Report on

Places and Spaces

Version 1.0

Prepared: Loftus

Prepared for

City of Prospect

25 July 2017

This project has been assisted by the Local Government Research & Development Scheme.

Document Control

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Versions

Version	Issue Date	Contributor	Description
0.1	12 Jun 2017	Jeff Morcombe	First draft of Business Requirements and Feasibility Study.
0.2	16 Jun 2017	John Millward	Additional information to Business Requirements and Feasibility Study.
0.3	19 Jun 2017	Jeff Morcombe	Updated technical information.
0.4-0.5	26 Jun 2017	John Millward	Business questions added to Business Requirements.
0.6	11 Jul 2017	Chris Malone	Redrafted Executive Summary.
0.7	12 Jul 2017	John Millward	Combined Documents.
0.8	12 Jul 2017	Chris Malone	Reviewed Executive Summary.
0.9	24 Jul 2017	Justin Porter Jeff Morcombe	Document updates feedback on First Draft.
1.0	25 Jul 2017	Chris Malone	Review of Financial Details.

1. Executive Summary

1.1 Overview

The Digital Transformation Working Group (DTWG) comprises of a consortium of local governing authorities championed by the City of Prospect.

The objective of the DTWG is to identify common challenges amongst the consortium, whereby the adoption of technology could lead to more effective communication and engagement between council, community, and local business stakeholders.

Loftus has been awarded an Expression of Interest (EOI), issued by the City of Prospect, to workshop and prepare recommendations on how the DTWG could utilise computer software to increase community asset utilisation and standardise the method by which assets are reserved.

For the purpose of this document, this project is known as **Places and Spaces**.

In conducting work under the EOI, Loftus considered its role as one of defining the primary business and technical requirements for a new computer software application that enabled council controlled assets, such as halls, tennis courts, and parks, to be promoted, booked, and more effectively utilised.

This document is not intended to represent an exhaustive list of operational "use cases", or a turn-key solution that is ready to use. Moreover, the deliverables highlight business issues, financial implications, and recommendations that will place the DTWG in a position to proceed towards application development should it wish to do so.

This project was conducted over three (3) phases, as follows:

- **Phase 1: Business and Functional Requirements**
  - Understanding issues and concerns with current electronic and paper-based methodologies.
  - Conducting Workshops to define high-level business workflow and functional requirements with stakeholders representing each council in the consortium.
  - Refining, verifying, and prioritising business and functional requirements.
  - Finalising requirements and obtaining sign off from key stakeholders in the consortium.
- **Phase 2: Feasibility Study**
  - Conducting Workshop to define Information Technology (IT) requirements with stakeholders.
  - Refining, verifying, and prioritising feasibility requirements.
  - Making recommendations with respect to technical issues.
- **Phase 3: Financial Modelling**
  - Defining models for financial commercialisation.
- **Phase 3: Prototype Design**
  - Design prototypes of business and functional requirements and high-level workflow.
  - Build a presentation for key stakeholders.

The DTWG member councils include:

- The City of Prospect
- City of Mitcham
- City of Unley Council
- Campbelltown City Council
- Adelaide City Council
- City of Burnside

Stakeholders that participated in workshops included information systems managers, corporate and community services managers, events facilitators, and elected members.

Currently, council-controlled assets are booked with the individual council that is the custodian of the asset. Customers currently book assets by telephone, and/or in person, or via a council web site.

Within councils, there are different processes as to how bookings are managed. For example, some councils have manual systems whereas others are partly computerised.

As a result, existing methods for managing bookings are considered fragmented, do not effectively utilise community assets and provide an inconsistent customer experience.

1.2 Business Requirements Summary

Loftus conducted two (2) workshops to identify the business requirements and processes from each council. These were collated and prioritised as documented in the Business Requirements Analysis section below.

The priorities were expressed by each council, in order to determine the short and long-term application lifecycle.

The identified core requirements and functions derived were:

- Core functionality to allow bookings of assets.
- Payment gateway to secure payment and report back to council systems.
- Booking process to account for each assets unique requirements.
- Council staff able to add/edit/modify bookings.
- Automation and standardisation of current processes.
- Financial reporting interfaces.
- Access to the application from any place and time.

1.2.1 **Recommendations**

Loftus recommends a staged approach to application development whereby the findings gathered during the workshops are given the highest priority.

Please refer to the **Business Requirements Analysis** section for further detail.

1.3 Financial Summary

There are a number of considerations to take into account when deciding how best to commercialise Places and Spaces. As the DTWG is a consortium, it is important to note that the final solution will be a single system that will support the consortium's needs for multiple customers across multiple councils.

In essence, Places and Spaces is an Uber-type or Airbnb model – that of connecting consumers with service providers through a single, centralised software engine.

Loftus has defined and explored models that represent the most readily explainable, least complex, and most transparent approaches.

Key takeaways from the developed financial model are summarised below and are explored in detail in subsequent sections of this document.

Key Takeaways	Description

Overarching model	• As Places and Spaces will be a community-based service, Loftus has built a financial model that accounts for the following:
	  ○ An understanding of initial and ongoing costs whereby initial development can be paid for as capital expenditure or amortised over a time horizon.
	  ○ Flexibility to encourage additional councils to join thereby reducing the costs to all members or enabling the Consortium to derive tangible profits.
	  ○ Scalability to incorporate additional revenue or expense considerations.

Time horizon	• For the purpose of this document, Loftus has assumed a five (5) year time horizon in keeping with the typical "life span" of application software.
Profit consideration	• Does the Consortium intend or anticipate to provide Places and Spaces as a profit generating, cost-neutral, or loss-leading community tool? The answer to this question influences any subsequent pricing considerations. • For the purpose of this document, Loftus has assumed cost-neutrality over the time horizon.
Expenses	• Financial modelling suggests an expenditure of $436,499 (ex GST) over a five (5) year time horizon. • Loftus recommends that an operational expenditure model be adopted to align expected revenues with expenses.

Pricing options	• A cost-neutral financial model arrives at the following suggested pricing options per year, exclusive of GST, and indexed by CPI:
	  ○ A fee per facility **booking** at $9.20.
	  ○ An annual fee per facility **listing** at $957.01.
	  ○ A **combination** of both (50-50 split, for this example) at $4.60 per booking and $478.51 per listing.
	• Alternately, the Consortium could **evenly divide** the anticipated total expenditure per year evenly amongst its seven (7) members. On average over the five (5) year time horizon, this equates to $62,357 per council.

1.4 Technical Summary

Generally, there are three (3) choices to make when selecting application software:

- A Commercial off the Shelf (COTS) solution can be utilised "as is".
- A COTS solution that could be augmented and customised.
- Bespoke application built to order.

Loftus conducted a review following a technical workshop to define the business requirements and desired functionality for Places and Spaces. Whilst many commercial systems (COTS) and Content Management Systems exist, they lack the full range of requested features identified in the business requirements workshops.

Key points identified from workshops were:

- Web based for ease of use e.g. www.Places&Spaces.com.au.
- Comprehensive management interface.
- Mobile and Tablet friendly.
- Development using industry standards.
- Easy to use payment gateway.
- Council not responsible for maintaining application.
- Secure, supportable, scalable and robust.
- Hosted in Australia on an Infrastructure as a Service (IaaS) platform.
- Reporting functionality.

1.4.1 **Recommendations**

Loftus recommends developing a bespoke software application that meets the requested needs of the consortium. This approach affords flexibility and control over the functionality, lifecycle, and cost.

A custom application using standard platforms such as Microsoft .NET and hosted in a public Australian Cloud.

1.5 Next Steps

In order to move further towards a fully realised Places and Spaces application, Loftus recommends a five (5) staged approach, of which this report represents Stage 1.

Stage 1: Requirements Analysis – This report

- Gathering of business and functional requirements.
- Defining financial models.
- Defining design considerations.
- Creating prototype designs.

Stage 2: Detailed Technical Specification and Design

- Building specifications based on further detailed analysis of information obtained in Stage 1.
- Building system use-cases and detailed workflows.
- Confirming financial model and impacts.

Stage 3: Software Application Development

- Developing and building the system software, including any mobile-ready platform.
- Conducting system and integration testing.
- Deploying the system to the IaaS platform.
- Loading the system with base data.

Stage 4: Go-Live Launch

- Implementing requisite Service Desk capabilities.
- Providing training and education sessions.
- Commencing marketing and communications plan.
- Integrating Places and Spaces with consortium member websites.
- Loading additional data.
- Formally launching the Places and Spaces service.

Stage 5: Enhancements and Support

- Extending the system to local businesses and stakeholders.
- Extending use and enhancements of system, including further mobile platform development.
- Formally commencing Service Desk capabilities.
- Formally reviewing the journey to date and planning for the remainder of the time horizon.

2. Business Requirements Analysis

2.1 Introduction

Loftus conducted two workshops to define business requirements and desired functionality for Places and Spaces. Whilst Commercial off the Shelf (COTS) solutions are available, they lack the full range of requested features from the representative councils. We have approached the business requirements by gathering details of the functions and requirements that represent what is expected from an application.

Currently, electronic bookings for specific assets (e.g. community halls, tennis courts, or parks for major community events) can only be made from respective council web sites or by direct contact with a council. Some councils provide a fully integrated booking experience, while others require multiple manual steps to complete the booking. None of the councils have the ability to promote related services or local business as part of the booking process.

2.2 Approach

This project will deliver upon the needs as outlined by DTWG:

- Develop business and functional requirements document(s).
- Deliver a feasibility study into developing the product which includes an analysis of multiple commercialisation models (e.g. user fee per booking, council fee per listing).
- Develop a prototype.

There were several phases to this project:

Phase 1: Business Requirements and Function

- Workshop with an output list of requirements and functions.
- Prioritise list, identify risks.
- Review and finalise list, with a key stakeholder sign off.
- Milestone report to City of Prospect and/or stakeholders.

Phase 2: Feasibility Study

- Workshop with IT group.
- Derive best platform(s) and primary IT requirements with key stakeholder sign off.
- Review and provide technical risks.
- Propose commercial models.
- Milestone report to City of Prospect and/or Stakeholders.

Phase 3: Prototype

- Design framework.
- Wireframe screens and workflow.
- Build presentation.
- Present to key stakeholders.
- Milestone final report to City of Prospect and/or stakeholders.

In collaboration with relevant stakeholders, Loftus conducted two workshops with council stakeholders (Business and functional requirements and IT workshop) to identify clear and defined requirements.

2.3 Business and Functional Requirements

Loftus collected and listed business requirements and stakeholder expectations from each of the DTWG councils attending the workshops using the following method.

- A requirements gathering process.
- Identification and list all project requirements.
- Grouping of project requirements into logical project categories.
- Identification of priorities.

The information collected is displayed and summarised in this document.

2.4 Categories

Requirements identified from the workshop have been grouped into and functional categories to better represent them.

The requirements submitted during each workshop were recorded and detailed further in this document and are listed below:

- Council Portal – platform / features available to councils.
- Customer Portal – platform / features available to customers.
- Mobile Devices – Access portal(s) via personal devices.
- Business Workflows and Processes – Event engine business logic. (See flow diagrams).
- Background Processes – ability to perform scheduled tasks (e.g. e-mail, SMS, reports).
- System Portal – Manage system (provision new councils, and scheduling processes).
- Security – user access, both Customer and Council portals.
- Data Integration – Connections into existing systems.

2.5 Functional Workflow

By working with key stakeholders, Loftus defined the requirements for a new cross-council booking system.

Primarily, the purpose of this system is to place emphasis on the customer via an intuitive booking process that guides the identification of a suitable asset, its reservation, and payment for usage.

Secondly, the system is intended to facilitate the connection and promotion of relevant local businesses that complement an asset or its type of use.

Finally, it was desired that the system operates on mobile devices as well as a traditional desktop PC and, ideally, via a 'widget' embedded into participating DTWG member council web sites.

