
Business Case

Enterprise Computing Team Project

CA472



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1.Introduction

SCAN-N-GO (SNG) is a disruptive mobile application and web service that will revolutionise the retail industry by turning the customer into the cashier. Our idea has the potential to eliminate all queuing and congestion in fast-paced retail stores globally.

Our web application and infrastructure allows retail store customers to transform their smartphone into a product scanner and payment tool, eliminating the need for physical cashiers and even self-service checkouts. The process for our user is simple. The customer enters the retail store and scans the store's unique "Store Scan" barcode, this will then bring the customer to a product barcode scanner within their web browser, which is unique to the store they have logged into. Once the customer finds a product they want to purchase, they can scan it using the product scanner and add it to their cart. The customer can repeat the product scanning process up until they exceed the maximum number of items a SNG customer can have in their cart, which is decided by the retail store. Once the customer is happy with items they have selected, they can go to the checkout page, and pay for their items using Apple Pay, Google Pay or using a Credit or Debit Card. Once the customer has successfully paid for their items they will be presented with a digital receipt which can be shown to any member of staff or store security to prove they have purchased the products that they will be leaving the store with. With this technology, the customer will have successfully bypassed traditional checkout methods and more importantly, never queued to purchase their products.

We envision that our technology will flourish in specifically fast-paced retail stores and for customers that only want to buy a small number of products quickly. This encourages us to initially focus on these types of retail stores although we believe that this technology can be used in all retail stores globally.

Although the main application focus is on the customer-facing aspect of the idea, the retail stores will also be able to easily customise their SNG configuration and monitor SNG customers using a security dashboard.

2.Value Analysis

Value analysis is the process of identifying users and customers of our application and demonstrating how our technology solution will help them achieve their goals. In this section, we will explain who are the users of our technology, the customers of our business, and how our users and customers will benefit from working with SNG.

Who are the users?

There are two sides to the SNG technology and each side of the application has a unique type of user.

Customers of Fast-Paced Retail Stores (Mobile Users)

Our first user is the user of the mobile web-app, which is also the customers of fast paced retail stores. These users will have to register for an account and once they have done so they will be able to use SNG technology inside SNG enrolled stores. Users can scan products and view product information, add items to their cart & finally checkout and pay for their items using their phones' in-built payment system or with their card information. This user's main goal is to purchase products within a retail store without any cashier interaction and more importantly without queuing.

Retail Store Staff (Dashboard Users)

To complement the mobile users application, retail store staff members will also have a secure admin platform that will allow them to configure their SNG store configuration and access a Security dashboard that will display currently logged-in store customers and the contents of their baskets. Store management and staff can configure variables such as Store information, cart restrictions, product restrictions and much more from this administrator platform.

Who are the customers?

SNG has two main customer segments as we are ultimately a two-sided business. Our two customer segments are similar to the users of our application and they are; **Owners of Fast Paced Retail Stores** and **Customers of Fast Paced Retail Stores**. The main difference between these two customers is that

Customers of Fast Paced Retail Stores will not have to pay for our service, instead the Fast Paced Retail Stores will pay a transaction fee on all checkouts.

Owners of Fast Paced Retail Stores

The Retail Stores are our paying customers. They will pay a setup fee to enrol their store with SNG technology and then they will pay a transaction fee for every time a customer pays for products using our web-app. However a customer is always a person, not a business, and since we will pitch our business to the Owners of Fast Paced Retail Stores they will be our first customer segment. The setup fee will be €4000 and the transaction size will be relatively small at 1% as our business model is centred around enrolling a large volume of stores rather than charging high fees.

Customers of Fast Paced Retail Stores

Customers of retail stores (the users using our mobile application) won't necessarily be paying for the use of our technology but they will be directly responsible for creating transactions on our platform, meaning they will be directly causing retail stores to pay their transaction fees. Since this is the model we have chosen, we will need to advertise our product heavily to entice this customer segment into downloading and using our technology and ultimately start creating transactions.

What is the Product Value For The User?

SNG's promise

SNG helps our users and organisations achieve their goals by delivering on our promise to decrease and eventually eliminate all in-store congestion and queueing in fast paced retail stores. This promise will in turn increase customer satisfaction and efficiency while also more importantly increasing retail-store revenue and decreasing running costs.

Customers of Fast Paced Retail Stores (Mobile Users)

SNG helps Customers of Fast Paced Retail Stores achieve their goal of completing the checkout process by providing a quick and seamless shopping experience without ever having to queue up or interact with a cashier. This improves the customers shopping experience while also allowing them to make their trip to the store more efficient by saving wasted time in the store that they would have spent queuing.

Owners of Fast Paced Retail Stores (Dashboard Users)

SNG will help Owners of Fast Paced Retail Stores achieve their goal of increasing store profitability by increasing revenue and decreasing store running costs. Retail stores running costs will decrease due to the decrease in labour needed to run the store on a day-to-day basis as the customer will be turned into the cashier, negating the need for a large number of cashier staff within the store. Store revenue will also be increased because a SNG enrolled store will have less congestion and be more appealing to customers passing by, this absence of congestion also helps turn normal customers into return customers which also will increase revenue in the long-term.

3.Market Analysis

In this section, we will explain our market analysis and discovery for SNG. As mentioned previously, SNG has two main customer segments - Customers of Fast Paced Retail Stores and Owners of Fast Paced Retail Stores. Hence SNG's market analysis will look at each of these customer segments individually and prove our market existence.

What is the proposed target market?

Owners of Fast Paced Retail Stores

SNG's proposed target market for our Owner customer segment is; Owners of fast paced, local convenient retail stores.

We define Fast Paced Retail Stores as stores with high daily volumes of customer transactions. An average Convenience store has around 1100 customers per day [1].

We define Local Convenient Retail Stores as retail stores that stock a variety of products to serve the daily needs of residents in the immediate area of the store [2].

SNGs Total Addressable Market is the global retail market which is estimated to be approximately 20 trillion USD in size.

However SNG plans to first begin with Irish Grocery / Convenience Stores which has a total market value of €19.8 Billion [3].

It is estimated that the Irish Grocery / Convenience Market will grow to 19.8 Billion EUR in 2021. This market is a mature market with a Compound Annual Growth Rate of 4.5% [3].

Our Target Market is Fast paced, Local Convenience, Irish Retail stores.

Customers of Fast Paced Retail Stores

SNG's proposed target market for our Customer segment is; Customers of fast paced, local convenient retail stores that have a smartphone.

We define Customers of fast paced, local convenient retail stores as customers who regularly shop in fast paced retail stores. These customers have purchased an item from a fast paced retail store at least once in their lifetime.

We define Smartphones as portable communication devices that can access the internet wirelessly . Access to the internet can happen wirelessly through using a cellular connection such as 3G, 4G and 5G [4] or by Wifi [5].

SNGs Total Addressable Market is the global population which owns a smartphone, which is estimated to be approximately 6.648 Billion people [6].

However SNG plans to first begin with Irish consumers with smartphones, which has a total market size of 3.73 Million Irish people that own a smartphone [7].

Our Target Market is Irish Customers of fast paced, local convenient retail stores that have a smartphone.

In the case of our business model canvas [Appendix 2] we have two consumers but only one paying customer. The two consumers of our product would be Owners of Fast Paced Retail Stores and Potential Customers of Fast Paced Retail Stores. Our paying customer in this case would be the Owners of Fast Paced Local Convenience Retail Stores.

What are the key value propositions?

SNG will provide two value propositions to its two customer segments; Owners of Fast Paced Retail Stores [Appendix 3] and Potential Consumers of these Retail Stores [Appendix 4].

Value Proposition - Owners of Fast Paced Retail Stores:

Our value proposition to Owners of Fast Paced Retail Stores is to increase store profitability by saving cashier staffing hours by at least 10 hours per week [Appendix 13] and increasing store revenue by at least 10%. [Appendix 14]. The above value proposition will be achieved with the following:

Less Staffing

SNG allows customers of these stores to become the cashier. Customers can easily enter the store, quickly get a product, pay for it, and leave the store in a matter of seconds. Since there is less dependency for cashiers, the retail store can save on staff hours.

Less congestion in-store

Our idea reduces congestion in-store, ultimately leading to a store that is more appealing to potential customers, and therefore increasing their sales

Potential to directly upsell

Retail stores can use our backend to upload product deals. Meaning, when a customer scans a product that is part of a deal or bundle, this will be advertised to them, and potentially close the upsell.

Customer retention

Customers will remember what stores have SNG enabled and will be more likely to shop at that store again because they know they will get a seamless buying experience.

Increase Customer Turnover Speed

Customers will simply be faster at coming in-store, paying for goods and leaving, since there are 0 queues.

Value Proposition - Potential Customers of Fast Paced Retail Stores:

Our value proposition to Potential Consumers of these retail stores is to eliminate 100% of customers' in-store checkout queuing time by providing a quick and seamless shopping experience solution. **[Appendix 9]**. We will achieve the above value proposition by providing Potential Customers of Fast Paced Retail Stores with the following:

Quick & seamless contactless shopping experience

Customers of retail stores that use our product will have the option of not queueing for their goods, meaning a better & quicker shopping experience for the customer.

Less time wasted standing in-store

Since customers won't have to queue in-store they ultimately save time that would be wasted standing around in retail environments.

Key Resources / Partners

Web Hosts

SNG will utilise Amazon web services [8] to host our application in cloud servers. This allows our application and system to be available to our users anywhere where there is an internet connection. Web Hosts are a key partner as without their technology and services they provide we would be unable to deploy our services to our Target Market. We require servers and the use of their cloud platform as our main consumable resource from these web hosts. The Web Hosts key activity is to host our applications making them securely available to our end users during times of low and high demand.

Online Payment Platform

We require an Online Payment Platform solution such as Stripe [9] to process our monetary transactions. As our pricing model requires us to have a high volume of transactions due to a low transaction fee and because our target market is within fast-paced retail stores, we require a payment platform that is suitable to cater for the demand and volume of transactions that we will potentially occur. Online payment platform is a key partner as without a secure payment platform, we would not be able to process payments on behalf of our Customer segments and deliver our value proposition to them. We require an online payment platform to allow for a secure payment portal, to transfer funds between our retail customers and our fast-paced retail owners, along with providing a mechanism to allow for us to take our transaction fee. The Online payment platform's key activity is to provide a platform for securely enabling payment transactions to take place for our end users.

