



ACHEF

Entrepreneurial Business Management

U58074

Achef Ltd.

Assignment 4.1

Business Concept Evaluation Report

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Executive Summary

Achef is an automated kitchen that aims to simplify the lives of students on campus, whilst saving them money and time. Achef will start operating at Oxford Brookes University from September 2020 and will allow students to select and personalize their own meals online through our mobile app and website or the kiosks available across campuses. Achef will provide a great variety of foods at unbeatable price compared to the competition.

Achef's marketing strategy is imbued in our mission and vision. We will provide accessible services while building a brand image recognised for great quality food and outstanding service. In our marketing, we will mostly use social media platforms to run campaigns in order to attract Brookes students and staff members to Achef.

In regard to operations, the company will establish its office in Headington in our Operations manager garage. Initially, storage space will be provided by Oxford Brookes University as part of our contract with them, however all additional storage needed will be filled with the services of Bigyellow (Bigyellow.co.uk, 2019). Ingredients will be sourced by local farmers, alongside the long lasting 'pantry' items which will be delivered from Alibaba. All activities will be performed by Achef founders alongside staff such as the chef and 2 IT consultants.

Achef intends to focus heavily on CSR by giving back to the community and supplying our automated kitchen entirely local products. CSR will focus on homelessness and several charity project around the city of Oxford, by partnering with charities we intend to run fund raising events that will help develop the impact of charities on local communities.

The legislation of all kitchen activities undertaken by Achef is of high importance and has been deeply researched. This ensures the analysis of employment laws, insurance policies, health and safety and all regulations linked to "direct selling" of fresh produced food.

Cambridge consultant is expected to provide us with the coding of the app and website alongside programming the kiosks, a small IT team will serve as consultants and deal with all technical issues.

In conclusion, we are requesting an investment of £150,000 and a return within 5 years with 10% interest. Achef is forecasted to break even at the end of the second year.

Contents

• The Business Details	p.3
• The Value Proposition:	
○ Industry and Market Analysis	p.4
○ Customer Proposition	p.5
○ Marketing Strategy	p.6
○ Operations Plan	p.7
• The Resources:	
○ Management Team and Company Structure	p.9
○ Financing and Financial Projections	p.10
○ Risks and Strategic Options	p.12
○ Key Milestones	p.13
• References	p.14
• Appendices	
○ Appendix 1 – Oliviero Barlucchi	p.16
○ Appendix 2 – Raul Villanueva Garcia	p.24
○ Appendix 3 – Hibo Ali Osman	p.30
○ Appendix 4 – Saleh Aker	p.42
○ Appendix 5 – Lkhagvajargal Damdindoo	p.49

The Business Details

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Nutritious, healthy, flavourful and customisable meals delivered to the customer with the speed and affordability of traditional quick-serve establishments.

”

The proposed business concept is an automated restaurant/canteen situated on Oxford Brookes University campuses, ideally occupying the poorly used real-estate at The Terrace, the larger catering outlet of the university. We envision to deliver nutritious, healthy, flavourful and customisable meals to students and staff with the speed and affordability of traditional quick-serve establishments while being more efficient and environmentally conscious. Additional value propositions are the wide selection of ingredients to choose from, accurate nutritional information (great for fitness centred lifestyles) and implementation of latest tech, like AI, to supply customers with intelligent recommendations based on their constantly updated user profiles and track their nutritional intake.

The implementation of AI also allows the business to get to know the customer plus it efficiently manages stock, collects valuable data about ingredients and others like number of sales. Our outlook for the future of the business is to eventually replace traditional cafés & canteens that can be found on University campuses around the country, that currently offer a limited choice for products which prices are forcefully set higher than desirable as costs like rent, salary and utility bills continue to increase. The use of automation, and subsequently AI, has shown to be effective at alleviating salary and raw material expenditure, ensuring increasing in revenues, and a growing customer base in the long run (McKinsey&Co., 2018; Walsh, 2018).

Industry and Market Analysis

We identify ourselves to be in the Quick-Service Restaurant industry, and more specifically in the fast-casual sub-category.

Achef's main target market is Oxford Brookes University students and staff that are in search of a quick, affordable and healthy meal to consume on campus.

Investigating local competition, we have observed that they offer highly priced, unappealing and often constricted meals that do not fully satisfy their target audience (See Appendix 1). For example, the average price to pay for a decently sized meal from such outlets is £8. We are looking to average around £4 per meal, while guaranteeing appealing portion sizes, healthy ingredients, quick delivery and full customisation.

As suggested from privately conducted research (16110633, 2019) there is great demand for our envisioned end-product, therefore great opportunity for Achef to penetrate the market. However, given the innovative nature of the business, that at its further stages aims at drastically diminishing and possibly eliminating a user's "made-at-home meals" we are also foreseeing the birth of a new market. Essentially, we are planning on supplying our customers with a practical and cost-effective alternative as opposed to being confined to time-consuming home kitchens and/or pre-packaged café meals (Perelman, 2018).

In terms of numbers the potential market is comprised of 13,690 undergraduate students, 4,115 postgraduate students and circa 3,000 members of staff, all from Oxford Brookes University (HESA, 2017). The TAM is comprised of 13,885 full-time students, with the highest probability of actively frequenting the university's campuses. The SAM amounts to half of the TAM, while the penetrated market size hovers around 1/3 of the SAM.

Serviceable Available Market: 2,500 Students & Staff

Customer Proposition

On the basis of or market research, we have identified the following points as Achef's customer value proposition:

- Frugal – Machines do not require salaries; thus, we can offer lower price points.
- Unrelenting – Our machines can run 24/7, always available.
- Efficient – We can lower food waste by giving customers just what they want.
- Accurate – Meals are guaranteed to be as good as always.
- Quick – Less queues, happier customers.
- Transparent – No hidden bits, what you see is what you get.
- Knowledgeable – Useful information for customer dietary requirements.
- Intelligent – Learns customers preferences with AI.

Additionally, Achef aims to stock nutritious, healthy and flavourful ingredients.

Vision Statement

Deliver students healthy, flavourful & highly customisable dishes at the speed and affordability of traditional quick-serve establishments.

Mission Statement

Achef maintains a tradition of conduction its operations in accordance with strong ethical laws and values as well as impeccable standards. We highly value the reputation of the company and our brand image in regard to communities that we serve.

Marketing Strategy

Identification of strategy

Initially, Achef needs to demonstrate social responsibility with the environment by offering an efficient service to keep our main consumer target, also we offer an affordable price with a highly efficient service in order to minimize consumers meal-time. Achef will have a strong work with public relation brands to provide events for University and the local community, as well as working on our brand recognition.

Strategy and objectives

As the second company in the world to provide this service, Achef appears as a pioneer in the automated kitchen in Europe. Achef will operate in universities with a main focus in technological innovation. This will erase human error, solve operational mistakes, resulting from high prices, slow efficiency and unhealthy food at university. Our focus is on customer relationships in order to tighten up these values with our clients (Burns, 2017).

Market options

According to our research, in the early years the competition will be the different restaurants and cafes around university that makes little competition for Achef as the options of healthy and affordable food are very limited. Although due to the high cost of the starting investment in machinery that makes it a hard market for the newcomers, therefore makes it hard at the beginning for Achef. One of the solutions to reduce this cost by Achef is the no waste of food and efficiency levels and later on the expansion of Achef to different universities.

Marketing objectives

Achef has set targets to acquire within the first year.

Within the first month Achef will launch a strong social media campaign, on Instagram, YouTube and Facebook trying to reach 500 to 600 followers, in order to attract as many University dwellers as possible with social media promotions. As well as gaining people every day by signing up for lunch at university. Start charity events at Achef to initiate brand awareness with students and local

community. To build this automated kitchen in other universities when the model is proven to work.

Marketing Mix:

Product: The product is an automated restaurant/canteen on university campuses. Such automatization is envisioned to deliver nutritious, healthy, flavourful and customisable meals to students and staff with the speed and affordability of traditional fast-food establishments while being more efficient and environmentally conscious.

Price: Due to the high competition and variety of options of food in University we will offer very affordable prices and customer's deals. Our main target market are university dwellers, therefore, low budget, this allowed us to penetrate the market with a pricing strategy.

Place: Our service will be mainly in universities providing a strategic location for university dwellers. Due to this our strategy will be mainly focus on the location and using social media, word of mouth and events to promote Achef around campuses.

People: as mentioned above our target segment will be mainly students and university staff due to the lower budget, willingness of a healthier life style and lack of time as they normally have a brief time to enjoy a meal. That making them our primarily target.

Operations Plan

Business controls

Operations management is about how an organisation manages the processes that produce or deliver goods and services (Greasley, 2013). Organisations exist to create value; thus, operations innovation can provide organizations with long-term strategic advantages over their competitors (Hammer, 2004).

Suppliers

After considering Oal group, a family owned robotic company based in the U.K., we ended up contacting Cambridge consultants (Henceforth CC) for the design of our robots. CC is a British company established in 1960 that offers next generation food manufacturing preparation and processing systems using

robotics. Several conversations with the company have led us to ask them to supply our machinery and the IT support covering any damage.

Achef will maintain Brookes' current food suppliers, mostly located in Oxford. This includes Jack Brand limited for meat and A.M Bailey for fruit and vegetables, milk and dairy and bakery goods (A.M bailey, 2019). The Automated Kitchen will not use the services of a catering company, as we only need two to two chefs employed locally by our HR manager (Marcousé, 2018). However, as the kitchen is using a completely automated system it is important to partner with IT companies that provide assistance in case of a technical issue (See appendix 3.1) Further discussions with Oxford Brookes University catering suppliers will define possible deals and room for growth in the future.

Warehouse and office space

When Achef first launches, the business will not require a warehouse, Cambridge consultant has agreed to deliver directly the automated kitchen to Brookes once the machinery is ready to use (Cambridgeconsultant.co.uk, 2019). This will help us save significant costs initially. Furthermore, the university will provide us with a storage space of 2000sqft to rent for all the ingredients and packaging. Hibo, the operation manager will provide the office space in her house located in Headington, Oxford.

This office will allow us to maintain the operations in the long run, when Achef expands to other universities in the Midlands and across the country.

Staff (HR)

The operations of the company will be run by the five of us without initial help. However, once the company will expand to other universities around the UK, we will start recruiting more personnel, through a series of face to face interviews. For the warehouse staff, activities will include unloading, unpacking, sorting, portioning and packing ingredients. Four to six months prior to implementation, we are expecting to hire and train 6 professionals. (Appendix 5.4.2)

IT professionals are essential to understand our machinery and should be available at all time to deal with technical issues. Customers will have the option to access our mobile application as well as ordering screens available across university. The international consultant will help Automated Kitchen to ensure a smooth transition during the national expansion phase. Moreover, he will consult

on packaging and instructions, mobile application creation as well as a hands-on participant in the actual phases of implementation.