With these requirements in mind, a functional workflow has been defined that encompasses the five (5) steps involved in booking and utilising a council asset:

1. **Selection**
    - Identification of suitable facilities (assets) via textual and geographical search mechanism.
    - Review of facility details.
    - Review of facility availability, including pricing.
2. **Booking**
    - Assignment of desired date(s).
    - Identification of person(s) or organisation making the booking.

      Special conditions may apply to specific persons and/or non for profit organisations.
3. **Payment**
    - Submission of payment details to gateway.
4. **Confirmation**
    - Confirmation of successful booking.
    - Update made to facility calendar.
    - Update made to relevant council system(s).
    - Alert made to council administrator(s).
    - Alert made to relevant local business sponsor(s), if desired.
5. **Billing**
    - Issuance of tax invoice and refund of any bond (if appropriate).

2.6 Priority Definitions

The following definitions are intended as a guideline to prioritize requirements. Councils were asked to identify their preference and report back. The results of the survey are included below; with an average score per item calculated.

- Priority 1 – The requirement is a "must have" as outlined by policy/law.
- Priority 2 – The requirement is needed for improved processing, and the fulfilment of the requirement will create immediate benefits.
- Priority 3 – The requirement is a "nice to have" which may include new functionality.

Assigning priorities to each task identifies the order of development phases.

2.7 Requirements List

The following table represent the requirements discussed during each workshop and their associated priorities.

Council	Designator	Priority
City of Prospect	P / Pros	Each council provided a value indicating their priority against each requirement. The values ranged from 1 (highest) to 3 (lowest). If councils did not provide any details, they have been unmarked or marked with dash. The average score is the total value for each council that responded divided by the total number of councils that responded. Those that did not respond were not included in the computation of the average. The average score will determine the development priority in the next stage of development.
City of Charles Sturt	-	
City of Burnside	B / Burn	
City of Mitcham	M / Mitch	
Campbelltown City Council	C / Camp	
City of Unley	U / Unley	
Adelaide City Council	A / Adl	

	Sub-Category	Requirement	Description	P	C	B	M	U	A	AVG
Council Portal										
	Facility Booking	LOFTUS	Add/Edit/delete facilities via council portal	1	--	--	-	-	-	1
	Facility Resources	LOFTUS	What resources are available with this facility? E.g. full working kitchen	2	--	--	-	-	-	2
	Facility Workflows	PROS_REQ_0.11 ADL_REQ_0.3	• Require workflow for facility hire - example: depot notification for additional bins or clean-up. • Option to automate workflow for specified facility with notification.	2	1	1	1	2	2	1.5
	Facility Occupancy	MITCH_REQ_0.2	Manage occupancy with the facility. e.g. max people allowed in hall	2	1	1	1	1	2	1.3
	Facility Infrastructure	PROS_REQ_0.3	Staff able to book what additional infrastructure is required for the event - example: security personnel for event or media room for personnel. Manually managed	2	1	1	1	2	2	1.5
	Event Infrastructure notification	PROS_REQ_0.4	Notify other infrastructure personnel automatically via e-mail/SMS	2	1	1	1	1	2	1.3
	Booking - Prior Notice	PROS_REQ_0.17	Some facilities we need at least 30 days' notice for a booking (e.g. can't book three days before).	2	1	1	1	1	2	1.3
	Event Licensing	BURN_REQ_0.3	Licensing, facility obligations regarding licensing the facility. - example: liquor licensing	1	1	1	1	1	2	1.2
	Event type: Instant/Enquire	MITCH_REQ_0.3	Facility dependent bookings - example: some facilities require you to book online OTHER booking require face to face consultation	2	1	1	1	1	2	1.3
	Event type: Shared/Exclusive	PROS_REQ_0.10	Cannot exclusively book parks, BUT other facilities maybe exclusive.	2	1	1	1	1	3	1.5
	Event booking/hire interval	PROS_REQ_0.18 LOFTUS	• Some facilities will be hired out by the hour while others will be by day. • There may need to be some time allocated before and after event for setup and pack up. This may or may not be included in the hire rate.	2	1	1	1	1	2	1.3
	Facility Availability	MITCH_REQ_0.4	Ability to block out rooms or facilities by the council. For example; Maintenance OR there is an event which requires adjoining rooms to be unavailable to certain events due to the nature of the event being held.	2	1	1	1	1	2	1.3
	Event Check List	BURN_REQ_0.12	Option to have customised check lists for hirers (e.g. check list things like Pub Liability checked, invoice issued, induction done, keys issued, keys returned, etc.)	2	1	1	1	2	2	1.5
	Facility Booking Calendar	BURN_REQ_0.10	Visual design to easily see bookings, facilities and resources. For example, a calendar chart displayed by either facility, day, hourly, monthly, etc.	2	1	1	1	1	2	1.3
	Booking Notes/Correspondence	BURN_REQ_0.9	Ability to add notes or correspondence (e-mail/ SMS) to a booking. Generates an audit trail of bookings.	2	1	1	1	2	2	1.5

	Sub-Category	Requirement	Description	P	C	B	M	U	A	AVG
Council Portal (cont.)	Booking Notification	PROS_REQ_0.9	Require notification of intent of use of park use. For example; if there are events that require additional emptying of rubbish bins, etc.	2	1	1	1	1	2	1.2
	Booking Notification Groups	LOFTUS	Notification groups used for notifying certain people or groups when various events occur for a facility. E.g. when a booking request is made.	3	-	-	-	-	-	3
	Facility Training and Induction	MITCH_REQ_0.5	Training and induction for specific facility and or resources.	1	1	1	1	3	3	1.7
	Feedback Review	CAMP_REQ_0.3	• Ability to review customer feedback forms. Ability to rank overall experience or facilities	2	1	1	1	2	3	1.7
	Customer Blacklist	CAMP_REQ_1.0	Manage bad customer list between councils e.g. damaged facilities, failure to pay, etc.	3	1	1	1	2	2	1.7
	Reporting	CAMP_REQ_0.2 BURN_REQ_0.11	• Ability to report on individual facilities, demographics, facility profitability, financial, etc. • Wide spread standard reporting – e.g. sales, occupancy, income, payments owing, client (current and all), usage, check lists, etc. • Many systems have these already, but great to have many of these as standard reports to go on. They would need full options to do based on date range, client, resource, start date, booking id, etc. as per the users need at any given time. And ability to export via e-mail, pdf, excel, etc. •	3	1	1	1	1	3	1.7
	Accounts and roles	LOFTUS	Ability for councils to manage own access, create accounts for staff	1	-	-	-	-	-	1
	Bump-in/Bump-out times	BURN_REQ_0.15	• refers to a specified period of time before and after an event used by the customer for setup and clean-up • There may also need to be additional time between events for council perform other tasks. For example; empty bins or wait for lawns to recover. The time may or may not be chargeable.	2	1	1	1	1	2	1.3
	Event Attendance	MITCH_REQ_0.12	Record number of attendances for each event for reporting. Needs to be broken down into Adults and children.	2	1	1	1	2	3	1.7
	Promoter	PROS_REQ_0.12	• View other local facilities. Local facilities with the area may include those from other councils or external links to resources managed by the council. • Allow promoters (cake decorators, caters, etc.) to advertise their own businesses and events.	2	2	2	3	-	3	2.4
	Facility Resources	PROS_REQ_0.21	• Some facilities may require the use of other specific resources provided by the council. For example; a council designated sound or lighting technician is required for operating specific equipment. • Stage 2 may look at more of directory service allowing Promoters (e.g. cake decorators, caters, etc.) to register an expression of interest in an event	2	1	1	1	2	2	1.5

	Sub-Category	Requirement	Description	P	C	B	M	U	A	AVG
Customer Portal										
	Facility booking	PROS_REQ_0.20	Ability to book community halls, parks and gardens etc.	1	1	1	1	1	1	1.00
	Edit/Update booking	PROS_REQ_0.19	Bookings may change after form sent in – can there be an ability for the hirer to make changes or should this be a verbal conversation with the bookings officer?	2	3	-	-	3	2	2.5
	Booking Notes/Correspondence	BURN_REQ_0.8	Ability to add notes or correspondence (e-mail/ SMS) to a booking. Generates an audit trail of booking.	2	1	1	1	2	2	1.5
	Facility Directory	BURN_REQ_0.5 CAMP_REQ_0.5	• Requirements: filtered based search feature, example: ALL halls that can handle 500 people in Burnside. • Able to view other LOCAL facilities.	2	1	2	1	2	2	1.7
	Facility Directory	PROS_REQ_0.6	People search everything in the local area	2	2	2	2	3	-	2.2
	Event Type	PROS_REQ_0.13	Require TYPE of event clarification - example: Wedding, Bands, playing live Music, Political Event etc.	2	1	1	1	1	2	1.3
	Event Type	PROS_REQ_0.7	Age or bucks shows, can notify people that this is NOT allowed	2	1	1	1	3	3	1.8
	Event checking	ADL_REQ_0.2	Requirement: able to cross check conflicting events and the type of event that is being held, example: Not appropriate to have heavy metal band and 5th birthday in adjoining room.	2	1	1	1	1	2	1.3
	Event wait list	BURN_REQ_0.7	Ability to have booking wait list for facilities	2	1	1	1	3	3	1.8
	Recurring Events	CAMP_REQ_0.7	Ability to book a facility once for recurring events	2	1	1	1	1	2	1.3
	Customer Type (e.g. Promoter)	CAMP_REQ_0.4	Some hirers will run events open to other members of public may need to advertise their event	2	2	2	1	3	3	2.2
	Terms and Conditions	PROS_REQ_0.14 PROS_REQ_0.15 PROS_REQ_0.8	• For each facility, there will be a set of terms and conditions. • Each facility to have restriction that can be set based on the event being held - example: NO 18th Birthday parties held at this facility.	2	1	1	1	1	1	1.2
	Terms and Conditions	BURN_REQ_0.4	Requirement: have a standard Terms and Condition across ALL councils, have a template that is easy to understand, and easy to compare facilities	2	1	2	2	2	1	1.7

	Sub-Category	Requirement	Description	P	C	B	M	U	A	AVG
Customer Portal (cont.)	Customer Verification	MITCH_REQ_0.1	Customer would receive automatic confirmation e-mail as verification bookings and requirements	2	1	1	1	1	2	1.3
	Customer Registration	CAMP_REQ_0.6 PROS_REQ_0.21	• Ability to register as a regular hirer or guest. • Allow suppliers to enter a registration of interest for a specific event and list any assets required. Estimated max 10-12. For example, a market stall selling hotdogs requires power. • Customer receives personalised automatic notification (SMS, E-mail) of booking, payments, refunds, etc.	2	1	1	1	1	3	1.5
	Customer Notification	MITCH_REQ_1.0	Customer receives personalised automatic notification (SMS, E-mail) of booking, payments, refunds, etc.	2	1	1	1	1	2	1.3
	Customer Notification	PROS_REQ_0.2	Allow registered providers of event to be receive correspondence relevant for that event	3	2	-	-	3	2	2.5
	Links	PROS_REQ_0.5	Link to other organizations	2	2	2	2	3	3	2.3
	Customer Feed back	CAMP_REQ_0.3	Ability for each customer to provide feedback, complete survey, customer service satisfaction, etc.	2	1	1	1	-	3	1.6
	Booking Validation	MITCH_REQ_0.6	Requirement: Verify booking and person responsible, example: electronically, or in person.	2	1	1	1	2	2	1.5
	Payment Options	CAMP_REQ_0.9	Able to be flexible with the payment options, e.g. able to give 20% discount or senior discount?	2	1	1	1	1	2	1.3
	Facility Reporting	BURN_REQ_0.6	Generic customer reporting. Maybe as simple as a star rating customer experience or facility access, etc.	2	2	2	2	3	3	2.3
	Customer Experience	BURN_REQ_0.1 BURN_REQ_0.2	• Customers should be able to manage their own booking. • Requirements - must be customer centric system where by the system will be filled and the ability to search	2	1	1	1	1	2	1.3
	Promotion of Local Businesses and Services	LOFTUS	Ability to promote local business for events. For example, list limo services if booking a wedding venue	3	-	-	-	-	-	3