Point-of-Sales Integration

SNG will need to integrate our services with providers of point-of-sale systems. Such as Square [10], AccuPOS [11], EPOS [12]. Integration with these systems and alike will allow SNG more easily set up our services in-store as well as reducing the overall chance of issues when integrating the existing systems with SNG's. Changes to the POS database will be relayed to SNG's database and the changes can be reflected in-app.

Application Store Hosts

In our Customer Channels, we provide our Retail Customers with a mobile application to deliver our value proposition. To deliver this we use Application Store Hosts as key partners such as the Apple App Store [74] or Google Play Store [75]. We require Application Store Hosts to host our app and to allow it to be available to our Retail Customers to download and install on their devices.

This is to provide a better experience to our retail customers so that the app seamlessly integrates with their devices operating system.

These Application Store Hosts are key partners as without their direct connection to our customers we would not be able to provide our application effectively to our customers. The Application Store Hosts key activity is to host our application in their store and allow users to access the app on their devices.

Revenue Streams

SNG has four primary revenue streams. They include up-front revenue such as an initial integration cost for businesses as well as continuous revenue streams such as a transaction fee on all purchases conducted through our mobile app. We plan to monetise our data and insights as well as in-app advertising.

Transaction Fee

The use of SNG for payment will incur a small transaction fee of 1% that will be expensed to the retail partner. This revenue stream will ensure continuous cash flow for the business, this revenue stream will scale directly with our customer base and usage of our application in-store.

In-App Advertising

Within the SNG mobile application there will be advertisement opportunities for our retail partners and businesses to promote their store / brand - We will direct our users towards the paid promotions ahead of other businesses as they search for nearby stores that have SNG enabled. This revenue stream will also encourage businesses to avail of our services.

Up-Front Integration Cost for Businesses

For a business to enrol for our SNG's service there will be an initial up-front setup cost associated with our service. This fee will scale as SNG grows, early adopters of SNG will incur a very minimal fee at essentially cost price in order to promote onboarding. This revenue stream will provide SNG with up-front capital from partners as well as confidence that our partners will commit long-term to our service.

Data & Insights

We aim to collect customer data and categorise it anonymously to comply with GDPR. We will use these insights to make our own informed decisions. We will also offer this anonymous data to retail partners at a cost providing SNG with an additional revenue stream.

Key Activities

SNG performs several key activities necessary to deliver upon our outlined value propositions.

Software Development

We need to develop software applications for our Retail Customers and for the Owners of Retail Stores. Our retail customers require a mobile application to physically use our service. Our Retail Store owners require an administration application to interact with our application to view system settings, security features and data reports etc. The key activity of software development is to maintain, update and provide additional features to our applications.

Consumer Marketing

We rely on Consumer marketing to inform potential customers of our application and service and to ultimately get these users to use our application. Our Service relies on the synergy of two customer segments. Marketing is an important activity for us to create and retain Retail customers to provide to our Retail Stores owners. The key activities of Marketing include advertising, Product features & design, promotion, packaging etc.

On-Boarding of Retail Stores Owners

Again Our Service relies on the synergy of two customer segments. Without Retail Stores owners we cannot deliver our value proposition to our customers, so a key activity is the ongoing pursuit of on-boarding of new retail stores to be made available to our Retail Store Customers. The key activity of on-boarding retail store owners includes door-to-door sales, negotiation, solution selling our service and social selling using referrals.

Customer Support

A key activity that we need to perform is managing our 2 customer segments through customer support. We need to be able to provide support to our customers to ensure we encourage, grow and retain our relationships with our Retail Store owners and our retail store customers. The key activity of customer support includes gathering data, feedback, active development of features, self service support, email & live chats, technical support and face-to-face support.

Supporting Industry Trends

Industry trends suggest that there is ample support for SNG to maintain a share in this market.

Increasing Cost of Labour

Global inflations and a restrictive labour market have pushed labour costs to new highs. The global inflation rate last year was at 4.35% and currently in the Euro area it is up to 7.5 % for March 2022 [13] & [14]. This increase in inflation is driving up prices and putting pressure on businesses to increase employee wages. Last year alone there was an annual increase in labour costs at 2.9% in the EU [15]. In Ireland the retail industry average base salary is €11.43 per hour [16]. Ireland's statutory minimum wage is €10.50 per hour [17]. The statutory minimum wage in Ireland has increased by over 21 % since 2016 [18]. In the EU there is also a general trend of minimum wage increases in the EU (average increase 6% in 2022 [19]). The retail sector wages are closely linked to the statutory minimum wage, any increase in the statutory minimum wage and the retail sector is heavily affected by its changes.

With labour costs increasing, businesses need to start cost cutting or investing in alternative opportunities. Businesses cannot sustainably continue to increase employee wages without either increasing retail prices, reducing operational cost or investing in automation. SNG can help businesses cope with the pressure of increased employee wages by supplementing labour needs with SNG technology. SNG can help businesses reduce operational costs, maximise store revenue during busy hours and add a hybrid automation approach to stores.

Shortage of retail workers

The global pandemic has sparked a global staff shortage. While the pandemic has increased the levels of employees being unavailable due to illness [20] it has also made employees reconsider their working lives and hence "The great Resignation" term was coined to explain this industry shift [21]. Ireland reached an all time high employment rate in the fourth quarter of 2021 at 73% employment rate [22]. The labour market is quite restrictive for the retail sector in Ireland, The wholesale and retail trade have plans to increase their headcounts significantly up to 22% [23] [24] [25]. Businesses are required to pay more for labour or risk not being able to source skilled employees for their businesses. SNG can support business by reducing the dependency on employees and help supplement business during times where there are staff shortages.

Preference by consumers for a personalised and online shopping experience.

Consumers across the world and in Ireland have an increased preference for online shopping. In a PWC report, 41% of respondents say they shop daily or weekly using a smartphone, an increase of 241% compared to 5 years ago[26]. Consumers also use smartphone shopping over any other online mode of shopping such as laptops or tablets[27]. In Ireland, 90% of Irish adults own a smartphone[28]. Online retail sales were approximately 4.9 trillion US dollars globally in 2021 and is expected to grow by 50% in the next 4 years [29]. It shows that consumers have an appetite for online shopping and SNG can provide a hybrid approach to help solve brick and mortar stores' needs, to cater for this new consumer preference. With the Global

Covid-19 pandemic there was a significant push towards contactless shopping experiences, SNG can provide and support retail stores with an option to provide a contactless shopping experience to their customers.

Large retail chains offering similar cashierless checkout options.

Large retail chains like Tesco and ALDI have begun introducing handheld scanner based shopping options to their customers and most large retail chains already have self service checkouts. With self service checkout increasing by (100% support) it is clear that there is a growing demand for self service and cashierless technologies. Businesses have now realised the benefits of these retail technologies which can help businesses diversify their checkout process.

Large technology companies investing and developing similar cashierless checkout options.

Amazon developed Amazon GO, which is a cashierless store where customers can purchase products without requiring a checkout using a manual process. Amazon Go has 32 store locations in the USA and 15 in the UK. Using Amazon's own “Just walk out” technology [30]. Amazon Go's first store opened in January 2018.

Similarly Microsoft is also developing retail technology with Microsoft Cloud for Retail [31].

With all these factors considered, it shows that there is support for retail technology and a market for SNG to be involved in. Customers have an appetite for new retail technology that can bring them a better shopping experience and retail companies are investing in this new customer shopping preference.

Chosen pricing model

Once off setup fee - Penetration Pricing Model

We plan on using a Penetration pricing model, whereby we set a lower setup fee price to enter the competitive retail market and once we have established a certain presence we will increase it. The goal of our penetration pricing model is to entice customers to try our SNG technology and to build market share with the long term vision of keeping our customers once prices rise [32].

We will charge a once-off setup fee to owners of retail stores to enrol in our service. Initially this fee will be significantly lowered for the first 100 retail store owners to help us gain a foothold in the industry and to quickly gain a strong consumer presence.

We will then increase our once-off setup fee gradually on a scale basis to help fund our aggressive rollout. See [Appendix 1]

Benefits

The benefits of using a penetration pricing strategy is that we can quickly obtain a substantial amount of market share in a competitive industry, encouraging customers to choose our product over competitors, generating significant demand and also helps drive similar competitors out of the market [33].

Risks

Some risk associated with using a penetration pricing strategy is that it can damage our brand image, potential retail store owners may perceive the brand as cheap or poor quality. Price penetration may start a price war with competitors which could negatively affect SNGs ability to compete [34].

While we are using the penetration pricing model, it is used in a reserved manner, since the once-off setup fee is not a recurring price for a specific customer. This helps us negate some of the disadvantages and risks of using the full penetrative pricing strategy.

Transaction Fee - Flat Commission Pricing Model

Our second pricing model is the Flat Commission Pricing Model, whereby we charge a 1% transaction fee of the total customer order to the store owner when customers successfully purchase goods through our app.

This commission fee is paid to SNG from the retail store owner, not the retail customer. This means that the store owners are our only paying customers. The store owners do not have any recurring maintenance fees

or monthly fees and they are only charged when a customer in their store purchases a product using our app [35].

Benefits

The benefits of using the flat commission pricing model is that it favours the retail store owners as much as it favours us. This will help us in negotiating new retail store owners, as retail store owners do not lose from enabling SNG in their store as they still gain a customer minus a commission fee.

This pricing model is also transparent, fair and easily explained so that there is no ambiguity when it comes to onboarding new store owners [36].

Risk

The risk of using this Flat commission pricing model is that SNG will only get paid when a retail store customer uses our app. This means that we will need to market our product to gain and retain customers for retail stores and for our app simultaneously. We cannot depend on store owners promoting our app [37].

Selected Competitor Profiles & Benchmarking

Amazon Go

Amazon Go is a cashierless retail store that utilises Amazon Inc own “Just Walk Out” Technology [30]. Amazon Go stores use cameras, computer vision, sensor fusion, deep learning and AI to automatically detect when products are taken or returned from shelves and keep track of them for each customer in the store. The customer can walk out of the store and the goods are automatically charged to the customer account, without the customer needing to checkout manually [38].

