RING2PARK ONLINE VISION AND SCOPE DOCUMENT

Kevin A. Lee

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1. Introduction

1.1. Purpose

Digital Parking Solutions (DPS) is a fictional organisation that provides cashless parking solutions. DPS provides a wide range of managed solutions for municipals, councils and companies via their **Ring2Park** branded applications (Ring2Park iPhone, Ring2Park BlackBerry, Ring2Park Online and so on). These applications allow end users to purchase parking tickets and permits via their registered mobile phones or through an internet portal.

DPS also develop a number of corporate applications to support their solutions including:

- a parking location database,
- a parking enforcement device (to scan vehicles, validate parking sessions and print fines/citations),
- a reporting application for administering corporate accounts.

DPS was founded in the UK but has aggressive plans to provide services throughout Europe and the US.

This document details the Vision and Scope of the **Ring2Park Online** application which allows customer to book parking via the Internet and also view and manage their historical bookings (including receipts).

1.2. Business Objectives

The following high level Business Objectives have been identified by DPS and apply at the organisational level to and all of its service, managed and bespoke applications:

1. Increase the number of Parking Locations managed by the Service by 50% to 500 discrete locations over the next year.

2. Register 250,000 new Customers to the Service over the next 2 years.

3. Increase revenue on additional paid for services by 20% to £1.2m over the next 2 years.

4. Increase the average Customer Satisfaction Rating for the Service to Very Good.

5. Reduce Customer Queries and Complaints received from Customers using the Service by 10% to 190 per year.

These objectives will be baselined and measured on a yearly basis.

1.3. References

This document should be read in conjunction with the following:

- Ring2Park Glossary of Terms
- Ring2Park Online - System Requirements Specification Document

2. Product Overview

2.1. Product Perspective

The system context of **Ring2Park Online** and its related applications is illustrated in

the diagram below:
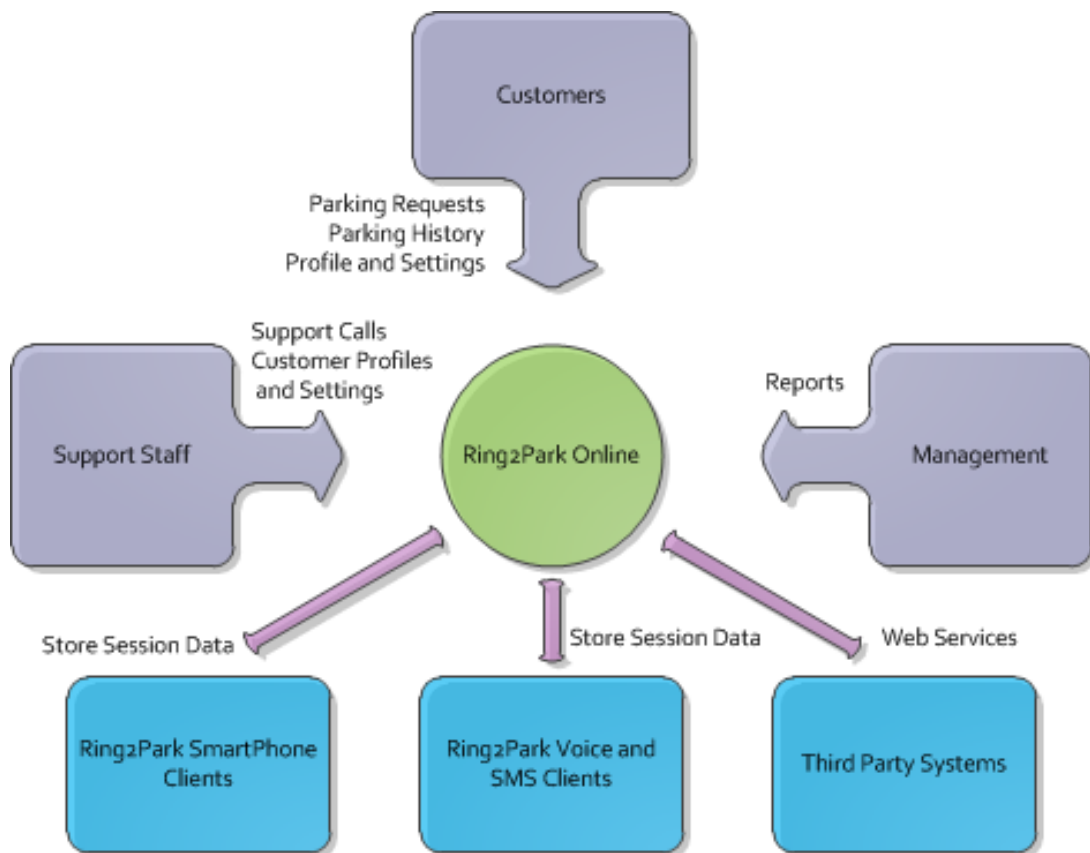
2.2. Product Position Statement