Storage and inventory:

Forms of inventories include raw materials, maintenance, work-in-process and finished goods (Slack et al, 2013). A chef will receive raw materials in the form of food and drinks as well as finished goods in terms of the automated kitchen machinery (See appendix 3.2.1)

In regard to the storage place, the Oxford Brookes space will be fitted with a refrigerated room, into which all of the fresh products will be unloaded directly in order to maintain freshness (See appendix 3.2)

Management Team and Company Structure

Management Team

Chief Executive Officer – Oliviero Barlucchi

Will be the company's CEO who is responsible for keeping the company to work towards the long-term goals and agreed strategies.

HR Director – Saleh Aker

Will be the company's HR director and will be responsible for defining people for the right positions and leading people towards the company's strategy.

Marketing Director – Raul Villanueva Garcia

Will be the company's marketing director and responsible for the consistency of the marketing campaign and identifying marketing segments.

Chief Financial Officer – Lhagvaa Damdindoo

Will be the company's CFO who is responsible for the company's accounts and tracking its ratios and its connection with the company's performance with the support of an accountancy firm.

Head of Operations – Hibo Ali Osman

Will be the operation director whose job is to keep operations efficient and effective.

Company Structure

The company will be set up as a private limited company where it will be separated from its directors including finances where the after-tax profits will be kept for the company (UK Government, 2019). Partners will be responsible for all

business billings as well as any losses the company makes. Furthermore, partners will be sharing profits and the tax payments will be done individually by each shareholder on behalf of his/her shares (UK Government, 2019).

Shareholders will create and agree for written rules known as 'Memorandum and articles of association' which states that all shareholders are agreeing on forming the company including written rules about running the company with the signatures of director/s and the company's secretary (Companies house, 2014). The company's name will be Achef Ltd, and it will be based in Oxford Brookes University Headington campus. There is no other company that has the same name in the UK. The company's shareholders Oliver, Saleh, Hibo, Lavga and Raul will be also the directors who run the company then the partnership will be registered for Self-assessment with HM Revenue and Customs (HMRC) by the nominated partner who will be responsible for partnership tax return using SA400 form or SA401 form (UK Government, 2019).

CSR

Achef is going to be a strong engaging member of Corporate Social Responsibility (CSR) in the local community. The business will operate as sustainable as possible and directors will ensure that the environmental harmful standards are to its lowest. the company will be implementing CSR by applying sustainable food sourcing, working with local food banks, cutting food waste, using sustainable packaging and recycling were possible, fair trading, energy efficiency and serving healthy food.

Financing and Financial Projections

Financing the business

We will invest £30,000, giving a total of £150,000 invested from its five founders. This money is mainly accumulated through founders' savings and their parents' investments for the project succession. Achef Ltd will require an investment of £150,000 from the venture capitalists to launch and operate early years of the business. The investments will be spent on buying machinery and general set-up for the business.

Sales

From April till August of 2020, we will work on setting up the business includes ordering customised automated machineries for the business, establishing the brand through marketing, and general preparations before beginning sales. In total, we have estimated sales of £709,200 in year 1. In year 2, our sales will increase due to Oxford Brookes Engineering School is moving next to Headington campus which will result increase in number of customers. From year 3, due to start partnering with second university, sales will be reached at £1,382,940 (see Appendix 5.1).

Pricing Strategy

Our business is aiming to sell the its products through a penetration pricing strategy following Porter's generic strategies (Porter, 2004). Penetration pricing strategy will rely on the expectation that students will naturally switch to your lower-cost, higher-quality product, helping us to penetrate the market quickly.

Cost of Sales

We are aiming to have a mark-up of the 40% to our cost of sales, meaning that a selling price at of £6, the cost of sales will be £3.36 (56% of the sales price). However, we are expecting cost of sales reduce as our business expands further. In the following years, due to being able to buy supplies in higher quantities, as we can negotiate the price with our suppliers and aiming to decrease it to 45%.

Sales and distribution cost

The sales and distribution cost will 5% in the first year, and it increase to 10% in year 3 due to expansion and required increased cost of marketing costs.

Taxes

Tax will be accounted in year 3, as the profit exceeds the limit of £300,000. From the year 3, our business's profit exceeds £300,000 when we will start paying 19% for the corporate tax.

Equity offered to investors

For £150,000 investment, we offer in return a 20% share of the business. The business has the value of £1,494,365.45 after 5+ years. This will come to investor receiving £298,873.09 in return for the investment if they want to exit the

business after year 5+. This would approximately an 199% increase in initial investment, if the business were to meet its expected sales and profit (see Appendix 5.9).

Risks and Strategic Options

Maylor (2013) defines risk as the “uncertainty inherent in plans and the possibility of something happening that can affect the prospects of achieving business or project goals.” Risk management can be evaluated as the process in which we studied the risks associated to Achef as a project and brainstorming the way we could minimize the negative impact of those.

Identified major risks:

Financial	Being too optimistic in regard to sales and unforeseen costs (Extra costs for the machinery for instance).
Technological	Robot failure, application and website failure. Kiosks not performing well
Societal	Stakeholder and supplier interferences can cause major problems.
External environment	Network issues, Brexit could affect food prices and general prices on the market

Three main risks have been identified in relation to Achef. These risks have been broken down into financial, technological, societal and environmental using a similar approach to Pestle analysis. The major risk identified here is the risk of a technological default, due to the fact that Achef is solely based on robotic systems and a failure of the system could bring about bad press and might push us to losing consumers. Any technical issues will be dealt with immediately by our IT consultants present on site most of the week, nevertheless a serious default will require us to send some part of find alternatives at the manufacturing company and this is time consuming.

Supplier “interferences” can be defined as all the negatives coming from the reprimandable actions undertaken by our suppliers. To deal with this issue, the company have surely undertaken extended research before deciding on our suppliers.

Finally, financial forecasting can represent a great risk, as the product is a software robot using AI and there is no comparable system currently operating

in the UK. Furthermore, the company will use high marketing costs, distribution channels and various suppliers which makes the long term forecasting hard. Nevertheless, we count on solving this issue by undertaking detailed market researches as well as accurate marketing estimations and a detailed Gantt chart we came up with a risk matrix (Appendix 6).

Exit Strategy

Our exit strategy is for Achef to be a merger of Sainsbury's. It is not an easy decision, but we believe that Sainsbury's and Achef embrace similar values as the company supports UN sustainable development goals and plays a key role in tackling climate change. In addition, Sainsbury's supports local communities by increasing local food donations (Sainsburys.co.uk, 2019).

Some of the advantages of a merger include diversification, this initiative could place Achef as a pioneer in Supermarket automation food services. Furthermore, merging with Sainsburys will bring about access to the 15% market share detained by the company alongside greater development in R&D and increased efficiency.

On the other hand, Achef brings data to Sainsbury's, this include customer experience data, FOH and BOH integration and speed of service data.

Key Milestones

- Year 0 – Develop technologies, website and App. Establish relationships with suppliers & customers. Launch the business and begin operations.
- Year 1 – Start paying back investors. Evaluate the business model, tweak accordingly.
- Year 2 – Break Even (February 2021)
- Year 3 – Consider options for further expansion with long-term loans, expand locally.
- Year 4 – Consider expanding nationally, expand to other universities.
- Year 5 – Complete repayment of investment towards investors.
- Year 6 – Expected Company valuation of £1,494,365.45.

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Appendices

Appendix 1A – Industry and Market Analysis – Olivero Barlucchi 16110633

Eating out market size

	Total	Index	%	£m at	Index	%
	£m		annual change	2018 prices		annual change
2013	59,675	81	n/a	66,542	90	n/a
2014	62,159	84	+4.2	67,714	92	+1.8
2015	64,909	88	+4.4	70,026	95	+3.4
2016	67,744	92	+4.4	71,807	97	+2.5
2017	70,980	96	+4.8	72,641	98	+1.2
2018 (est.)	73,842	100	+4.0	73,842	100	+1.7
2019 (for.)	76,030	103	+3.0	73,824	100	0.0
2020 (for.)	77,973	106	+2.6	73,563	100	-0.4
2021 (for.)	79,867	108	+2.4	73,209	99	-0.5
2022 (for.)	81,691	111	+2.3	72,717	98	-0.7
2023 (for.)	83,420	113	+2.1	72,133	98	-0.8

Figure 1.1: UK eating out market size and forecast, 2013-23 (Mintel, 2018)

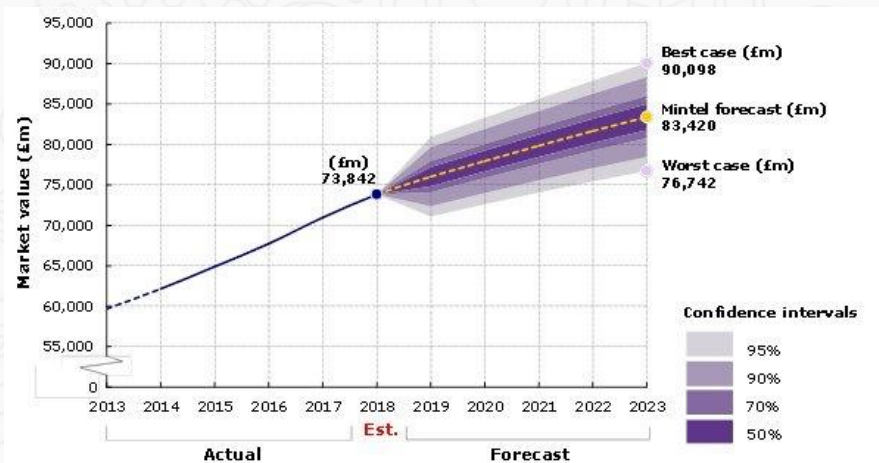


Figure 1.2: UK eating out market size and forecast, 2013-23 (Mintel, 2018)

Under Mintel's (2018) terms our market segment is the Food-to-go Specialists, quick-serve outlets that cater for breakfast, lunch and snack occasions. Listed examples for established businesses in such segment are Pret a Manger, Subway and Greggs. Data from Mintel (2018) suggests that the eating out of home foodservice market declined in 2018 as consumers skewed towards increasingly budget-conscious meal solutions, including eating out less often. However, the market size is forecasted to grow £9 billion from 2018 to 2023.

Customisable Meals Matter to Consumers

The eating-out market has grown towards generating profit by offering meal deals, low-cost alternatives fueled by the consumers need to save money. However, as shown in Figure A3, 39% of consumers surveyed have stated that

the meal deals have become repetitive and unsatisfying. Having the option to customise meals would be much more appealing and ideal, as 56% of respondents would like to see more tweakable options.

