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rTown report

Workpackage 4 – Incentives and Car Parking

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Contents

1	Introduction	4
1.1	Scope	4
1.2	Background	4
1.2.1	The remit for ProxiSmart Ltd - Work Packages 4 & 5	4
1.2.2	Incentives	5
1.2.3	Car Parking.....	6
1.2.4	e-Commerce and the adoption of other ‘Single Business Entity’ tactics	7
2	Work Package 4: Incentives and Car Parking	7
2.1	Demand.....	7
2.1.1	Key ‘headline’ statistics extracted from the survey data.....	7
2.1.2	Analysis based upon the key statistics	8
2.1.3	Summary	8
2.2	The rTown solution mix	8
2.2.1	A <i>Locality</i> based Content Management System (<i>LocalitySmart</i>)	9
2.2.2	A <i>Locality</i> wide e-Consumer record supported by NFC	10
2.2.3	The rTown proprietary App (<i>ProxiSmart</i>).....	12
2.2.4	Linking car parking with the high street (incorporating <i>ProxiPark</i>)	15
2.2.5	Deployment of town centre self service kiosks (<i>KioskSmart</i>).....	20
2.2.6	rTown solution mix overview and summary of progress to date	22
3	Commercial Business Model	25
3.1	Context of developing the commercial business model	25
3.1.1	Opportunity for different revenue streams	25
3.1.2	Exploiting economies of scale	26
3.1.3	Opportunities for rebates to a Location	27
3.2	The business model: Phase 2	27
Annex 1	Survey Data Tables & Analysis	28
Annex 2	Costs	32
Annex 3	Phase 2 Gantt Chart	39
Annex 4	References & useful links	41

Introduction

Scope

The scope of this document is to provide a progress report on the work completed by ProxiSmart Ltd in relation to the rTown project as part of the TSB SBRI 'Re-imagining the High Street' remit. This document will evolve and grow over time and will be the basis for any structured submissions to the TSB using their templates for any work carried out by ProxiSmart Ltd ("the Company"). It is a document which is meant to reflect research, findings, recommendations and conclusions at the time of a given submitted version. Careful note should therefore be made of the strict version control summary shown on Page 2 and of the named version number of the document.

The objective of this document is to be primarily used by AMS Consulting (but also by any other participating protagonists) in the formulation of their interim and final report submissions to the TSB.

This document is intended for use by the management / staff of ProxiSmart Ltd, AMS Consulting its associated resources and any organisations or individuals deemed by the Company to have a vested interest in the project. Please note the confidentiality and disclaimer notices on Page 2.

Background

The remit for ProxiSmart Ltd - Work Packages 4 & 5

ProxiSmart Ltd has been employed by AMS Consulting to provide research, ideas, recommendations and conclusions on two key areas of the rTown project as follows...

- The use of incentives and rewards generally to increase footfall to a given Locality*¹ and more specifically how these incentives can be linked to car parking in and around that Locality.
- The introduction of standard Retail tactics used in e-commerce and m-commerce to market the Locality as a 'single business entity', thereby drawing on the strengths and diversity of a co-operative branding and approach. More specifically to look at the feasibility, benefits and opportunities associated with 'click and collect' and other related services.

These two areas have been split neatly into Work Packages 4 and 5 respectively for the rTown project submission.

ProxiSmart Ltd has been heavily involved in research and development of solutions linked to these specific topics and in particular has been looking at addressing the specific objectives of the rTown project using the latest technologies available to the market. It is this alignment that brings ProxiSmart Ltd to the rTown project and the specific Work Packages identified.

¹ A Locality is defined broadly as an area where there is a collection of different Retailers and other businesses within a 'reasonable' walking distance for a consumer. In the context of the SBRI Project, this is a Market Town or High Street.

In the context of the rTown pilot project this is the market town of Ross on Wye but which has commercial context and opportunities associated with the other 1200 or so similar Localities across the UK

Incentives

Incentives are a long established technique within Retail and Service based businesses to drive additional revenues. They can take many forms from the use of Vouchers through to Sales, Promotions, Offers, Deals, Loyalty Programs and more. It is important to note the context of incentives within the overall marketing strategy for a given business. Many different marketing channels are available ranging from the more traditional (using the Shop Front of, and within, a Retail Store, Printed Advertising, Direct Mail, etc) to the more modern (Digital Signage, website, App, Email and Social Media) and each have their merits, advantages and disadvantages to different types of businesses. How incentives are used across different marketing channels is therefore also an important consideration. Larger retail businesses dedicate significant resources to their marketing strategies and importantly are able to measure the return on their investment in the use of incentives across different marketing channels.

Incentives are normally used within the context of a number of marketing 'touches' with the target consumer.

Figure 1 below provides a graphic which summarises the role of incentives

The Role of Incentives

rTown

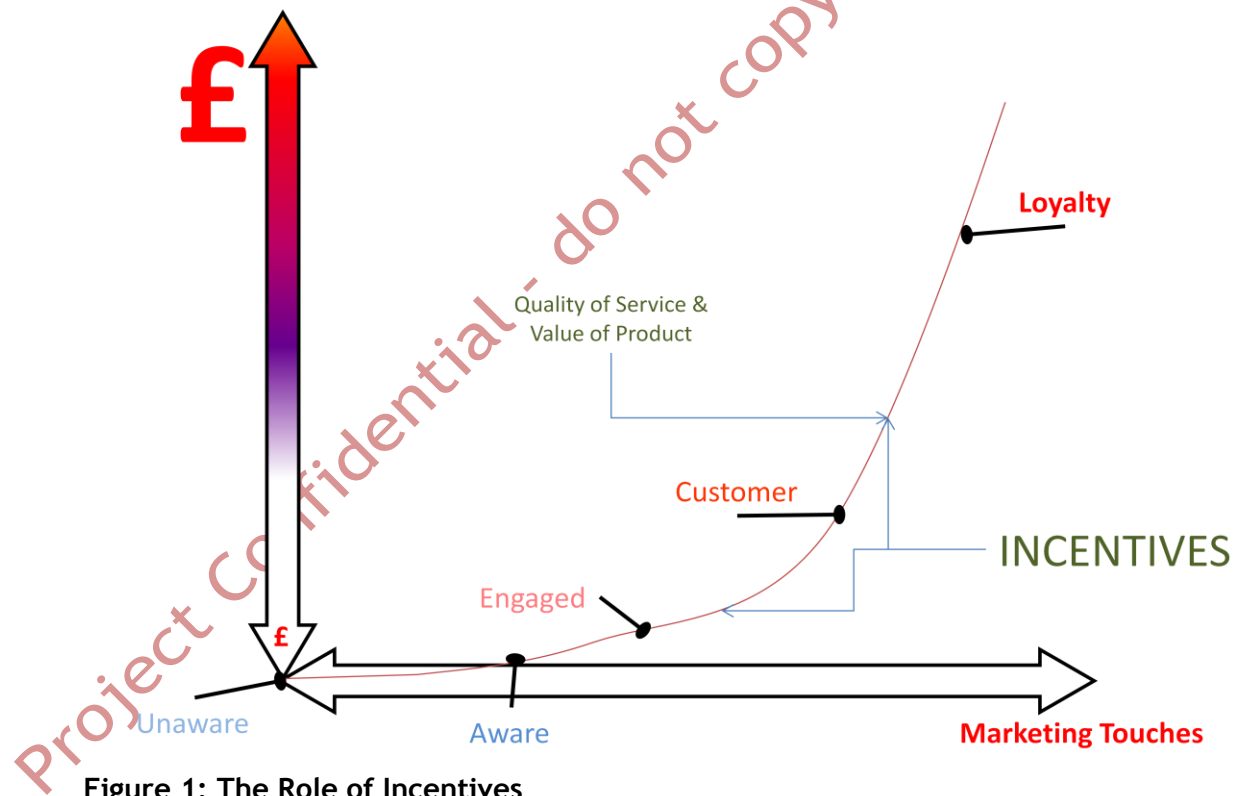


Figure 1: The Role of Incentives

The x axis represents the number of marketing 'touches' used by the business across multiple marketing channels. The y axis represents the revenue value to the business of a given consumer. The curved line represents the status of the consumers engagement with the business ranging from 'unaware', through to an 'awareness' based upon being exposed to the marketing touches, moving to a status of 'engagement', then becoming a customer and finally converting into a loyal customer. At any point, a consumer can 'fall off' the line of this graphic based upon a number of possible elements or events such as poor marketing, bad PR, a bad customer experience, pricing / value or a low quality product or service.

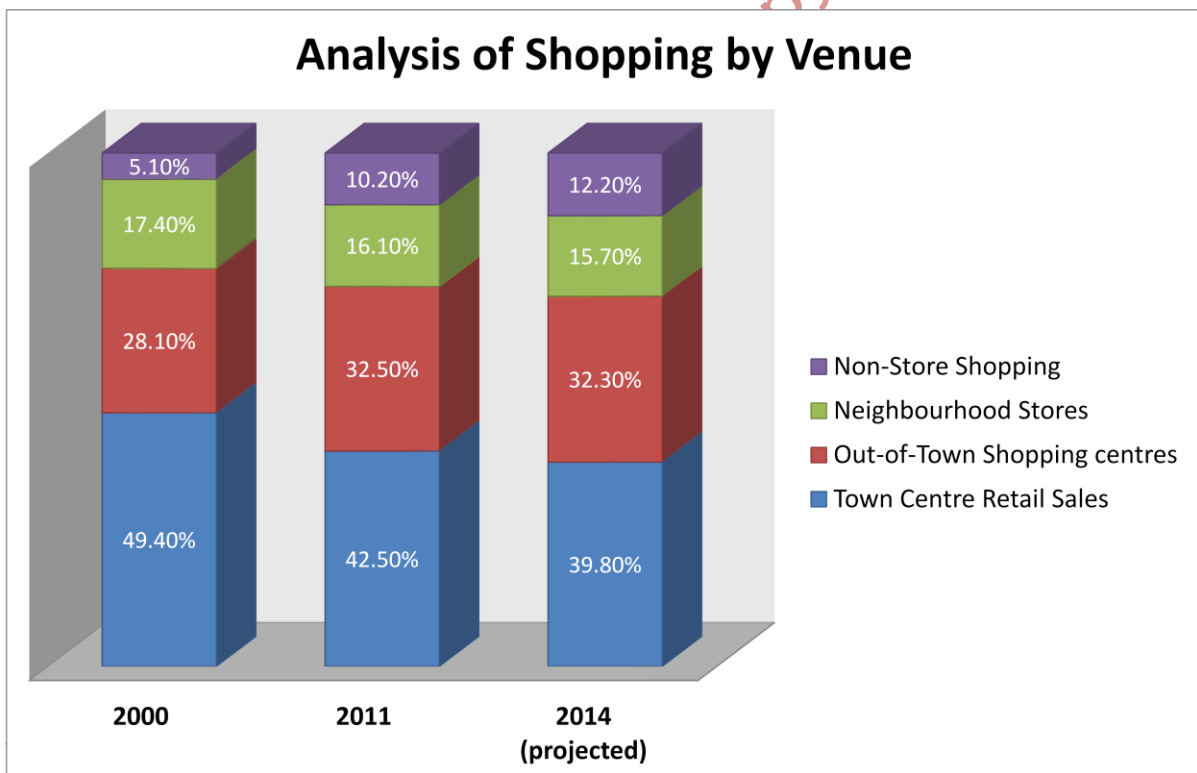
The graphic shows that incentives are generally used at two key points in the consumer journey -

- To convert an 'Engaged Consumer' into a 'Customer'
- To convert a 'Customer' into a 'Loyal Customer'

The value to the business of these 2 stages of engagement can be very significant and gives context to the 'cost' of using incentives across different marketing channels to achieve the conversion mentioned above. A loyal customer is worth significantly more to a business than a customer who is worth a lot more to a business than an engaged consumer.

