a host in Greece – everybody in the team said it was too expensive, we can't sell it in Greece. We need to tell the host to lower the price, then I said to the team "no" because if the host is living in Greece, actually wants to sell for that price we stay out of it. Five days after he sold everything – so it's a hard one! This was 5 people against one, saying we need to contact him to lower the price but we didn't. You can't really tell the market, because it's a market without a market – because the market isn't built yet. It's in very early stage market but I think future wise, there will be a lot of providers and it's a huge market. I think it will outgrow the restaurants, I think so. See how it's going for Airbnb? I think it's the future – actually it's the reinvention of the old times because it worked like that in the old times. Now we want everything to be 'originally' - we're tired of the big commercials – you want your stories. When you sit at a table you want your own stories, not "I tried McDonalds"

[laughs] yeah because it's the same [story] everywhere [laughs]

Exactly.

You mentioned 'events' on your platform – are these hosted by professional chefs?

Future-wise it will be more people-to-people [peer-to-peer].

Is that a way of attract users onto your platform?

No, right now we just need content. We need content to learn, with no content we can't learn. It's fully transparent, you know who's doing it, and who is who. So it's nothing like this, no hidden agendas. I'm hoping future wise also, it will be a free space for chefs. Because they are working in restaurants, they need to go to the manager, this is what we are doing, this is the product, that's how it looks, this is how we make our food – they need free space. So maybe twice a month, 3 times a month or once a month to have this space – maybe you work in a Thai restaurant and you want to run a sushi restaurant, then you can run a sushi restaurant on this platform – and just try it out – play with it. Do some pop-ups, do some fun. For me it's make some experiences, make some social dining, invite some people. In the future we will divide it. We will start working on the tax and working with separation – so you know this is a restaurant chef, you know this is a private chef.

Do you think separating the types of chefs will cause users to be more attracted to going to professional chefs versus private chefs?

What is driving this is get value for money. I can see if we have someone who wants to make money on it – people don't want that, they don't do it. They want value for money and that's the key. You know if you will go to a famous chef of course you will pay more, because you believe you will get value for money. So I don't think they will compete like that, but they will compete with giving customers value for money. But that's a hard one, and that will be the main issue – give the users what they are paying for.

In the case that a host creates an event, and they get approved and people have paid - what happens on the day if things don't go right? If the food provided wasn't as promised?

What we do money wise, because then we are back to money – a guest pay for an event before the event – buy the tickets, we reserve the money, the host gets the money 48 hours after the event. It's to secure

the guests if the host is not providing what was promised then they [the guests] have 48 hours to contact us if anything was wrong. Then we will refund the money.

Is it 100% refunded or do you actually go into the case?

We need to go into the case – because if it was a long menu and he forgot the parsley on one of the course then okay [laughs] so you need to go into that. And I think dialogue is very important – talk to the guest and talk to the host.

How will you maintain that when the platform starts growing a lot more?

We will keep personal contact because I think it is so important.

So you won't have a form online to fill out complaints?

No, we need to have instant reaction because this is P2P, they need to have humans.

What is the right type of users?

It's back to the pricing and back to the product that they are delivering. If you're doing spaghetti, that's the perfect thing for students at CBS, or salads, because that's matching the price range – that's perfect for you. Maybe I want to have some 5 course dinner, I will have to pay some more but that's perfect for me.

If we talk about the platform design, are there any features which you would say is most critical for success of TastePlease? You mentioned the social media integration...

I think future wise that will be our success. It's not ready for it yet because we are not perfect on it yet. But it will bring us to next level, I believe. And the new creator, because it's really freeing your mind on what you want to make. It's back to content, we need a lot of amazing content in order to attract the users so if we are getting boring then we have a certain amount of users, but with the new creator we can create new amazing stuff. Also, it’s around dinners but you can also do 'by invitation only' so you can do a closed group of people, keep it out of the public, so you can do secret things. You can do dating dinners so you can go with this amount of men and this amount of girls, whatever kind of dating you want, you can do that. And there are a lot of fun things in there.