	Sub-Category	Requirement	Description	P	C	B	M	U	A	AVG
Mobile Devices										
	Customer Portal	LOFTUS	Development of a platforms for specific mobile devices for the Customer portal	1	-	-	-	-	-	1
	Council Portal	LOFTUS	Development of a platforms for specific mobile devices for the Council portal	2	-	-	-	-	-	2
			From discussions at the second workshop the view was to provide mobile applications for all the more popular devices	2	-	-	-	-	-	2

	Category	Requirement	Description	P	C	B	M	U	A	AVG
Background Processes										
	Customer Notifications	LOFTUS	Scheduled e-mail and SMS notification tasks. e.g. update customer of a registered event	-	-	-	-	-	-	
	Council Notifications	LOFTUS	Scheduled tasks to update staff of event requests	-	-	-	-	-	-	
	System Notifications	LOFTUS	Warn of potential system problems, allowing fast resolution of issues	-	-	-	-	-	-	

	Category	Requirement	Description	P	C	B	M	**C**	A	AVG
System Portal										
	Manage tasks	LOFTUS	Manage scheduled tasks	1	-	-	-	-	-	1
	Event/Error logging	LOFTUS	The system should capture and record events for purposes of Debugging, Auditing and providing a more proactive approach to support users.	1	-	-	-	-	-	1
	Reporting	LOFTUS	Review and manage system health and performance statistics	1	-	-	-	-	-	1
	Setup	LOFTUS	Setup and provision new councils	1	-	-	-	-	-	1
	System Maintenance	LOFTUS	Maintain global data lists such as Suburbs, Facility Types, Activity Codes, Types of Hire, and Cancellation codes, Global lists would be the same for all councils.	1	-	-	-	-	-	1
	Template generation	LOFTUS	E-mail and SMS Templates	1	-	-	-	-	-	1

	Category	Requirement	Description	P	C	B	M	U	A	AVG
Security										
	User level identification	LOFTUS	• Username and password required to gain access to system. • User accounts can be assigned roles and facilities can be assigned to roles and/or users • Ability to accurately audit changes	1	-	-	-	-	-	1
	Secure online payments	MITCH_REQ_0.11	• Ability to produce invoices or take direct payments • Online capacity for payment / BPAY etc.	-	1	1	1	1 -	1	1
	Secure online payments	BURN_REQ_0.13 BURN_REQ_0.14	• Option to set payment plans / instalment plans onto invoices • Consideration of bond payments and refunds to be done easily and quickly both ways – many sites cannot take through EFT as 'holding bond' like motels do and instead must receipt them as full transactions both ways.	-	1	1	1	3	3	1.5
	Electronic signatures	CAMP_REQ_0.8	Ability to have customer sign / agree to terms and conditions	-	1	1	1	1	1	1

	Category	Requirement	Description	P	C	B	M	U	A	AVG
Data Integration										
	Web Page	MITCH_REQ_0.9	Payment Integration into local management systems to avoid double entering data. • Provide a web page capable of exporting data (e.g. payment details) as a CSV/XML file for importing into to council systems in an ad hoc fashion as required.	-	1	1	1	1	1	1
	Common application interface	MITCH_REQ_0.8	Real-time Integration into local management systems to avoid double entering data • Provide the tools and infrastructure necessary to allow 3rd parties to build packages capable of automating and scheduling the process of exporting data out and into local government systems.	-	2	2	2	1	1	1.3

3. Feasibility Study

3.1 Introduction

Loftus performed a technical workshop to collect information from each participating council to include in this milestone report. Councils were invited to provide feedback on the specific areas detailed in this report.

The purpose of the Feasibility Study was to derive technology considerations, key technology requirements, and any risks associated with technical recommendations.

During the workshop, Loftus asked these questions and discussed the following areas:

- What is the purpose and the required outcome?
- What are the consequences of change?
- What are the benefits of change?
- What are the impacts on governance and compliance?
- Can the process be improved by using process automation?
- Who will need to interact with the process, and what information is required at each point of the process?
- Are there any legal requirements that need to be considered in regards to the management and storage of the information that is processed?
- Are there other processes that interact with the same information or that could benefit from access to this information?
- What metrics are currently collected and how can improvements be defined and measured?

The report also establishes various Financial Models that identify costs and possible benefits available under each model. A number of variables and inputs are considered and these can be almost infinitely varied in order to arrive at expenses and expected revenues.

3.2 Objectives

The objectives of Places and Spaces is to:

1. Deliver a comprehensive, reliable, innovative across-council booking solution.
   Bookings will be made via a dedicated App, from a dedicated web site and from widgets integrated with participating Council web sites. Use Australian industry standard technologies and methods within a secure solution.

2. Deliver a streamlined booking process.
   The system will support the easy identification of a suitable, available resource and will provide a full booking service, including a payment gateway and final booking confirmation.

3. Enable support for promotion of local businesses and services.
   The system will provide information and contact details of booking related local services. Businesses can be added by Council administrators and will be presented as part of the booking process. This potentially will provide an opportunity for direct or indirect commercialisation to participating Councils.

4. Provide a value for money solution.
   The system will facilitate greater occupancy and use of facilities whilst creating a means to efficiently book a facility.

3.3 Functional Requirements

3.3.1 Recommendations

Loftus recommends when building the solution that it is developed in a modular form to ensure clarity and fit for purpose.

The two primary parts will be the Client portal and the Council portal; both needing services to back end systems.

Loftus has split the identified backend system requirements into separate standalone modules, each consisting of similar functional tasks. Loftus identified the purpose of each module and its relationship to other modules.

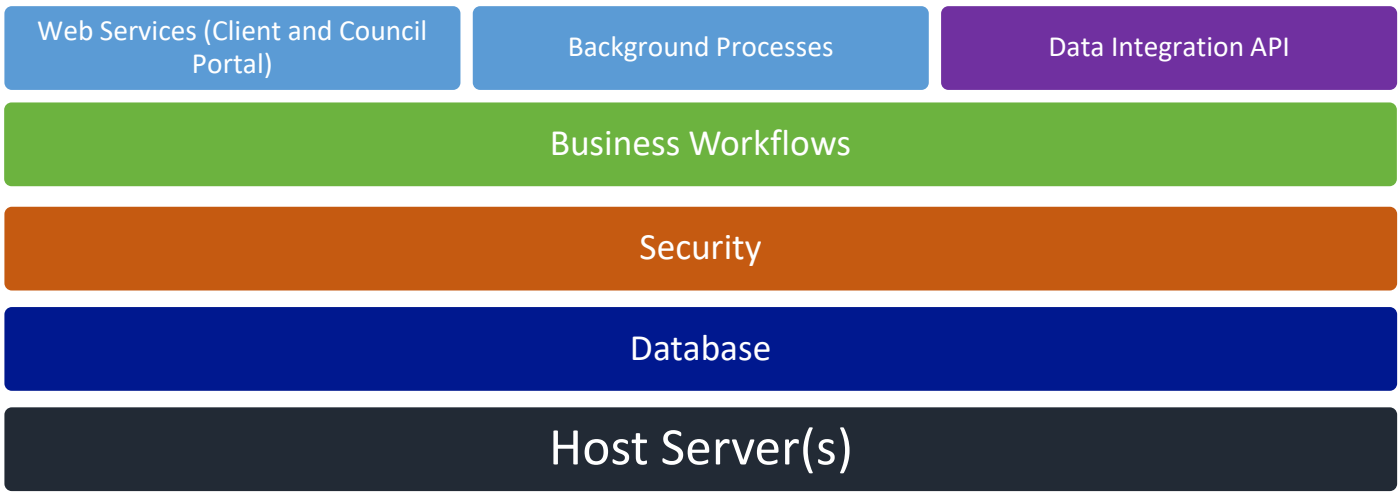
3.3.2 Detail

The following application architectural layers were derived from the business requirements workshop.

These distinct functional components help identify application flow and compartmentalize development tasks, allowing faster development lifecycles. Each functional component shown below, gives a sense of structure and order to development.

- Customer Portal – Platform / features available to customers.
- Council Portal – Platform / features available to councils.
- Mobile Devices – Access portal(s) via personal devices.
- Business Workflows and Processes – Event engine business logic.
- Background Processes – Ability to perform scheduled tasks (e.g. e-mail, SMS, reports).
- System Portal – Manage system (provision new councils, and scheduling processes).
- Security – User access, both Customer and Council portals.
- Data Integration – Connections into existing systems.
- System – Secure Server Hosting, Capacity planning, Redundancy, etc.

Functional requirements for each module outline the user interface requirements and design layout.



3.4 Cloud vs On Premise Computing

Cloud based solutions come in several varieties. Two common approaches are outlined below:

Cloud-based systems are hosted using vendor's servers and accessed through a Web browser and internet interfaces. All onus is on the cloud provider to ensure the infrastructure layer is available and operational.

Private cloud systems are servers hosted locally, on a company's own servers. Additional services are required for this to become effective and available with minimal outages.

The key reason to consider these two options is that there are advantages and disadvantages to both.

Another key reason to consider the differences is that they often include a different approach as to how they are priced. While there are exceptions to this rule, in general, Cloud based systems are priced under a monthly or annual subscription basis, with additional recurring fees for support.

On-premise systems are generally considered a capital expenditure (one large initial investment up front). With these systems requiring expert assistance to provide support and maintenance. It is an additional overhead cost the organisation will continue to pay.

3.4.1 Making a choice between cloud computing and private cloud application development

Public clouds (IaaS – Infrastructure as a Service), such as those from Amazon Web Services , Google Compute Engine, share a computing infrastructure across different users, business units or businesses. However, these shared computing environments are not suitable for all businesses, such as those with mission-critical workloads, security concerns, uptime requirements or management demands. Instead, these businesses can provision a portion of their existing data centre as a private cloud. Often data held in public cloud environments is held outside of Australia and governed by foreign laws. This could mean any conflicts could put information at risk of being lost or not accessible.

A private cloud provides the same basic benefits of public cloud. These include self-service and scalability; multi-tenancy; the ability to provision machines; changing computing resources on-demand; and creating multiple machines for complex computing jobs, such as big data. Chargeback tools track computing usage, and business units pay only for the resources they use.

As a result, private cloud is best for businesses with dynamic or unpredictable computing needs that require direct control over their environments.

Private clouds have some disadvantages. For example, on-premises IT - rather than a third-party cloud provider - is responsible for managing the private cloud. As a result, private cloud deployments carry the same staffing, management, maintenance and capital expenses as traditional data centre ownership. Additional private cloud expenses include virtualization, cloud software and cloud management tools.

3.5 Choosing a Cloud Provider

Choosing the right Cloud provider can be challenging with the ever-growing number of Cloud Computing solutions providers.

Loftus benchmarked Cloud services providers using the following metrics in order to rate them in the table below:

- Which Cloud services do they provide?
- What is their pricing structure?
- How secure is their cloud?
- Contract Jurisdiction
- Where is the data centre and how safe is it?
- What happens if they lose your data?
- Can the Cloud environment scale up to meet the business needs?
- What is their down time history?

	Business Location (Australia)	*Business Location (South Australia)*	*Data Sovereignty (Australia)*	*Contract jurisdiction (Australia)*	*Support (24hr service desk)*	*Fully Customisable*	*Transparent Billing*	*PCI and **AS/NZS ISO 9001:2016***	*Disaster Recovery Backups*
Amazon Web Services	✗	✗	✔	✗	✔	✔	✗	ⓘ	✔
Azure	✔	✗	✔	✔	✔	✔	✗	ⓘ	✔
Ninefold	✔	✗	✔	✔	✔	✔	✗	✔	✔
Telstra	✔	✔	✔	✔	✔	✔	✗	✔	✔
Zettagrid	✔	✔	✔	✔	✔	✔	✔	✔	✔

ⓘ International sites are accredited to ISO standards only.