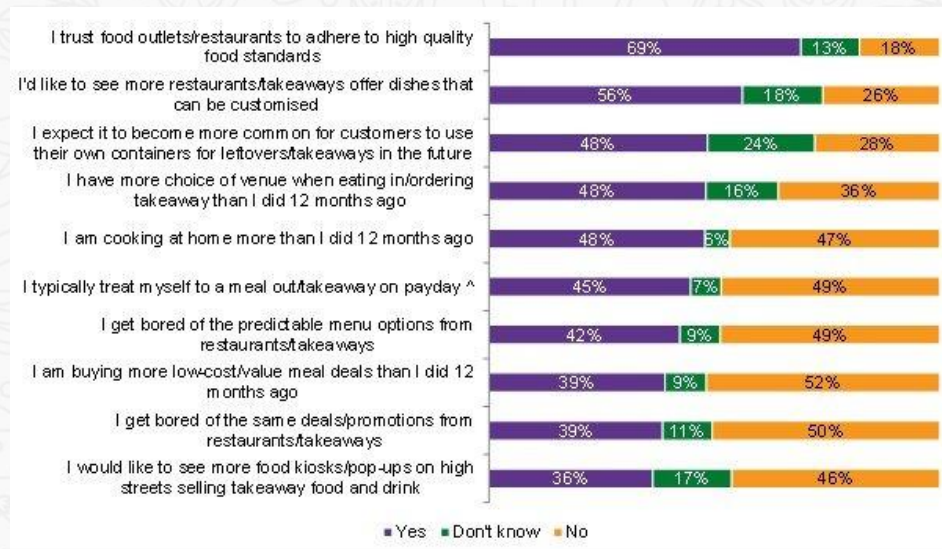


Figure 1.3: Eating out-of-home behaviours, June 2018 (Mintel, 2018)

What do Consumers Want

There is a growing demand for greater customisation, as consumers often feel frustrated under the circumstances of limited and fixed menu options.

Establishments have a great opportunity to develop and offer a system that allow customers to have greater control over what they eat. Similar implementations for easy customisation have been seen in McDonalds ordering kiosks, and in Starbucks in-app ordering system.

Mintel (2018) suggests that establishments that can supply customers with “the right ranges, formats, locations and customer experience have the opportunity to prosper the most in the coming future. Furthermore, the growing population of people at work is fuelling a great demand for healthy grab-and-go meals for daily occasions.

Local Target Market

The targeted market is a growing market although due innovative circumstances of our business we may branch into creating a new market. Therefore, proof is needed to demonstrate that demand does indeed exist. In further stages we aim to drastically diminishing and possibly eliminating “made-at-home meals”. Essentially, we are envisioning to supply our customers with a practical, cost-effective alternative as opposed to being confined to time-consuming home kitchens and/or pre-packaged café meals. Although the market is new, competition still exists as it branches out from an existing & growing market. Other characteristics of the market are its great fragmentation and it being local, however, regarding the latter, this is only true during the testing-pilot period. In the case of the business being successful locally, it is most definitely expected to expand globally. Having a testing-pilot period can be beneficial, allowing to contain any unforeseen issues with the business and resolve them before

stepping in the much bigger and costly global market. However, in the case of the business being successful, having held back from immediately going global may allow competitors in, therefore losing the window of opportunity (Burns, 2018).

Surveying our target market

The online survey (16110633, 2019) has been completed by over 200 users, of which roughly half were students. The prevailing age bracket was 18 to 25. 50% of the respondents demonstrated that they never purchase/consume a meal on-campus, while a large minority showed to occasionally/sometimes do so. Respondents stated that cost (value for money), taste (sensorial feedback) and time involvement (time spent cooking/assembling/buying) were the most important factors to affect the final choice of meal to go for. Having control over the above factors shows that 48.7% of the respondents may be more inclined to consume a meal on campus. 19% of respondents said to be spending £ 1-2 per home-cooked meals, 32% spend £ 2-3 and 22% spend £ 3-4. Similarly, in percentages, respondents feel that such prices are reasonable for a meal to be cheap. 39% have shown to monitor their nutritional intake and 60% have shown interest in purchasing custom/catered meals with supplied nutritional information lists over consuming home-made meals lacking such data/information. When asked if they would be inclined to shift part of their monthly grocery expenditure towards custom made meals, which costs won't exceed the cost of making food at home, a large majority of the respondents appraised the idea. On the matter of trading human-made meals for the efficiency and consistency of a robot made meal, with the guarantee of an absence of human-error respondents similarly appraised the concept.

Customisable meals

There is a rise in consumers that tend to closely analyse the ingredients and contents of the food that they buy. Establishments can benefit from helping customers "walking-through the process of how they create the dish so they can make informed decisions and feel in control of what they put into their body". Compared to menus with rigid options, a greater freedom of choice and the possibility to build customised meals may also increase the variety of flavour combinations, which in turn may keep customers coming back to try a different mix of ingredients (Mintel, 2019).

Political	Economical	Sociological	Technological	Legal	Environmental
<p>Brexit</p> <p>New government tuition fees</p> <p>Will they increase or decrease</p>	<p>£ Decreasing in value</p> <p>Cost of food increasing</p>	<p>Healthy lifestyles</p> <p>Specific Dietary Requirements</p> <p>Public opinion on global issues</p>	<p>Widespread automation and adoption of AI</p> <p>Newer generations tendency to better engage with tech</p>	<p>Government tendency to create new policies to promote innovation</p> <p>Employment laws for low-skill jobs</p>	<p>Eco-sustainability</p> <p>Reduction of Food waste</p>

Figure 1.4 Achef PESTEL Analysis

<p><u>Strengths</u></p> <p>Serving healthy and nutritious food across campuses</p> <p>Competitive pricing</p> <p>Fast and efficient</p> <p>Customizable food, endless amount of combinations possible</p>	<p><u>Weaknesses</u></p> <p>Employee training on how to use the robots</p> <p>Financial resources</p> <p>Competitive vulnerability</p>
<p><u>Opportunities</u></p> <p>Taking advantage of trends related to eating healthier may mean featuring more organic dishes or salads on your menu</p> <p>Offering plant-based options alongside halal meat</p> <p>Selling some sides as take away, in order for students/staff to take some of their combinations back home</p>	<p><u>Threats</u></p> <p>Adapting to robots can</p> <p>Great competition with on campus and local restaurant</p> <p>Rising price of certain foods, especially on sea foods</p> <p>Increase in property rent</p>

Figure 1.5 Achef OSWT

The Business Model Canvas

Designed for: **Automatised Restaurant/Canteen** Designed by: **16110633** Date: **02/02/2019** Version:

<p>Key Partners</p> <p>Investors</p> <p>University</p> <p>Suppliers</p>	<p>Key Activities</p> <p>Development of new tech & machinery</p> <p>Marketing</p> <p>Problem Solving</p> <p>Platform/Network</p> <p>Selling</p>	<p>Value Propositions</p> <p>Speed and affordability of traditional fastfood places.</p> <p>Nutritious, healthy, flavourfull ingredients.</p> <p>The business is easy to adapt to different locations so that customers can always enjoy their favourite meal. eg. at University, Shopping centers, smaller variant for workplaces.</p>	<p>Customer Relationships</p> <p>Personal Assistance</p> <p>Self-Service</p> <p>Automated Services</p> <p>Co-Creation</p>	<p>Customer Segments</p> <p>The business mainly targets students, however it also considers people that often frequent the premises of the university campuses.</p> <p>This segment is characterised by being accustomed by todays speed of day to day life, having increasingly less time for a complete sit-down meal. These customer often search for a meal that can guarantee healthyness, value for money, wile being delivered unusually fast.</p> <p>People that want a meal on campus.</p>
<p>Cost Structure</p> <p>RnD Costs Marketing costs</p> <p>Variable costs</p> <p>Economies of Scale costs</p> <p>Equipment & Technology</p>		<p>Revenue Streams</p> <p>Possible customers are willing to pay £ 3-4 per meal. University meals currently cost around £ 5-6 (Main + Drink + Side). Customers pay via card or cash each visit, however they may be inclined to switch to a one-time payment solution or a monthly subscription.</p> <p>Meal Sales, Subscription sales</p>		

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Figure 1.6 Achef Business Model Canvas

Appendix 1B – Technology – Olivero Barlucchi 16110633

We are looking to design and develop all of our machinery in conjunction with Cambridge Consultants Ltd. They have developed technology for Ocado, Iridium, Axisis, Vinfusion and many others. They offer expertise in design, electronics, software, and mechanical systems.

Machinery

We are planning on designing and manufacturing custom machinery in conjunction with Cambridge Consultants Ltd. This machinery will be the front of house robotics tasked with cooking, assembling and serving the customers ordered dish. We are looking to produce 10 modular machines for the pilot/test run of the business. The machines will operate through a system of ingredient dispensers, hoppers that will feed into a cylindrical apparatus aided by induction heating and a motor to mix ingredients.

App & Website Development

Achef experience will be strongly based around an ad hoc website and app. These webservice will provide customers with a quick and different way of ordering food, essentially allowing them to anticipate a dish preparation for it to be ready on their arrival to the business's premises. The app will also supply the users with an edited and curated community section, where customers can share their favourite dish compositions with pictures and useful nutritional, cost and sourcing data. The objective is to create a crowd-sourced social media discussion board.

The app will allow customers to pay in a variety of different ways and aid the business in sales. Via notifications users will be encouraged to view the latest offerings and get AI produced suggestions (based on account data, like a listed customer objective to lose weight or gain muscle, age, previous purchases and other)

Ordering Stations

We will use prefabricated kiosks available from china. These kiosks have been proven to be suitable as used by similar businesses like McDonalds, Uniqlo and others. Kiosks will be ordered through Alibaba. Prices range from as low as 200£ to 1000£ for the higher quality variants (Alibaba, 2019). Set up will be carried out by Cambridge Consultants.