How do the guests and hosts currently interact? Do they have dialogue?

They have a dialogue – we have a messaging system but only working on the web-version. We are building a very cool chat now. For me there's different business models, I believe in opening it up, provide a product that is so good they want to be there, of course there's always a possibility that they can cheat and say 'you can pay me directly' and all that, but if I provide a very good product, they will stay. So value-for-money.

So it's basically: value for money, content and innovation.

Yeah that's the key that you would want to build critical mass on your platform

What about the issue of health and safety?

We don't care [laughs] No it's back to the rating, the kinds of people using it, if you're coming to a dinner, you can instantly see if things aren't alright – you can just walk out. Then you would know why you did, you will contact us and we will refund your money.

Do you ever send people out like secret agents?

Yeah we do that, it's a way of monitoring the quality as well. Now I'm not the best one doing this but I'm doing it a lot because I need to learn. I need to learn what is happening and I need to talk to the people and see how they react, see what they like. Because it's a learning process and we can sit in the office and have all these great ideas, but when you attend as real people, it's the real stuff.

What would you define as the sharing economy?

I think when things are between people then it's the sharing economy – so we are in the sharing economy sector. For us it's mostly about experiences and just – free your mind! But I will not say to a professional chef, you cannot be here. In private he is also a person.

If you were to rank what the most critical focus of your platform design, would it be: attracting the right users, the best technology, the product/service, the pricing?

For me it's the structure behind the platform, because design wise, we are not there. This is not bad looking but we are not there. We are working on a brand new design, and trust me there will be 10 more of them so not the design. It's the idea the plan and the strategy – and I hope down the track the functions are also working very good so it's easier for the users to use.

What is the main hurdle right now with the functions?

The app is not that good.

What about the desktop version?

[sighs] … we're getting noticed, we're selling tickets.. There's a lot of stuff to be done. It's early days and we're not that many people working on it and we don't have that many people working on it, so we just go with the flow and do what we can.

Are you also on the look-out for competitors within Denmark?

I'm looking at the big competitors – and this is kind of motivating. There are a lot of small ones and the big ones are not big because they say they are big. But they have 150000 users – I have a lot of blogger friends more than that [laughs] that's not big – not on a global market. You know the main problem is you can't do this locally, because it needs to be global. It just takes a longer time to build globally but it's the only way forward. Because you are going to Milan, you don't know where to check for a platform like this, so you need to have global solutions like this one. I think future wise, I will provide some APIs, so local providers can plug in and sell their products, I think that's the best way forward.

I guess if you only keep it local, you don't really have a customer base – you already know people and you will prefer to dine at their place

Exactly – you don't get the market, and I think that's the problem. And in a market like this, you don't have a big marketing budget so all our competitors, in order to attract users, they need to do marketing. In our project, it's our users doing their own marketing – they share on social medias, they take their own photos, so it's the whole interaction that's creating the market for us.

How many users are there on TastePlease?

Only 6000. We have close to 100 hosts right now and we sold around 800 tickets for dinner – since we went live 6 months ago, end of March. I think it will be a platform that will grow very, very slowly, and then one day when things are starting working it will soar. So we are aiming for 2 million users – but you know it's about building communities and making it work.

What are your hopes for TastePlease?

I hope I have brought a lot of people together, and I hope a lot of people made some new friends and I hope in just a little way it can make our planet a better place to be. Just bringing people together and food is a good excuse.

11.4 OLIO – 7 Most Popular Listings of 2017

Hi Dona,

The results are in! It's been quite a year. We had just short of 100,000 listings added to OLIO in 2017 (yay!) and here are the ones that topped the list.

7 most popular listings of 2017

1. "Nutty delights"

2. "Propercorn popcorn 🍿"

3. "Natural veggie autumn salads"

4. "1000s of bags of Punchy Protein Nuts"

5. "Fruit and veg"

6. "More breads than dreams are made of"

7. "Roasted Coffee beans from a restaurant"