Amazon Go requires customers to download an application and link to their Amazon account. This app is required to enter the store and to pay for their items.

Website	Amazon GO	Founded	January 22, 2018
Location	Seattle, Washington, United States	CEO	Andy Jassy

Amazon Go Benchmarking	
Category	Result
Operating Locations	Amazon Go is a product of its parent company Amazon [39] with 32 Stores in the USA and 15 in the UK. Their first store opened in January 2018 in Seattle, Washington USA
Target Audience	Office workers and young professionals & students. Stores have limited opening hours and are closed during weekends [40].
Setup Price	Estimated to cost \$1 million for a 1500 square-foot store [41].
Transaction Fees	There are no transaction fees, Amazon Go uses its own technology. However they do licence out the technology to other retailers for an undisclosed fee [42][43].
Revenue Streams	Amazon Go has 2 revenue streams - 1) customers using their stores and 2) external 3rd parties licensing their technology.
Amazon Go Revenue	\$1.5 million dollars per store [77].
USP	Amazon Go’s Unique selling point is that customers do not need to scan each item into their cart. Their stores are true frictionless checkouts.
Security Features	Turnstiles at the entrances and exits requiring an amazon GO account to enter. Cameras and AI Sensors.

Queuing Time	0 queuing time, there are no queues or checkouts in Amazon Go stores.
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Tesco Hand Held Checkout

Tesco Hand held scanner is a check out option that Tesco enables in its retail stores [45]. Tesco Scan as you Shop uses a handheld scanner which the customer uses to scan each individual product before they add it to their basket / trolley. The customer can then pack as they shop. When the customer wants to checkout, the user scans an enabled checkout till. The customer can pay quickly for their shopping without needing to wait for a cashier to scan each item [45].

Tesco Scan as you Shop is exclusive to their clubcard members. It is a cashierless checkout option from its parent company Tesco [46]. Tesco Scan as you Shop was first introduced in 2010 as a trial then later expanded in 2012 [48]. Tesco Scan as you Shop is mostly enabled in large Tesco retail stores which sell a large variety of different products and have long opening hours from 8am to the latest 11pm with some opened 24 hours a day [49].

Website	Tesco - Scan As You Shop	Founded	March, 2010
HQ Location	Hertfordshire, United Kingdom	CEO	Ken Murphy

Tesco Hand-Held Checkouts Benchmarking	
Category	Result
Operating Locations	There are 573 Tesco Scan as you Shop enabled stores in the UK and 83 enabled stores in Ireland [47].
Target Audience	Customers that use self service checkouts and families or customers who do one large weekly shop [50].
Customers	Used by 600,000 customers every week (2016) [50].
Setup Price	Tesco provides this service free to their clubcard members, estimated setup price for each portal handheld scanner is \$90, there are generally multiple scanners needed in one store [51]. while integration with the stores tills is unknown.
Transaction Fees	There are no transaction fees, Tesco provides this service free to their clubcard members [52].
Revenue Streams	Tesco Scan as you Shop is a checkout option and is used to enable tesco customers to purchase items more efficiently. It is provided to clubcard members freely hence there is no revenue stream.
Tesco Revenue	€3.1 billion [76].
USP	Tesco Scan as you Shop Unique selling point is that it enables customers to effectively have a contactless shopping experience at a cost effective price.
Security Features	Access only granted to club card members, Spot checks get carried out, in store cameras and staff awareness, scanning noise.
Queuing Time	Customers still have to queue at a checkout to pay for their items, however they do not have to scan each item. Queuing time using Tesco Scan as you Shop is 3.92 minutes [Appendix 6].

NCR Self Service Checkouts

NCR Self-checkouts is the world leader when it comes to Self service checkouts [53]. NCR Self service checkouts are used in major stores such as Walmart [54]. Self service checkouts are machines that replace a cashier and allow customers complete their own transactions. These machines use barcode scanners,

weighing scales and cameras. The customer scans their own items, places them in a “bagging area” and then completes their checkout by paying for their order. There is generally a staff member that supervises and helps customers that require assistance and for approving restrictive items [55].

NCR Self checkouts are a product of the company NCR formally known as national cash register company and was acquired by AT&T in 1991 [56]. NCR has 71% market share of the Self service checkouts [57] In 2010, NCR had deployed more than 83,000 self-checkout units into more than 150 retailers worldwide [58].

Website	NCR Self-Checkout	Founded	1884
Location	Dayton, Ohio, United States	CEO	Michael D. Hayford

Self Service Checkouts Benchmarking	
Category	Result
Operating Locations	Operates and Sells worldwide in 180 countries [59].
Target Audience	NCR Self Service checkouts target audience is to retail stores that 1) Have not implemented any form of cashierless technology and 2) To retail stores that want to reduce labour costs, reduce instore queuing times and to cater to the demographics of 18-34 year olds [60].
Setup Price	NCR Self Service Units cost \$17,000 to \$30,000 [61].
Transaction Fees	NCR does not charge transaction fees on purchases made through their machines but they do require their machines to be serviced regularly [62].
Revenue Streams	NCR self service checkouts have 2 revenue streams - 1) purchases from retailers 2) maintenance and support charges from retailers [63].
Revenue NCR	\$7.16 billion [78].
USP	NCR self service checkout’s Unique selling point is it is a better compact version than a traditional cashier system. NCR self service checkouts make better use of retail space. NCR self services also provide a range of different security measures to help protect against theft [64].
Security Features	Kiosk cameras, weighing items, Auto flag suspicious purchases (multiple voided items), Scanner beeper, trained assistants, on the spot checks [65].
Queuing Time	Queuing time using NCR Self Service is 3.04 minutes [Appendix 5].

Mishi Pay

Mishi Pay empowers shoppers to scan and pay for their products using their smartphone, rather than queuing up at a checkout [66]. Mishi Pay is a mobile app which uses the customer’s smartphone camera to scan a barcode of a product and add it to their cart. The customer pays for their products in the app and then they can leave the shop without needing to queue up at a checkout. Mishi Pay is a direct competitor to SNG with using similar technologies.

Website	Mishi Pay	Founded	2015
Location	London, England, United Kingdom	CEO	Mustafa Khanwala

Mishi Pay Benchmarking	
Category	Result
Operating Locations	Mishi Pay operates in 12 countries and in 2 Stores in Ireland [67].

Target Audience	Mishi Pay's target audience is high footfall retail stores [68].
Setup Price	Mishi Pay would not disclose this information.
Transaction Fees	Mishi Pay would not disclose this information.
Revenue Streams	Mishi Pay has 1 revenue stream - retail stores using their technology.
USP	Mishi Pay is that they have first movers advantage.
Security Features	Mishi Pay has a “Trust Engine” Algorithmic theft prevention [69], a staff security dashboard and have patented RFID technology that alarms staff if a product is taken from a store without paying [70].
Queuing Time	0 queuing time, customers do not need to queue at a checkout as their mobile phone is the checkout.

What is your competitive advantage?

Lower Technology Cost

The price of implementing SNG into retail stores compared to the technology cost of Amazon Go technology (\$1,000,000) and Self Service Checkouts (\$30,000) is substantially lower. This appeals to smaller retail franchises and store owners who cannot afford to pay the high costs associated with new retail technology.

Easier Implementation

SNG is more accessible physically to smaller retail stores or stores with limited retail space. SNG does not take up the same amount of space required for a self service, scanner or AI based cashierless technology. Similarly SNG does not require retrofitting or installation of cameras or self service tills nor do we require a store to change its customer flows within stores. SNG is easier to install and implement in multiple different store types.

Security Features

SNG has multiple, innovative security features which set us apart from Mishi Pay and other cashierless technologies. These security features include a virtual basket item limit and a virtual basket value limit, an information rich admin security dashboard which includes a customer rating based on previous orders and a Scan-in and Scan-out system. SNG has built-in restrictive product item controls, verifiable digital receipts, distinctive SNG scanning noise among other security-first features.

Familiar Form Factor

Retail store customers are familiar with using their mobile phones for everyday tasks. Customers are more comfortable using a device that they trust and know.

Upselling Opportunities

SNG can enable retail stores better upselling opportunities by using the SNG app to show in-store promotions and in-store advertisements directly in the app. SNG can also provide Brand partnerships to help promote different products in participating retail stores. loyalty programs,coffee subscription, car wash subscription.

Environmentally Friendly

SNG is a digital only application. We only provide receipts and advertisements in digital formats, no paper is used. We also use less technological hardware compared to other cashierless options. We also actively promote reuse by enabling retail customers to use their own phones to checkout. All our servers run on 100% green energy.

Three-year financial projections

Link to Google Sheets View: [SCAN-N-GO-FINANCIALS - 3 Year - Financial Projection.pdf](#)

	Year 1				Year 2				Year 3				
INVESTMENT INCOME	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	3 YR TOTAL
Angel Investor	€ -	€ 75,000.00	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ 25,000.00	€ -	€ -	€ 100,000.00
A/B Loan	€ -	€ -	€ -	€ -	€ -	€ 40,000.00	€ -	€ -	€ -	€ -	€ -	€ -	€ 40,000.00
F&F Round	€ 30,000.00	€ -	€ -	€ -	€ 20,000.00	€ -	€ -	€ -	€ -	€ 10,000.00	€ -	€ -	€ 60,000.00
Founder 1 Buy-in	€ 10,000.00	€ -	€ -	€ -	€ 5,000.00	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ 15,000.00
Founder 2 Buy-in	€ 10,000.00	€ -	€ -	€ -	€ 5,000.00	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ 15,000.00
Founder 3 Buy-in	€ 10,000.00	€ -	€ -	€ -	€ 5,000.00	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ 15,000.00
TOTALS	€ 60,000.00	€ 75,000.00	€ -	€ -	€ 35,000.00	€ 40,000.00	€ -	€ -	€ -	€ 35,000.00	€ -	€ -	€ 245,000.00