International Standards Organisation	**Australian/New Zealand comparable Standard**
ISO Released September 2015	AS/NZS ISO Release 2 March 2016
9000 and 9001:2015 Quality management systems Fundamentals and vocabulary	9000:2016 and 9001:2016 Quality management systems Fundamentals and vocabulary

3.6 Development Platforms

3.6.1 Recommendations

1. The ability to perform complex backend tasks, such as managing workflows and sending e-mails/SMS message notifications, complex dynamic web pages and web services means the web platforms such as SharePoint are not ideal candidates as development platforms. Places and Spaces is best suited to a custom development project.
2. Continuous business process improvements, ongoing maintenance and support would suggest that well supported platforms such as .NET would be ideally suited to this project. Using the .NET framework allows developers to build a scalable application able to handle the ever-increasing demand in a capable manner.

3.6.2 Detail

Web-designing platforms such as WordPress, Joomla, SharePoint and many others are very popular because coding expertise is not required. These platforms offer amazing versatility while developing dynamic websites. These platforms have strengths as well as limitations and it is important to understand where they lie. More complex sites are generally not suited to these platforms and are better suited to being developed using frameworks such as .NET or JSP.

- **ASP.NET**

  Though Active Server Pages (ASP) is not free, there is a huge library that consists of lots of basic functions and database interactions. Another advantage of ASP.NET is that it is omnipresent and engineers know how to build applications using this framework.

- **JSP**

  Java Server Pages (JSP) is a technology that assists software developers in creating dynamic web pages that are based on XML, HTML, or other types of document. JSP is similar to ASP and PHP, except it uses Java programming language. One of the greatest advantage of using this framework is that JSP pages combine static templates, including HTML or XML fragments, with the code that generates dynamic content.

Note: Cross-browser compatibility and inconsistent HTML and CSS versions may limit the customer experience to specific browser versions; therefore, consideration needs to be made for developing technology solutions to address the largest possible audience.

3.7 Mobile Device Development

3.7.1 Recommendations

1. Application development should take a web first approach and build web pages with responsive user interfaces that are able to automatically scale to suit the most common mobile device browser formats.
2. Once browser pages, styles and processes have been developed and established, development could consider moving to mobile-specific platforms if necessary.

3.7.2 Detail

Mobile devices are currently the fastest growing platform, and users are becoming more technically competent, expecting services to be available irrespective of device type.

Paths to be considered:

- **A responsive, web-based design.**

  Developing for a browser means that a separate application is not required for each platform. However, careful consideration needs to be made, and testing conducted, to adapt to multiple screen sizes, resolutions, and web browsers. In many cases, this becomes a compromise of a response user interface adapting page layout to suit the device. This is the potentially the quickest development path and one of least cost.

- **Dedicated app for each mobile device.**

  There are costs associated with developing a separate app for each platform, but there are advantages as well. One of the most important is that performance of a dedicated app will certainly be better than the performance of running it through a browser.

3.7.3 Developing Cross-Platform Applications for Mobile Devices

There are a number of cross platform development tools allowing developers to code for iOS, Android, Windows and more at the same time. There are advantages to native applications, but a well-made cross-platform mobile app will make these differences seem small and carry the advantage that users on more than one platform have access to the service.

One example a cross platform development tool is Xamarin and allows for development for devices such as Android, IOS, and Windows phone all at the same time.

3.8 Development Best Practices

3.8.1 Recommendations

1. The best results for developing web and mobile applications come from applying best practices to the design and deployment. Some of the following best practices relate to any application development effort, but most take into account the vagaries of web and mobile development.
2. Developing a clean, semantic, and cross-browser responsive website seems to be easy, but can be more complicated than expected. There are few important points to be considered when planning a business web site.
3. Utilise a continuous improvement mindset and allow future development to improve and grow the application further.

3.8.2 Detail

- **Mobile First Approach:** According to **comScore, a company that provides independent data analytics** more than 80% internet users have a Smartphone. Users expect a responsive experience that adapts to the device that they are accessing the site from. A mobile-first approach enables this functionality to be built in from the start, ensuring that the system is appropriately responsive to any device.
- **Easy Navigation:** Browsing a website must not be difficult to operate and offer easy to use, straight forward across web browsers or mobile devices.
- **Optimised and Responsive:** A website must not take ages to load. Ideally, it should load within three (3) seconds. A fast and quick to load website has lesser bounce rate.
- **Keep It Simple:** Making a website too animated may confuse a visitor and slows down it to a reasonable extent.
- **Engage and Retain Users:** In this era of social networking, a website must engage users with quality, interesting content and imagery. It should not sound monotonous. Logins must be available through Facebook, Twitter etc.
- **Search Engine Optimisation** – Web site development must adhere to the SEO best practises to appear on major search engines. For example: Verify that your HTTPS pages can be crawled and indexed by search engines.
- **Continuous Improvement:** The business process improvement activities are embedded or aligned to the use of a Continuous Improvement Framework. A practical implementation would be the design of a program of work that includes clearly defined sub projects that ultimately lead from the current state to desired outcome. Importantly each step/project should already deliver an outcome with clearly measurable benefits.

3.9 Web Site Security

Authentication – Using strong passwords, change password policies, use public key authentication when possible.

Security Certificates – HTTPS (Hypertext Transfer Protocol Secure) is an internet communication protocol that protects the integrity and confidentiality of data between the user's computer and the site. Users expect a secure and private online experience when using a website.

4. Financial Modelling

4.1 Introduction

There are a number of considerations to take into account in order to build a financial model for Places and Spaces.

It is important that the Consortium of councils reach agreement over the preferred revenue and expense model. This is because the delivered solution will be a single system that will support the consortium's needs rather than a dedicated system for each member council to operate. Consequently, multiple consumers of council services and multiple councils will be connected via the software, which will act as a nexus point.

In essence, Places and Spaces is an Uber-type or Airbnb model – that of connecting consumers with service providers through a single, centralised software engine.

Loftus has defined and explored models that represent the most readily explainable, least complex, and most transparent approaches.

It is therefore necessary to articulate the parameters that are fixed and variable with respect to any financial model as some revenues and expenses are likely to be linked with usage patterns by both council and community stakeholders.

Loftus has constructed an Excel-based pro-forma Profit and Loss worksheet (refer to the **Example Calculations** and **Financial Model Spreadsheet** sections below) that enables parameters to be varied and the impact immediately observed.

In any subsequent stage of Places and Spaces, it would be expected that this model be reviewed and used to derive firm expectations about potential revenue and expenditure.

The purpose of this section is to therefore articulate the variables and assumptions that are likely to have the largest impact on any profit or loss running Places and Spaces.

Unless otherwise stated, any calculations are based on the Consortium as a whole rather than individual participating councils.

4.2 Summary

Key takeaways from the developed financial model are summarised below and are explored in detail in subsequent sections of this document.

Key Takeaways	Description

Overarching model	• As Places and Spaces will be a community-based service, Loftus has built a financial model that accounts for the following:
	  ○ An understanding of initial and ongoing costs whereby initial development can be paid for as capital expenditure, or amortised over a time horizon.
	  ○ Flexibility to encourage additional councils to join thereby reducing the costs to all members or enabling the Consortium to derive tangible profits.
	  ○ Scalability to incorporate additional revenue or expense considerations.

Time horizon	• For the purpose of this document, Loftus has assumed a five (5) year time horizon in keeping with the typical "life span" of application software.
Profit consideration	• Does the Consortium intend or anticipate to provide Places and Spaces as a profit generating, cost-neutral, or loss-leading community tool? The answer to this question influences any subsequent pricing considerations. • For the purpose of this document, Loftus has assumed cost-neutrality over the time horizon.
Financial modelling inputs and variables	• There are numerous inputs and variables that can be considered when constructing a financial model. These are detailed in later sections of this document and include expenses and sources of revenue.
Expenses	• A number of assumptions have been made with respect to costing the software application development for Places and Spaces, the daily running and maintenance of the application, and any ongoing marketing efforts. • Financial modelling suggests an expenditure of $436,499 (ex GST) over a five (5) year time horizon. • Loftus recommends that an operational expenditure model be adopted to more appropriately align expected revenues with expenses.

Pricing options	• A cost-neutral financial model arrives at the following suggested pricing options per year, exclusive of GST, and indexed by CPI:
	  ○ A fee per facility **booking** at $9.20.
	  ○ An annual fee per facility **listing** at $957.01.
	  ○ A **combination** of both (50-50 split, for this example) at $4.60 per booking and $478.51 per listing.
	• Alternately, the Consortium could **evenly divide** the anticipated total expenditure per year evenly amongst its seven (7) members. On average over the five (5) year time horizon, this equates to $62,357 per council.

4.3 Profit and Loss Considerations

A key consideration for the Consortium is whether it anticipates making a profit from running Places and Spaces or whether it sees the system as a channel to drive greater community engagement with profit being a secondary consideration.

There are a number of benefits that can potentially be derived by providing Places and Spaces to the community. These include, but are not limited to, the following:

Benefits	Description
Role of Local Government	Increased visibility of the role of councils as providers of essential community services.
Support for local business	Increased visibility of local businesses that provide complimentary products and services.
Asset utilisation	Greater asset utilisation and occupancy. This may come at a potential increased cost to manage, maintain, and rehabilitate these assets thereby also affecting financial depreciation rates.
Capital development projects	Abilities to better ascertain the behaviour patterns and needs of the community with respect to urban planning and capital development projects.
Asset divestment (disposal)	Abilities to consider divesting assets that are performing above or below expectations on an occupancy vs cost of ownership basis.
Community engagement	Increased levels of community participation and council engagement across disparate services.

It is beyond the scope of this report to conduct an analysis of the above as it requires a detailed review of financial data held by each Consortium member in isolation as well as aggregate. Furthermore, some of these items are intangible by their nature and necessitate further analysis to approximate a value.

4.4 Time Horizon

The typical lifespan of a well-designed and implemented software application is five (5) years (and sometimes more) with enhancements envisaged during this lifespan. Such enhancements typically address changes in user requirements, the marketplace, usage patterns, increased adoption of alternate technology, or the introduction of new disruptive technology.

Whilst the constructed financial model enables flexibility over choice of time horizon for any calculations, for the purpose of this document, Loftus has assumed a five (5) year time horizon applies.

4.5 Expense Model

4.5.1 Overview

In arriving at a financial model for Places and Spaces, it is logical to start from a basis of understanding the expenses that are likely to be incurred in its operation because these can reasonably be estimated.

The expense model information can then be used to apply a mechanism for monetising the offering and deriving the "desired levels" of revenue. It is important to emphasise that a desired level of revenue may be to make a profit, a break-even over the time horizon, or a loss depending on the Consortium's appetite to make tangible returns.

At a minimum, the following primary costs are necessary to consider in running Places and Spaces:

Primary Expense Item	Description
System Software Application Development	• Primary application development activities. • Ongoing application support costs. • Costs for any enhancements to the application over its lifespan.
Infrastructure Platform	• Operating environment comprising hardware and software to host and run Places and Spaces. • Ongoing infrastructure support costs.
System Application Administration	• Data entry and system administration to keep information on venues current. • This may be minimal after the initial load of facilities, yet there is likely to be a requirement to periodically review the accuracy and completeness of information, adjust prices, potentially offer specials, and manage local business advertising listings.
Marketing and Promotion	• Marketing agency fees. • Styling and design of landing web pages. • Any printed materials. • Running any digital promotion activities via social media platforms.