Car Parking

Car parking in and around Town Centres and High Streets has long been viewed as a key barrier to generating growth for a given Locality. The initial base line data collection that has been carried out for the rTown project as part of the other Work Packages certainly adds weight to this argument and although often an emotive and political subject (due to the involvement of Local Authority management and administration of car parking facilities) is something that can be evidenced as replicated across the country. It is a barrier that does not exist for out of town shopping and possibly more important e-commerce which has seen significant growth to the detriment of the High Street over recent years. Figure 2 below confirms this trend.



Sources: Experian Marketing Research & Centre for Retail Research.
 Note: CRR estimates 13.2% for Non Store Shopping 2012

Figure 2 : How the Retail Cake is cut

Removing this as a barrier therefore has significant impact on the commercial viability of the rTown project for the longer term (i.e., if a successful solution can be delivered under the remit of the SBRI project to the Ross on Wye pilot and it can be demonstrated that this is a replicable solution across other Localities then there is added commercial value to the rTown brand).

Introducing ‘incentives’ to park and therefore drive footfall to a given Locality is not a new idea. Indeed the out of town ‘free parking’ shopping model actively uses this as a marketing tool. There is a cost associated with the provision of car parking and in the case of Local Authorities an opportunity cost of lost revenues to any introduction of ‘free parking’. However, by using the latest technologies it can be possible to convert car parking revenues into a form of ‘currency’ that can be used in ‘trading’ between consumers, retailers and Local Authorities in a seamless manner.

e-Commerce and the adoption of other ‘Single Business Entity’ tactics

Convenience is a catch all term that is used to promote a number of features of e-commerce, the largest growing form of retail. The question therefore becomes about whether a Locality can adopt some of these techniques in order to become more competitive with e-commerce and thereby achieve the objectives of greater footfall, higher revenues and *convenience* to the consumer.

“There is a need for a Town to establish its identity and for the Town to act as a separate Business entity in order to become competitive and be able to react to the different pressures facing the ‘high street’ and prosper”

*A key conclusion from the
“The Portas Review - an independent review into the future of our High Streets”*

By adopting an approach of treating a Locality as a single business entity, which can be marketed as such, provides a stronger proposition for the individual constituent parts of that Locality under a cooperative branding. Services such as ‘click and collect’ under the branded umbrella of a Locality could have a greater appeal than if they were available on a disparate basis among individual retailers. This is the basis of the rTown project Work Package 5 and the development of ideas and solutions in this context.

Many smaller, independent Retailers are unable to provide ‘convenience’ services such as click and collect, delivery services, extended opening hours or a virtual retail offering via e-commerce that the larger players are able to resource. Again using new technologies as a platform, rTown is looking to the possibility of addressing these barriers and to get a Locality on more of an even keel with its direct and indirect competition.

Work Package 4: Incentives and Car Parking

Demand

Initial analysis of the baseline survey data indicates an appetite among consumers (the majority among those surveyed) towards incentives that would increase their footfall in Ross on Wye. Further, to have some form of link between car parking and ‘incentives to shop’ in the centre of town would have the greatest appeal. If converted, this would realise a core support among consumers which it is believed could be increased with suitably resourced marketing and PR thereby maximising the impact of the initiatives proposed in this report

Key ‘headline’ statistics extracted from the survey data

Refer to Annex 1: Survey Data Tables & Analysis for more detail.

- 52% of those surveyed stated that financial or other incentives would make them make **more** use of the Ross on Wye town centre shops and facilities
- In terms of the type of incentives these consumers would prefer, over 63% (the most popular answer) of those who expressed a preference indicated that a Parking Rebate would be their preferred incentive, followed closely by retail incentives such as a Voucher (51%) or a direct discount (30%)

- Average Spend for those surveyed was (pessimistically) calculated at £18.09 per town centre visit
- The average number of visits to the town centre for those surveyed was 12.4 per month (around 3 times per week) per consumer which is an equivalent spend of £224.68 per person per month (£51.85 per week)
- 27% of those surveyed indicated that the duration of their town centre visit was restricted due to the parking time limit of the car park they used or due to the cost of parking charges
- Excluding all day parking the average time spent in a given town centre visit for those surveyed was calculated at 1 hour 28 minutes
- Assuming a linear relationship between the amount of time spent in a visit and that visit's average spend, each additional minute of time spent in town is worth £0.22 per visit (or put another way, spending equates to £12.91 per hour per visit)

Analysis based upon the key statistics

- Extrapolating the survey results (which represent 2.9% of the catchment area population), we would see a consumer collective of over 4,100 people open to using the town centre more often if incentivised to do so
- Based upon the calculated Average Spend per visit, incentivising **1 additional visit** per month among this collective (excluding the proportion who currently visit the town centre daily anyway) would be worth an additional **£53k** in revenues to town centre businesses per month. This does not take into account tourists or converting the proportion of consumers who indicated at this stage that incentives would play no part in increasing their footfall. It is believed that suitable marketing and PR would increase this conversion and also further tap into the tourism sector
- For each percentage point increase in visits to the town centre (amongst this consumer collective only) an increase in revenues of just under £3k to town centre businesses per month would result
- Extrapolating the numbers of consumers whose visits were restricted by car park time / cost limits, and using the calculated average spend per visit and a linear relationship between that and the time spent in the town centre, every 5 additional minutes spent in the town centre would realise an additional **£29k** to town centre businesses per month

Summary

- The financial impact of converting consumers open to the use of incentives is significant
- There is sufficient scope to introduce a business model where revenues raised from the deployment of the rTown initiatives could be based upon measurable returns to the member businesses
- Removing car parking restrictions within the town centre and moving to a 'pay on exit' system would realise a significant uplift in revenues
- By deploying solutions that incentivise additional town centre visits, remove restrictions to car parking and provide a link between car parking rebates and town centre shopping, the rTown core objective of additional footfall has a suitable level of support and in terms of potential financial impact the rTown initiatives have a warranted basis for development

The rTown solution mix

Using the latest technologies, in particular Cloud Based Content Systems, NFC (Near Field Communication) and iBeacon / Beacon Smart networks, a number of concepts have been

researched and wrapped up as ‘features’ under a single Solution Mix. It should be noted that all of these concepts exploit existing technologies but that bringing them together represents a unique Solution under the rTown banner. Partial development and testing has been carried out to establish the feasibility and viability of the Solution Mix as part of the first Phase of the SBRI project. Further development, testing and deployment would be the remit (if successful) of the second Phase of the SBRI rTown project. The constituent parts of the rTown Solution Mix will actually provide more functionality and features than the stipulated remit of Work Package 4 which is only looking at the link between incentives and car parking. Therefore it is important to emphasise all of the features and benefits of the deployed technologies developed. The following sections provide a wider detail on the functions and features of the rTown Solution Mix...

A Locality based Content Management System (LocalitySmart)

Underpinning the rTown project is the development and deployment of a cloud based Content Management System (CMS) that can be used by multiple Retailer and other *Locality* based member businesses. This online ‘self registration / self service’ system would allow users to register their businesses under the umbrella of the ‘town’ brand. They could then go on to create and manage advertising, promotional and other types of content (with little or no training) using templates, wizards and supporting how to videos. The content created would then be automatically (based upon the member business’ scheduling requirements) pushed by the CMS system to a number of ‘modern’ marketing channels. In addition, the Town Team (or equivalent organisations) would use the CMS to promote Locality specific content too such as public information, events and tourist information related data. The initial marketing channels used for the content push by the rTown system would include the following...

- **Social Media** (including but not limited to the Ross on Wye FaceBook Page)
- **Website(s)** (proprietary, locality based and 3rd party)
- **Email campaigns** (to registered consumers)
- A locality based **Smartphone App**
- Locality based self service touch screen **Kiosks**
- Locality based **Digital Signage** deployments

The proposed solution would be fully supported via a helpdesk resource complemented by additional marketing support resources that would optionally assist businesses in the creation of content if required. The support resources would be funded from subscription revenues from the member businesses and feasible due to the economies of scale achieved by having a large member base (and as part of the longer term commercial model which would see the solution being rolled out to other Localities across the UK and beyond). Resources would grow in direct correlation to the number of Localities and businesses being supported.

The key purpose of a single CMS would be to facilitate the promotion of the constituent parts of that Locality (i.e. the member businesses) and the Locality as a whole. The collection and push of media rich content relating to Events, Promotions, Campaigns, Offers, Incentives, Marketing and Other Information through **multiple** marketing channels would result in the Locality being promoted as a single ‘Business Entity’, in the same way that larger retailers, out of town malls and e-commerce based businesses conduct *their* marketing.

The system would seek to provide the following principle benefits...

- Professionalise the marketing approach of smaller independent retailers / businesses

- Complement existing marketing strategies and extend the reach of those businesses who may already engage in modern marketing channels into a number of additional and new types of channel
- Provide a low cost, easy to opt in / opt out solution that allows measurable ROI
- Promote the Locality as a whole and provide good PR and enhanced credibility
- Benefit the Retailers with cooperative membership of the town's 'brand' and 'single business entity'
- Promote Business Collaboration
- Ultimately, increase footfall to the Locality and the member businesses
- Increase Revenues to member businesses

From this core system, the Locality would adopt and use marketing strategies that are common to its competitors (such as out of town shopping malls and larger retailer organisations). Importantly, in terms of the rTown project there are a number of additional features and functionality (see later) using new technologies that would use the CMS as the basis upon which to deliver those features.

Further, the CMS would be built as an **open** platform (through the creation and use of Application Programming Interfaces - API's and Software Development Kits - SDK's) to allow any 3rd party developers the opportunity in the future to develop software, Apps and other solutions that could interface or interact with the data / content of the CMS.

The initial types of content that can be created and how this can be applied can be summarised below...

- Specific Promotions for products or services from member businesses
- Offers / Deals from member businesses including a method by which Vouchers can be issued and redeemed
- The linking of Offers with Car Parking and other locations to incentivise footfall
- General Advertising through multiple channels and including options for Digital Signage (this would not just be restricted to town centre businesses and opens up the opportunity for additional revenue streams through the selling of advertising space associated with the deployment of the solution)
- Wayfinding and other specific business information
- Events relating to the Town as a whole (e.g. market days, one off events, etc) or for individual member businesses (e.g. book signings, sales, etc)
- Public Information (e.g. weather forecasts, traffic & travel alerts, police notifications, public sector information)
- Competitions to incentivise footfall
- Loyalty Rewards for repeat custom / visits - again relating to the Town or for individual member businesses
- Tourist Information, historic information about the Town and content relating to places of interest (including the option for 'treasure trails' that have an interactive means of informing and rewarding footfall)

A Locality wide e-Consumer record supported by NFC

As an integral module of the CMS, there will be a maintained database of registered consumer records. In order to facilitate many of the features of the Solution Mix it will be necessary to be able to capture and maintain consumer records holding basic key data in accordance with Data Protection Act provisions. The ability to provide consumer specific rewards or loyalty rewards based upon repeat custom is reliant upon the ability to identify the consumer and their relevant activity. A key differential for the rTown solution will be the ability to engage with a single consumer across multiple businesses and services offered by the Locality. The role of using technologies that allow a seamless consumer engagement will be key to the success of this element of the Solution Mix.