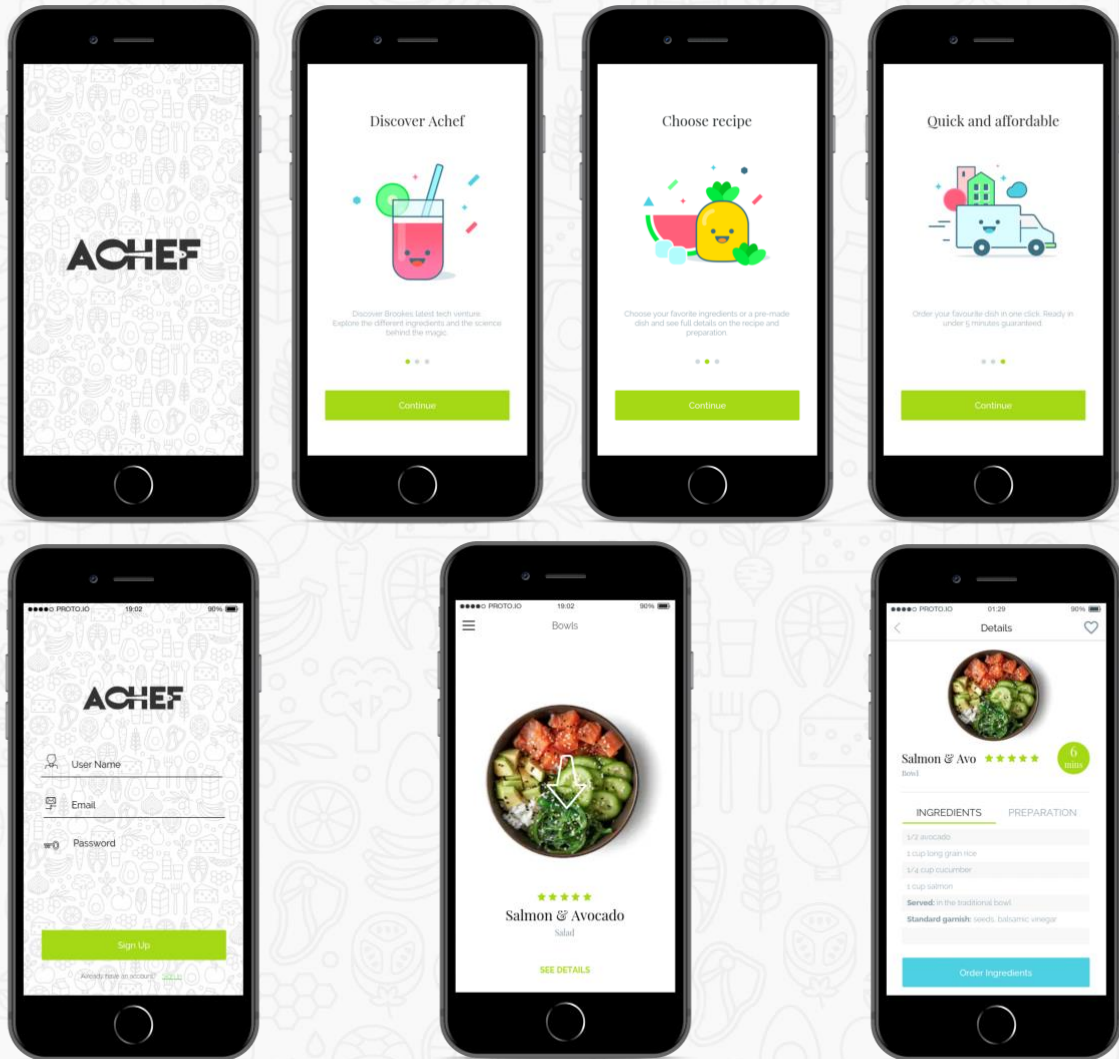


Figure 1A.1 – Achef App Concept



Figure 1A.2 Main Automated kitchen machinery

Appendix 1 – References

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Appendix 2 – Marketing Strategy – Raul Villanueva Garcia 15120905

2.0 Promotions:

- Advertising: On the first three months Achef will be primarily advertising through strong social media campaigns with videos for Instagram, Facebook and our YouTube channel. As well as leaflets around university and poster all over to incentive the people to come and visit Achef.
- Sales: We will be giving away on the first two weeks coupon discounts of a 30% around university to use for any meal at Achef. Moreover, we will work with brand ambassadors carefully chosen, people who have a strong influence on social media and over their circle of friends using the word of mouth around university.
- Public relations: Achef will work with the company Topline PR to start an strong image of the environmentally friendly and innovation of Achef on the local community as well as storytelling in different newspapers and tech magazines.

2.1 Marketing explanation

Porters 5 forces	
Competition	<ul style="list-style-type: none"> - There is a relatively low amount of companies in the world with the technology and concept that we have. - The firms that exist on our technologize market compete with high quality and affordable prices - Starting cost is really high due to the amount of technology require, therefore low risk of new entrants. - On the market to create a brand name recognition is important to expand.
Bargain Power of buyer	<ul style="list-style-type: none"> - The power of buyers is medium, due to the affordable price existing. - Customers are attracted to the deals offered by Achef - Customers have no switching cost to other companies - Customers are attracted by quality and healthy options
Bargain Power of supplier	<ul style="list-style-type: none"> - The bargain power of supplier is very limited - Due to the number of farms and food producers in the area, which provide high quality food. - Makes it harder to have power over the customer (Achef), as there are many options.
Threats of substitution	<ul style="list-style-type: none"> - Threats of substitution are low. - Due to the high initial investment on technology. - Food services are everywhere but there is no company that gives such an efficient service for that price. - The speed of the food by other restaurant/ canteens could be replaceable. - The quality of the service for an affordable price and health cannot.

2.2 Pestel Analysis

Pestel Analysis	
Political	<ul style="list-style-type: none"> - The business follows the UK regulations of minimum wage by offering a higher salary than the minimum imposed by the UK. - Important to complied the hygiene and quality policies, as well as labelling and packaging
Economic	<ul style="list-style-type: none"> - Customer consumption still increasing as there is a need to eat out in this case. - The industry is moderately low-cost, affordable for customers - The restaurant market is increasing as customers look for convenient options of services to eat out
Social	<ul style="list-style-type: none"> - Consumers are conscious about sustainability and healthy lifestyle - Consumers prefer to have more options at university in a shorter time. - Rise of consciousness for organic food, vegan options and vegetarian lifestyle.
Technological	<ul style="list-style-type: none"> - More technology is necessary in the restaurant industry such as self-service to increase the sales. - Screens to showcase their menus. - Achef will technologize the whole process with the robotic kitchen to decrease your ordering time without affecting the quality of the food.
Environmental	<ul style="list-style-type: none"> - Climate change is a big issue for the restaurant business. - Government have made various policies to keep the food healthy and nutritious for the health of the people - Achef will be plastic free on packaging and cutlery.
Legal	<ul style="list-style-type: none"> - Government has implemented specifics rules to control the supply and provision of food products. - Employees wages and welfares regulations - Healthy work environment to provide high food standards.

2.3 OSWT

OSWT analysis	
Strengths	<ul style="list-style-type: none"> - Speed and affordability of a traditional fast-food restaurant - Nutritious and healthy food - Well adapt business plan, the business can adapt to different locations - Food prepare by robots, no human error. - Large variety of ingredients. - Supply customers with health and nutrition information. - No competition can offer a comparable service.
Opportunities	<ul style="list-style-type: none"> - New concept, little to no competition which allow us to expand - People is opting for eating out more nowadays, promoting healthiness in the community. - Expansion nationally and globally to different sectors such as airports, shopping malls and universities. - Innovation could cause I major impact on sales.
Weaknesses	<ul style="list-style-type: none"> - High cost of machinery, equipment and technology. - Controversy regarding people losing jobs - People not used to robots cooking their meals. - Potential for bigger companies to overtake. - Technological problems, machines malfunction
Threats	<ul style="list-style-type: none"> - Entering a new market with new technology. - People refusing to use this technology. - Larger companies could copy the technology and use their names to gain competitive advantages.

2.5 Establish control

To evaluate the performance of the marketing campaigns we will be looking to meet these key points.

- The use of the discount codes and coupons vouchers given away by the brand ambassadors in order to track the process of sales.
- To track the success of the social media campaign we will see how many people download the up through the link and visits to our website.
- Increase on sales always is an important indicator.
- Short surveys to know how they got and heard of Achef.

2.6 Marketing breakdown

Opening event: The opening event at Oxford Brookes University will be a major marketing point, as Achef will spend 2000 pounds on free meals for university dwellers that create an account on our app or website. This is a way of bringing people right from the start of the academic year to try the Achef quality and efficiency. So, by having this event we are creating customer loyalty being this Another powerful way to motivate a customer to repurchase is to establish the idea in the customer's mind that switching to a competitor will cost the customer, in terms of time, money or performance. (Jill Griffin,2002)

2.7 Website

The purpose of the website is to link all the digital marketing of Achef with the other platforms that are going to be use. The website will inform the users about the story behind and the purposes of the creation of Achef, to familiarize them with our brand image. This is a form to convert the visitors of the website into potential customers. (Kerstin Schäfer, 2013)

2.8 Photographer

We are hiring a professional photographer for media creation, pictures, graphics and thumbnails for our website and App.

2.9 Instagram

Instagram is a powerful social media source within our main target market, such a tool could allow us to make campaigns with our followers to win prizes or meal discounts. Besides showing our social awareness by reducing waste and the plastic free policy that Achef has. Instagram will allow the people to know the story behind the restaurant and it also generates a customer's loyalty to the brand. We will be using Instagram ads which is included into the Facebook ad space, this will give exposure to our posts as it will appear on the Instagram feed of our target market and it can redirect the users to our website. (Instagram, 2019)

2.10 Facebook

The Facebook page will be used for promotion of Achef by using relevant content created, such as videos, pictures and technology articles. Facebook ads have the tools to control the marketing effectiveness measurement. Moreover, Facebook has the tools to allow our followers to share the posts with all their friends, making an indirect marketing online. (Facebook, 2019)

2.11 YouTube

Achef will create a YouTube channel as it is the ideal place to share the story behind the restaurant, what motivates the creation of Achef and it founders. Achef will use this platform to show gourmet videos and content that can be share in Facebook and Instagram helping to have more subscribers on the YouTube channel.

2.12 Mailing

Sending regular newsletters about health and nutrition to our subscribers and the benefits of these meals.

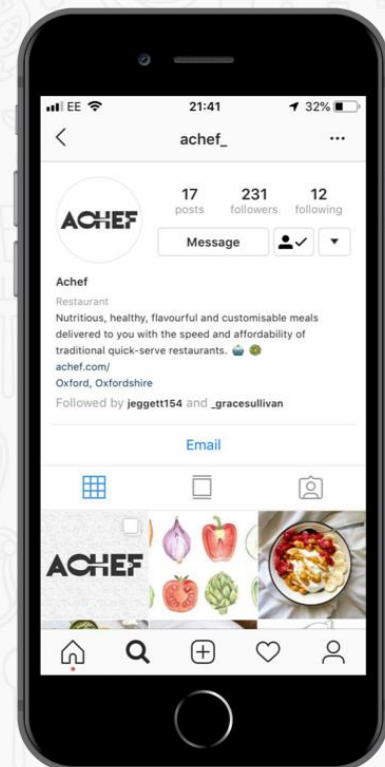
2.13 Event

Achef will partner up with the different societies of oxford Brookes to cover their lunches and dinners.

2.14 Marketing budget

30,000 pounds

Opening event	2,000 pounds
T-shirts	5,000 pounds
Facebook ads	3,000 pounds
Photographer	5,000 pounds
Topline PR	11,500 pounds
Brand ambassadors	3,000 pounds
Leaflets and posters	500 pounds



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Appendix 3A – Operations Plan – Hibo Ali Osman 15114659

Operations is about how organizations create and deliver services and products. It is referred to as the management processes that convert inputs (such as materials, labour, and energy) into outputs (in the form of goods and services) (Slack et al, 2013, p.4).

Achef operations are solely based locally, embracing the will of the company to support local farmers and suppliers and enhance waste reduction and transparency. Oxford is our prime location as it is amongst the best cities to set up a business in the UK (Nominet, 2019) and with its 13,500 full time students increasing by 2% yearly (Brookes.co.uk,2019), Brookes seem to be a dynamic student hub to start operating at (Appendix A).