Loftus has estimated these costs and implemented a series of additional variable assumptions – that can be almost infinitely altered – and applied typical starting values. These assumptions cover:

Variable Factors	Description
Consumer Price Index (CPI) (%)	A Consumer Price Index (CPI) adjustment factor year-on-year to account for the likely increase in costs associated with running Places and Spaces.
System Software Application Development as Lump Sum (Yes/No)	Whether the largest single expense – the primary software application development activity – is undertaken as a lump sum fee that would be paid during the first year or amortised over the entire time horizon. The latter is subject to commercial business borrowing rates to determine a net present value of costs.
Application Support Costs (%)	Yearly application support costs as a percentage of the initial application development fee.
Application Enhancements (%)	Yearly application enhancements as a percentage of the initial application development fee.
Marketing and Promotion (%)	Yearly marketing and promotion activities as a percentage of initial spend.
Annual Growth (%)	The annual growth rate of system utilisation as this will potentially impact Infrastructure Platform technology and support costs as well as administration of the Places and Spaces application.

4.5.2 **Assignment of Costs**

In realising the Places and Spaces application, there is an opportunity to agree to a method by which costs can be shared amongst stakeholders or entirely assigned to one particular stakeholder.

More specifically, the primary costs involved in realising Places and Spaces over the designated time horizon could be shared or assigned.

Possible options include:

Assignment of Costs	Description
Council Consortium as IP Owner	This approach places risk, reward, and flexibility largely within the sphere of the Consortium. In doing so, the Consortium would be able to direct any decisions with respect to monetisation strategy. Any agency involved in developing the software application would reasonably expect to be paid commercial fees for doing so. Some questions would remain about the ownership of specific code bases or components incorporated into Places and Spaces. This is because any software application is usually built by "standing on the shoulders" of work that has come beforehand. For example, once a calendaring component has been built for another solution, it is often reused in totality or extended for another solution. If the Consortium retained full ownership of IP, it would be assumed that the Consortium itself would further commercialisation opportunities in South Australia, Australia, or abroad. Furthermore, the Consortium would be responsible for deciding how to best support and maintain the software application. This does raise questions about the role of Local Government and its core purpose for business. Councils are designed serve the community by managing local assets, community services, and urban planning. It is reasonable to assume that councils are not experts at developing software applications, supporting them, monetising them, or driving them into other markets.
Public-Private Partnership	Under a public-private model, it would be expected that the primary agency involved in developing the software application would partner with the Consortium to deliver the solution. Consequently, it would be expected that both would share in the risk and reward from doing so as well as any further commercialisation opportunities in South Australia, Australia, or abroad. The partner agency would likely be seeking a profit from this type of model.
Development Agency as IP Owner	This approach entirely places risk and reward within the sphere of the development agency. Costs in developing and supporting the software would typically be agreed to over the desired time horizon. The development agency would then make choices regarding further commercialisation of Places and Spaces in South Australia, Australia, or abroad. In working to have Places and Spaces commercially realised, it is likely that any company involved in doing so will want to have some or total ownership of any IP.

4.6 Revenue Model

4.6.1 Overview

There are a number of factors that influence any potential revenue streams obtained via Places and Spaces.

Loftus has made a number of assumptions that are parameterised and can be varied according to desired model conditions. These include, but are not limited to, the following:

Variable Factors	Description
Participating Councils (#)	Number of Councils participating in the Places and Spaces consortium.
Number of Facilities Per Council (#)	Average number of Places and Spaces to be managed via the proposed solution.
Bookings per Week (#)	Number of bookings anticipated per facility per week.
Adoption Rate (%)	Adoption rate (annual growth) of system utilisation each year.
Advertising Revenue	Anticipated revenue via fees and advertising, if any, computed on the basis of: • Anticipated visits to the Places and Spaces site per day. • Number of unique parties (businesses) who are advertising on Places and Spaces. • Adoption rate (annual growth) in advertising revenue. The above enables a computation of fees per advertisement per month.
Consumer Price Index (CPI) (%)	A Consumer Price Index (CPI) adjustment factor year-on-year to account for any increases in chargeable rates that affect revenue.

It is important to emphasise that any extant hiring or utilisation fees are not under consideration for this model. This is because they may vary depending on the type of facility, its size, the duration of hire, intended or actual use, its location, or other factors. Rather, Loftus has modelled the costs of providing Places and Spaces in isolation of any extant fees.

4.6.2 Additional Sources of Revenue

There are additional sources of revenue that may be available to support Places and Spaces. These are outlined below:

Additional Revenue Sources	Description
Click-Through Advertising	Additional revenue can be derived by the Places and Spaces consortium by offering targeted click-through advertising space. Examples of potential advertising businesses include: catering and food; party hire; furniture and equipment hire; and cleaning. Any such advertising could be targeted on the basis of facility/user geographic location, functional use of the facility; intended use of the facility; time of the year; or upcoming weather forecast. An allowance for possible advertising revenue has been factored into the financial modelling.
Government Grants	Federal, State, and Local Government grants may be available to subsidise part of the development or ongoing cost involved in offering Places and Spaces. Whilst it is beyond the scope of this document to conduct an exhaustive analysis, the South Australian Local Government Grants Commission, for example, could be a source of funding depending on the (perceived) value that Places and Spaces could deliver to the wider community. For instance, if Places and Spaces increased the utilisation of facilities for sport and recreation, aged care, and non-resident use, then it may be worth pursuing government subsidy. More information can be found on the Grants Commission web site: https://www.dpti.sa.gov.au/local_govt/LGGC

4.7 Pricing Options

4.7.1 Introduction

There are typically two (2) methodologies used to set a market price for a bespoke software application. These are described below:

Pricing Methodology	Description
Cost-Plus Pricing	Cost-plus pricing is a 'traditional' approach whereby a cost multiplier of between 1.1 and 5 times is typically applied to the aggregate of costs necessary to deliver a product or service in order to arrive at a profit margin. In order to apply a cost-plus model, it is necessary to compute the costs of all constituent components of the system, including running costs, and divide these by some factor to account for utilisation.
Value-Based Pricing	Loftus generally advocates that a "value-based" pricing methodology is adopted for any project that delivers operational efficiencies or business benefits to stakeholders. In arriving at a value-based model, it is necessary to understand the additional value that can be derived from a technology-based solution rather than adding a margin to its constituent labour, equipment, and material components. Doing this is often not a trivial task because it requires suitable vision into the future. In the case of Places and Spaces, a value-based model would need to consider how to measure the community benefit delivered by the system. More specifically, how to effectively measure the intangible aspects of increases in community engagement, consumer satisfaction, asset utilisation, and service delivery to the wider community. Even so, a value-based pricing model usually endeavours to exceed the expenses (costs) in providing a service.

4.7.2 Suggested Approach

A pragmatic approach to developing a pricing model is to build upon the Expense and Revenue assumptions identified and arrive at the most readily explainable methodology by which a consumer can purchase a service.

Regardless of whether the Consortium intends or expects to provide Places and Spaces as a profit generating, cost-neutral, or loss-leading community tool, there are options to consider with respect to pricing.

The most transparent and readily explainable pricing options are described below:

Pricing Option	Description
Option A – Fee Per Booking	The first methodology for generating revenue is to charge either the council custodian of a facility or the end-consumer a booking fee. This is a similar methodology to that applied by an agency that charges a fee to book tickets to an event. However, in difference to a ticketing agency, the volumes of bookings made via Places and Spaces are, by nature, far lower than that of, say, a stadium event. Initial modelling suggests that a fee of $9.20 per booking would be achievable over a cost-neutral five (5) year time horizon. Refer to the **Example Calculations** section below for detail.
Option B – Fee Per Listing	The second methodology for generating revenue is to charge the council asset custodian (Consortium member council) an annual listing fee for their facilities. By nature, the anticipated number of individual bookings across a calendar year will be significantly greater than the number of facilities that can be booked. Consequently, a fee per listing will significantly exceed a fee per booking. Initial modelling suggests that a fee of $957.01 per facility listing would be achievable over a cost-neutral five (5) year time horizon. Refer to the **Example Calculations** section below for detail.
Option C – Combination (Hybrid)	It is possible to combine the above two methodologies by applying some form of weighting factor in preference of booking vs listing fees. An almost infinite degree of variation is possible in terms of weighting between booking vs listing fees. As a starting point, initial modelling suggests a 50-50 split with a booking fee of $4.60 per booking and $478.51 per listing would be would be achievable over a cost-neutral five (5) year time horizon. Refer to the **Example Calculations** section below for detail.
Option D – Divide by Councils	Alternately, the Consortium could evenly divide the total anticipated expenditure per year evenly amongst members. On average over the five (5) year time horizon, this equates to $62,357 per council.

4.7.3 Example Calculations

Any model is only as good as its inputs. The inputs that have the most significant impact on the Profit and Loss model are outlined below and are for the Consortium as whole, unless explicitly stated otherwise:

Input	Description and Assumed Input
Time Horizon (# Years)	Number of years during which the Places and Spaces project will run before the application is redeveloped, enhanced, or extended. • Assumption: Five (5) years.
Number of Facilities (#)	Quantity of facilities that are represented and available for booking via Places and Spaces. • Assumption: 10 facilities x 7 participating councils = 70 facilities. • Assumption: Subject to a 10% annual adoption rate (growth).
System Application Development ($)	Costs associated with initial application development, ongoing support, and enhancements over the time horizon for the Consortium as a whole. • Assumption: Initial development cost of $100,000 amortised over five (5) years at commercial business interest rates. • Assumption: 15% of the total development costs will be necessary to support the software per annum. • Assumption: 7% of the total development costs will be necessary to develop enhancements per annum from year two (2) onward. • Assumption: Subject to CPI annually.
Infrastructure Platform ($)	Costs associated with running the Infrastructure as a Service (IaaS) that hosts Places and Spaces for the Consortium as a whole. • Assumption: $1,065 per month for IaaS hosting. • Assumption: One (1) hour of IaaS maintenance per month. • Assumption: Subject to CPI and adoption rate (growth) of 10%.
System Administration	Costs associated with the day to day administration of the system for the Consortium as a whole. • Assumption: A council resource will be used for helping users self-serve and facility owners to administer their listings. • Assumption: 7 hours of time is needed per month on this activity at an all up cost of $60 per hour, inclusive of SG&A overheads. • Assumption: Subject to CPI and adoption rate (growth) of 10%.
Marketing and Promotion ($)	Fees associated with marketing and promotion for the Consortium as a whole. • Assumption: $7,000 of initial marketing agency fees to design a promotion campaign. • Assumption: $7,000 to develop and style appropriate landing pages on the Internet. • Assumption: $2,000 for printed materials. • Assumption: $3,000 for other digital promotion such as Facebook, Twitter, LinkedIn, etc. • Assumption: 20% of initial costs will be spent each remaining year over the time horizon from year two (2) onward. • Assumption: Subject to CPI annually.
Advertising ($)	Inward revenue generated via advertising for the Consortium as a whole. • Assumption: 5 visits per day of each month. • Assumption: 5 advertising parties per month. • Assumption: An adoption rate (growth) of 20%. • Assumption: Subject to CPI annually.

The following table illustrates the sensitivity that exists when varying the weighting between booking vs listing fees with the above assumptions in place.

This example assumes the consortium wishes to run Places and Spaces as a cost-neutral undertaking over a five (5) year time horizon:

Booking vs Listing Fee Relative Percentage	Booking Fee ($ ex GST)	Listing Fee ($ ex GST)	Profit Margin (%)
Booking: 100% **Listing: 0%**	$9.20	$0	0% Cost-neutral
Booking: 75% Listing: 25%	$6.90	$239.25	0% Cost-neutral
Booking: 50% **Listing: 50%**	$4.60	$478.51	0% Cost-neutral
Booking: 25% Listing: 75%	$2.30	$717.76	0% Cost-neutral
Booking: 0% **Listing: 100%**	$0	$957.01	0% Cost-neutral

A typical pro-forma Profit and Loss statement is shown below with a 50-50% split between Booking and Listing fees for Revenue.