For	Ring2Park's Customers
Who	book parking via the Internet or need to management their account, vehicles and receipts
Ring2Park Online	is an Internet portal

That	• will increase existing customer satisfaction, • increase our targeted product "cross-selling" capability - leading to tangible new product openings by existing customers, • and attract new customers who have heard about, been recommended and/or witnessed our new capability
Unlike	our competitors website capability
Our product	will use leading edge Web 2.0 technologies to provide a seamless, easy to use and rich customer experience

2.3. Assumptions and Dependencies

The following assumptions and dependencies have been identified for the

Ring2Park Online project:

1. Customer's do not have to sign up to Ring2Park Online in order to be able to receive receipts, however it is recommended that they do so.

2. Any bookings made via other Ring2Park clients will show up on Ring2Park Online.

3. Ring2Park Online is dependent upon the Parking Location database being created, available and updated.

2.4. Risks

The following high level risks have been identified for the **Ring2Park Online** project:

1. Our competitors implement new Mobile Parking capabilities or online presence that attract further organisations and customers and devalue our development effort.

2. The cost of development is high and outweighs the benefits of an online solution.

3. User Description

3.1. Stakeholder Summary

The following Stakeholders have been identified as interacting, involved or influenced by the **Ring2Park Online** application.

3.1.1. Business Analyst

Internal member of the development organisation.

3.1.2. Customer

Individual that is a Customer of the Service.

3.1.3. Customer Advisor

Member of the Service's account registration and query team.

3.1.4. Parking Officer

A field operator that validates Parking Sessions of individual Customers.

3.1.5. Service

The Service that DPS provides to Customers.

3.1.6. System

The application that is being implemented to provide the Service.

3.1.7. Technical Support

Member of the Service's Customer Support Team.

3.1.8. User

Individual that is browsing the website but is not yet a Customer.

3.2. Alternatives and Competition

The following high alternatives and competition have been identified for the **Ring2Park Online** project:

1. There are a number of other providers who offer a similar service. We need to ensure that we offer a complete, competitive and cost effective package so that we can provide a compelling service to municipals, councils and companies who will sign up for our overall managed service.

4. Product Requirements

4.1. User Requirements

4.1.1. Customer login by username

A Customer shall be able to login to the System using their username and password.

4.1.2. Customer login by mobile number

A Customer shall be able to login to the System using their mobile phone number and password.

4.1.3. Book parking by location

A Customer shall be able to book a Parking Session by searching for a Parking Location and entering the start date for the session.

4.1.4. Book parking by duration

A Customer shall be able to book a Parking Session for a number of consecutive days.

4.1.5. Parking reminder on payment

At booking time or at anytime during the duration of the Parking Session a Customer shall be able to select an (optional and chargeable) Parking Reminder when making a booking.

4.1.6. Parking reminder before expiry

At booking time or at anytime during the duration of the Parking Session a Customer shall be able to select an (optional and chargeable) Parking Reminder that informs them 15 minutes before the Parking Session is due to expire.

4.1.7. Extend a parking session

A Customer shall be able to extend an active Parking Session.

4.1.8. Session payment by credit card

A Customer shall be able to select a previously entered credit card that has been associated with their Account or enter a new credit card to pay for their Parking Session.

4.1.9. Transaction statements

A Customer shall be able to display and print a statement of their transactions between a monthly or user defined interval.

4.1.10. Parking receipts

A Customer shall be able to display, print or email an individual PDF Receipt for any of their Parking Sessions.

4.1.11. Quick Park by SMS

A Customer shall be able to enter the details of their preferred Park Locations so that they can book a Quick Park session by SMS.