Consumers will be exposed to a number of marketing and PR touches and encouraged to register in order to benefit from the advantages of the loyalty rewards, promotions and offers available from the Location's member businesses. Registration will be available from a number of different channels. For example, there will be a proprietary App which when downloaded will request the consumer to register their core details and preferences. This registration record will be maintained along with an activity history for that consumer so that marketing messages can be optimised (in accordance with the consumer's preferences and activity history) and the consumer is able to qualify for loyalty rewards based upon repeat custom with member businesses. Consumers will have full access to their own e-Consumer record via a dedicated web portal and via the App and be able to opt in and out of services as they so wish.

From the rTown perspective, having and maintaining this record allows for a dynamic approach to optimised marketing and is a basis towards building a Locality wide loyalty platform based around offering services, and encouraging and measuring footfall.

Importantly this would be a platform upon which it would be possible to link multiple, location wide, services and businesses to an individual consumer. In terms of a seamless consumer engagement, the use of NFC will be the basis upon how this will be achieved. This is a technology commonly used for transport (eg, Oyster Card¹ in London) and payment (Contactless / Wave 'n' Pay) systems. NFC is also the primary technology being used in the fast developing m-commerce channels where the use of a Smartphone as a payment device will become more common place in the coming years.

From a consumer's point of view, the NFC technology 'in their wallet' will take one or two forms. For Smartphone users with an NFC enabled Smartphone, registration of their consumer record will include the option of linking the Universally Unique Identifier (UUID) of the phone to the consumer (done automatically by the App). For non tech savvy Users, or Users who opt not to use their phone, registration will include the option of the issue of an NFC enabled (credit card sized) smart card which is their 'Location wide' loyalty card. Again the UUID of the card will be linked to the consumer record. *Note that there will be procedures in place to handle lost / replacement cards and Smartphones to ensure the consumer's activity records are maintained accurately.* Whenever a consumer engages with a business or service within the Location that offers an rTown NFC enabled interface, they simply need to present their Loyalty Card or Smartphone and their rTown activity will be recorded and maintained against their record and fed back to the CMS.

Therefore building capacity for a Location based consumer record within the CMS system that allows for the integration of additional systems that use NFC which can identify individual consumers will future proof the rTown Solution Mix making it open to additional development.

Initially, the first NFC based integrated deployment for rTown will be the Car Parking services (see 0) around the town. NFC enabled pay and display machines will facilitate individual consumer activity to be recorded and rewarded accordingly. NFC readers are already an integral part of the hardware of the pay and display kiosks from the preferred supplier as they are used as part of the contactless payment capability of the unit. The feasibility of extending this functionality to include the read of an individual consumer's NFC enabled loyalty card or Smartphone has been confirmed by the supplier. This would therefore facilitate a transaction feed into the CMS which identifies which registered consumers have used the car parking services of the Location, and importantly which car parks they use and how much they have spent on car parking fees. This will act as a trigger to loyalty rewards / car parking fee redemptions / voucher issues to individual consumers based upon their repeat custom with the Location (town). This will also provide critical data on the movement of consumers and their use of town centre services which is one of the requirements of the SBRI project.

A secondary NFC deployment will be in the provision of the town centre self service kiosks (see 0). These kiosks will have a multitude of features including digital signage, wayfinding, a platform for promotions, voucher issues and more but importantly will facilitate the ability for consumers to 'log in' using their NFC card / Smartphone and benefit from an optimised / personalised kiosk visit.

Further down the line it will be feasible to add other services to the portfolio offered under the rTown banner where NFC is an integral part of the solution, including for example public transport systems and Point of Sale systems (from Retail AND non retail enterprises). The preferred supplier for the car park management systems and hardware have already developed and deployed systems in Australiaⁱⁱ which link car parking and public transport through the use of a single NFC interface. It is envisaged that this expertise will be exploited as part of the future developments for the rTown solution.

Allowing an activity feed from 3rd party NFC based systems to / from the CMS means that consumers can be rewarded for repeat use of cross town services with a variety of mechanisms including discounts, vouchers, rebates and more. Importantly the activity data provides a measurable basis upon which to analyse the movement of consumers and help to identify which schemes work best to increase footfall and revenue spend.

As stated, the availability of SDK's and API's for interfacing with the CMS will be an integral part of the CMS development roadmap, thereby allowing any 3rd party suppliers to interface with the rTown Promotions and Loyalty platform. Marketed right, this will provide added value to both of the rTown provision and the products / services of the collaborative businesses.

The rTown proprietary App (*ProxiSmart*)

A proprietary Locality based App (developed under the trading name of ProxiSmart - but which can be white labelled for subsequent deployments) is another of the key marketing channels used in the synchronisation of content push from the CMS. Importantly the App will facilitate the capture of registration data from individual consumers and will allow them to configure the type of content they are interested in (e.g. by selecting categories of retailer, named retailers, through the use of keywords, etc). This feeds back to a module of the CMS which is dedicated to managing the optimisation of marketing messages to consumers from retailers.

Media rich content from the CMS will arrive on consumers' Smartphones (who have downloaded the rTown App) based upon the scheduling details of that promotion / campaign. This will include the ability for participating Retailers to create and issue, directly to Smartphone users, e-Vouchers that can be redeemed at the Point of Sale (POS). It is also a feature of the solution to be able to measure this type of activity and for Retailers to see the relevant success of their campaigns via the dashboard of the CMS. Note that the App is one of *many* marketing channels available to member businesses using the CMS.

The availability of generic marketing content from the CMS to consumers via the App is only one of a number of functions that the App will feature. Other functions include business wayfinding and navigation, real time car parking availability and navigation, real time retailer engagement, loyalty program updates, redeemable e-Vouchers, public information, events notifications and more.

Further, a key USP of the integrated App and CMS is in the interaction of the solution with a deployed iBeacon or *Beacon Smart* network. iBeacons are uniquely identifiable Bluetooth (BLE) transmitters that are deployed in a given location and can be individually configured in terms of their transmission range.

There is a wide array of possibilities (not limited to the car parking functionality described in 0) available in the exploitation of this iBeacon technology. This would include the retail context of pushing specific promotions to consumers' SmartPhones when they are within proximity of a given site. It would also extend to tourism applications for Points of Interest (POI) in and around the town. The CMS would be geared to facilitate ALL of these different types of content and be able to differentiate what messages to push to the phone depending upon the handshake between individual consumers' SmartPhones and the individual points of the iBeacon network. The App would be configured to take the Smartphone User along a given journey as part of the App interface in order to maximise the opportunities associated with this real time, proximity based interaction.

Here's how it works...

- iBeacons are deployed (can be indoors or outdoors) at given sites in and around the town and are individually identifiable through their UUID. The details of these Beacons which includes where they are placed and their range are maintained in the CMS
- A consumer running the rTown Locality App (and by this has registered their details which would include preferences, demographics, etc) comes within range of a given iBeacon (*the range for iBeacons can be set individually per Beacon from inches to a maximum of around 70m*)
- The App detects the iBeacon with a Bluetooth Low Energy (BLE) handshake. The App then makes a call to the CMS identifying the UUID of the Beacon and the UUID of the consumer's Smartphone to get content specific to the user based upon the site where the iBeacon is installed
- The consumer receives a notification on their Smartphone with content that has been pushed to them and this enables the consumer to interact / react to that content within the App user interface

Note - Retailers can create 'Smart Messages' via the CMS which include media rich content and specify which Beacons and which types of consumer they wish to 'target' with that message. Targeting can be done via a number of elements including demographics (age, gender, etc), historic engagement (eg, users who have visited the store in the last 30 days, users who have spent a minimum of £50 in the store, users who are new to the store, users who have bought a given product before, etc), the use of keywords matching user preferences (e, "lunch deals", "children", "fashion", etc) and loyalty program levels (eg, Bronze, Silver, Gold customers). A matching consumer who is within range of the selected Beacon(s) will receive the message which, because of targeting, is more relevant to them, and increases revenue conversion rates for this form of marketing

An additional outcome of this handshake is the ability to sense and record proximity activity history for an individual consumer, including entry and exit trigger events, ie, that a consumer is at a given location at a given date / time (which is primarily used in the car parking context - see the examples of how this will be used which are given as 'Scenarios' in 0)

Here are some examples of how this CMS / App / iBeacon network integration could be used in the context of the rTown project...

- A consumer drives into a car park where iBeacons have been sited. The App can log the fact that the consumer is parking their (registered) car in the specific car park and starts their 'e-parking meter'. When the consumer drives out of the car park the parking meter activity is updated. This activity record can be fed to a back end payment processing system, trigger incentives / rewards sent to the

user's phone based upon the car park visit / cost, update the car parking availability for that car park in real time and alert the App user to the cost of their visit

- A consumer walks down the High Street and passes a Retailer who has a Beacon at their site. The App recognises the Retailer's iBeacon transmission and knows that the consumer is within a given distance from the store. It makes a call to the CMS and picks up content relating to offers available from that Retailer and sends a notification to the phone. The consumer sees the offer notification and walks in store to redeem against the offer.

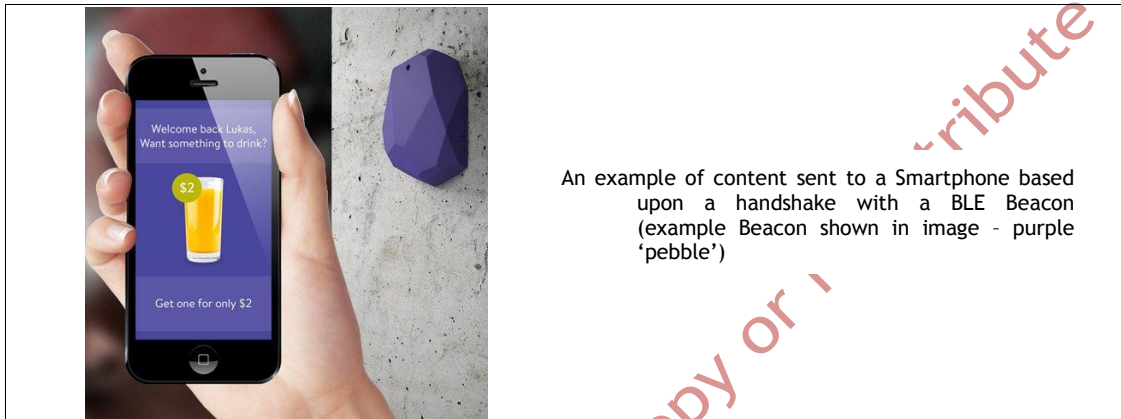


Figure 3 : Beacon interaction

- A tourist is visiting a Place of Interest (POI) in the town where an iBeacon is sited. The App detects the Beacon and sends a range of interactive information about the POI to the phone opening up more possibilities than a traditional site visit
- The Town Team create 'Treasure Trail' based themed events, and challenge participating consumers to interact via the App. As consumers arrive at given sites, they are rewarded in some way which promotes more interactivity with the Locality (whether this is through shopping, or visits or other forms of reward). An example might be a 'pub crawl', or a 'historic POI trail', or an 'antiques dealer trail' or a food festival themed trail visiting different sites (which can go down to individual market stalls)
- Retailers looking to target specific consumers (in real time) can create a message that is sent to all Smartphone users with given 'characteristics' within proximity of their store / location / town centre / locality car parks. For example, it's a hot day, and the local pharmacy sends out a message to all parents (specifically targeted) notifying them of a deal on sun screen products for children.