Profit / Loss by Fiscal Year	FY17/18	FY18/19	FY19/20	FY20/21	FY21/22
Revenue Item					
Places and Spaces Booking Fees	$33,495	$37,666	$42,355	$47,628	$53,558
Places and Spaces Listing Fees	$33,495	$37,666	$42,355	$47,628	$53,558
Advertising	$900	$1,106	$1,360	$1,672	$2,056
Sub Total	**$67,891**	**$76,438**	**$86,070**	**$96,929**	**$109,172**
Expense Item					
System Application Development					
Application Development	$33,027	$33,027	$33,027	$33,027	$33,027
Application Support Costs	$15,000	$15,368	$15,744	$16,130	$16,525
Application Enhancements		$7,172	$7,347	$7,527	$7,712
Infrastructure Platform					
Infrastructure Platform (IaaS)	$12,780	$14,371	$16,160	$18,172	$20,435
Infrastructure Support Costs	$2,100	$2,361	$2,655	$2,986	$3,358
System Application Administration					
Data Entry and System Administration	$5,040	$5,667	$6,373	$7,167	$8,059
Marketing and Promotion					
Marketing Agency Fees	$7,000	$1,434	$1,469	$1,505	$1,542
Landing Web Pages	$7,000	$1,434	$1,469	$1,505	$1,542
Printed Materials	$2,000	$410	$420	$430	$441
Digital Promotion	$3,000	$615	$630	$645	$661
Sub Total	**$86,947**	**$81,859**	**$85,296**	**$89,095**	**$93,301**
Profit / Loss	**-$19,056**	**-$5,422**	**$774**	**$7,833**	**$15,870**

Detailed examples of the model **Profit and Loss** pro-forma is provided in **Appendix A**.

4.7.4 Financial Model Spreadsheet

A copy of the pro-forma financial model Profit and Loss spreadsheet has been posted to the places and spaces portal and will be made available upon request to any participating party.

4.7.5 References

- Top 10 Product Pricing Models For Start-up's
  https://www.businessinsider.com.au/ten-top-product-pricing-models-for-startups-2010-12?r=US&IR=T#product-or-service-is-free-revenue-from-ads-and-critical-mass-1
- Ten Proven Pricing Models
  https://www.caycon.com/blog/2011/02/ten-top-product-pricing-models-for-startups/
- How Much Should You Charge For Advertising On Your Blog?
  https://www.entrepreneurs-journey.com/10201/how-much-should-you-charge-for-advertising-on-your-blog/

4.8 Appendix A – Financial Model Examples

4.8.1 Model 1 – 100% to Booking Fees

Places and Spaces Financial Model							
Variables	**Value**	**Notes**					
Start Date	1/07/2017						
Time Horizon	5	Years					
Places and Spaces Revenue							
Number of Councils in Consortium	7						
Number of Places and Spaces Per Council	10						
Bookings Per Place/Space	2	Per week					
Adoption Rate of System (Growth)	10%	Per annum					
Booking and Listing Fees							
Fees Subject to CPI?	Yes						
Explicit Booking Fee?	No	Enter a booking fee here or choose "No" to use system computed value					
Explicit Booking Fee	$ -						
Explicit Listing Fee?	No	Enter a booking fee here or choose "No" to use system computed value					
Explicit Listing Fee	$ -						
Computed Listing Fee							
Desired Profit Margin	0%						
Bookings vs Listings Ratio (%)	100%						
Computed Avg Booking Fee	$ 9.20						
Computed Avg Listing Fee	$ -						
Advertising							
Expected Site Visits Per Day	5						
Advertising Parties	5						
Advertising Fees Per Advertiser	$ 15.00	Month					
Advertising Fees	$ 75.00	Month					
Adoption Rate of Advertising (Growth)	20%	Per annum					
System Application Development							
Application Development	$ 100,000						
Lump Sum?	No						
Support Costs as % of Development	15%	Including Service Desk and bug fixes					
Enhancements as % of Development	7%	Per annum					
Infrastructure Platform							
Infrastructure Platform (IaaS)	$ 1,065	Month	Zettagrid pricing				
Infrastructure Support Costs	$ 175	Month					
System Application Administration							
Hourly Admin Resource Rate + Overheads	$ 60.00	Hourly Rate	Council resource				
Data Entry and System Administration	7	Hours per Month					
Marketing and Promotion							
Marketing Agency Fees	$ 7,000						
Landing Web Pages	$ 7,000						
Printed Materials	$ 2,000						
Digital Promotion	$ 3,000						
Ongoing Marketing %	20%	Per annum					
General Financials							
CPI Proxy	2.45%	Adelaide "All Groups" March 2016 to March 2017 x 1.25					
Business Interest Rate and Overheads	**8.10%**	16/06/2017					
NAB	8.32%	https://www.nab.com.au/business/tools/rates-fees-and-charges#indicator-rates					
Westpac	7.25%	https://www.westpac.com.au/business-banking/business-loans/business-loans-interest-rate/					
ANZ	8.03%	http://www.anz.com/auxiliary/rates-fees-terms/interest-rates/					
Commonwealth	7.81%	https://www.commbank.com.au/business/rates-fees.html					
Overheads (Admin, etc)	0.25%						

Fiscal Year	**FY17/18**	**FY18/19**	**FY19/20**	**FY20/21**	**FY21/22**
Year Index	**0**	**1**	**2**	**3**	**4**
Revenue Item					
Places and Spaces Booking Fees	$ 66,991	$ 75,331	$ 84,710	$ 95,256	$ 107,116
Places and Spaces Listing Fees	$ -	$ -	$ -	$ -	$ -
Advertising	$ 900	$ 1,106	$ 1,360	$ 1,672	$ 2,056
Sub Total	**$ 67,891**	**$ 76,438**	**$ 86,070**	**$ 96,929**	**$ 109,172**
Expense Item					
System Application Development					
Application Development	$ 33,027	$ 33,027	$ 33,027	$ 33,027	$ 33,027
Application Support Costs	$ 15,000	$ 15,368	$ 15,744	$ 16,130	$ 16,525
Application Enhancements		$ 7,172	$ 7,347	$ 7,527	$ 7,712
Infrastructure Platform					
Infrastructure Platform (IaaS)	$ 12,780	$ 14,371	$ 16,160	$ 18,172	$ 20,435
Infrastructure Support Costs	$ 2,100	$ 2,361	$ 2,655	$ 2,986	$ 3,358
System Application Administration					
Data Entry and System Administration	$ 5,040	$ 5,667	$ 6,373	$ 7,167	$ 8,059
Marketing and Promotion					
Marketing Agency Fees	$ 7,000	$ 1,434	$ 1,469	$ 1,505	$ 1,542
Landing Web Pages	$ 7,000	$ 1,434	$ 1,469	$ 1,505	$ 1,542
Printed Materials	$ 2,000	$ 410	$ 420	$ 430	$ 441
Digital Promotion	$ 3,000	$ 615	$ 630	$ 645	$ 661
Sub Total	**$ 86,947**	**$ 81,859**	**$ 85,296**	**$ 89,095**	**$ 93,301**
Grand Total	**-$ 19,056**	**-$ 5,422**	**$ 774**	**$ 7,833**	**$ 15,870**

Total Revenue Over Time Horizon	**$ 436,499**
Total Expenses Over Time Horizon	**$ 436,499**
Total Profit / Loss Over Time Horizon	**$ -**
Avg Profit / Loss Over Time Horizon Per Year	**$ -**

4.8.2 Model 2 – 50% to Booking Fees, 50% to Listing Fees

Places and Spaces Financial Model							
Variables	**Value**	**Notes**					
Start Date	1/07/2017						
Time Horizon	5	Years					
Places and Spaces Revenue							
Number of Councils in Consortium	7						
Number of Places and Spaces Per Council	10						
Bookings Per Place/Space	2	Per week					
Adoption Rate of System (Growth)	10%	Per annum					
Booking and Listing Fees							
Fees Subject to CPI?	Yes						
Explicit Booking Fee?	No	Enter a booking fee here or choose "No" to use system computed value					
Explicit Booking Fee	$ -						
Explicit Listing Fee?	No	Enter a booking fee here or choose "No" to use system computed value					
Explicit Listing Fee	$ -						
Computed Listing Fee							
Desired Profit Margin	0%						
Bookings vs Listings Ratio (%)	50%						
Computed Avg Booking Fee	$ 4.60						
Computed Avg Listing Fee	$ 478.51						
Advertising							
Expected Site Visits Per Day	5						
Advertising Parties	5						
Advertising Fees Per Advertiser	$ 15.00	Month					
Advertising Fees	$ 75.00	Month					
Adoption Rate of Advertising (Growth)	20%	Per annum					
System Application Development							
Application Development	$ 100,000						
Lump Sum?	No						
Support Costs as % of Development	15%	Including Service Desk and bug fixes					
Enhancements as % of Development	7%	Per annum					
Infrastructure Platform							
Infrastructure Platform (IaaS)	$ 1,065	Month	Zettagrid pricing				
Infrastructure Support Costs	$ 175	Month					
System Application Administration							
Hourly Admin Resource Rate + Overheads	$ 60.00	Hourly Rate	Council resource				
Data Entry and System Administration	7	Hours per Month					
Marketing and Promotion							
Marketing Agency Fees	$ 7,000						
Landing Web Pages	$ 7,000						
Printed Materials	$ 2,000						
Digital Promotion	$ 3,000						
Ongoing Marketing %	20%	Per annum					
General Financials							
CPI Proxy	2.45%	Adelaide "All Groups" March 2016 to March 2017 x 1.25					
Business Interest Rate and Overheads	**8.10%**	16/06/2017					
NAB	8.32%	https://www.nab.com.au/business/tools/rates-fees-and-charges#indicator-rates					
Westpac	7.25%	https://www.westpac.com.au/business-banking/business-loans/business-loans-interest-rate/					
ANZ	8.03%	http://www.anz.com/auxiliary/rates-fees-terms/interest-rates/					
Commonwealth	7.81%	https://www.commbank.com.au/business/rates-fees.html					
Overheads (Admin, etc)	0.25%						

Fiscal Year	**FY17/18**	**FY18/19**	**FY19/20**	**FY20/21**	**FY21/22**
Year Index	**0**	**1**	**2**	**3**	**4**
Revenue Item					
Places and Spaces Booking Fees	$ 33,495	$ 37,666	$ 42,355	$ 47,628	$ 53,558
Places and Spaces Listing Fees	$ 33,495	$ 37,666	$ 42,355	$ 47,628	$ 53,558
Advertising	$ 900	$ 1,106	$ 1,360	$ 1,672	$ 2,056
Sub Total	**$ 67,891**	**$ 76,438**	**$ 86,070**	**$ 96,929**	**$ 109,172**
Expense Item					
System Application Development					
Application Development	$ 33,027	$ 33,027	$ 33,027	$ 33,027	$ 33,027
Application Support Costs	$ 15,000	$ 15,368	$ 15,744	$ 16,130	$ 16,525
Application Enhancements		$ 7,172	$ 7,347	$ 7,527	$ 7,712
Infrastructure Platform					
Infrastructure Platform (IaaS)	$ 12,780	$ 14,371	$ 16,160	$ 18,172	$ 20,435
Infrastructure Support Costs	$ 2,100	$ 2,361	$ 2,655	$ 2,986	$ 3,358
System Application Administration					
Data Entry and System Administration	$ 5,040	$ 5,667	$ 6,373	$ 7,167	$ 8,059
Marketing and Promotion					
Marketing Agency Fees	$ 7,000	$ 1,434	$ 1,469	$ 1,505	$ 1,542
Landing Web Pages	$ 7,000	$ 1,434	$ 1,469	$ 1,505	$ 1,542
Printed Materials	$ 2,000	$ 410	$ 420	$ 430	$ 441
Digital Promotion	$ 3,000	$ 615	$ 630	$ 645	$ 661
Sub Total	**$ 86,947**	**$ 81,859**	**$ 85,296**	**$ 89,095**	**$ 93,301**
Grand Total	**-$ 19,056**	**-$ 5,422**	**$ 774**	**$ 7,833**	**$ 15,870**