OPERATING REVENUE	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	3 YR TOTAL
Initial Setup Cost (Retailer)	€ 1,500.00	€ 2,400.00	€ 4,800.00	€ 6,000.00	€ 12,400.00	€ 18,500.00	€ 21,500.00	€ 25,000.00	€ 28,500.00	€ 33,000.00	€ 37,000.00	€ 40,000.00	€ 230,600.00
Transaction Fee(Re-occurring)	€ 165.00	€ 450.00	€ 675.00	€ 1,000.00	€ 2,400.00	€ 3,600.00	€ 4,400.00	€ 5,600.00	€ 7,800.00	€ 13,500.00	€ 19,000.00	€ 23,000.00	€ 81,590.00
In-App Advertisements	€ -	€ -	€ -	€ -	€ -	€ 2,000.00	€ 2,000.00	€ 2,000.00	€ 2,500.00	€ 3,500.00	€ 3,500.00	€ 5,500.00	€ 21,000.00
	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -	€ -
TOTALS	€ 1,665.00	€ 2,850.00	€ 5,475.00	€ 7,000.00	€ 14,800.00	€ 24,100.00	€ 27,900.00	€ 32,600.00	€ 38,800.00	€ 50,000.00	€ 59,500.00	€ 68,500.00	€ 333,190.00

QUARTERLY EXPENSES	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	3 YR TOTAL
Salaries (dev)	€ 9,000.00	€ 9,000.00	€ 9,000.00	€ 9,000.00	€ 12,000.00	€ 12,000.00	€ 24,000.00	€ 24,000.00	€ 24,000.00	€ 24,000.00	€ 24,000.00	€ 24,000.00	€ 204,000.00
Salaries (sales)	€ -	€ -	€ -	€ -	€ 7,500.00	€ 7,500.00	€ 7,500.00	€ 7,500.00	€ 15,000.00	€ 15,000.00	€ 15,000.00	€ 15,000.00	€ 90,000.00
Marketing	€ 1,500.00	€ 1,500.00	€ 1,500.00	€ 1,500.00	€ 3,000.00	€ 3,000.00	€ 3,000.00	€ 3,000.00	€ 6,000.00	€ 6,000.00	€ 6,000.00	€ 6,000.00	€ 42,000.00
Insurance	€ 200.00	€ 200.00	€ 200.00	€ 200.00	€ 200.00	€ 200.00	€ 200.00	€ 200.00	€ 200.00	€ 200.00	€ 200.00	€ 200.00	€ 2,400.00
Rent	€ -	€ -	€ -	€ -	€ -	€ -	€ 2,000.00	€ 2,000.00	€ 2,000.00	€ 2,000.00	€ 2,000.00	€ 2,000.00	€ 12,000.00
Legal GDPR Consultants	€ -	€ -	€ 4,500.00	€ -	€ -	€ -	€ 4,500.00	€ -	€ -	€ 6,000.00	€ -	€ -	€ 15,000.00
Loan Repayments	€ -	€ -	€ -	€ -	€ -	€ -	€ 2,428.34	€ 2,428.34	€ 2,428.34	€ 2,428.34	€ 2,428.34	€ 2,428.34	€ 14,570.04
Travel	€ -	€ 1,000.00	€ 1,000.00	€ 1,500.00	€ 1,500.00	€ 1,500.00	€ 1,500.00	€ 1,500.00	€ 3,500.00	€ 3,500.00	€ 3,500.00	€ 3,500.00	€ 23,500.00
Cloud Computing / Hosting	€ 150.00	€ 300.00	€ 300.00	€ 300.00	€ 300.00	€ 300.00	€ 750.00	€ 750.00	€ 750.00	€ 1,500.00	€ 1,500.00	€ 1,500.00	€ 8,400.00
Equipment	€ 750.00	€ -	€ 2,000.00	€ 750.00	€ 1,500.00	€ 1,500.00	€ 1,500.00	€ 1,500.00	€ 4,000.00	€ 3,000.00	€ 3,000.00	€ 3,000.00	€ 22,500.00
Technical Services	€ 300.00	€ 300.00	€ 300.00	€ 800.00	€ 800.00	€ 1,100.00	€ 1,750.00	€ 1,750.00	€ 2,800.00	€ 2,800.00	€ 3,200.00	€ 3,200.00	€ 19,100.00
Misc	€ 600.00	€ 600.00	€ 600.00	€ 600.00	€ 550.00	€ 800.00	€ 750.00	€ 1,100.00	€ 900.00	€ 1,100.00	€ 700.00	€ 1,000.00	€ 9,300.00
VAT (Sales Tax)	€ 382.95	€ 655.50	€ 1,259.25	€ 1,610.00	€ 3,404.00	€ 5,543.00	€ 6,417.00	€ 7,498.00	€ 8,924.00	€ 11,500.00	€ 13,685.00	€ 15,755.00	€ 76,633.70
BURN RATE	€ 12,882.95	€ 13,555.50	€ 20,659.25	€ 16,260.00	€ 30,754.00	€ 33,443.00	€ 56,295.34	€ 53,226.34	€ 70,502.34	€ 79,028.34	€ 75,213.34	€ 77,583.34	€ 539,403.74

OVERVIEW	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
CUMMULATIVE EXPENSES	€ 12,882.95	€ 26,438.45	€ 47,097.70	€ 63,357.70	€ 94,111.70	€ 127,554.70	€ 183,850.04	€ 237,076.38	€ 307,578.72	€ 386,607.06	€ 461,820.40	€ 539,403.74	
CUMMULATIVE INCOME	€ 61,665.00	€ 139,515.00	€ 144,990.00	€ 151,990.00	€ 201,790.00	€ 265,890.00	€ 293,790.00	€ 326,390.00	€ 365,190.00	€ 450,190.00	€ 509,690.00	€ 578,190.00	
STATUS	€ 48,782.05	€ 113,076.55	€ 97,892.30	€ 88,632.30	€ 107,678.30	€ 138,335.30	€ 109,939.96	€ 89,313.62	€ 57,611.28	€ 63,582.94	€ 47,869.60	€ 38,786.26	

See Financial Requirements Section below for more in depth detail

Financial Requirements

Investment Income

Angel Investor

Early stage investment from an angel investor would provide SNG with much needed capital to propel our services forward and aid adoption of the platform.

Bank Loan

Obtaining a bank loan at a fixed interest rate can provide SNG with upfront capital to conduct necessary business operations whilst providing a regular interval & cost repayment structure that is predictable for the business.

F & F Rounds

Family and friends will be offered the opportunity to invest in the business at its inception. This capital will be used to cover early expenses such as salaries and marketing expenses.

Founder Buy Ins

SNG has three co-founders. Each of these co-founders will commit their own capital in order to kick start the business. This investment will allow the business to cover early expenses associated with beginning a business.

Operational Expenses

Salaries

Salaries are a regular expense that will scale over time as the business grows. They will increase as the business increases in revenues as it will allow SNG to pay the existing employees more for their continued dedication to the business as well as onboarding new employees to aid the growth of the business.

Marketing

Marketing expenses include both digital marketing and traditional marketing expenses. Digital advertisements, giveaways, guerilla marketing, radio exposure will all be conducted and the associated costs must be covered.

Insurance

There are a wide array of insurance products that a business can obtain. SNG will initially obtain public liability insurance and expand the insurance coverage to other aspects of the business further on in the business's life cycle.

Rent

SNG will acquire office space to conduct most of our operations. This will incur the cost of rent, this expense will be fixed monthly or bi-monthly cost.

Legal Consultancy

SNG will require various legal services in relation to many aspects of the business e.g GDPR compliance services. These services will be contracted in on an as-needed basis initially.

Loan Repayments

SNG intends to obtain a bank loan to gather capital. Doing this will result in payments that fall due on a monthly basis.

Travel Expenses

In order to sell our product directly to fast-paced retail stores some members of our team will need to travel on-site to meet with owners of fast-paced retail stores. In doing so will result in travel expenses such as a leasing / purchasing of a vehicle as well as all of the associated costs of running and maintaining a vehicle.

Server Hosting

SNG will require hosting services such as AWS and Microsoft Azure to host our application. The costs associated with these services will grow proportionally to the user base of the SNG application.

Equipment

SNG will require a vast array of equipment to fulfil the overall business mission. Equipment ranging from laptops to chairs, keyboards, and similar.

Technical Services

SNG will require various technical services from IT professionals ranging from installation and maintenance of software on workstations as well as overseeing network security.

Miscellaneous

It is important to consider and account for miscellaneous purchases or costs. These include small costs associated with operations such as petty cash, credit / bank fees, transportation etc.

VAT (Sales Tax)

SNG will be required to pay 23% VAT on all services. This is a cost associated with running a business of this nature.

Research Analysis

Primary Research

For our primary research we conducted a round of interviews with Owners of Fast Paced Retail Stores and we surveyed potential users of our mobile application (Customers of Fast Paced Retail Stores), finally we observed Customers of Fast Paced Retail Stores using multiple store checkout processes.

Owners of Fast Paced Retail Stores

During our interviews with Owners of Fast Paced Retail Stores, we realised that the main reason owners have not yet installed any self-service checkouts was due to a lack of floor space available to them (**4/8 store owners**). Other reasons flagged that prevented owners implementing the self-service machines, was the expense of installing a self-service machine (**2/8 store owners**) and a lack of technical knowledge around the area.

An interesting comment from 2 different filling station owners was the pain point of congestion in stores during busy periods. They voiced that if a customer is parked at a fuel pump and they have to queue for 5 minutes in store to pay for the fuel, then that fuel pump is unavailable to the rest of the store customers. This means the filling station is not maximising potential revenue. SNG could help alleviate this problem by reducing queues in store.

75.6% [**Appendix 7**] was the average percentage of store employees working on tills.

When we asked the owners how long a customer might queue during busy periods, the answers ranged from 3 - 7 minutes.

100% (**8/8 store owners**) of store owners said that SAGE was the Point-of-Sales system they use. This correlates with our secondary research findings seen in the next section below.

100% (**8/8 store owners**) of store owners said that they thought the €4,000 setup fee was “Reasonable”, considering €20,000 is the cost for a self service machine. When asked about the 1% per transaction commission fee, again they said it was “reasonable” and “expected”.

Customers of Fast Paced Retail Stores

When we surveyed the likely users of our mobile application, we asked them to show their preference in shopping in either a busy retail environment or quiet retail environment, the decision inclined greatly towards a quiet retail environment with more than 90% of individuals picking a quiet retail environment over a busy retail environment [**Appendix 8**]. This shows the pain point of queuing in stores and that reducing congestion in stores ultimately leads to the store being more appealing to potential customers.