There are some example pre-requisites to maximise the impact of this functionality...

- As part of the App download, consumers would register some core details in order to benefit from the functionality offered (e.g., their car registration number(s) in order to utilise the 'e-parking meter' and parking on account facilities)
- Consumers would be able to filter notifications upon registration based upon their preferences, e.g., certain types of offer (lunchtime meal deals), specific Retailers, categories of Event (Theatre, Comedy, Festivals), etc
- Marketing of the Locality branded App and related PR is key to ensure maximum take up of the App. This would include marketing to tourists as well as regular visitors, workers and local residents

- Having a quality and diverse range of content that is updated regularly is also key to the habitual use of the App. Content should not be restricted to advertising and offers but should also be of service to the consumer (e.g., ‘come in and get free Wi-Fi’, ‘traffic delays if you’re heading north due to an accident’ as they return to their car, etc)

Linking car parking with the high street (incorporating ProxiPark)

One of the key features of the rTown Solution mix will be the ability to link Car Parking activity with footfall to the High Street. This link will be in the form of measured activity, optimised marketing and direct incentives to consumers to visit and spend monies in the town centre. This will be achieved through the combination of a number of different elements that have the CMS at the fulcrum of the solution.

Car Parking will move away from the traditional method of paying for parking in advance at the point of parking the car. As we have seen from the survey data, this can be restrictive to the time spent in the town centre which in turn has a financial impact on the revenues spent with Locality businesses. Instead, consumers will have a choice of methods, both of which will be based upon the ‘pay on exit’ principal, but which will incorporate a link to incentives and loyalty rewards driven by the CMS.

- Interaction with ‘intelligent’ Car Park Kiosks
- ‘Smart Parking’ via the consumer’s Smartphone

Introducing ‘intelligent’ car park kiosks

Moving away from traditional ‘pay & display’ coin collecting, ticket issuing machines to a more ‘intelligent’ kiosk that integrates with the CMS allows for the RTown Solution to link car parking activity with incentives / rewards associated with shopping on the High Street.

The Kiosks would have the following key features...

- HD touch screens
- Local Processor and Memory (effectively a PC)
- Internet Connectivity (via 4G / 3G wireless antennas)
- CHIP & PIN and / or Contactless Payment Device
- Powered iBeacon Transmitter
- Powered NFC Reader
- Receipt / Voucher Printer

This would facilitate the following range of functionality...

- The ability to synchronise promotions content with the Cloud based CMS
- An intuitive touch screen User Interface that can browse through and select content and have features such as interactive wayfinding, digital signage, and optimised marketing
- Facilitate the ‘sign in’ of registered consumers using the single tap of an NFC enabled Smartphone or Locality branded NFC enabled Loyalty Card
- Facilitate contactless payments and / or ‘on account’ payments for car parking
- Facilitate ‘smart parking’ (i.e. the real time logging in and out of a car park against registered consumers) - even without the consumer having to approach the kiosk (using Beacon Smart enabled phone) - see 0
- Facilitate ‘pay on exit’ and remove the need for pay and display tickets
- Allow consumers to receive parking limit reminders and / or to top up their parking remotely without having to return to their car*
- Provide real time parking availability to consumers*

- Open up the possibility of 'pre-booking' selected car parking spaces*
- Provide real time car park monitoring and activity details
- Link incentives to parking in *specific* car parks (pro active, real time traffic management)
- Collect data about consumers, parking and shopping activity which can be shared across the cooperative members of the Locality
- Push optimised (to the individual consumer) marketing content via the Kiosk and / or Smartphone*
- Open up the possibility of an electronic 'currency exchange' between parking and shopping (i.e., a consumer's car parking activity is paid for by Retailers as part of a voucher redemption system based upon car parking activity based charges - see 0)
- Open up the option of 'statement' based car parking charges on account on line
- Open up the possibility of generating advertising revenues (via digital signage features) for the Locality

*Part of the functionality proposed for the ProxiSmart App

Consideration needs to be given to the following...

- Consumers who are not 'registered' should not be excluded. The largest group that this would include is likely to be tourists. Chip & Pin, Contactless payment via Debit / Credit cards and coin payments would still be a feature of the kiosks. However it would still be possible to push promotional content (eg, offers / deals etc) to the kiosks that would still be made available to non registered consumers and act as a trigger to driving footfall. Equally, proficient marketing of the Locality based 'Loyalty Program' may encourage 'repeat custom' from returning tourists.
- Policing of car parking in terms of monitoring would not be removed altogether. However this too would be enhanced (an App for the Car Park wardens would allow for management by exception - i.e., highlighting individually registered cars by length of stay and allowing snapshot checks of vehicles against the real time car parking database in terms of payments, etc). Enforcement of fines, if adopted would be made more efficient. The addition of Number Plate Recognition hardware and software would add a further layer to the monitoring options, increasing the accuracy of car park usage / real time data and this is being considered as part of the Work Package 3 elements of the rTown project.

'Smart Parking' via the consumer's Smartphone

Section 0 detailed the use of iBeacons integrated with a proprietary App and linked to the CMS. This will be given specific context to the activity of car parking and branded as 'ProxiPark' features / functionality.

Each Car Park will have a network of iBeacons installed (as part of the kiosks and potentially external to the kiosks too) which will facilitate the collection of entry and exit events when handshakes are made with consumers' Smartphones. This will create activity records relating to the car parking of individually identified consumers (subject to their download of the App and registration of their details - including the car registration number(s) of their vehicle(s) and the option of pre-registering a method of payment for the car parking charges) which can be fed to the back office systems of the car parking management company as well as to the CMS. This means that car parking activity is *automatically* recorded and has the following benefits...

For the consumer

- A convenient method of parking and paying for their car

- No need to have the correct change
- No need to go to a kiosk to pay and return to their car to display a ticket
- No need to worry about ticket expiry
- No need to worry about penalty notices
- No overpayments - they will pay for the length of time they spend in the car park and no more
- Real time notifications with regards to their parking (via their Smartphone)
 - They can receive notifications of car park spaces availability along with navigation information to a given car park
 - They will receive advance notification if they are potentially about to exceed car park time limits (if any apply)
 - They will receive notification of the length and cost of their car park visit at the point of exit with options for rebates / discounts based upon their shopping activity
- Optimised Incentives and opportunities to receive rebates on their car parking based upon their shopping activity
 - Receive incentives direct to their phone from Retailers and about products and services they are interested in (optimised marketing) at the point when they park their car / enter the High Street - thereby maximising the opportunity for conversion (the closer to the point of sale when a voucher is issued, the more likely the redemption conversion)
 - Receive vouchers from Retailers based upon qualifying spending activity that can be redeemed against the cost of their car parking
 - Receive discounts on their parking based upon 'car parking' loyalty and / or the pre-registration of payment methods (eg, direct debit)

For the retailer

- An opportunity to target consumers when they are likely to be the most open to incentives - ie when they within the proximity of the shopping point of sale
 - Push incentives direct to the phone of the targeted (optimum) consumer(s) about products and services they are most interested in
 - Tap into the appetite for car parking rebates by linking incentives to parking activity
- An opportunity to convert potential new consumers when they are likely to be the most open to incentives - ie when they within the proximity of the shopping point of sale
 - Push promotions and advertising directly to the car park kiosk hardware to engage with potential consumers (regular / casual / tourists)

For the car park management company

- A real time transaction feed of car parking activity
 - Feeds back office systems that trigger a call for payment
 - Accurate to the minute and second providing car park usage data and real time space availability data
 - Provides data for penalty notice management and enforcement
- Facilitates registration and therefore engagement with consumers
 - Provides opportunities for additional marketing to and PR with individual consumers
 - Provides USPs in terms of the services offered to end consumers - giving enhanced credibility and branding among consumers
 - Provides up selling opportunities
- Opens up additional revenue opportunities with Retailers

- Provides 'advertising space' to Retailers using the 'real estate' of the Car Parks
- Opens up opportunities for pre payments from Retailers as part of the incentives offered to consumers - effectively pre selling car parking space for later retail based redemption improves cash flow
- Creates a currency exchange between the car parks and the high street which can be used to build collaborative relationships with retailer and other business stock

The Partnership with Parkeon

It is an objective to develop the ProxiSmart solutions to integrate with the Parkeon ParkREG back office systems and Strada Touch (or alternative?) car parking kiosk hardware to deliver on the rTown initiative.

Based upon the functionality of the integrated CMS / App / iBeacon network / NFC enabled Car Park Kiosks there are a number of features of the Parkeon Partnership which can cover a range of consumer activities / scenarios.

Beacon-enabled car parks

The Strada Touch (or alternative) car parking kiosks are enabled with iBeacons and / or car parks are Beacon Smart network enabled, allowing our solution to record key parking activity data for registered consumers and intelligently react to this.

Scenario - assuming the consumer downloads the ProxiSmart App and registers their personal details, including their vehicle(s) and optional pre-payment details - in the same way as Whoosh / Yellowbrick (Parkeon proprietary Apps).

- Consumers park their car within the proximity of a Beacon deployed at a given car park / space triggering an 'Entry' event
- The ProxiSmart / ProxiPark App handshakes with the Beacon and sends the ID of the Beacon and the registered Consumer to the CMS. The CMS processes this data and carries out the following...
 - records the entry of the consumer at the car park
 - sends a confirmation message to the consumers phone to signify their parking visit has begun with options in terms of post parking 'on the fly' payment if pre-payment has not been registered / selected
 - sends an 'incentive' to the consumer based upon spending monies in the locality (town) which has been optimised based upon their preferences / activity history / loyalty record and available incentives from member retailers
- The consumer drives out of the car park / away from the space triggering an 'Exit' event which the App sends back to the CMS
- The CMS processes this data and carries out the following...
 - calculates the length of stay and cost of the car parking visit and passes this data to the ParkREG back office systems to trigger a charge transaction
 - sends a confirmation message to the consumers phone showing the length and cost of parking
 - sends an 'incentive' to the consumer which allows them to reclaim the cost of their parking via additional spending in the locality (town) on a subsequent visit and which has been optimised based upon their preferences / activity history / loyalty record and available qualifying incentives from member retailers or alternatively

- adds a loyalty reward to the consumers town loyalty account which can be saved and redeemed at participating locality (town) retailers / businesses / service providers

CMS-enabled car parks

The Strada Touch (or alternative) car parking kiosk software is added as another marketing channel to the CMS in terms of content push. This opens up advertising opportunities and direct revenue opportunities to Parkeon from the LocalitySmart CMS. This would work in the same way as the KioskSmart software (see 0).