Total Revenue Over Time Horizon	**$ 436,499**
Total Expenses Over Time Horizon	**$ 436,499**
Total Profit / Loss Over Time Horizon	**$ -**
Avg Profit / Loss Over Time Horizon Per Year	**$ -**

4.8.3 **Model 3 – 100% to Listing Fees**

Places and Spaces Financial Model							
Variables	**Value**	**Notes**					
Start Date	1/07/2017						
Time Horizon	5	Years					
Places and Spaces Revenue							
Number of Councils in Consortium	7						
Number of Places and Spaces Per Council	10						
Bookings Per Place/Space	2	Per week					
Adoption Rate of System (Growth)	10%	Per annum					
Booking and Listing Fees							
Fees Subject to CPI?	Yes						
Explicit Booking Fee?	No	Enter a booking fee here or choose "No" to use system computed value					
Explicit Booking Fee	$ -						
Explicit Listing Fee?	No	Enter a booking fee here or choose "No" to use system computed value					
Explicit Listing Fee	$ -						
Computed Listing Fee							
Desired Profit Margin	0%						
Bookings vs Listings Ratio (%)	0%						
Computed Avg Booking Fee	$ -						
Computed Avg Listing Fee	$ 957.01						
Advertising							
Expected Site Visits Per Day	5						
Advertising Parties	5						
Advertising Fees Per Advertiser	$ 15.00	Month					
Advertising Fees	$ 75.00	Month					
Adoption Rate of Advertising (Growth)	20%	Per annum					
System Application Development							
Application Development	$ 100,000						
Lump Sum?	No						
Support Costs as % of Development	15%	Including Service Desk and bug fixes					
Enhancements as % of Development	7%	Per annum					
Infrastructure Platform							
Infrastructure Platform (IaaS)	$ 1,065	Month	Zettagrid pricing				
Infrastructure Support Costs	$ 175	Month					
System Application Administration							
Hourly Admin Resource Rate + Overheads	$ 60.00	Hourly Rate	Council resource				
Data Entry and System Administration	7	Hours per Month					
Marketing and Promotion							
Marketing Agency Fees	$ 7,000						
Landing Web Pages	$ 7,000						
Printed Materials	$ 2,000						
Digital Promotion	$ 3,000						
Ongoing Marketing %	20%	Per annum					
General Financials							
CPI Proxy	2.45%	Adelaide "All Groups" March 2016 to March 2017 x 1.25					
Business Interest Rate and Overheads	**8.10%**	16/06/2017					
NAB	8.32%	https://www.nab.com.au/business/tools/rates-fees-and-charges#indicator-rates					
Westpac	7.25%	https://www.westpac.com.au/business-banking/business-loans/business-loans-interest-rate/					
ANZ	8.03%	http://www.anz.com/auxiliary/rates-fees-terms/interest-rates/					
Commonwealth	7.81%	https://www.commbank.com.au/business/rates-fees.html					
Overheads (Admin, etc)	0.25%						

Fiscal Year	**FY17/18**	**FY18/19**	**FY19/20**	**FY20/21**	**FY21/22**
Year Index	**0**	**1**	**2**	**3**	**4**
Revenue Item					
Places and Spaces Booking Fees	$ -	$ -	$ -	$ -	$ -
Places and Spaces Listing Fees	$ 66,991	$ 75,331	$ 84,710	$ 95,256	$ 107,116
Advertising	$ 900	$ 1,106	$ 1,360	$ 1,672	$ 2,056
Sub Total	**$ 67,891**	**$ 76,438**	**$ 86,070**	**$ 96,929**	**$ 109,172**
Expense Item					
System Application Development					
Application Development	$ 33,027	$ 33,027	$ 33,027	$ 33,027	$ 33,027
Application Support Costs	$ 15,000	$ 15,368	$ 15,744	$ 16,130	$ 16,525
Application Enhancements		$ 7,172	$ 7,347	$ 7,527	$ 7,712
Infrastructure Platform					
Infrastructure Platform (IaaS)	$ 12,780	$ 14,371	$ 16,160	$ 18,172	$ 20,435
Infrastructure Support Costs	$ 2,100	$ 2,361	$ 2,655	$ 2,986	$ 3,358
System Application Administration					
Data Entry and System Administration	$ 5,040	$ 5,667	$ 6,373	$ 7,167	$ 8,059
Marketing and Promotion					
Marketing Agency Fees	$ 7,000	$ 1,434	$ 1,469	$ 1,505	$ 1,542
Landing Web Pages	$ 7,000	$ 1,434	$ 1,469	$ 1,505	$ 1,542
Printed Materials	$ 2,000	$ 410	$ 420	$ 430	$ 441
Digital Promotion	$ 3,000	$ 615	$ 630	$ 645	$ 661
Sub Total	**$ 86,947**	**$ 81,859**	**$ 85,296**	**$ 89,095**	**$ 93,301**
Grand Total	**-$ 19,056**	**-$ 5,422**	**$ 774**	**$ 7,833**	**$ 15,870**

Total Revenue Over Time Horizon	**$ 436,499**
Total Expenses Over Time Horizon	**$ 436,499**
Total Profit / Loss Over Time Horizon	**$ -**
Avg Profit / Loss Over Time Horizon Per Year	**$ -**

5. Prototype

5.1 Prototype Model

1. A calendar based web application that enables an end to end-on line-booking facility.
2. A browser based application.
3. A corresponding Application interface that can be consumed on all mobile platforms.
4. Payment links to facilitate payments and deposits as applicable.
5. The application will have an administration interface to enable appropriate council resource to manage and configure facilities.
6. The application will be built to allow for different types of venues, including football fields, tennis courts as an example.
7. The application will provide a mechanism to promote secondary services to compliment the bookings made. Local business would be given priority consideration to provide these services.
8. Mail/SMS gateway allows notifications and booking confirmations by e-mail. Reminders can be sent via SMS assuming the customer has opted in to this service.
9. Configurable Widgets to be embedded in Council websites.

5.1.1 Example: User Design Components

1. A flexible mobile application designed to support all major platforms and can integrate and support current digital wallet systems.
2. Browser based application compatible with all common web browsers.
3. Applications support latest security protocols.
4. Embedded widget to be installed in Council CMS Solutions.

5.1.2 Example: Back Office Components

1. Administration interface allows input and edit of council facilities.
2. Administration interface allows visibility of all council facility calendars and booking information.
3. Choice of payment gateways, Council default, all major credit cards, PayPal, and others.
4. E-mail and SMS Gateway allows notifications, booking confirmations and reminders.

5.1.3 Example: Prototype Process

The following table provides an example of the prototype process

1.Selection

- Identify suitable facilities (search or browse)
- Confirm availability

2.Booking

- Provide personal details
- Choose payment method
- Provide organisational details (As required)

3.Verification

- If required for business bookings, or security purposes

4.Payment

- Submit details to payment gateway
- Confirm successful processing

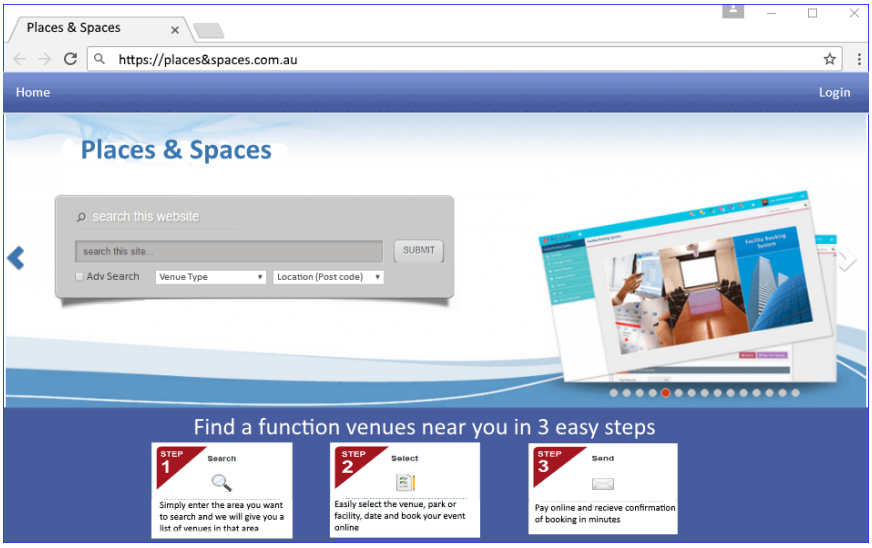
5.Confirmation

- Confirm successful booking to purchaser
- Update facility calendar
- Update council system
- Alert council administrator

5.2 Prototype – Customer Portal

5.2.1 Search Facilities, Venues, Halls, and Parks

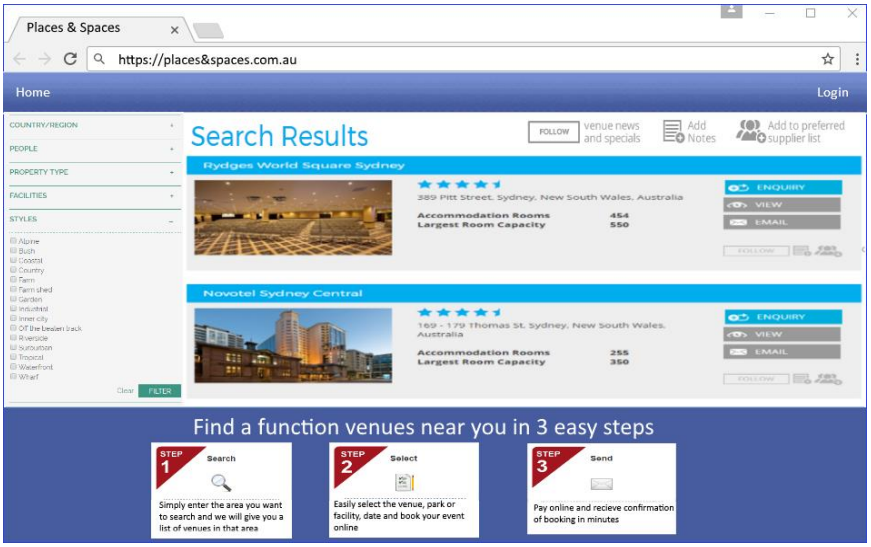
Ability to search thousands of facilities and spaces in seconds, by location, facility or availability. Using a simple clean customer centric design to ensure customers can easily and simply find and book facilities, venues etc.



5.2.2 Advanced Search

Ability to easily and simply search and filter facilities, venues etc.

Filtering could be by facilities, venues, halls and parks or by location (e.g. Postcode), availability, size etc. For example; All hall that can hold 500 people in Burnside area.



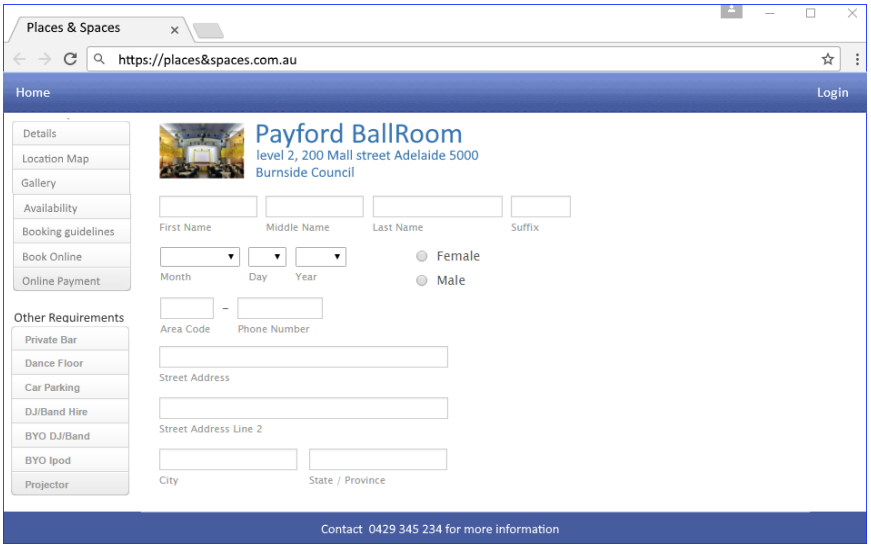
5.2.3 View Facility Details

On choosing a facility, Venues, etc. the ability to easily view details, images, availability and location. Ability to sign in with their Facebook/Google/Twitter account to easily track bookings and resources.