3.1 Suppliers

In terms of food supply, our poultry will be delivered by Jack Brand limited who works in conjunction with a small number of growers, over ninety percent of whom are based in East Anglia. Mostly independent farmers managing their own flocks (Jackbrandltd.co.uk, 2019). All of their farmers meet the welfare standards laid down by UK law as a minimum and most have the Assured Chicken Production accreditation (ACP). We chose this company because it provides Halal certified chicken, this shows consideration to diets followed by Muslim students at Brookes (Figure 1.1)

The non-halal meat will be provided by Meatmaster Cash & Carry, an Oxford based company that saves Achef 40% compared to supermarkets and provides great quality local and regional produced meat. The company has agreed to fulfil our need for expansion in the future, within their areas of operation. Nevertheless, we will consider additional suppliers if the demand is too high, and at the third year of operation when Achef will expand.

In addition, we have contacted a great number of fruit and vegetable farmers around Oxfordshire. A.M bailey a fruits and vegetables, milk and dairy and bakery goods supplier produced by local farmed in the Warwickshire and Oxfordshire areas assured us that they will be able to meet our forecast demand (am-bailey.co.uk, 2019). Again, new suppliers will be required when the business will expand (Figure 1.1).

Products will be delivered at Brookes and collected by two of the founders between 7am to 9am, then disposed in the refrigerated room on campus.

Basic examples include:

Meatmaster Cash & Carry price list includes:

- Lamb leg steak: 3,30 each or 2kg for 5
- Lamb shoulder steaks: 5 for 500g (meatmaster.info, 2019)

- Leg lamb on the bone: £12.50 for 1.50kg
Salt: £186.79 per tonne (www.saltandgritsolutions.co.uk, 2019)

At this price, we will get 40 large bags of white solar marine salt per pallet (each bag weighs approx. 23 - 26 kg). The salt conforms to British standard BS3247 and it takes only 1 to 2 working days to get delivered in the UK.

Pepper: \$4-\$10 per kilogram (www.alibaba.com, 2017) Even if this will require longer period of delivery and goes against our will to produce 100% locally, ordering on Alibaba will be cheaper for the company. After the first 2 years, we will shift our supplier to a local one.

Cheese and dairy products	<ul style="list-style-type: none"> • Terrys Stone Cottage, Oxford (07539214000) • A.M Bailey • Roots of Oxford (Freshdirect.co.uk, 2019)
Meat	<ul style="list-style-type: none"> • Jack Brand limited for poultry • Meatmaster Cash & Carry for red meat
Fish	<ul style="list-style-type: none"> • The stickleback Fish company ltd • Browns seafoods
Fruit and vegetables	<ul style="list-style-type: none"> • A.M Bailey • Roots of Oxford

Figure 1.1- List of suppliers

Finally, Achef will operate with fixed margins of 40% on all sales. The average cost per meal is estimated at £3.36 (see Appendix 5), with a mark-up of 40% the selling price will be approximately £6, varying according to the ingredients chosen.

3.1 Infrastructure

3.1.1 Storage

Our contract with Oxford Brookes University will provide us with an operational food storage. However, over the course of the first year, when needed and capital permits, we could use a secondary company as a temporary storage. Big Yellow is a self-storage business located in Peterley Rd, Oxford. We intend to rent 100 sqft at £864 a year (bigyellow.co.uk, 2019). Big Yellow do not insure the contents of their storage units (bigyellow.co.uk, 2019), thereby we will have to provide the budget for the insurance (Quotemonkey.co.uk, 2019), a padlock and refundable security deposit (Appendix finance).

The office space we have chosen is located in Headington, 15 minutes away from Oxford Brookes. I am the owner of the house and we will use my garage as an office space. I will provide with majority of office supplies as well as a microwave, refrigerator, security system, a printer, coat racks, trash cans and recycling baskets. Additionally, we will need office and restaurant equipment (Figure 1.2)

3.2 Equipment

Considering the fact that the catering equipment of Achef will be entirely provided by Oxford Brookes University (See appendix 5), we assumed that some kitchen equipment is dealt with. This comprises freezers and refrigerators, preparation tables, shelving, food processors, mixers, slicers and food preparation counters as the food will be prepared prior to the cooking made by the automated kitchen. In addition, as the Automated Kitchen will be based at The Terrace, plates and cutlery sets are provided by the university. This will significantly lower our need for take away boxes, resulting in less wastage (Figure 1.2). In order to gain these advantages, we will need to set up a meeting with the catering department of Brookes University and convince them that our product will significantly increase their sales revenue and impact the 48.9% of students who do not eat on Campus (Appendix 1.1 and 2.1).

Furthermore, all long lasting 'pantry' items will be purchased on Amazon UK through suppliers who offer full delivery. Specific items related to specific recipes will be ordered in bulk.

Office equipment	Restaurant equipment
4 HP office computers (£499 each)	Automated kitchen (£150,000)
5 Office desks and chairs (£800)	Kiosks (£6,000)
1 Samsung proXpress printer (£240) Includes printer, scanner and fax machine	Mobile Application and website (£20,000)
Internet connection and 2 landline phones (£50)	Shelving's and other kitchen material
Lamps and lighting equipment (£40)	

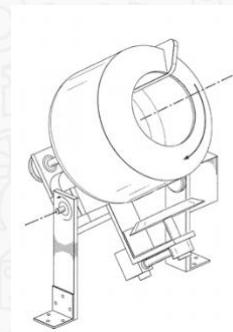
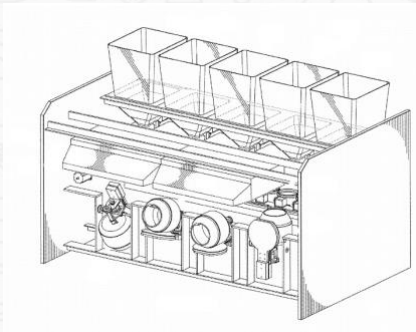
Figure 1.2- Equipment required for Achef (Appendix 5)

3.3 Manufacturing process

Due to the low volume-high variety nature of our business, a batch production process will be implemented (slack et al., 2013, p220). In terms of production layout, Achef will apply a cell layout whereby all models "transformed resources entering the operation are pre-selected to move to one part of the operation, to meet their immediate processing needs." (Slack et al, 2013, p.223).

3.3.1 The manufacturer and Packaging

After the analysis of several manufacturing companies, we have determined Cambridge consultants as the best suited UK automation production site. Established in 1960, the company specialise in helping clients identify, create and launch breakthrough products and services that disrupt their markets (Cambridgeconsultants.co.uk, 2019). The organisation implements and assures a strict quality control system and delivery time, significantly reducing uncertainty (Meyers, 2000). The design of the automated Kitchen is highly inspired by Spyce, an American automated restaurant located in Washington. After long conversations with Cambridge Consultants, the project lead time is estimated at 6 months starting from April 2020.



Rotating bowls will use Artificial intelligence to compose customers' orders using set measures referred to by a material processing technology (slack et al., 2013 p.249). The kitchen will be controlled by a computer and supervised by myself and our IT technician.

3.3.2 The four V analysis

Low repetition, each staff members High unit costs Less systemization	Volume	High repeatability Specialization Capital intensive, low unit cost
Flexible complex Match consumers' needs High unit cost	Variety	Well defined Routine Standardized Regular, low unit cost
Changing capacity Anticipation Flexibility In touch with demand High unit costs	Variation in demand	Stable Routine Predictable High utilization Low unit costs
Short waiting tolerance Satisfaction governed by customer perception Customer contact skills needed Received variety is high	Visibility	Time lag between production and consumption Standardization Low contract skills High staff utilization Centralisation, low unit cost

(Slack and Lewis, 2015)

Achef produces low volumes of food using low repetition and low unit costs. In terms of variety, the automated kitchen is relatively flexible and matches consumers' needs. The variation in demands is high but there is a great anticipation and the visibility is low, with short waiting tolerance and satisfaction governed by customer perception (Slack and Lewis, 2015).

3.4 Operations strategy

An operations strategy is the total pattern of decisions and actions that position the organization in its environment and that are intended to achieve its long-term goals (Slack et al., 2016). Using Porter's generic competitive strategies (1985) it can be argued that Achef employs a differentiation strategy.

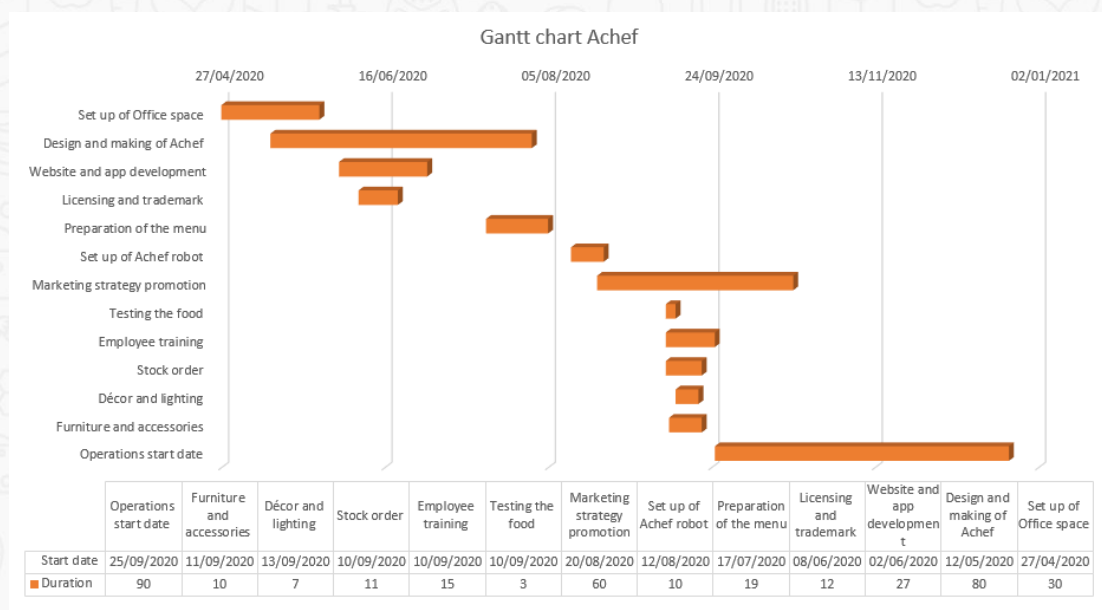


(Porter M. E., 1980)

Indeed, Achef offers a unique concept that allows consumers to customize their meals and name their own combinations. The cooking of meals is visible to consumers, and the company employs strict quality standards and hygiene law requirements. Ingredients are strictly organic, and a variety of plant-based meals are offered. Achef has a competitive advantage in the market thanks to the effective marketing, the ability to deliver high quality products and the innovation of the automated kitchen. Once we have created a strong hold within this competitive scope, it allows us to enter other scopes, thus expanding.