Scenario - a consumer who has not opted to use the ProxiSmart App and is effectively a walk up customer (e.g. casual users / tourists)

- They park their car at a given car park / space and go to use the kiosk to pre-pay or log their car details via the touch screen
- The touch screen runs scheduled advertising signage / messages during idle time using the CMS content and scheduling data push which is interrupted by a consumer screen touch event
- After the consumer performs their car parking transaction on the touch screen the software presents an 'incentive' (or a choice of incentives via browsing functionality) from participating member retailers. The user could opt to select one of the incentives which results in a coupon print at the kiosk. Note that these would be generic incentives not necessarily optimised to the individual consumer (useful for tourists for example)
- Further, with the loyalty platform in place, the consumer could be prompted after their car parking transaction to 'present' (swipe) their NFC enabled phone or loyalty card over the NFC reader on the kiosk. This would result in a call to the CMS (in the same way as the Beacon based App call) to pull optimised content and loyalty data relevant to the individual consumer.

CMS-linked car park systems

There is an additional methodology being considered which would not require direct integration with Parkeon front end software or kiosk hardware but which would require interfacing and management from Parkeon's back office systems.

The CMS facilitates vouchers to be issued directly to consumers via a number of marketing channels (outside of the Parkeon kiosks). These vouchers could include 'parking rebates' as the form of incentive given. A data feed of redeemed vouchers is part of the CMS functionality and would be the qualifying trigger for these types of incentive. The idea is that this would create a 'credit' against the individual consumers' account with Parkeon and this is paid for by the Retailer.

Scenario - a consumer receives a voucher from a Retailer (for example 'spend £50 and get £5 off your car parking fees'). The consumer visits the Retailer, qualifies for the offer and the Retailer records the redemption of the voucher (which would be imported to our CMS via an ePOS data feed, or directly via a Retailer POS App or via the interface of our CMS system itself)

- The data record in the CMS would identify the consumer, the Retailer and the value of the rebate which would also be fed to Parkeon's back office systems
- Parkeon could then raise an invoice / collect a direct debit from the Retailer based upon say a monthly activity summary for all qualifying consumers
- The consumer, when they next park their car, triggers an entry event via their ProxiSmart App (see above). Note that this type of voucher would only be

available to registered App users. The CMS processes this and carries out the following...

- Checks the consumer's record for any car parking credits (gleaned from the voucher redemptions data feed) and as part of the confirmation message sent back to the consumer informs them of the current level of credit they have
- When the consumer triggers the Exit event, the CMS...
 - Calculates the length of stay and cost of the car parking visit, deducts any credits available and passes any outstanding charge (if any) to the ParkREG back office systems to trigger a charge transaction
 - Reduces the consumers credit availability by the cost of the car parking transaction or the available credit whichever is smaller
 - sends a confirmation message to the consumers phone showing the length and cost of parking less any credits applied

Note that Parkeon would collect any credits up front from the Retailers and future transaction charges are only reduced at the point when the consumer next uses the parking facility - which is a better cash flow scenario for Parkeon!

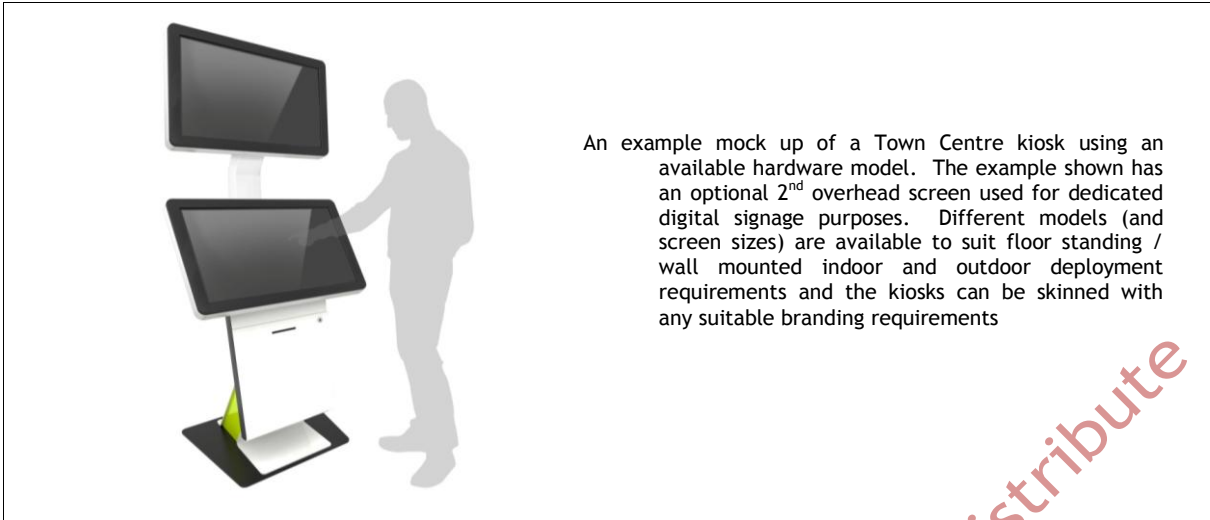
Initial meetings and correspondence have taken place with representatives from Parkeon to discuss the technical aspects of the project and the opportunities available. Parkeon have expressed a keen interest to develop the project and discussions will continue into 2015. No technical barriers have been raised that would negate any of the functionality discussed and Parkeon have expressed a commitment in terms of making resources available to continue the research and development that has been undertaken to date.

Deployment of town centre self service kiosks (KioskSmart)

One of the marketing channels available to member businesses would be 'intelligent' kiosks used in and around the town. These self service kiosks would have a range of functions and act as a physical customer attraction and marketing medium for the rTown solution. The kiosks also extend the services available to Smartphone users to non tech savvy consumers. Further, they would also act as a significant marketing channel for content specifically linked to the role of the Town Team hub - particularly in the context of public information and event marketing.

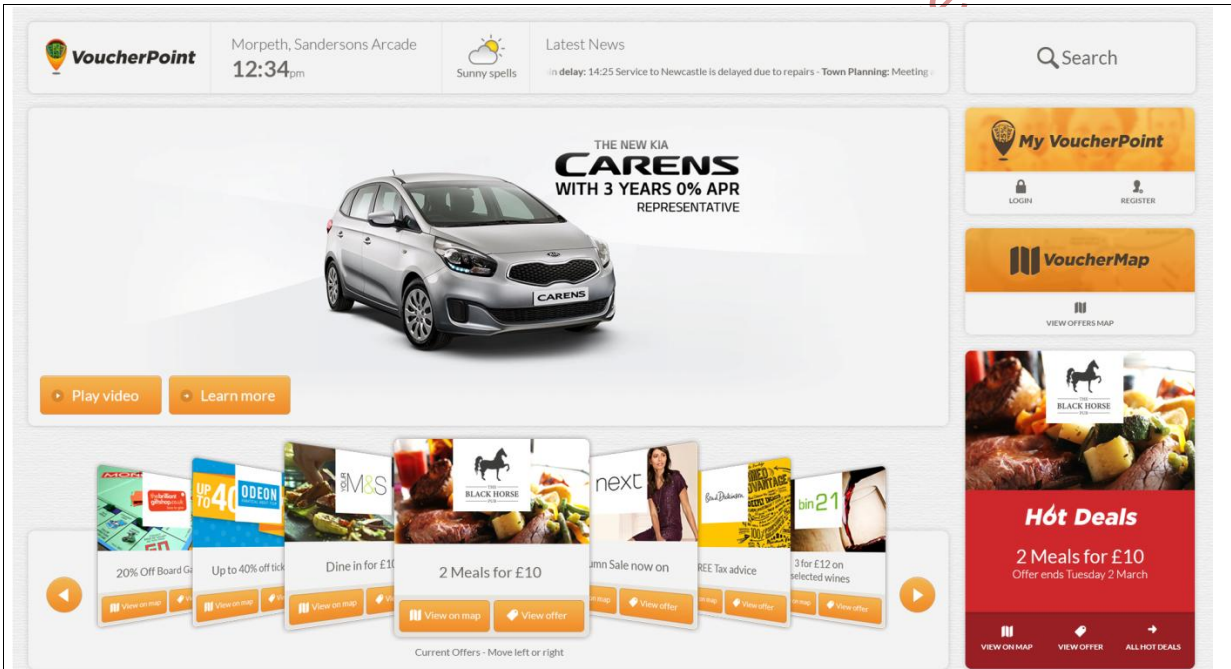
The Kiosks would have the following key features...

- HD touch screens
- Local Processor and Memory (effectively a PC)
- Internet Connectivity (via 4G / 3G wireless antennas)
- Powered iBeacon Transmitter
- Powered NFC Reader
- Receipt / Voucher Printer
- Optional CHIP & PIN and / or Contactless Payment Device



An example mock up of a Town Centre kiosk using an available hardware model. The example shown has an optional 2nd overhead screen used for dedicated digital signage purposes. Different models (and screen sizes) are available to suit floor standing / wall mounted indoor and outdoor deployment requirements and the kiosks can be skinned with any suitable branding requirements

Figure 4 : Town Centre kiosk



The Home Page UI design of the Kiosk Software showing how different zones of the large touch screen UI can be used for features such as revenue generating advertising, voucher / promotions browsing and selection, wayfinding, public information and more.

Note that branding of the Kiosk UI (and the skinning of the physical kiosk itself) would be 'white labelled' allowing use of the rTown branding or specific branding relating to each Location. The example shown uses a generic 'VoucherPoint' branding

Figure 5 : Town Centre kiosk user interface

The combination of hardware and peripherals would facilitate the following range of functionality...

- The ability to synchronise advertising and promotions content with the Cloud based CMS
- An intuitive touch screen User Interface that can browse through and select content and have features such as interactive wayfinding, digital signage, and optimised marketing
- A Voucher issue point for promotions and offers from member Retailers and other businesses within the Locality

- Facilitate the ‘sign in’ of registered consumers using the single tap of an NFC enabled Smartphone or Locality branded NFC enabled Loyalty Card
- Collect data about consumers and shopping activity which can be shared across the cooperative members of the Locality
- Push optimised (to the individual consumer) marketing content via the Kiosk
- Open up the possibility of generating advertising revenues (via digital signage features) for the Locality

The proximity of the kiosks to the Point of Sale (POS) higher would realise higher redemption rates than traditional voucher issue methods, thereby increasing the ROI for participating Retailers and other businesses.

Digital Signage options open up the feasibility of generating advertising revenue from businesses not necessarily linked directly to the Location. However, ‘selling advertising space’ is the task of a dedicated sales and marketing resource which is a recommended feature of the Business Model (see section 3).

rTown solution mix overview and summary of progress to date

The elements described in sections 0 through to 0 above will integrate to form the basis of the rTown Solution Mix which is summarised by the following diagram...