4.1.12. Parking permits

A Customer shall be able to purchase a long term Parking Permit for a specific Parking Location.

4.1.13. Parking penalities

A Customer shall be able to pay for any Parking Penalties that have occurred by exceeding their purchased Parking Session time.

4.1.14. Parking locator

A Customer shall be able to search for available Parking Locations by place (e.g. train station) or location (e.g. city).

4.1.15. Parking location details

A Customer shall be able to display the full details of a parking location, including address, daily rate and map position.

4.1.16. Price calculator

A Customer shall be able to calculate the price of a future Parking Session at a specific Parking Location.

4.1.17. Customer queries

A Customer shall be able able to contact Technical Support via secure email.

4.1.18. Technical Support contact

Technical Support shall be able to reply to Customer queries via secure email.

4.1.19. User registration

A User shall be able to register with the service by entering a username and their mobile phone number. For Registration to be completed the System will require the user's full name, their username, mobile number, email and a password.

4.1.20. User registration confirmation

Upon registration of a new User, an email will be sent to the user's registered email account. The User will need to click on the link contained within this email to complete the registration process.

4.1.21. Update contact details

A Customer shall be able to update all of their contact details including name, address, email and mobile number.

4.1.22. Update security details

A Customer shall be able to update all of their security details including name,

address and password.

4.1.23. Multiple vehicles

A Customer shall be able to have multiple vehicles associated a single Account.

4.1.24. Update vehicle details

A Customer shall be able to update or add Vehicle Details including license number, make, model and colour.

4.1.25. Multiple Cards

A Customer shall be able to have multiple credit cards associated a single Account.

4.1.26. Update payment details

A Customer shall be able to update their credit card payment details, including card type, number, expiry date and security code.

4.1.27. Default parking reminders

A Customer shall be able to set their default Parking Reminders.

4.2. Nonfunctional Requirements

4.2.1. On-line help

A Customer shall have access to on-line help, describing how the systems works.

4.2.2. Transaction storage

The System will store 2 years worth of historical transactions for a Customer before they are archived.

4.2.3. User authentication

The System shall support system security and in particular: authenticating users, supporting password encryption and ensuring that users are allowed to perform only

the operations for which they have authorisation.

4.2.4. Audit trail

The System shall capture a complete trail of operations and transaction carried out by Customers, Technical Support and Parking Enforcers.

4.2.5. Concurrent users

The System shall support up to 1000 concurrent users.

4.2.6. Internet browser support

The System shall support both the latest and previous versions of Microsoft Internet Explorer, Safari and Firefox.

4.3. Documentation Requirements

4.3.1. Context sensitive help

Context sensitive help will be able for the Customer on all forms, fields and actions.

5. Exemplary Use Cases

5.1. Register User

5.1.1. Summary

This Use Case describes general behaviour for the System to register a new User as a Customer.

5.1.2. Actors
- User
- Customer
- Service

5.1.3. Preconditions
- The User has not yet registered with the System.

5.1.4. Main Flow

1. The Use Case begins when the User browses to the Ring2Park Online website.

2. The User selects the options to Register.

3. The System prompts the User for their Registration details.

4. The User enters their Registration details, including mobile phone number, username, password and email address.

5. The System validates the Registrations Details and sends an email to the User with a link to complete the registration process.

6. The User opens their email and clicks on the link in the generated email.

7. The User is redirected back to Ring2Park Online website and prompted to complete the registration process.

8. The User re-enters their password to confirm their registration.

9. The System confirms the User as a new Customer and redirects them to their Account Page.

10. The Use Case ends.

5.1.5. Alternative Flows

5.1.5.1. User does not complete Registration

1. The Use Case starts at step 5 in the main flow.

2. The User does not confirm their registration within 60 days.

3. The Systems re-sends the User the confirmation link.

4. If the User clicks on the link the main flow restarts at step 7.

5. The User does not confirm their registration within another 60 days.

6. The System removes the User's details.

5.1.5.2. User request confirmation email to be resent

1. The Use Case starts at step 5 in the main flow.

2. The User browses to the Ring2Park Online website and selects the option to Register.

3. The User selects the option to Resend Registration Details.

4. The System prompts the User for their email address.

5. The Systems re-sends the User the confirmation link.

6. The Use Case restarts at step 6 in the main flow.

5.1.6. Postconditions
- The User is registered as a new Customer of the System.

5.2. Book Parking

5.2.1. Summary

This Use Case describes general behaviour for a Customer to book a new parking

session.