3.4.1- Gantt chart of Achef operations

This chart enhances our cognitive ability to cope with the structural complexity of a large number, diverse and interdependent tasks (Geraldi et al, 2011). As followed pre-opening operations will start before the 27th of April 2020 and end on the 25th of September 2020 on opening day.



(Weaver, 2007; Wilson, 2003)

3.4.2 Revenue streams and growth strategy

At first, the company will solely get its revenue from sales generated from students and staff at Oxford Brookes University. However, through a strong marketing campaign, we aim to quickly expand our automated kitchen to other universities around the UK. Using Ansoff Matrix (1957), it can be argued that Achef is currently in the product development phase. Indeed, even though the product is new, the use of automation in the food industry is an existing market. Throughout the years, Achef is expected to shift to Market penetration with an existing product and market. This initiative is often combined with competitive pricing (Richardson and Evans, 2017), which is already in place at Achef.

	Existing product	New product
Existing Market	Market penetration	Product Development Achef currently
New Market	Market development	Diversification

Figure 1.3- Ansoff, 1957

The aim of this shift is to increase the company's market share, as we aim to be the number one robotic kitchen in the United Kingdom. Following the Hayes and Wheelwright four-stage operations contribution model, our operations seem to be at Stage 2 "striving to adopt best practice in their industry and are usually as good as their competitors at serving their market" (Hayes and Wheelwright, 1984). We aim to reach Stage 3 by 2022.

3.5 Quality management

Quality management is a key process in the operations of a business. Within operations "quality conformance" means consistently delivering services and products in line with their design specifications, which in turn, reflects customer needs and expectations (Hill & Hill, 2018, p.274). With a value proposition ensuring healthy and quality food, it is essential that Achef performs regular quality checks.

These are performed by Cambridge consultants as part of our contract to certify the Kitchen performs its intended tasks without error (Slack et al, 2013). Additionally, prior to launch, An Achef team member has to travel to Cambridge to perform statistical process control (Slack et al., 2013) and a Pareto analysis (Hill & Hill, 2018) with the goal of becoming a six-sigma quality company within 5 years.

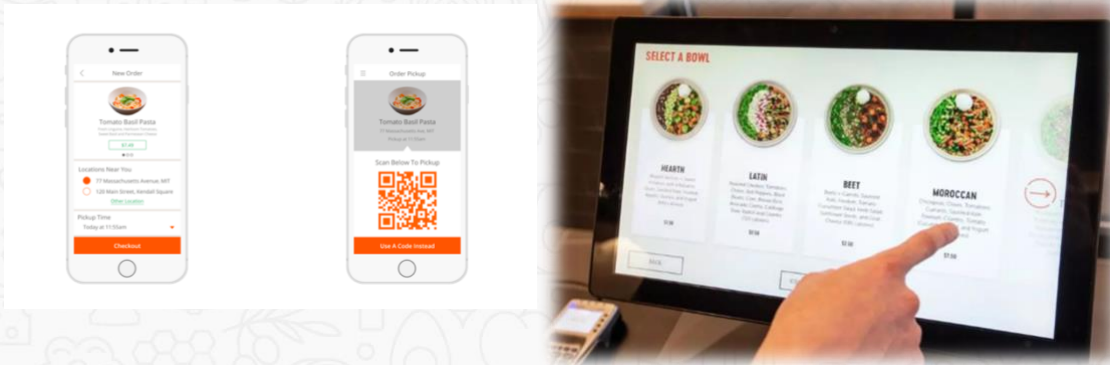
To reach this by year 5, we have set guiding principles for, managing quality within Achef (Hill & Hill, 2018)

- Develop a quality strategy
- Get top management support

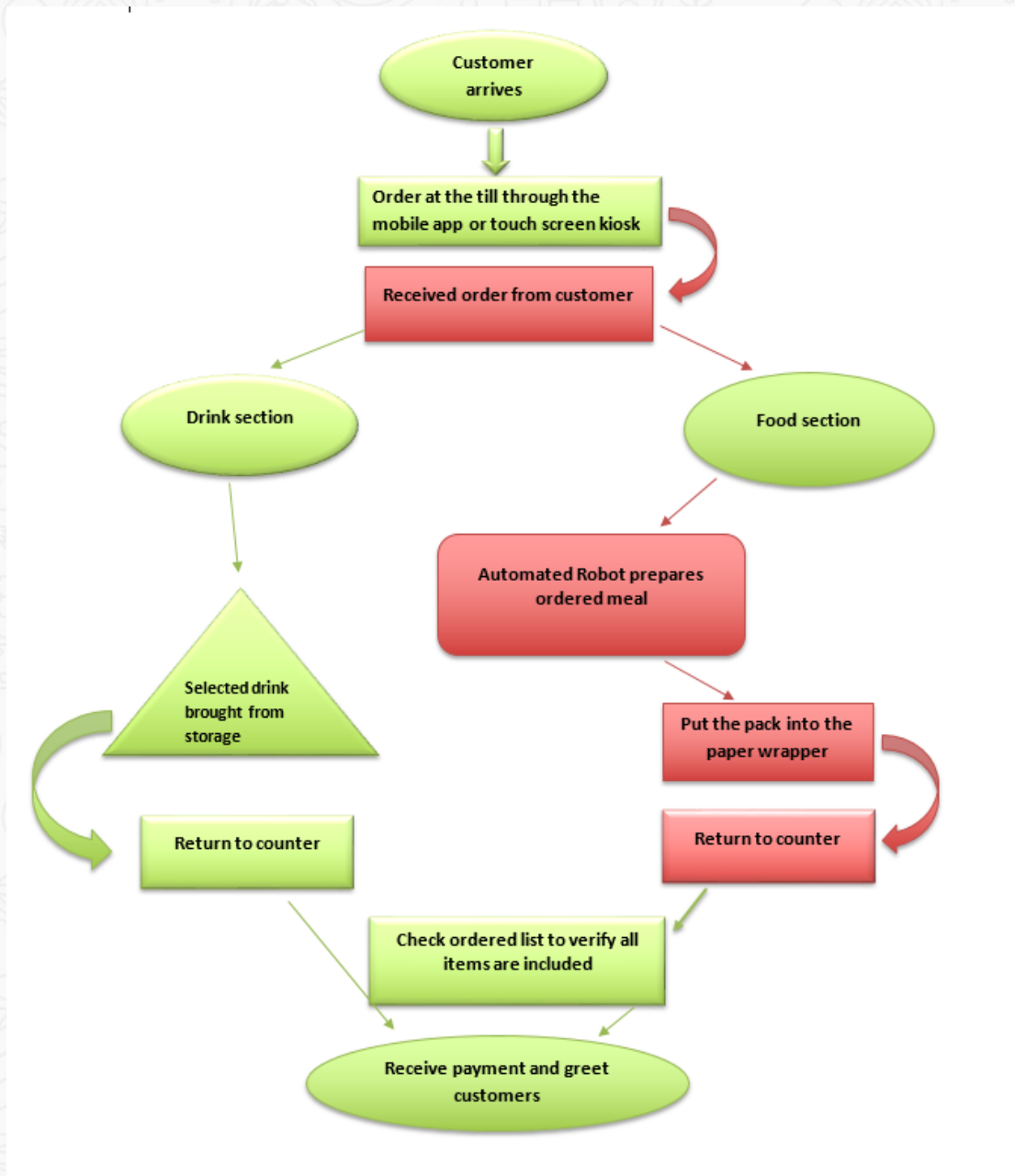
- Use a TQM steering group
- Employ improvement teams
- Use quality tools and approaches

3.6 Distribution channels

Achef uses online platforms such as a website and a mobile application to allow customers to make orders and suppliers to contact us. On site, Kiosks are available alongside the tills at the restaurant to make all orders.



Appendix B- Achef operation flow chart



Appendix 3B – Organisational Culture – Hibo Ali Osman 15114659

The organisational culture at Achef follows 6 key principles implanted into each group member (See appendix C):

- Customers come first, always
- Seek challenges and act professional at all time
- Communication and engagement
- Be honest, open and constructive
- Offer excellent service to customers
- Be creative and open to new ideas

These six principles provide us a platform from which we can develop our culture, vision and brand. Further to providing clear values to employees, these elements allow for innovation and creativity which play a significant role in sustaining a competitive advantage over competition.

Appendix 3C – Risks and Strategic Options – Hibo Ali Osman 15114659

Reference	Risk	Causes/Reason	Effect	Probability	Impact	Controllability	Level of risk	Response
01	Technical default	Maintenance is required constantly to fix all technical issues.	Costly	4	5	2	8	Plan regular maintenance service
02	Health and Safety on site	Constant cleaning and respect of health and safety requirement is primordial	Consumers can have a bad experience and never come back	3	5	1	4	Ensure that all safety and health requirements are respected in the kitchen
03	Lack of Cash to operate	Overseen of costs	Lack of cash can lead the business to close	4	5	3	24	Always have disposable cash, limit our expenses.
04	Competitors	Existing competition who may start using robotics in their operations to facilitate the process.	Poor sales and profit lost over competition	2	3	2	12	Stick to our values and strategy to become the kitchen robotic market leader

Level of risk		Response required
1 to 4	Very low	None
5 to 10	Low	Monitor
11 to 20	Medium	Control
21 to 30	High	Urgent action required
31 to 50	Very high	Unacceptable

Very high impact	5	Very high probability	5	Not controllable
	4		4	
	3		3	
	2		2	
Very low impact	1	Very low probability	1	Very controllable

Appendix 3 – References

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Appendix 4 – Management Team & Company Structure – Saleh Aker 16102641

Legislation

The company will be set up as a private limited company where it will be separated from its directors including finances where the after-tax profits will be kept for the company (UK Government, 2019). Partners will be responsible for all business billings as well as any losses the company makes. Furthermore, partners will be sharing profits and the tax payments will be done individually by each shareholder on behalf of his/her shares (UK Government, 2019).

The company's name will be Achef Ltd, and it will be based in Oxford Brookes University Headington campus. There is no other company that has the same name in the UK. The company's shareholders Oliver, Saleh, Hibo, Lavga and Raul will be also the directors who run the company then the partnership will be registered for Self-assessment with HM Revenue and Customs (HMRC) by the nominated partner who will be responsible for partnership tax return using SA400 form or SA401 form (UK Government, 2019). Each shareholder will be paying tax on his personal shares only as each of them is required to send tax returns individually Registering for VAT is required after VAT taxable Turnover is over £85,000.

Shareholders will create and agree for written rules known as 'Memorandum and articles of association' which states that all shareholders are agreeing on forming the company including written rules about running the company with the signatures of director/s and the company's secretary (Companies house, 2014). However, the memorandum cannot be updated after the company is formed which is used to announce Companies House what each subscriber agreed on (Companies house, 2009). The company will be registered online before opening and PAYE service will be registered to, for informing HMRC that the company is employing staff including the directors to get a 'Certificate of incorporation' which is a legal confirmation of the company's existence. This document will include the company's number and date of formation to ensure shareholders are paying the right tax (UK Government, 2019).