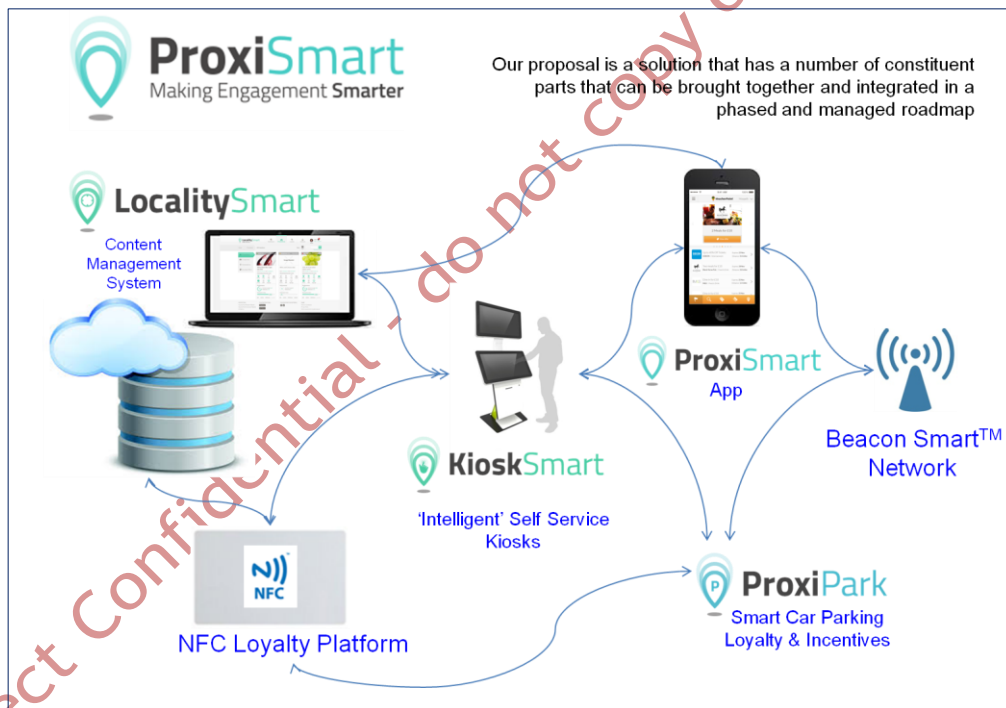


Figure 6: Proxismart elements

Development on a number of the elements has begun as part of the feasibility work of Phase I. Details of progress to date is shown in the table on the next page. The LocalitySmart CMS which is the heart of the system is at a more prominent stage of development than the other elements.

The following table summarises the platform / architecture selected for the CMS and it should be noted that these are industry standard elements that will facilitate full integration with 3rd party systems at a given point in the development roadmap. It should also be noted that the elements chosen allow for the growth of the system across multiple Locations and the relevant resources will be boosted according to that growth.

Development	
Development Platform	Visual Studio 2012
Development Technology	ASP.NET
Development Language	VB.NET
Requirement	
.NET Framework	.NET 4.0
SQL Server	SQL Server 2008 R2 or above. SQL Server Express version can be used.
Server	Windows 2008 R2 or above running IIS 7 or above. Moderate spec server - Dual Processor, 8GB RAM Hard disk - 1 GB to install. Adequate space to hold the uploaded media files
Internet Connectivity	Static IP with adequate bandwidth

The following table summarises the functional development progress to date and the Phase 2 requirements for each of the elements of the Solution Mix.

Main Element	Sub Element	Phase I Progress	Phase 2 Requirements
LocalitySmart CMS	Application Design	Core Elements completed	User Interface design for non-core peripheral functionality
	Initial Application Build and Deployment in a hosted environment	Completed & Tested	Bench testing for multi Location rollout Development & testing of non-core peripheral functionality
	System Administrator functionality	Core elements such as Location Settings management completed & tested	Additional functionality associated with control and monitoring of Kiosk & Digital Signage, User Accounts control, 3 rd Party Data Exchange and Financial Payments
	Retailer Registration and User Account set up	Completed & Tested	Additional functionality associated with Financial Payments facilitation and control
	Retailer User Interface	Design and initial build complete	Additional Dashboard elements and Account Control functionality
	Creation & of Promotional Content	Completed & Tested including verification of media rich (text, images & video) content push to Social Media and App marketing channels	Additional push mechanics to remaining marketing channels including building channel specific content templates to be made available to Retailer User Accounts
	Creation & of Smart Messaging	Core elements completed & tested	Additional bench testing required for user and proximity (beacons) based combinations
	Loyalty Program Content and Management	Core Design partially complete	Additional design, development and testing of elements specific to Loyalty Program management
	Consumer User Interface	Core Design partially complete	Additional design, development and testing of Consumer based portal

Main Element	Sub Element	Phase I Progress	Phase 2 Requirements
	Kiosk Interface Data	Core Elements identified	Development and testing of two way data feed between CMS & Kiosks (requires kiosk hardware purchase funding)
	App Interface Data	Core Elements identified	Development and testing of data push from App to CMS of Consumer transactional activity data
	Consumer Activity Intelligence Module	Core Elements identified	Development and testing of module that will enhance smart message targeting based upon consumer account historic transactional activity data
	3 rd Party API Development	Core Elements identified	Development, documentation and testing of APIs
ProxiSmart App	App Design	Core Elements completed	Additional elements associated with ProxiPark Car Parking and ProxiWise POI interactive User Journeys
	Initial App Build & Deployment	Completed & Tested (Android only)	Development and testing of iOS version
ProxiSmart App (cont.)	App interaction with iBeacons to drive specific content to the Smartphone	Completed & Tested (Android only)	Development and testing of iOS version
	ProxiPark Functionality	Core Elements identified	Development & testing of User Journeys and the two way activity based data feed to the CMS
	ProxiWise Functionality	Core Elements identified	Development & testing of User Journeys and the two way activity based data feed to the CMS
	Parkeon Interface	Core Elements identified	Development & testing in conjunction with Parkeon development resources
	3 rd Party API Development	Core Elements identified	Development, documentation and testing of APIs
KioskSmart	Kiosk Software Design	Core Elements completed	
	Initial Application Build & Deployment	Core Elements identified	Development and testing of application (requires kiosk hardware purchase funding)
	Kiosk Interface Data	Core Elements identified	Development and testing of two way data feed between CMS & Kiosks
	Parkeon Interface	Core Elements identified	Development & testing in conjunction with Parkeon development resources to ensure KioskSmart functionality works on Parkeon hardware
	3 rd Party API Development	Core Elements identified	Development, documentation and testing of APIs

Commercial Business Model

Context of developing the commercial business model

'One size does not fit all'

The constituent elements of the rTown Solution Mix can feasibly be deployed independently of each other. For example the LocalitySmart CMS is a single or multiple Location, multi Retailer, marketing tool that can push promotional content to channels other than the Kiosk (KioskSmart) or 'Beacon Smart' enabled App (ProxiSmart). Equally the KioskSmart software and ProxiSmart App could potentially source content from alternative Content Management Systems other than the LocalitySmart CMS. Each element is being independently developed as an optionally 'white labelled' open platform application with API availability to 3rd party developers. This is a deliberate tactic to allow for flexible marketability of these products as an integrated whole system or as individual elements. The reasoning behind this is because the target market (High Streets/ Market Towns / BIDs / Shopping Malls / Large National Retailers / Large Department Stores) for the commercialisation opportunities associated with this project beyond Phase 2 are extremely varied in their needs. Therefore the mantra of 'one size does not fit all' applies. Some Locations may not require / do not suit the deployment of self service kiosks. Some Locations do not have issues with restrictive car parking costs or availability. Some Locations will not have a consumer catchment that lends itself to a real time Smartphone based engagement using a Beacon Smart network, and so on. The ability to scope and configure different elements of the Solution Mix will be key to their commercial success.

Opportunity for different revenue streams

Potentially, there is a number of different revenue streams associated with the solution mix that could be adopted / developed as part of the commercialisation strategy. This has the benefit of bringing flexibility and management of risk to any negotiations with potential clients of the rTown Solution Mix. Not all types of revenue stream may be opted for / deployed and it would be possible to adopt different revenue streams for different clients. Further, it would be possible to have a matrix of different fees applicable to a single client / location deployment. These revenue streams include but are not limited to...

- Deployment / Installation Fees - to cover the costs of / contribute to the returns from work associated with implementing the solution, e.g.,
 - Implementation Consultancy / Project Management
 - Location Scoping
 - Beacon Smart network Installation
 - Hardware Costs
 - Kiosk Installation
 - Marketing and PR Services
 - System Training (where Fully Managed services are not opted for)
- Maintenance / Service Contract Fees - to cover the costs of / contribute to the returns from work associated with the day to day running of the solution, eg,
 - System maintenance / upgrades
 - User support
 - Hosting services
 - Hardware monitoring and maintenance
 - Ongoing Marketing and PR Services

- License Fees - where the system is purchased / used as a tool directly by Clients or by 3rd parties (such as Parkeon) but without any form of installation, maintenance or management options
- Subscription Fees from participating member businesses - to have access to the use of and benefits from the system
- Transactional Fees from participating member businesses - as an alternative to a period based subscription fee, member businesses could pay per promotion / campaign / message push allowing the benefit and flexibility of being able to opt in / opt out in accordance with usage and budget
- Download Fees from Consumer App downloads - the benefits to consumers are both measurable and perceived (save money by access to deals / discounts on shopping, reductions in car parking costs, access to up to the minute deals, real time engagement with preferred member businesses, meaningful targeted promotions, 'shop local' membership feel, loyalty rewards for repeat custom and more) and therefore a small fee for the App download maybe justified
- Advertising Revenues from non Locality businesses - exploiting the modern marketing channels that allow for media rich content, the placement of this in a central locality with measurable footfall / ROI and with the added benefit of proximity based optimised targeting, it is possible to sell 'advertising space' to create an additional contribution to the returns from the system. Note that this requires a given dedicated sales and marketing resource to actively sell such space.

Exploiting economies of scale

A number of resources and costs associated with the deployment and ongoing support of the solution can be provided centrally covering multiple Locations and would therefore enjoy economies of scale. Helpdesk, Marketing, PR, Sales, Engineering and Support resources would fall into this category. This, combined with the multi business nature of a given Location (for example in Ross on Wye there are over 200 independent businesses that make up the Location 'membership' and who provide the market opportunity for the system), lends itself to a business model which can charge relatively small fees to individual participants. This would add to the attractiveness of the solution, provide a positive, measured return on investment and maximise its opportunity for additional take up.

For example, employing a sales executive to drive take up from retailers and sell advertising space on the system. Let's say that the executive was paid £25k per year plus on costs (15%) equating to an annual cost of £28,750. Assuming the context of the longer term plan of rolling out the solution to multiple locations, and the Sales Executive works one day per week per Location - this would enable that individual to support 5 Locations. This would equate to a cost of £5,750 per Location per year or £15.75 per day. If each Location had an average take up of 75 businesses using the system, then this resource would cost each business 21p per day - an example of how the economies of scale would work.

There would be other costs involved of course - not just a single Sales Executive. However, initial modelling that has been carried out, and using a subscription fee based model, would put charges to individual retailers for the deployment of this system (excluding the costs of the actual offers / discounts they chose to promote) at between £1 and £3 per day*. The question to those businesses would be "would the system bring in revenues in excess of £3 per day?" Assuming the system is successful in attracting new and repeat customers to the business, each business should be able to assess the value of that

custom in terms of additional spend and whether this exceeds the charges being levied to use the system.