Another result from this survey was that 77% of customers surveyed, spent on average 5 minutes or more queuing in store [**Appendix 10**]. From this result and the 90% of customers that prefer a quieter store, we can validate that there is appetite from customers for a queueless checkout solution.

During our observation research, we found that the average queueing time across all 14 stores observed was: **2.27 minutes** [**Appendix 9**]. We can also validate our value proposition to potential customers of these retail stores. Our value proposition is to eliminate 100% of customers' in-store checkout queueing time. SCAN-N-GO can eliminate customers checkout queueing time since SCAN-N-GO customers do not need to queue at a checkout. Instead they checkout using their smartphones.

Finally when we asked customers if they were willing to use a queue-less, smartphone based checkout solution we got a resounding positive answer of 93.3% [**Appendix 11**].

Secondary Research

We conducted research on how long the average person queues during their lifetime and the results were surprising. We found that the average person spends 47 days queuing over their lifetime [**79**]. This showed us

that there is a massive amount of time for people to save with the use of our mobile application. For businesses, studies reveal that in-store queuing costs the global retail sector \$200 billion annually [80]. In a survey conducted by Piplsay, 57% of respondents are excited to see cashierless stores open up and 54% of people believe it will be a success [82].

To validate our 1% commission fee, we conducted multiple searches to find the appropriate commission fee pricing for our business type. Looking at other types of businesses such as Amazon Marketplace, Ebay, Etsy, Airbnb, we found their referral rates and commission rates used vary substantially from 2% to 45% [Appendix 12]. When we discussed the 1% commission fee to business owners in our primary research, the owners said it was “reasonable” and “expected”. Other forms of commission fees that the retail industry pay are minimal, such as VISA & MasterCard transaction fees which are 1.29% per credit card transaction [81].

To validate our €4000 setup fee, we reviewed the prices of our competitor cashierless checkout solutions. A single grocery store self-checkout Kiosk averages \$30,000 [83] and a self-checkout setup with four machines costs \$125,000 [84]. 4 traditional manually operated registers costs on average \$1500 [84] however, 4 traditional manually operated registers also have the cost of employing the operator which in Ireland costs on average €13.33 per hour or €26,000 per year [85].

When researching the most widely used POS system, the most popular POS system is Sage [89].

Appendix 1

Once Off setup fee - Penetration Pricing Model



Appendix 2

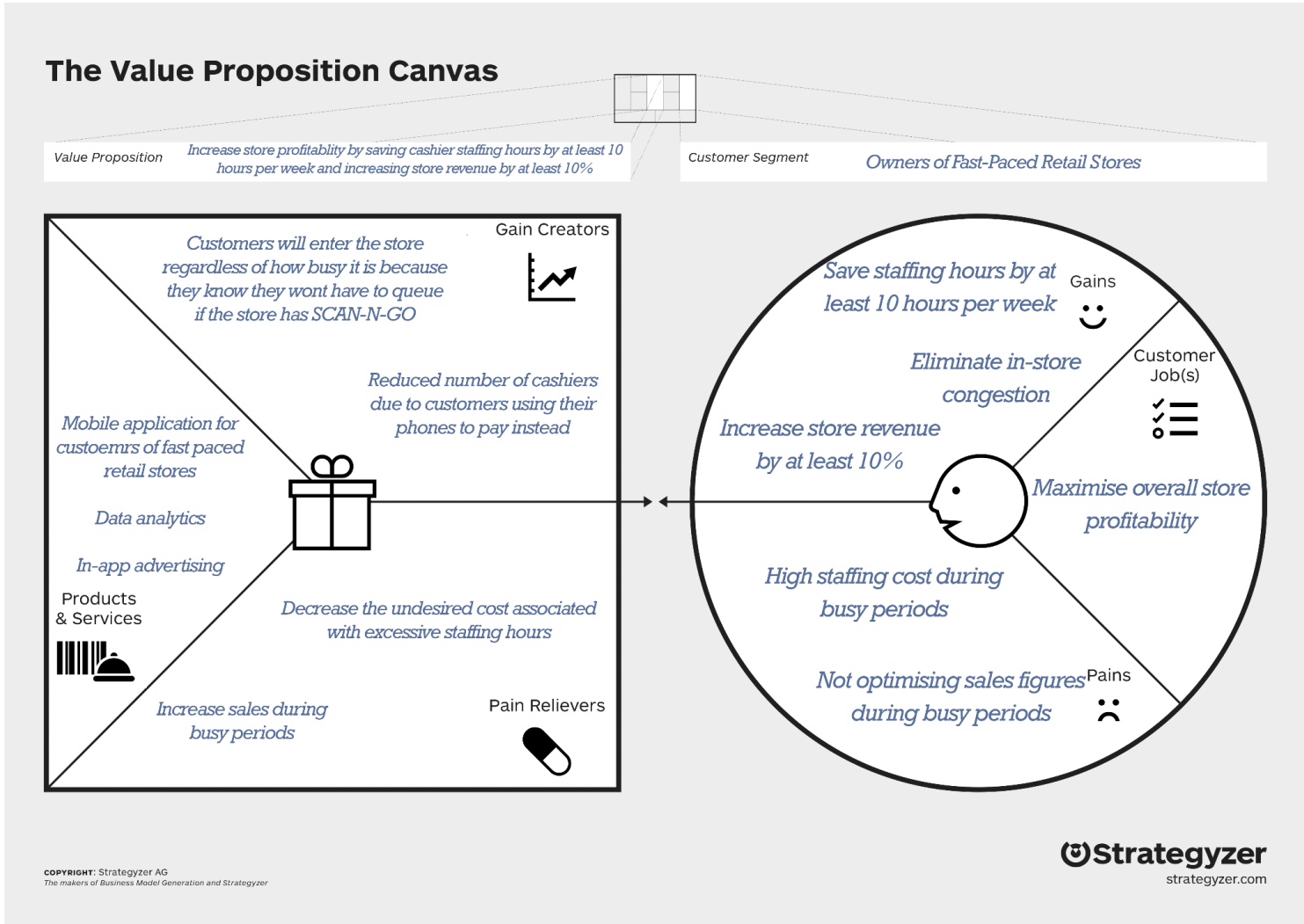
Business Model Canvas of SNG.

BMI●Business model canvas

<div>● Key partners</div> <div>Who are your most important partners? Which key resources do you acquire from partners? Which key activities do your partners perform?</div> <div>Online Payment Platforms: <i>Stripe, Apple Pay, Google Pay. These partners will process our payments</i></div> <div>Electronic Point-of-Sales Companies: <i>We will work with these companies to integrate our software with theirs</i></div> <div>Web Hosts: <i>Web hosts will host our application on the internet, meaning it is accessible anywhere</i></div> <div>Application Store Hosts: <i>These apps will be the medium through which we will distribute our application. E.G Apple Store, Google Play Store</i></div>	<div>● Key activities</div> <div>What are the activities you perform every day to create & deliver your value proposition?</div> <div>Software development & Maintenance</div> <div>Consumer Marketing</div> <div>On-boarding of Retail Stores</div> <div>Custoemr Support</div>	<div>● Value propositions</div> <div>What is the value you delivery to your customer? Which of your customer's problems are you helping to solve? What is the customer need that your value proposition addresses? What is your promise to your customers? What are the products and services you create for your customers?</div> <div>Owners of Fast Paced Retails Stores: <i>Increase store profitability by reducing cashier staffing hours by at least 10 hours per week and increase store revenue by at least 10%</i></div> <div>Customers of Fast Paced Retail Stores: <i>Eliminate in-store queueing time by 100%</i></div>	<div>● Customer relationships</div> <div>What relationship does each customer segment expect you to establish and maintain?</div> <div>Owners of Fast Paced Retail Stores- <i>Acquire customers initially by providing a reduced setup fee for early adopters</i></div> <div>Customers of Fast Paced Retail Stores - <i>Acquire using in-store advertisements, social media outreach, referral programmes</i></div>	<div>● Customer segments</div> <div>For whom are you creating value? What are the customer segments that either pay, receive or decide on your value proposition?</div> <div>Owners of Fast Paced Retail Stores <i>This includes owners of convenience stores, petrol stations, grocery stores</i></div> <div>Customers of Fast Paced retail Stores <i>Any customer of a fast paced retail store that has access to a smart phone</i></div>
<div>● Cost structure</div> <div>What are the important costs you make to create & deliver your value proposition?</div> <div>Web hosting / application hosting,</div> <div>Marketing,</div> <div>Development Costs,</div> <div>Salaries,</div> <div>Sales & Marketing.</div>	<div>● Revenue streams</div> <div>How do customers reward you for the value you provide to them? What are the different revenue models?</div> <div>Transaction fee on all purchases through mobile application charged to the retail store(1%)</div> <div>Paid promotion through our mobile application for businesses</div> <div>Up-Front integration cost for businesses</div> <div>Data collection to provide insights to retail businesses at a cost</div>			