There are records that are a must keep which includes: identification of rules (directors, shareholders and secretaries), results of shareholders votes and resolutions, loans payback including specific future dates and who should be paid, form that states paying if something goes wrong within the company and that it is the company's fault, shares transactions (UK Government, 2019). It has been agreed that if any of the shareholders is resigning his/her shares the shares can only be transferred/sold to the same group of shareholders and that all shareholders will have the same number of shares, however even after transfer the previous member will be liable for the firm's debts when the person was part of it (Davis & Worthington, 2012). If any situation happened that require a legal change, an application of removing material about a director should be sent to companies' house. All directors will have a document appointing them as directors of the company that will be sent to companies' house (Companies house,

2014) Each shareholder will carry 15% of the Company's share with 20% of shares reserved further investors space. At has been agreed that decisions making will require a formal shareholders voting. To make the decision the majority of shares numbers holders will decide if the decision is to be made or not.

The company needs to keep all accounting records for 6 years after the end of the financial year including sales, any purchases or payments, debts stocks the company owns and stocktaking's (UK Government, 2019). Registering for corporation tax will be required within the first 3 months of starting the business (First Accounting Period). A sign will be displayed showing the company's name at the registered company address and on all the company's forms, website and all other promotional materials, however not at the office as the company will be running in one of the Shareholder's homes (UK Government, 2019). The company might need ONS code for Manufacture of other food products N.E.C. (10890) as this classify the business's standards and clarify the economic type of activities that will be engaged with the business or Take-away food shops and mobile food stands (56103) (UK Government, 2018). The company will be considered as a Consumer goods and retail business (restaurant and catering services). Preparing or handling food needs Food Premises Approval by the council before undertaking any activities.

Food Safety:

There are Food safety responsibilities that the business should take into consideration. The most important thing is to make safe food following the food safety management technique provided by the government about cross-contamination, cleaning, chilling, cooking, management and using dairy that helps to obey to food hygiene regulations, showing how the food is being made to ensure safety, train staff, protecting businesses reputability, improving the food hygiene rating score along with the business itself (Food Standards Agency, 2018). A plan that is based on the Hazzard analysis and critical control point (HACCP) principles needs to be made to keep food biologically, chemically and physically safe (Food Standards Agency, 2017). There are more things that are needed to be taken into consideration for responsibilities of food safety (Food standards agency, 2007) and food hygiene like food contact materials, to keep food safe for consumption, bacteria and food poisoning, food hygiene training and food allergies (Food Standards Agency, 2018). The business will be ready for any food inspections by the council at any time as food safety and food hygiene will be put to high standards required by the law (UK Government, 2007). All food making, storing, delivering and any other activity that the food is a part of will be done according to safe food standards provided from Food Standards Agency (2019).

Brexit:

In terms of no deal Brexit, it is expected that all the legalisation regulation will be at similar standards that the EU have as the changes will be on certificate content as it will be put by the British government as it mentioned that there are no substantive policy changes to be made (UK Government, 2018). Moreover, the government stated that organic food and feed products certification will be required in a no deal Brexit situation (UK Government, 2018).

Moreover, business directors will ensure that the business's policies will meet Brookes' policies.

CSR

Achef is going to be a strong engaging member of Corporate Social Responsibility (CSR) in the local community. The business will operate as sustainable as possible and directors will ensure that the environmental harmful standards are to its lowest. the company will be sustainable in many areas:

Food sourcing: The company will use sustainable local food sourcing only to keep delivery gas emissions to its lowest as well as to serve high-quality food from the local community. The company will use seasonal local produced food to reduce transportation environmental impact and to support local businesses. Animal welfare will be the main consideration within the company supporting the company's ethics and following Brookes sustainable food sourcing where the company will use the same food suppliers (Brookes, 2019)

Food banks and charities: the company will work with local food banks and charities to support these with need where the company will be ready to donate all its overflowing food. The company will be working with The Oxford Food Bank as it is the largest in the area where they collect food from supermarkets and wholesalers and other organisations and individuals and supply to over 100 charities depending on each charity's needs (The Oxford Food Bank, 2014).

Food waste will be the main issue the business will be solving as automation will use ingredients as exact amounts for each portion where food waste is only for food that cannot be used according to government's standards.

Packaging will be basic and made from recycled materials for takeaways. for eating in normal plates will be used to reduce the business's general waste. Brookes recycles 71% of its waste including food and Achef will do its best to keep and increase this figure in the future (Brookes, 2019)

Treating staff equally by providing fair training and equal opportunities with clear policies. Our kitchen employees will be getting food hygiene training essentials and formal training level 2 and 3 provided by Oxford City Council (Oxford City Council, 2019). It has been stated that 400-800 million jobs will be dismissed by automated machines or robots by 2030 in the global workforce, nonetheless,

555-890 million jobs will be created (McKinsey Global Institute, 2018). This means the business will be creating jobs in a slightly new industry.

Valuing all-natural resources by improving energy efficiency managing water usage to save money and the environment. The company will use and adapt Brookes Water Action Plan to keep the business as socially responsible as possible by installing facilities and faculties that reduce water usage (Brookes, 2017, and, Meike & Ribickis, 2011).

The company will be focusing on serving healthy food for its customers as much as possible. This step comes with the support of Oxford Brookes university promotion of healthy eating and ethical catering campaign where it adopts Fairtrade organic and local sourced food (Brookes, 2019). The aim of this step is to reduce the use of food products that have a negative impact socially and environmentally and to support the fair-trade campaign (Fitt, 2017).

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Appendix 5 – Financing and Financial Projections – Lkhagvajargal Damdindoo 15083754

5.1 Sales

For the first 5 months from April to August of 2020, we are not expecting any sales, as we will do the essential preparations for starting the business. We are aiming to reach £79,200 in sales in the first operating month (September 2020). This time is great time to begin our business as it is based on university school year. For the Year 1, our expected sales would be £709,200, and we are expecting to grow the Year 2, and further expand from Year 3 with total estimated sales totalling £1,360,476. As shown on table, estimated sales shown decline in sales for the months between semesters, which is December and January. Sales for the month of June, July and August will be estimated as other months since Achef Ltd will be working with EF summer school.

	Month Apr	Month May	Month Jun	Month Jul	Month Aug	Month Sep	Month Oct	Month Nov	Month Dec	Month Jan	Month Feb	Month Mar
Sales						79,200	115,920	110,880	90,720	90,720	105,840	115,920
Cost of Sales						44,352	64,915	62,093	50,803	50,803	59,270	64,915
Gross Profit						34,848	51,005	48,787	39,917	39,917	46,570	51,005

Table 5.1 Sales for Year 1, April to March

	Year 1 2020	Year 2021	Year 2022
Sales	709,200	921,960	1,382,940
Cost of Sales	397,152	414,882	622,323
Gross profit	312,048	507,078	780,617

Table 5.2 Sales for Year 1-3, including cost of sales and gross profit

5.2 Cost of Sales

The cost of foods will be primarily dependent of fresh food suppliers, who are mainly local farms we have agreed to cooperate with. There will be decrease in cost of sales when we start purchasing higher quantity supplies from farmers. cost of sales will decrease from 56% to 45% in the Year 2 and Year 3. (see Appendix 3.1)

5.3 Capital expenditure

5.3.1 Intangible assets

To prevent our business and brand from unfair competition, the trademark for Achef will be secured. The trademark will cost £200 (gov.uk, 2019). Additionally, the app development will cost £20,000, meaning that total intangible asset is £20,200.

5.3.2 Machinery/plant

We will purchase 10 automated mixing machines, which will cost £15,000 each. The quota was given through telephone conversation with sales representative of Cambridge Consultant, 2 April. Furthermore, to make it easy access when ordering foods, we need 6 kiosks, which will cost £1,000 each total cost of £156,000.

5.3.3 IT/Office equipment

IT/Office equipment has been estimated £3,000, which includes four desktop computers of the type 'HP 22-c009na' from Currys shop will be purchased with total cost £2,000 added one 1 laser-jet printer which costs £240 along with tables and chairs for the office.

5.4 Administrative expenses

5.4.1 Rent

The main business operation is running at Oxford Brookes University Terrace, which we will be renting. The estimated cost for rent set for £48,000per annum after considering commercial space property in same area (rightmove.co.uk, 2019).

For the office, we will be working from Hibo's place located in Headington. So, there is no rent allocated for the office rent.

5.4.2 Salaries

As all five founding members start working from April for the preparations, we will be getting paid 8£ per hour before business start making sales. As for the personnel who are working in operations, we plan to hire 6 people for 2 shifts; salaries will be £16,640 for each personnel. In total of 11 people working for Achef Ltd, which brings to £183,040 per annum inclusive of National Insurance.

5.4.3 Utilities

As we mentioned previously, we will be paying £4,000pcm for the renting the space. This will include the utilities as we are sharing spaces and utilities with other food outlets. Therefore, no additional utilities assigned for main operation's site.

However, we will be paying utility bills for our office space. Utility cost is assigned £1,800 for the Year 1 and will expected to stay the same in Year 2 and Year 3.

5.4.4 Telephone cost

We have agreed to use existing broadband and landline which Hibo pays £50 per month for Virgin Media, which total £600 for the telephone and broadband cost in Year 1 and Year (Virgin Media, 2019). From the Year 3, cost is expected to increase 20% since we are making more calls due to expansion of the business.

5.4.5 Insurance cost

As our business relies on equipment and technology, our insurance plan will cover general liability, content and equipment, commercial legal protection and cyber security of the company. We will be paying £1,524 for the insurance in Year 1 and Year 2, and it is expected to rise £1,829 in Year 3 (towergateinsurance.co.uk, 2019).

5.4.6 Stationary cost

As we are running day-to-day operations from the office, we have estimated the cost for stationery for 5 people. Stationary cost is expected to be £600 per annum in first 2 years after checking average stationary cost for small companies (Small Business, 2019). It is expected to increase 20% from Year 3.

5.4.7 Website cost

As we start setting website from June 2020, we have estimated to pay £1,925 for Year 1 and continue to pay £3,300 each in Year 2 and expected to pay £3,960 in Year 3.

5.4.8 Accountancy cost

To ensure our financial records being properly kept and make sure we are complying with financial procedures, we are agreed to work with accounting firm provides their service support for limited companies (qaccounting.com, 2019). Cost is expected to be £1,512 year 1.

5.4.9 Marketing cost

Marketing cost will be estimated £30,000 per annum in Year 1 since we need more recognition at the beginning of the business through PR events and extensive marketing campaigns (See Appendix 2). However, marketing cost will be the same after Achef's expansion in Year 2 and Year 3 due to the brand will be already established.

5.4.10 Travel cost

Since our suppliers delivering their products directly to us, our travel cost will stay low in first years. However, we have allocated £600 per annum to the travel expenses.