**there are a large number of factors to be taken into account, such as the number of retailers in a given location, number of kiosks deployed, allocated sales and marketing resources per location and so on.*

Phase 2 would involve additional work on this kind of modelling to arrive at attractive, beneficial and competitive levies for participating clients

Opportunities for rebates to a Location

The Business Model will be developed to affect a return to the rTown CIC or equivalent organisational body as the solution is rolled out to multiple Location deployments. However, consideration should also be given as to whether a portion of revenues (over a given contribution threshold) should be paid to the 'Location Landlord' as a rebate on any deployment / implementation / maintenance fees being levied. The idea is that a successful deployment would lead to increased revenues from additional take up from locality member businesses. If the fees charged are based upon subscriptions and / or transaction fees then there comes a point where contributions over and above a given point (set to achieve target returns) could be split to facilitate such rebates. The beneficiaries of this (in the case of Market Towns / High Streets) would be the 'Town Team' / Stewardship Authority that made the initial investment to deploy the solution. This could result in a much reduced long term cost which could even be cost neutral or create a surplus depending upon the success of the implementation.

This would be a highly marketable selling point to the system both to potential Locations AND member businesses - knowing that a portion of their fees was being ploughed back into the locality to be used for additional services.

The business model: Phase 2

Additional work is required as part of Phase 2 of the project to research and develop an appropriate Business Model that would form a major part of the commercialisation of the system. This would include detailed cost / benefits modelling and investigating price tipping points in terms of prospective Retailer and Location based Client take up.

As part of the Phase 2 deployment of the system in a live sense at Ross on Wye, resources will be needed to drive the successful take up of the system among potential member businesses. This 'Marketing and PR' work has been allocated a budget as part of the costs submitted. There will also be elements of other support resources required such as helpdesk, engineering support, hosting etc. Monitoring these costs and the actual levels of work required from these resources as part of the pilot deployment at Ross on Wye of the rTown project will contribute significantly to the modelling and development of the Business Model.

A final cost / fees matrix that would facilitate a flexible approach to different types of target clients across different types of Locations and one that would maximise the opportunities associated with the solution would be a clear objective of the Phase 2 work undertaken.

Annex 1 Survey Data Tables & Analysis

Table 1: Consumers - Link between incentives and footfall

Survey Question No	Question	Response	Count	%age
18	Do you think financial or other incentives would persuade you to make more use of Ross-on-Wye town centre shops and facilities?	Yes	119	52%
		No	109	48%

Table 2: Consumers - Link between incentives and footfall -incentive preferences

Survey Question No	Question	Response	Count	%age
19	If yes to Q18, please chose no more than the four (4) most attractive of these incentives:	Parking Rebate	67	63%
		Bus-fare Rebate	9	8%
		Special bus fares (e.g. family tickets)	10	9%
		Product / Brand Promotion	17	16%
		Sale Percentage Discount	31	29%
		Quantity Discount	16	15%
		Buy 'x', get 'y' free	23	22%
		Price Pack Deal (e.g. get 25% extra free)	17	16%
		Free Samples	27	25%
		Voucher / Coupon	54	51%
		Product Premiums / Prizes	8	8%
		Free Additional or Related Service	18	17%
		Other incentive (please specify)	16	15%
TOTAL RESPONSES WHO EXPRESSED A PREFERENCE			106	

Table 3: Consumers - Average Spend per Town Centre Visit

Survey Question No	Question				
12	Roughly how much money did you spend in Ross-on-Wye town centre on your most recent visit?	No of Consumers	Spend Midpoint: £	Visit Spend: £	Average Spend per Visit: £
Responses	Nothing	31	0	0	
	£0.01-£5.00	30	2.50	75.00	
	£5.01-£10.00	35	7.50	262.50	
	£10.01-£20.00	64	15.00	960.00	
	£20.01-£50.00	51	35.00	1,785.00	
	More than £50.00	23	50.00	1,150.00	
		234		4,232.50	18.09

Table 4: Consumers - Town Centre Period based Visit Frequency & Average Spends

Survey Question No	Question							
4	How often do you visit Ross-on-Wye town centre?	No of Consumers	Nominalised Visits per Month	Calculated Total Visits	Average Visits per Month per Consumer	Average Spend per Month per Consumer (av. spend per visit (table 3) X av. visits per month)	Average Visits per Week per Consumer	Average Spend per Week per Consumer (av. spend per visit (table 3) X av. visits per week)
Responses	Daily	71	30.44	2,161.06				
	More than once a week	108	6.50	702.00				
	Weekly	34	4.33	147.33				
	Fortnightly	5	2.17	10.83				
	More than once a Month	5	1.50	7.50				
	Once a Month or less	22	0.67	14.67				
TOTALS		245		3,043.40	12.42	£ 224.68	2.87	£ 51.85
TOTALS EXCLUDING DAILY VISITORS		174		882.33	5.07	£ 91.72	1.17	£ 21.17

Table 5: Consumers - Town Centre Visit restricted by Parking

Survey Question No	Question	Count	%age
14	Was the time you spent in Ross-on-Wye town centre on your most recent visit limited?		
Responses	No	123	46%
	Yes, by parking time limit	56	21%
	Yes, by parking charges	16	6%
	Yes, by bus times	8	3%
	Yes, by something else (please specify)	62	23%
		265	

Table 6: Consumers - Average Length of Stay

Survey Question No	Question	No of Consumers	Length of Stay Midpoint	Total Length of Stay (Hours)	Average Length of Stay (Hours)	
13	How long did you stay in Ross-on-Wye town centre on your most recent visit?					
	Less than an hour	91	0.5	45.5		
	1-2 hours	84	1.5	126		
	2-4 hours	40	3	120		
	4-6 hours	7	5	35		
	All day	12	8	96		
	Other (please specify)	0	0	0		
	TOTALS	234		422.5	1.81	1 hrs 48 mins
	TOTALS EXCLUDING ALL DAY PARKING	222		326.5	1.47	1 hrs 28 mins

Table 7: Extracted Analysis

Extracted Analysis		
	Survey representation of local population	2.90%
From Q18	Number of consumers who would visit the town centre more often if incentivised to do so	119
	Extrapolated number of consumers	4,103
From Q4	Proportion of consumers who do NOT visit daily	71%
	Proportion of extrapolated number of consumers who do not visit daily - the "Incentivised Target Consumer Group"	2,914
From Q12	Average spend per visit	£18.09
	Value of 1 additional visit from the Incentivised Target Consumer Group per month	£52,712
From Q4	The average number of visits per month per consumer	5.07
	Total number of visits per month by the Incentivised Target Consumer Group	14,778
	1% increase in number of visits	147.78
	Value of percentage point increase in visits from the Incentivised Target Consumer Group per month	£2,673
From Q14	The proportion of visits limited by car parking restrictions	27%
	Extrapolated number of visits per month	104,945
	Number of visits limited by car parking restrictions per month	28,513
	Value of additional 5 mins in town per visit	£1.02
	Extrapolated value of additional 5 mins per visit per month	£29,222

Annex 2 Costs

ALL COSTS ARE SHOWN EXCLUSIVE OF VAT

Tariffs				
Category	Element	Unit	Rate	Notes
Software Development	Software Standard Engineer	per day	£110.00	Software Development Resources rates are EXTREMELY competitive as we use offshore resources
	Software Premium Engineer	per day	£130.00	Premium Software Engineers have specialist expertise and attract a higher rate
	Software Development Team Leader	per day	£150.00	Team Leaders have coding and Project Management responsibility and attract a higher rate
	Executive Project Management	per day	£320.00	Company Executive Software Development Lead - competitive day rate for Project Management
	UI Designer	per day	£280.00	UK based Software User Interface Designer - competitive day rate for this resource
System Implementation	Installation Engineer	per day	£160.00	Installation Engineers perform location scoping, hardware installation (kiosks & beacons) and associated maintenance tasks
	Consultant	per day	£240.00	Implementation Consultants cover implementations support, training and related activities and are available to work on site
	Helpdesk Technician	per day	£120.00	Helpdesk Technicians provide remote support for installation activities. Activities relating to ongoing support are included in the Annual Maintenance agreements
Hardware	Beacons	per unit	£25.00	Prices are likely to reduce as greater levels of competition enter this field
	Kiosks	per unit	£5,495.00	Kiosks will vary in price from around £3,000 up to £7,000 depending upon screen size, peripherals, wall / floor mounted options, indoor / outdoor deployment options and 2nd screen options. The price shown is for a 'standard' model of choice with peripherals identified to facilitate the functionality of the core specification, and any 3rd party software
	Broadband Contract	per kiosk per month	£50.00	Each kiosk will need to be connected to the internet and where this involves 3G / 4G there will be contract costs. Price shown is an estimate
Consumables	Printed Vouchers	each	£0.03312	This is the stationery loaded into the Kiosks for Voucher Printing. Vouchers will be a high quality ticket format
	NFC Enabled Loyalty Cards	each	£0.95	These are the NFC Loyalty Cards distributed to consumers. Cards will be branded accordingly

Tariffs				
Category	Element	Unit	Rate	Notes
Helpdesk	Annual Maintenance	per software	12.50%	An annual maintenance agreement covered by an SLA provides for Helpdesk Services and Software Maintenance & Upgrades (excluding additional functional development) and is calculated at 15% of the development costs of the software
	Hosting Level 1	per month	£75.00	Hosting is a variable cost that can increase or decrease depending upon the demand placed on the hosting environment. Costs shown are a base estimate. Hosting is covered by an SLA which will set a price 6 monthly in advance and which will be reviewed on a half yearly basis. Level 1 reflects a low load requirement
	Hosting Level 2	per month	£395.00	Hosting is a variable cost that can increase or decrease depending upon the demand placed on the hosting environment. Costs shown are a base estimate. Hosting is covered by an SLA which will set a price 6 monthly in advance and which will be reviewed on a half yearly basis. Level 2 reflects a medium load requirement
	Hosting Level 3	per month	£995.00	Hosting is a variable cost that can increase or decrease depending upon the demand placed on the hosting environment. Costs shown are a base estimate. Hosting is covered by an SLA which will set a price 6 monthly in advance and which will be reviewed on a half yearly basis. Level 2 reflects a high load requirement
	Bespoke Support Remote	per hour (or part thereof)	£40.00	Bespoke Support is for any activities not covered by the SLA, for example, where support resources have been called upon to fix issues relating to Client error. All charges will be quoted for and agreed before any work is undertaken
Travel Subsistence	Accommodation	per night	£95.00	Will be charged at cost. Estimate provision is shown
	Subsistence	per night	£15.00	
	Mileage	per mile	£0.55	Calculated based upon return journey to NE1 1JF
	International Air Fares	per trip	£600.00	Will be charged at cost. Estimate provision is shown