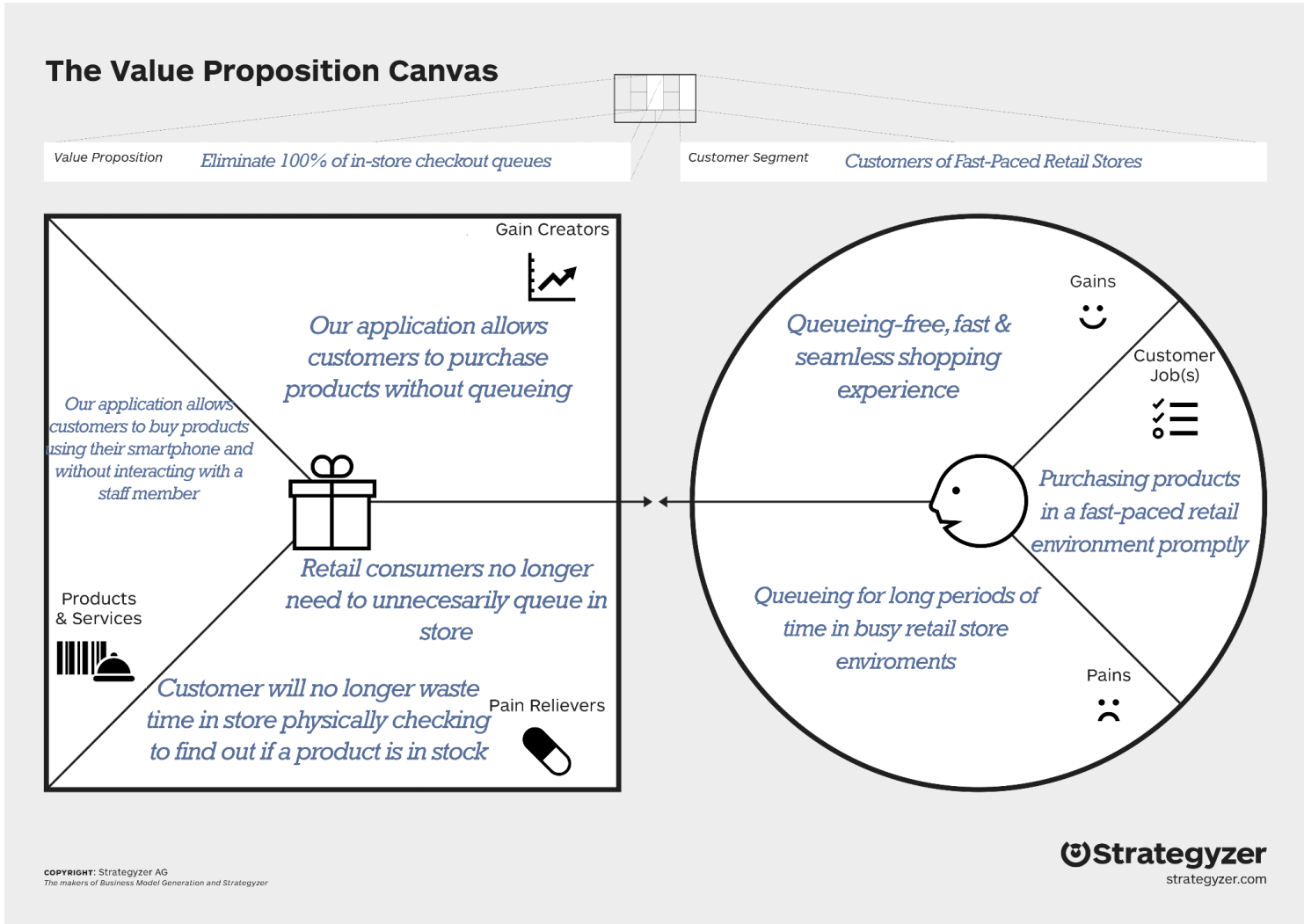
Appendix 3

Value proposition canvas: Owners of fast paced retail stores.



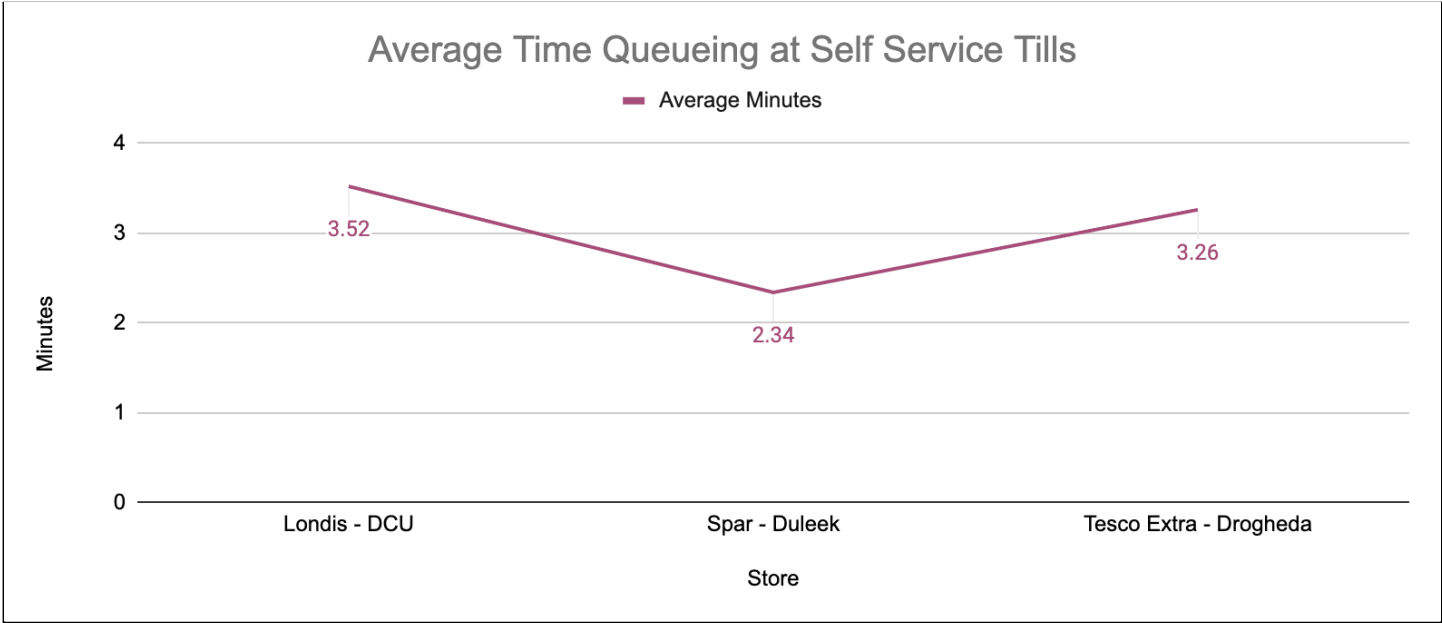
Appendix 4

Value proposition canvas: Customers of fast paced retail stores.



Appendix 5

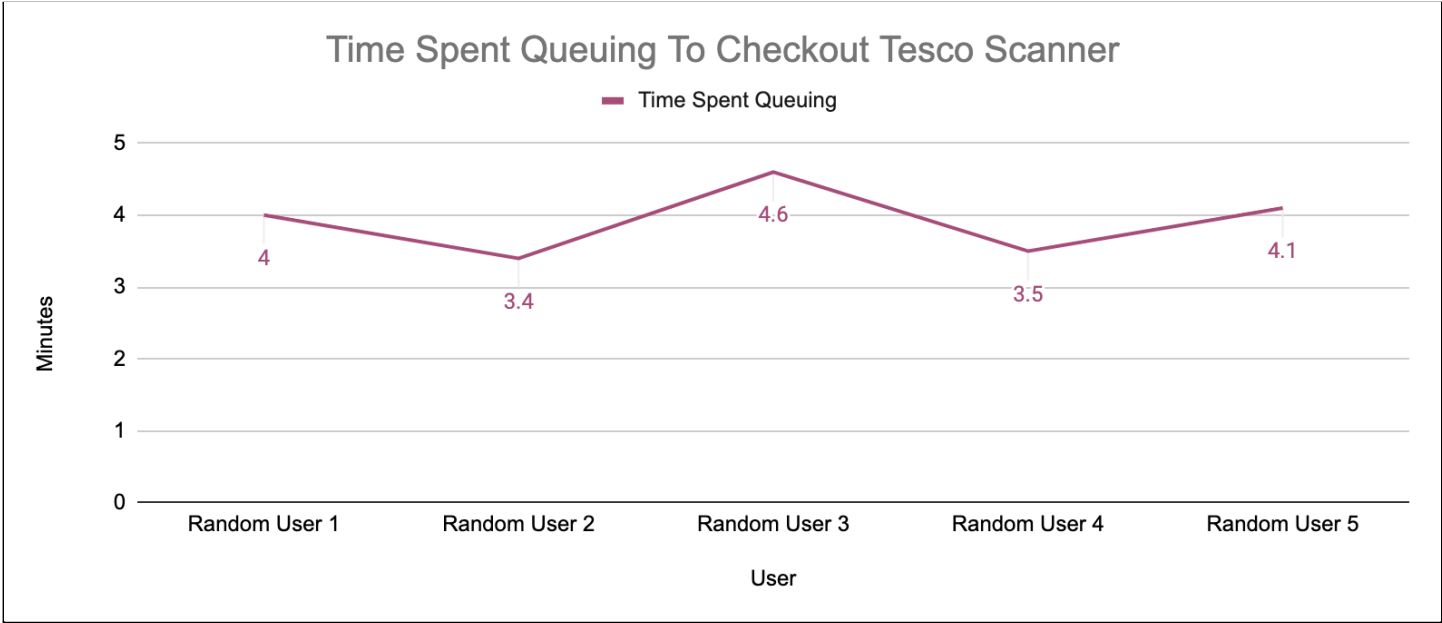
Average time spent queuing at a self service till.



The average across all 3 stores sampled was: **3.04 minutes**.