5.2.2. Actors
- Customer
- Service

5.2.3. Preconditions
- The User has registered with the System.
- The User has added a default Vehicle to the System.
- The User has added a default Payment Card to the System.

5.2.4. Main Flow

1. The Use Case begins when the Customer logs in to the Ring2Park Online website.

2. The Customer selects the options to Book Parking.

3. The System prompts the Customer to search for a Parking Location and lists the Customers preferred (last) Parking Location.

4. The Customer enters search criteria for a Parking Location or selects their preferred Parking Location.

5. The System displays the cost of a Parking Session at the selected Parking Location.

6. The Customer selects the option to Book Parking for the selected location.

7. The System prompts the Customer for details of the Parking Session, including duration and parking reminders.

8. The Customer enters the Parking Session details.

9. The System prompts the Customer to select which Vehicle will apply to the Parking Session.

10. The Customer selects one of their Vehicles.

11. The System prompts the Customer to select which Payment Card will apply to

the Parking Session.

12. The Customers selects one of their Payment Cards.

13. The System confirms the cost of the Parking Session and prompts the Customer for the security code of the selected Payment Card.

14. The Customer enters their security code.

15. The System confirms the Parking Session and sends an email to the Customer with the confirmation details.

17. The Use Case ends.

5.2.5. Alternative Flows

5.2.5.1. Customer enters alternate Vehicle

1. The Use Case starts at step 10 in the main flow.

2. The Customer selects the option to Add a New Vehicle.

3. The System prompts the Customer for details of the Vehicle, including brand, model, colour and registration.

4. The Customer enters the Vehicle details.

5. The main flow restarts at step 11 with the new Vehicle used for the Parking Session.

5.2.5.2. Customer enters alternate Payment Card

1. The Use Case starts at step 12 in the main flow.

2. The Customer selects the option to Add a New Payment Card.

3. The System prompts the Customer for details of the Payment Card, including type, number and expiry date.

4. The Customer enters the Payment Card details.

5. The main flow restarts at step 11 with the new Payment Card used for the

Parking Session.

5.2.6. Postconditions
- The Customer has booked a new Parking Session.

6. Scope

6.1. Initial and Subsequent Releases

This section outlines at a high level the planning of requirements into deliverable releases. Note that the exact content of each release will be the subject of individual Release Plans, it is included here to illustrate how the functionality will be delivered over a series of releases.

6.1.1. Release 1.0

The initial release of Ring2Park Online will be for internal use only and will include the following requirements (in no particular order):

- Customer login by username

- Book parking by location

- Book parking by duration

- Session payment by credit card

- Transaction statements

- Parking locator

- Parking location details

- User registration

- User registration confirmation

- Update contact details

- Update security details

- Multiple vehicles

- Multiple cards

- Update payment details

- User authentication

- Internet browser support

6.1.2. Release 1.1

This release will be the first Customer visible release and as such will have sufficient

functionality for Customers to be able to book, manage and view parking sessions. It

will include the following additional requirements (in no particular order):

- Customer login by mobile number

- Parking reminder on payment

- Parking reminder before expiry

- Extend a parking session

- Parking receipts

- Price calculator

- Customer queries

- Technical Support contact

- Default parking reminders

- On-line help

- Transaction storage

- Audit trail

- Concurrent users

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6.1.3. Release 2.0

This release will contain forward planned functionality that further differentiates Ring2Park from our and integrates with additional Systems. It will potentially include the following requirements (in no particular order):

- Quick Park by SMS

- Parking permits

- Parking penalties

- Context sensitive help

6.2. Release Expectations and Variances

Release 1.0 is planned for Q2 2011

- The priority of this release will be functionality.

- Delivery will be allowed to vary by ± 2 months.

- Costs will be allowed to vary by ± 15% since this is new application.

Release 1.1 is planned for Q1 2012

- The priority of this release will be quality.

- Delivery will be allowed to vary by ± 1 month.

- Costs will be allowed to vary by ± 10%.

Release 2.0 is planned for Q3 2012

- The priority of this release will be quality and functionality.

- Delivery will be allowed to vary by ± 2 weeks.

- Costs will be allowed to vary by ± 5%.