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Phase 1 Development Costs							
Work Group	Software System	Element	Resource	Units	Rate	Cost	
Development: Phase 1 Sunk Costs	LocalitySmart CMS	Application Design	UI Designer	7.75	£280.00	£2,170.00	
		Initial Application Build and Deployment in a hosted environment	Software Engineer Standard	286.65	£110.00	£31,531.50	
		System Administrator functionality	Software Engineer Standard	22.05	£110.00	£2,425.50	
		Retailer Registration and User Account set up	Software Engineer Standard	44.10	£110.00	£4,851.00	
		Retailer User Interface	Software Engineer Standard	22.05	£110.00	£2,425.50	
		Creation & Scheduling of Promotional Content	Software Engineer Standard	44.10	£110.00	£4,851.00	
		Creation & Scheduling of Smart Messaging	Software Engineer Standard	22.05	£110.00	£2,425.50	
		System Design / Project Management	Executive Management Project	52.00	£320.00	£16,640.00	
		<i>SUBTOTALS</i>			500.75		£67,320.00
	ProxiSmart App	App Design	UI Designer	2.00	£280.00	£560.00	
		Initial App Build & Deployment	Software Engineer Premium	15.00	£130.00	£1,950.00	
		App interaction with iBeacons to drive specific content to the Smartphone	Software Engineer Premium	5.00	£130.00	£650.00	
		System Design / Project Management	Executive Management Project	10.00	£320.00	£3,200.00	
		<i>SUBTOTALS</i>			32		£6,360.00
	KioskSmart	Kiosk Software Design	UI Designer	2.00	£280.00	£560.00	
		System Design / Project Management	Executive Management Project	4.00	£320.00	£1,280.00	
		<i>SUBTOTALS</i>			6		£1,840.00
	Total Phase 1 sunk development costs						£75,520.00

Phase 2 Development Costs							
Work Group	Software System	Element	Resource	Units	Rate	Cost	
Development: Phase 2	LocalitySmart CMS	Application Design	UI Designer	5.00	£280.00	£1,400.00	
		Initial Application Build and Deployment in a hosted environment	Software Engineer Standard	79.00	£110.00	£8,690.00	
		System Administrator functionality	Software Engineer Standard	60.00	£110.00	£6,600.00	
		Retailer Registration and User Account set up	Software Engineer Standard	30.00	£110.00	£3,300.00	
		Retailer User Interface	Software Engineer Standard	40.00	£110.00	£4,400.00	
		Creation & Scheduling of Promotional Content	Software Engineer Standard	120.00	£110.00	£13,200.00	
		Creation & Scheduling of Smart Messaging	Software Engineer Standard	15.00	£110.00	£1,650.00	
		Loyalty Program Content and Management	Software Engineer Standard	60.00	£110.00	£6,600.00	
		Consumer User Interface	Software Engineer Standard	60.00	£110.00	£6,600.00	
		Kiosk Data Interface	Software Engineer Standard	15.00	£110.00	£1,650.00	
		App Data Interface	Software Engineer Standard	15.00	£110.00	£1,650.00	
		Consumer Activity Intelligence Module	Software Engineer Standard	85.00	£110.00	£9,350.00	
		3 rd Party API Development	Software Engineer Standard	10.00	£110.00	£1,100.00	
		System Design / Project Management	Executive Management Project	55.00	£320.00	£17,600.00	
	SUBTOTALS				649		£83,790.00
		ProxiSmart App	App Design	UI Designer	5.00	£280.00	£1,400.00
			Initial App Build & Deployment	Software Engineer Premium	40.00	£130.00	£5,200.00
			App interaction with iBeacons to drive specific content to the Smartphone	Software Engineer Premium	120.00	£130.00	£15,600.00
			ProxiPark Functionality	Software Engineer Premium	100.00	£130.00	£13,000.00
			ProxiWise Functionality	Software Engineer Premium	40.00	£130.00	£5,200.00
	Parkeon Interface		Software Engineer Premium	20.00	£130.00	£2,600.00	
	3 rd Party API Development		Software Engineer Premium	20.00	£130.00	£2,600.00	
	System Design / Project Management		Executive Management Project	18.00	£320.00	£5,760.00	
	SUBTOTALS			363		£51,360.00	

Phase 2 Development Costs							
Work Group	Software System	Element	Resource	Units	Rate	Cost	
Development: Phase 2 (cont.)	KioskSmart	Kiosk Software Design	UI Designer	3.00	£280.00	£840.00	
		Initial Application Build & Deployment	Software Engineer Standard	130.00	£110.00	£14,300.00	
		Kiosk Data Interface	Software Engineer Standard	40.00	£110.00	£4,400.00	
		Parkeon Interface	Software Engineer Standard	20.00	£110.00	£2,200.00	
		3 rd Party API Development	Software Engineer Standard	20.00	£110.00	£2,200.00	
		System Design / Project Management	Executive Management Project	17.00	£320.00	£5,440.00	
		SUBTOTALS			956		£29,380.00
		Hardware	Kiosks		2.00	£5,495.00	£10,990.00
			Beacons		20.00	£25.00	£500.00
			SUBTOTALS				£11,490.00
		Offshore Project Management Travel Costs	International Air Fares		2.00	£600.00	£1,200.00
			Accommodation		10.00	£95.00	£950.00
			Subsistence		10.00	£15.00	£150.00
			SUBTOTALS			22	£2,300.00
	Total Phase 2 development costs						£178,320.00
	An approximate 10% (of development costs) contingency (£18,500) should be made for any 'development creep' associated with the project. This is where the specification requirements are changed during the development lifecycle and these changes are incorporated into the software subject to approval from the rTown management team.						

One off, implementation, costs						
Work Group	Element	Resource	Units	Rate	Cost	
Implementation - one off costs	System Installation and Hosting Configuration	Helpdesk Technician	3.00	£120.00	£360.00	
	Site based implementation support and training	Consultant	14.00	£240.00	£3,360.00	
		Accommodation	15.00	£95.00	£1,425.00	
		Subsistence	15.00	£15.00	£225.00	
		Mileage	2700.00	£0.55	£1,485.00	
	Site based scoping and hardware installation	Installation Engineer	8.00	£160.00	£1,280.00	
		Accommodation	4.00	£95.00	£380.00	
		Subsistence	4.00	£15.00	£60.00	
		Mileage	2160.00	£0.55	£1,188.00	
	Hardware	Kiosks	3.00	£5,495.00	£16,485.00	
		Beacons	200.00	£25.00	£5,000.00	
	Consumables	Printed Vouchers	10000.00	£0.03	£331.20	
		NFC Enabled Loyalty Cards	5000.00	£0.95	£4,750.00	
	Total one off, implementation, costs					£36,329.20

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Total costs		
Work Group	Element	Cost
Phase 1	Total sunk development costs	£75,520.00
Phase 2	Total development costs	£178,320.00
Implementation	Total one off costs	£36,329.20
All work	Total costs	£290,169.20

NOTES

- Consideration should be given to the commissioning of specialist Marketing & PR resources to drive Business and Consumer uptake. No costs have been included but work has been undertaken with 2 different companies. It is estimated that a suitably managed Marketing & PR Campaign for the Location would cost approximately £27,000 which would include the production of POS materials, posters, flyers etc
- No annual maintenance costs are shown. Annual maintenance of the system would be provided under SLA, along with hosting, broadband and consumables provision for due consideration of license / subscription fees under the agreed Business Model. Negotiations to absorb the annual maintenance costs of the DeliverySmart system would also be considered
- Note that the costs of the App development are inclusive for delivery of the App over two platforms - Android & iOS
- Sunk Phase I Development Costs can be absorbed by the contractor IF the budget constraints of the SBRI funding bid are restrictive in return for due consideration of license / subscription fees under the agreed Business Model (ie a higher rate). This can be capped until the point when these monies are recovered and then this additional levy removed

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Annex 3 Phase 2 Gantt Chart

Main Element	Sub Element	Phase 2 Requirements	Man Days	Mont h 1	Mont h 2	Mont h 3	Mont h 4	Mont h 5	Mont h 6	Mont h 7	Mont h 8	Mont h 9	
LocalitySmart CMS	Application Design	User Interface design for non-core peripheral functionality	5	█									
	Initial Application Build and Deployment in a hosted environment	Bench testing for multi Location rollout	4										█
		Development & testing of non-core peripheral functionality	75		█	█	█	█	█	█	█	█	
	System functionality Administrator	Additional functionality associated with control and monitoring of Kiosk & Digital Signage, User Accounts control, 3 rd Party Data Exchange and Financial Payments	60					█	█	█	█	█	
	Retailer Registration and User Account set up	Additional functionality associated with Financial Payments facilitation and control	30						█	█	█		
	Retailer User Interface	Additional Dashboard elements and Account Control functionality	40		█	█							
	Creation & Scheduling of Promotional Content	Additional push mechanics to remaining marketing channels including building channel specific content templates to be made available to Retailer User Accounts	120		█	█	█	█	█	█	█	█	
	Creation & Scheduling of Smart Messaging	Additional bench testing required for user and proximity (beacons) based combinations	15								█	█	
Loyalty Program Content and Management	Additional design, development and testing of elements specific to Loyalty Program management	60				█	█	█	█	█	█		

Main Element	Sub Element	Phase 2 Requirements	Man Days	Mont h 1	Mont h 2	Mont h 3	Mont h 4	Mont h 5	Mont h 6	Mont h 7	Mont h 8	Mont h 9
	Consumer User Interface	Additional design, development and testing of Consumer based portal	60									
	Kiosk Data Interface	Development and testing of two way data feed between CMS & Kiosks (requires kiosk hardware purchase funding)	15									
	App Data Interface	Development and testing of data push from App to CMS of Consumer transactional activity data	15									
	Consumer Activity Intelligence Module	Development and testing of module that will enhance smart message targeting based upon consumer account historic transactional activity data	85									
	3 rd Party API Development	Development, documentation and testing of APIs	10									
ProxiSmart App	App Design	Additional elements associated with ProxiPark Car Parking and ProxiWise POI interactive User Journeys	5									
	Initial App Build & Deployment	Development and testing of iOS version	40									
	App interaction with iBeacons to drive specific content to the Smartphone	Development and testing of iOS version	120									
	ProxiPark Functionality	Development & testing of User Journeys and the two way activity based data feed to the CMS	100									
	ProxiWise Functionality	Development & testing of User Journeys and the two way activity based data feed to the CMS	40									

Main Element	Sub Element	Phase 2 Requirements	Man Days	Mont h 1	Mont h 2	Mont h 3	Mont h 4	Mont h 5	Mont h 6	Mont h 7	Mont h 8	Mont h 9
	Parkeon Interface	Development & testing in conjunction with Parkeon development resources	20									
	3 rd Party API Development	Development, documentation and testing of APIs	20									
KioskSmart	Kiosk Software Design		3									
	Initial Application Build & Deployment	Development and testing of application (requires kiosk hardware purchase funding)	130									
	Kiosk Data Interface	Development and testing of two way data feed between CMS & Kiosks	40									
	Parkeon Interface	Development & testing in conjunction with Parkeon development resources to ensure KioskSmart functionality works on Parkeon hardware	20									
	3 rd Party API Development	Development, documentation and testing of APIs	20									
Executive Project Management			90									

Note that the development team are able to work on different modules concurrently and engineers are added and removed flexibly throughout the project

Annex 4 References & useful links

- i <http://www.tfl.gov.uk/fares-and-payments/oyster/what-is-oyster?intcmp=1685>
- ii <http://www.parkeon.co.uk/parkeon-news/parkeon-uk-team-develops-integrated-transport-and-car-parking-smartcard-system.html>