Appendix 6

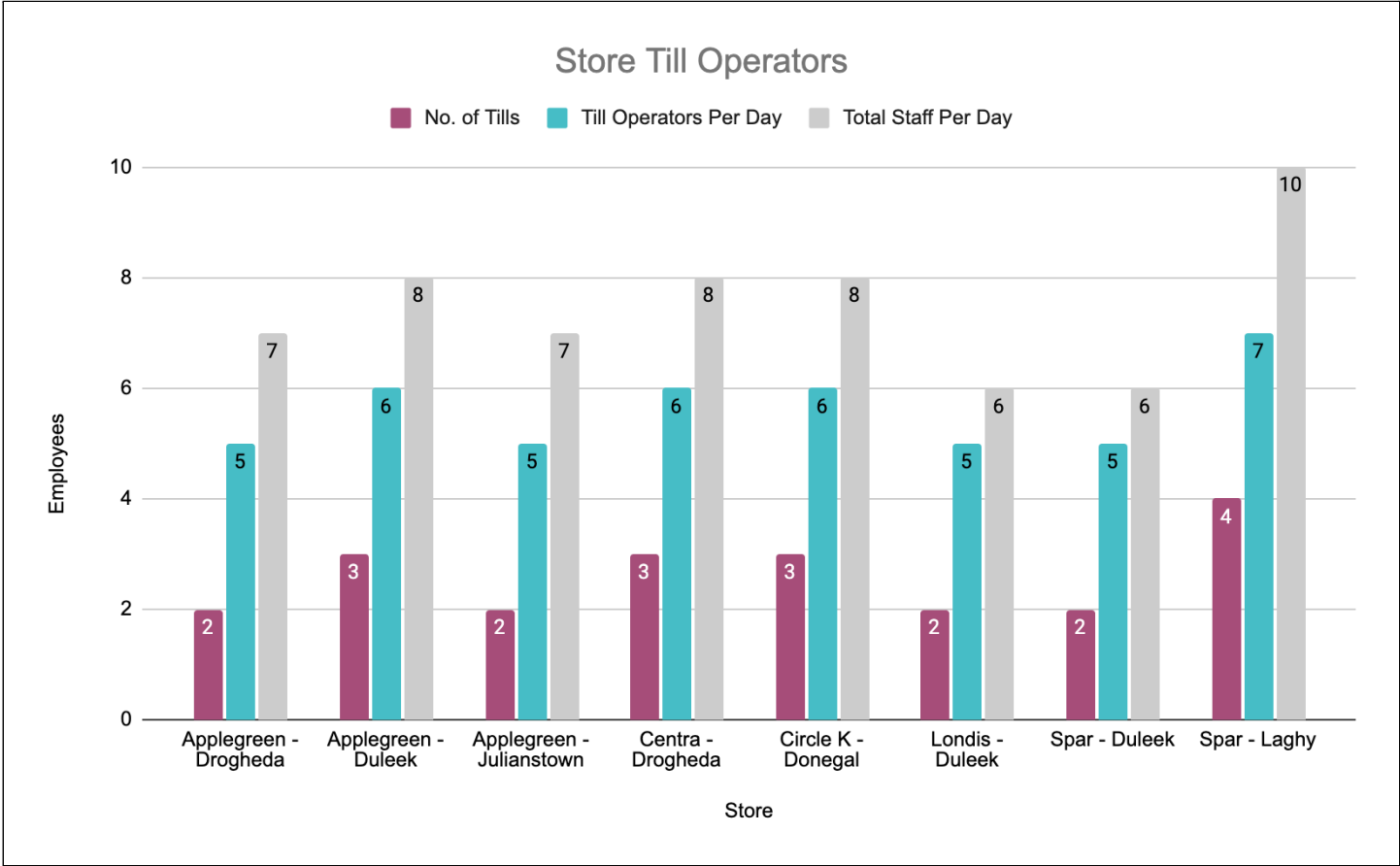
Average time spent queuing to checkout after using Tesco scanner.



The average across all 5 users randomly sampled was: **3.92 minutes**.

Appendix 7

Count of store till operators per day with total staff per day along with available tills per day.

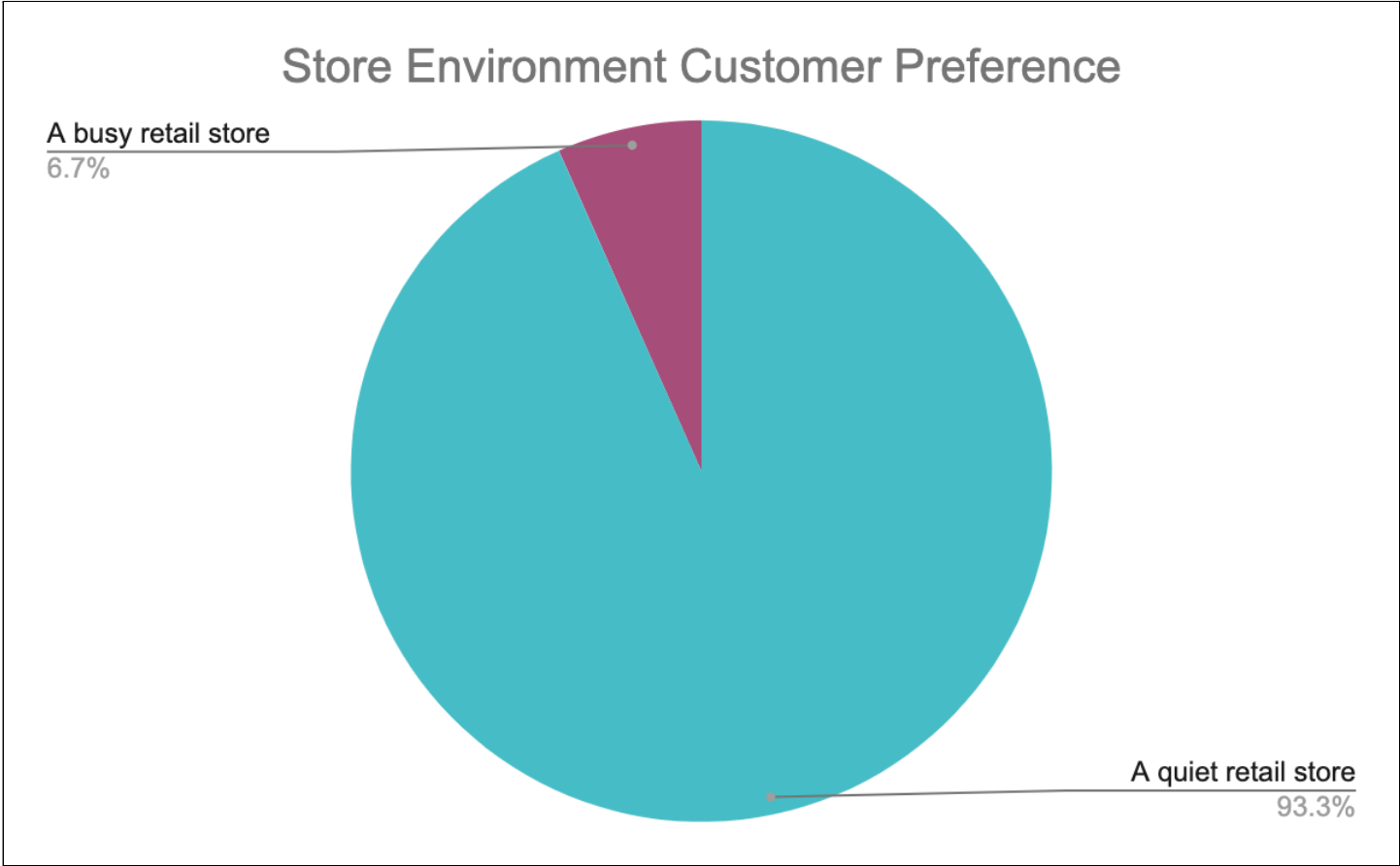


The average percentage of staff operating tills across all 8 stores interviewed was: **75.6%**

Appendix 8

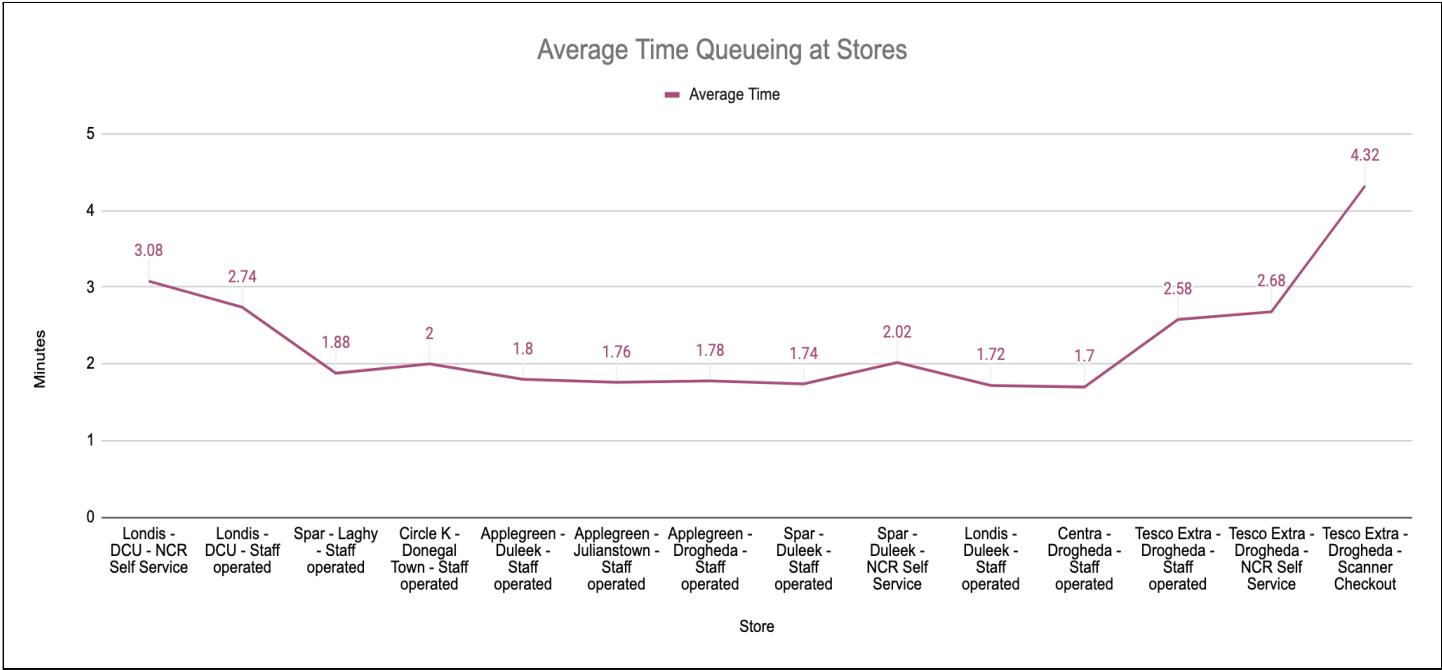
Survey results for customers of fast paced retail stores:

Shopping in a busy retail environment or quiet retail environment,



Appendix 9

Average time for customers queueing at stores to checkout. These stores have different checkout methods, staff operated checkouts, self service checkouts and Portable Scanner checkout.