5.5 Valuation of the business

5.5.1 Equity

For a £150,000 investment, we will offer investor 20% equity in return. We have chosen 20% equity due to the research conducted, as it appears that the average in the industry is approximately 15%, and we accounted 5% for the risk.

5.5.2 Sensitivity analysis

The company is valued to £1,494,365.45 after 5+ years, meaning if the investor wants to exit the business, they would receive £298,873.09 - which is approximately 199% return on their initial investment. If we account -5% change since the company is not recognised, which will bring to £275,150.368. This indicates investor would receive 183% in return on investment.

5.5.3 Break-even point analysis

In order to break-even, Achef need sales of £551,346 which will be estimated to be reached by beginning of Year 2.

5.6 Profit and Loss

	Month Apr	Month May	Month Jun	Month Jul	Month Aug	Month Sep	Month Oct	Month Nov	Month Dec	Month Jan	Month Feb	Month Mar	Year 2020	Year 2021	Year 2022
Sales						79,200	115,920	110,880	90,720	90,720	105,840	115,920	709,200	921,960	1,382,940
Cost of Sales						44,352	64,915	62,093	50,803	50,803	59,270	64,915	397,152	414,882	622,323
Gross Profit						34,848	51,005	48,787	39,917	39,917	46,570	51,005	312,048	507,078	760,617
Administrative Expenses															
Offices & Rates						4,000	4,000	4,000	4,000	4,000	4,000	4,000	28,000	48,000	48,000
Salaries & Employer NI	8,310	8,310	8,310	8,310	8,310	15,253	15,253	15,253	15,253	15,253	15,253	15,253	148,321	183,040	183,040
Utilities	150	150	150	150	150	150	150	150	150	150	150	150	1,800	1,800	2,160
Telephones	50	50	50	50	50	50	50	50	50	50	50	50	600	600	720
Insurance						127	127	127	127	127	127	127	889	1,524	1,829
Stationery & Post	50	50	50	50	50	50	50	50	50	50	50	50	600	600	720
Office Equipment Rental															
Website Costs			160	160	160	160	160	160	160	160	160	160	1,604	3,300	3,960
Accountancy Costs	126	126	126	126	126	126	126	126	126	126	126	126	1,512	1,512	1,512
Legal & Professional Fees															
Travel & Subsistence	50	50	50	50	50	50	50	50	50	50	50	50	600	600	720
Motor Expenses															
Sundry Expenses															
Bank Charges															
Other Services															
Marketing Costs	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	30,000	30,000	30,000
Research Costs															
Provision for Bad Debts	11,236	11,236	11,396	11,396	11,396	22,466	22,466	22,466	22,466	22,466	22,466	22,466	213,926	270,976	272,661
Sales & Distribution Costs						3,960	5,796	5,544	4,536	4,536	5,292	5,796	35,460	46,098	138,294
Depreciation	2,389	2,350	2,310	2,272	2,234	2,197	2,160	2,124	2,089	2,054	2,020	1,986	26,184	23,435	18,748
Operating Profit (EBIT)	- 13,625	- 13,586	- 13,707	- 13,668	- 13,630	6,225	20,582	18,653	10,826	10,860	16,791	20,756	36,477	166,569	330,914
Interest Payable															
Overdraft Interest (Interest Received)															
Loan Interest Payable															
Profit Before Corporation Tax	- 13,625	- 13,586	- 13,707	- 13,668	- 13,630	6,225	20,582	18,653	10,826	10,860	16,791	20,756	36,477	166,569	330,914
Corporation Tax															
Net Profit / (Loss)	- 13,625	- 13,586	- 13,707	- 13,668	- 13,630	6,225	20,582	18,653	10,826	10,860	16,791	20,756	36,477	166,569	330,914
Dividends Payable															
Profit to Reserves	- 13,625	- 13,586	- 13,707	- 13,668	- 13,630	6,225	20,582	18,653	10,826	10,860	16,791	20,756	36,477	166,569	330,914

5.7 Cash flow

Administrative Expenses															
Offices & Rates						4,000	4,000	4,000	4,000	4,000	4,000	4,000	24,000	48,000	48,000
Salaries & Employer NI	8,310	8,310	8,310	8,310	8,310	15,253	15,253	15,253	15,253	15,253	15,253	15,253	148,321	183,040	183,040
Utilities	150	150	150	150	150	150	150	150	150	150	150	150	1,800	1,800	2,160
Telephones	50	50	50	50	50	50	50	50	50	50	50	50	600	600	720
Insurance						127	127	127	127	127	127	127	762	1,524	1,829
Stationery & Post	50	50	50	50	50	50	50	50	50	50	50	50	550	600	720
Office Equipment Rental															
Website Costs			160	160	160	160	160	160	160	160	160	160	1,444	3,300	3,960
Accountancy Costs	126	126	126	126	126	126	126	126	126	126	126	126	1,386	1,512	1,512
Legal & Professional Fees															
Travel & Subsistence	50	50	50	50	50	50	50	50	50	50	50	50	550	600	720
Motor Expenses															
Sundry Expenses															
Bank Charges															
Other Services															
Marketing Costs	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	27,500	30,000	30,000
Research Costs															
Provision for Bad Debts															
Sales & Distribution Costs						3,960	5,796	5,544	4,536	4,536	5,292	5,796	35,460	46,098	138,294
VAT (or GST USA)															
VAT in Purchases & Expense Payment		585	585	617	617	10,260	15,585	14,970	12,511	12,511	14,355	15,585	98,201	109,783	170,048
VAT to Customs & Excise - Payment (Refund)		1,170				1,852		19,540				18,080	34,597	82,208	106,540
CASH OUTFLOWS IN PERIOD	8,310	11,821	10,651	12,014	12,014	75,079	108,763	105,073	109,886	90,316	101,384	126,842	772,123	923,947	1,309,866
NET CASH FLOWS	- 8,310	- 11,821	- 10,651	- 12,014	- 12,014	- 75,079	- 13,723	- 34,031	- 23,200	- 18,548	- 7,480	- 166	- 60,187	- 182,405	- 499,682
OPENING CASH	156,640	148,330	136,509	125,858	113,844	101,831	26,751	13,029	47,000	70,259	88,807	96,287	156,640	96,453	278,858
CASH BALANCE	148,330	136,509	125,858	113,844	101,831	26,751	13,029	47,000	70,259	88,807	96,287	96,453	96,453	278,858	278,858

5.8 Balance Sheet

	Opening Balance	Month Apr	Month May	Month Jun	Month Jul	Month Aug	Month Sep	Month Oct	Month Nov	Month Dec	Month Jan	Month Feb	Month Mar	Year 2020	Year 2021	Year 2022
Non Current (Fixed) Assets																
IT / Office Equipment	3,000	2,960	2,321	2,282	2,244	2,207	2,170	2,134	2,098	2,063	2,029	1,995	1,962	1,962	1,569	1,255
Plant & Machines	156,000	122,720	120,675	118,663	116,686	114,741	112,829	110,948	109,099	107,281	105,493	103,734	102,006	102,006	81,604	65,284
Intangible Assets (Development)	20,200	15,891	15,626	15,365	15,109	14,857	14,610	14,366	14,127	13,891	13,660	13,432	13,208	13,208	10,567	8,463
Other Fixed Assets																
	179,200	140,971	138,621	136,311	134,039	131,805	129,608	127,448	125,324	123,235	121,181	119,162	117,176	117,176	93,740	74,992
Current Assets																
Cash	156,640	148,330	136,509	125,859	113,844	101,631	89,751	78,029	67,000	56,259	45,807	35,267	24,453	13,104	278,558	778,520
Trade Debtors							85,040	130,104	133,056	108,864	108,864	127,008	139,104	139,104	139,104	139,104
Stock																
	156,640	148,330	136,509	125,859	113,844	101,631	121,791	162,133	189,116	179,123	197,671	223,296	235,567	235,567	417,862	917,624
Current Liabilities																
Trade Creditors & Accruals	3,511	3,511	3,704	3,704	3,704	3,704	8,656	8,656	8,656	8,656	8,656	8,656	8,656	8,656	8,656	8,656
VAT Creditor (Debtor)	585	1,170	617	1,235	1,235	1,852	4,735	12,334	19,540	5,633	11,267	16,800	7,599	7,599	7,599	7,599
Other Creditors																
	2,926	2,341	3,086	2,469	1,852	13,391	20,990	28,196	14,290	19,923	26,738	16,255	16,255	16,255	8,656	8,656
Net Current Assets	156,640	145,654	134,168	122,772	111,375	99,979	108,400	131,143	151,920	164,634	177,748	196,559	219,302	219,302	409,306	908,968
Total Assets less Current Liabilities	335,840	286,375	272,789	259,082	245,414	231,784	238,009	258,991	277,243	288,069	298,930	315,721	336,477	336,477	503,046	983,960
Long Term Creditors																
Long Term Loans	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Loans from Directors																
Other Creditors due after 1 year	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
NET ASSETS	185,840	136,375	122,789	109,082	95,414	81,784	88,009	108,991	127,243	138,069	148,930	165,721	186,477	186,477	353,046	833,960
	35,940															
SHAREHOLDERS FUNDS																
Share Capital & Premium	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	300,000
Profit & Loss Account		13,625	27,211	40,918	54,586	68,216	81,991	95,749	119,591	143,539	167,518	191,511	215,477	239,477	263,477	533,960

5.9 Valuation Model

Cost of equity (effectively the discount rate)		20.00%				
Depreciation rate	25.00%					
Date	2019	2020	2021	2022	2023	2024
Year:	0	1	2	3	4	5+
Revenue (€)	0	709,200.00	921,960.00	1,382,940.00	2,074,410.00	3,111,615.00
Loan Interest paid						
Profit after tax		364,777	166,569	330,914	496,371.16	744,556.74
Non-current Asset investment**		-709,200	-921,960	-1,382,940	-2,074,410	-3,111,615
Add back depreciation (estimated at half of NCA investment)		177,300	230,490	345,740	518,600	777,900
Change working capital***		-354,600	-1,063,800	-2,304,900	-3,457,400	-5,186,000
Operating Free Cash Flow		-52,173	86,784	204,145	306,217	458,325
Perpetuity (annual OFCF divided by the interest rate)						2,555,928
Discount factor		0.8333	0.6944	0.5787	0.4823	0.4019
Discounted Operating Free Cash Flow		-43,477	60,267	118,139	147,674	184,593
Discount factor for year 5						0.4019
PV of Perpetuity disc. from year 5						1,027,170
Sum of Discounted OFCF plus Perpetuity						1,494,385.45

Valuation Sensitivity	-5%	Standard Assumptions	5%
Operating Profit	1,375,751.84	1,494,365.45	1,612,979.07
Discount factor	-20%	Assumptions	20%
Discount factor	1,195,492.36	1,494,365.45	1,793,238.54

Appendix 5 – References

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