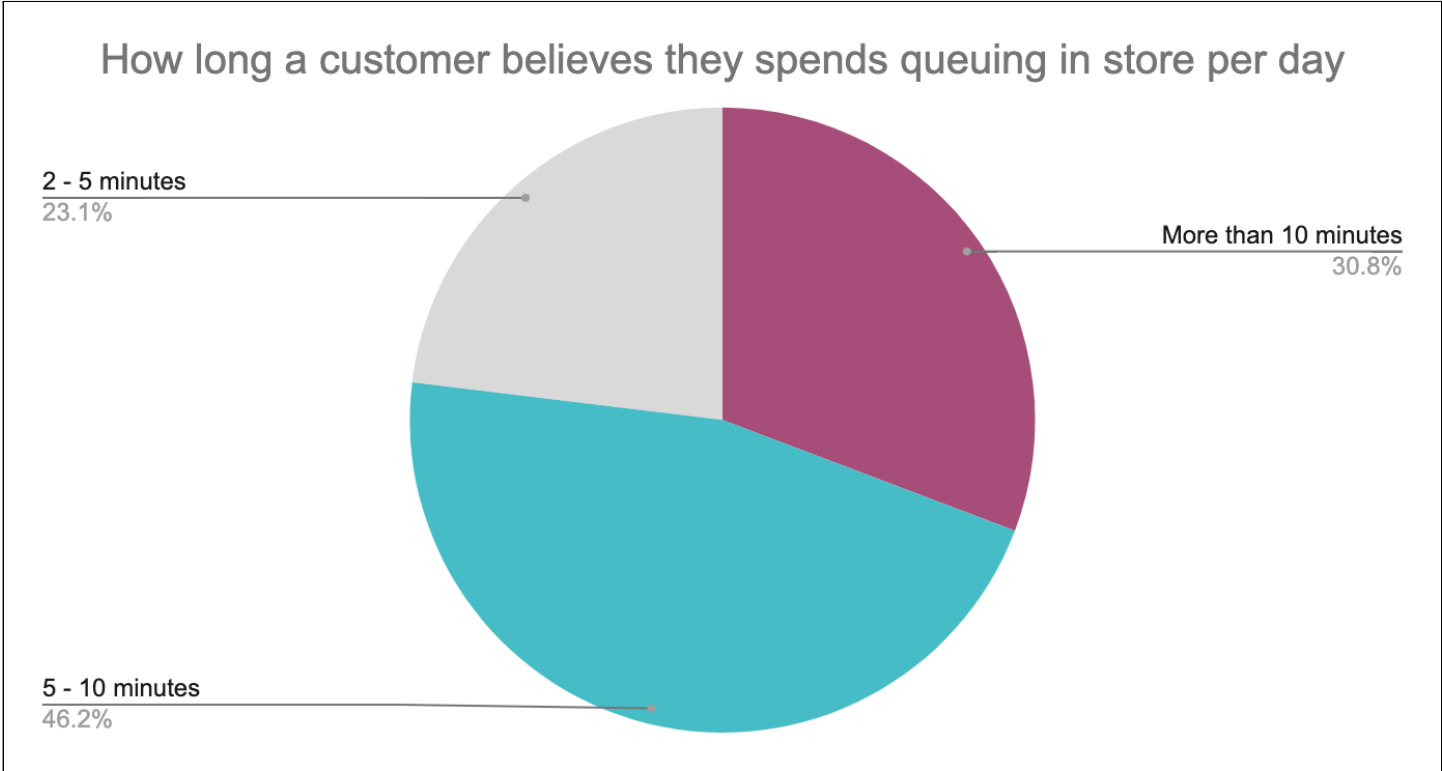


The average queueing time across all 14 stores was: **2.27 minutes.**

SCAN-N-GO can eliminate 100% of customers in-store queueing time when checking out. SCAN-N-GO customers do not need to wait at a checkout as they checkout using their smartphones in store instead.

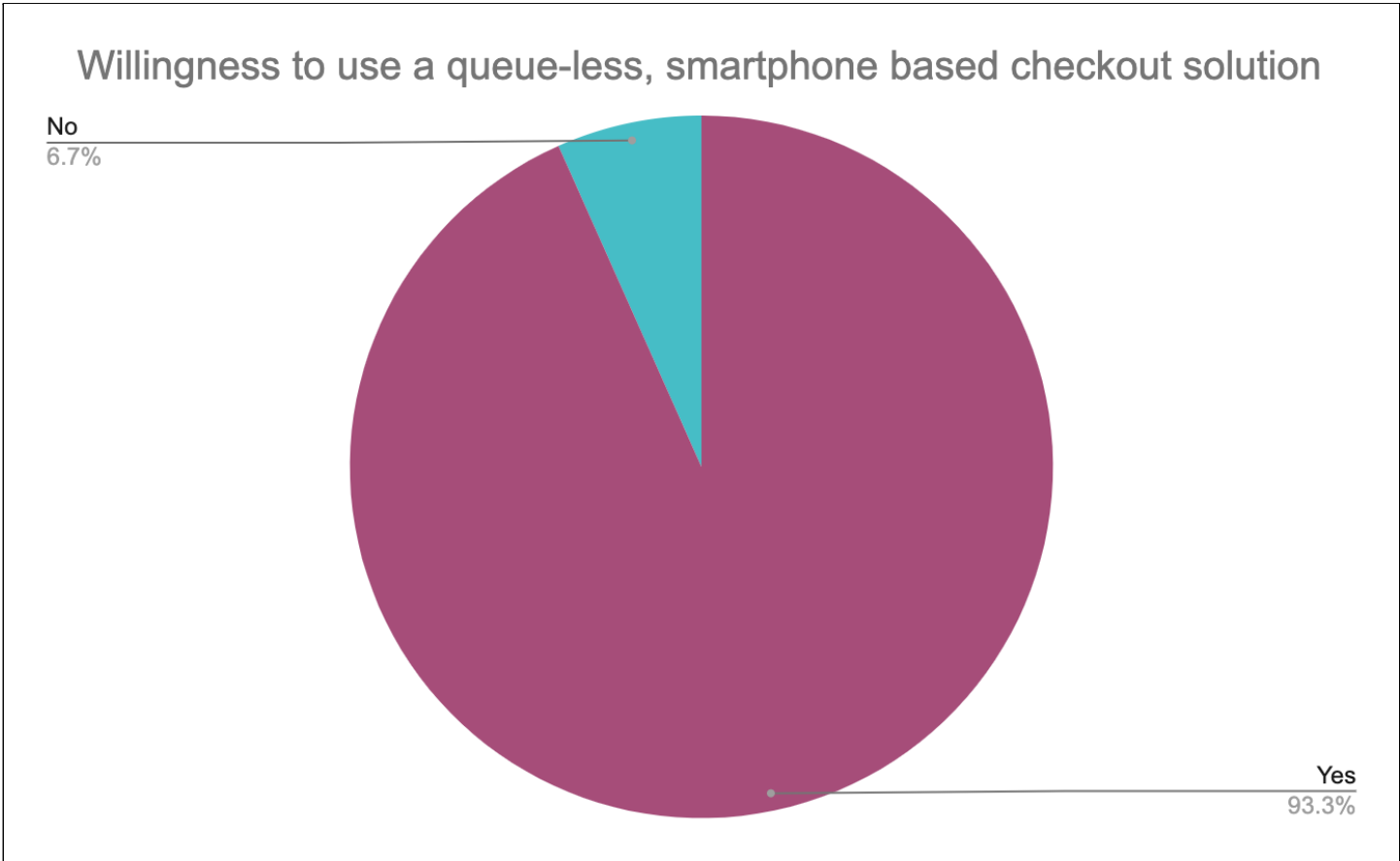
Appendix 10

Customer survey result for: how long on average do you think you spend in shopping queues on a daily basis?



Appendix 11

Customers willingness to use a queue-less, smartphone based checkout solution.



Appendix 12

Below is the table comparing commission rate of some big modern marketplaces.

Company	Commission rate (%)	Note
Uber	20	
Fiverr	20	
Freelancer	10	
Upwork	5-20	The more valuable the project, the lower the fee.
Etsy	3.5	
Airbnb	3-5 + 6-12	3-5% on host end and 6-12% for guests.
Amazon	6-45	Varies per category, typically 15% with \$1.00 minimum.
eBay	2-15	Varies per category, and reduces as the item value increases.
Shutterstock	70-80	

<https://www.enginethemes.com/commission-rate-in-online-marketplace/>

Appendix 13

Our value proposition to Owners of Fast Paced Retail Stores is to increase store profitability by saving cashier staffing hours by at least 10 hours per week.

- Mishi pay states that they can save 9 staff hours per week [67]
- In general, 4 Self service tills can be operated by 1 staff member. Unlike traditional manually operated tills, where each till must be operated by an employee. Taking this into account, a self service till can save 3 times the amount of a traditional till.

Sample Store Operational Times		
Store	Opening / Closing Times	Total Hours
Londis	8am - 10pm	14
Tesco	7am - 11pm	16
Spar	6.30 - 10pm	15.5
Centra	7am - 10pm	15
	Average:	15.125 Hours

- 15.125 operational hours per day.
- 105.875 operational hours per week.

From our primary research [Appendix 9], on average each checkout transaction takes between 1.72 - 4.32 minutes with an average of **2.27 minutes**. When SNG can take 3 customers away from a checkout till every hour, SNG can save cashier staffing hours by more than 10 hours per week. This will only increase, when retail store customers become aware and more comfortable using SNG technology.

Calculation
3 customers every 15.125 hours with an average checkout time of 2.7 minutes every week.
$3 * 15.125 * 2.7 * 7 = 856.998 / 60 = 14.2833$ hours.
SNG can save cashier staffing hours by at least 10 hours per week.

Appendix 14

Our value proposition to Owners of Fast Paced Retail Stores is to increase store profitability by increasing store revenue by at least 10%.

- Mishi pay states that customer increase their basket value by 27% [67]
- Research conducted by McDonald's Fast Food takeaway found that customers using self-service kiosks spent 30% more on average.
- Average customer spending in grocery store per shopping trip was - €27.02 [87]
- A sample found that the Centra retail franchise has 473 stores that serve 3 million customers per week [88].
Using these figures we can get a good estimate of the number of customers in a retail franchise store per day.

Calculation
3 million customers every week across 473 stores
$(3,000,000 / 473 = 6,342.49) / 7 = 906$
906 customers served in every Centra store per day

Using our secondary research, customers tend to increase the value of their baskets on average 30% when using a self service checkout option. Taking this into account, SNG can say with confidence that we can increase store revenue by at least 10%

From our primary research 93.3% of Customers when asked were willing to use a queue-less, smartphone based checkout solution [Appendix 11].

Our main competitor, outlines that 31% of shoppers checkout with Mishipay [67].

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