5.2.4 Book Online

Customer would enter personal and booking details and receive e-mail verification of booking.

E-mail notification should also contain link to quickly and easily edit or change the booking. Both council and the customer should receive notification of changes via e-mail or SMS.

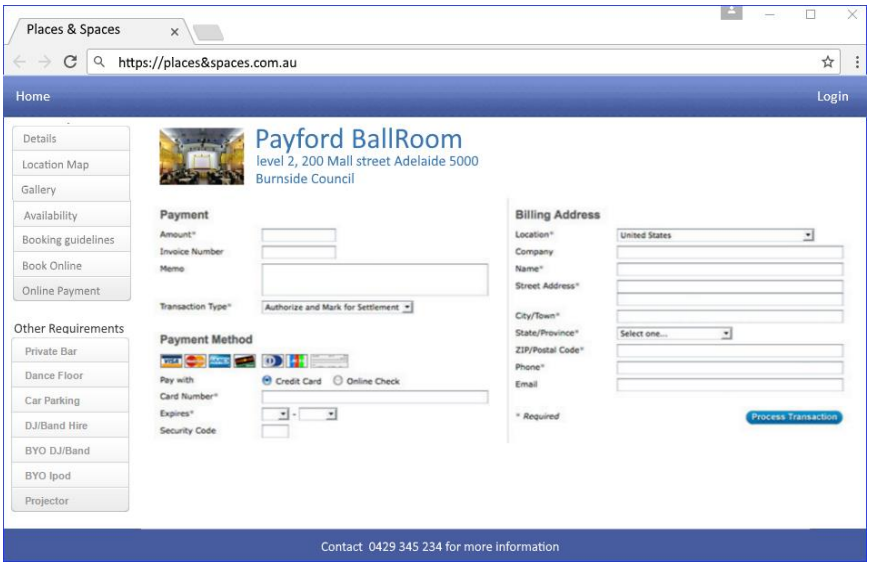


5.2.5 **Secure Online Payments**

Users can quickly and simply make payments online and get notification of booking.

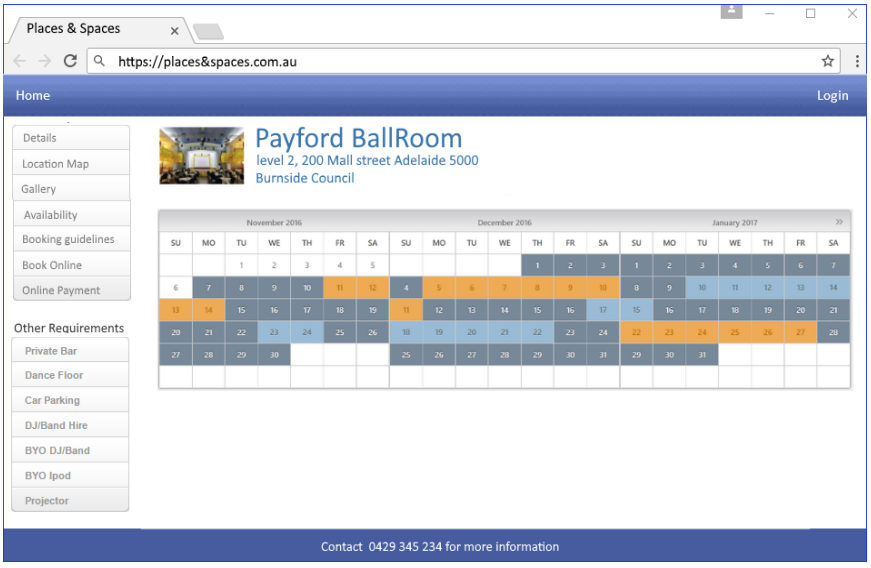
Consideration of bond payments and refunds to be done easily and quickly.

Customer receives personalised automatic notification (SMS, E-mail) of booking, payments, refunds, etc.



5.2.6 **Facility Calendar**

Visual design allowing customers to easily view and select availability of facilities, Venues, Parks and Halls.



5.2.7 **Mobile Friendly**

Cloud applications are accessible from any device that's connected to the web – just open a browser, type in the domain name and you're away; responsive design lets you manage bookings from any location using any mobile device; users likewise have access to a booking process optimised for mobiles, allowing them to check availability, manage existing bookings and make new bookings on the go, ether from their mobile browser or by downloading and installing responsive a mobile application.

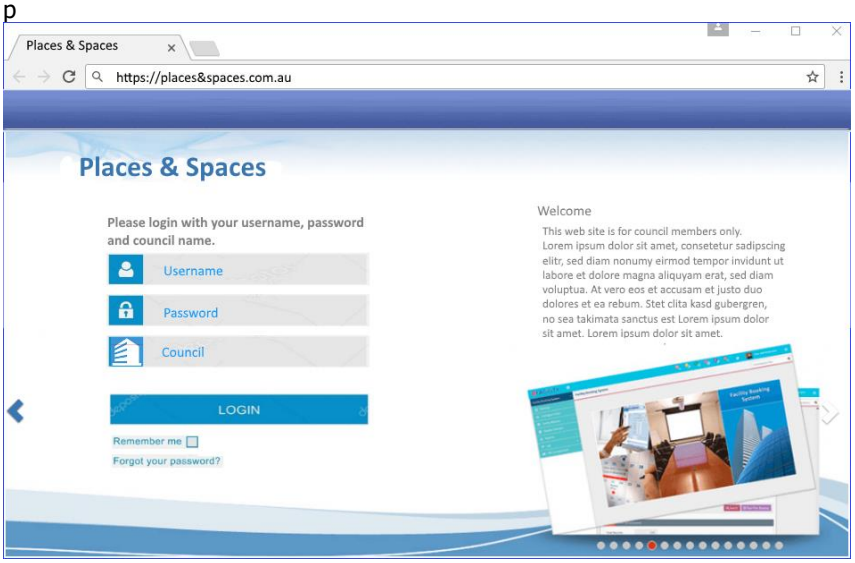
5.3 Prototype - Council Portal

5.3.1 **Login Screen**

Council portal must be secured by means of username and passwords.

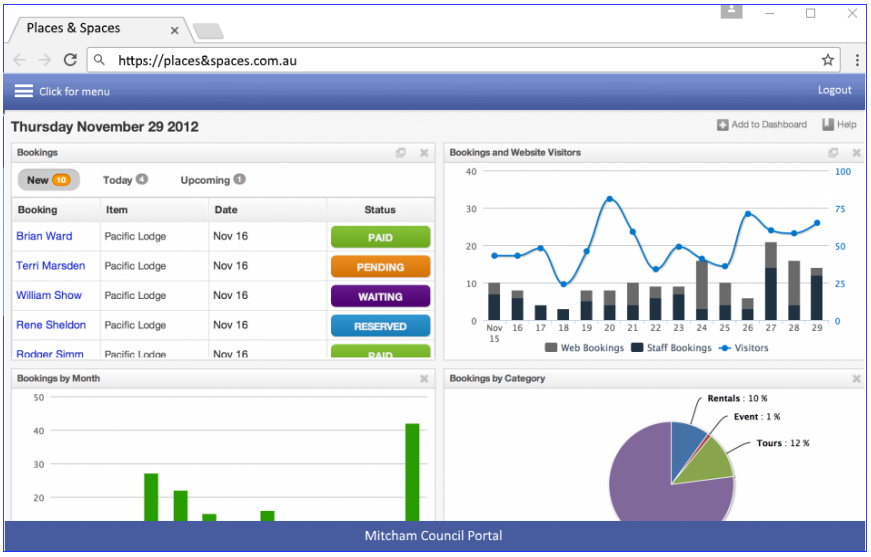
This portal provides council employees the ability add/edit and manage facilities, etc.

p



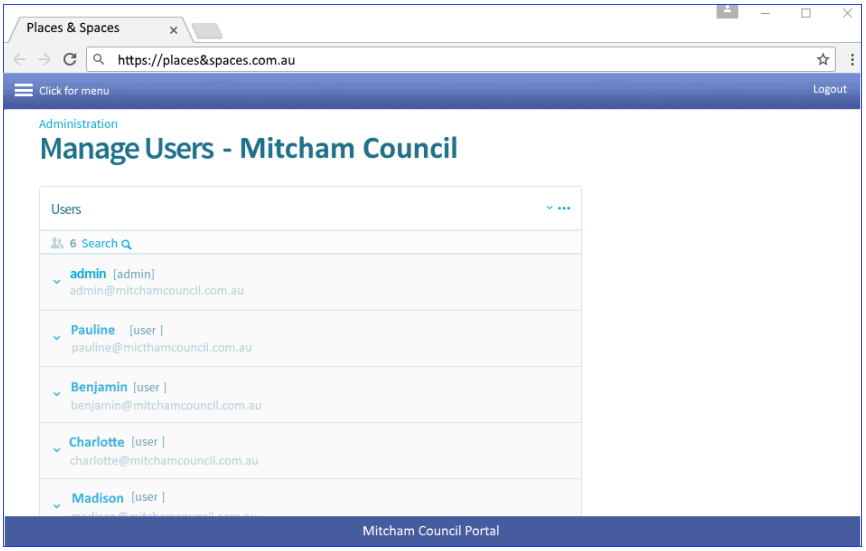
5.3.2 **Bookings Dashboard**

On login to the council portal a dashboard of current activities allowing staff to quickly and effortlessly view top facilities, new bookings, and/or tasks requiring action.



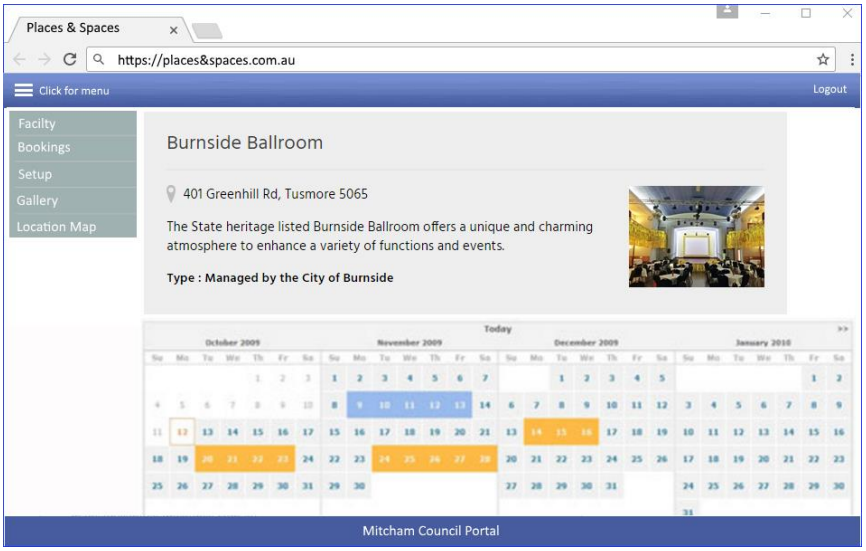
5.3.3 **User Management**

Each council needs the ability to manage their own access. For example; the ability to add/edit users and grant or revoke access and/or organize them into groups.



5.3.4 **Manage Facilities**

Faculties, Venues, Halls, Parks etc. need to be created, managed and maintained. The ability to add details, pictures, availability and configure booking criteria will remove hours of administration time. The booking calendar is where managing your space starts to get much easier. The easy-to-use interface allows you to make bookings directly in the calendar in just a few clicks. You are able to see everything at a glance and get a full visual overview of your space.

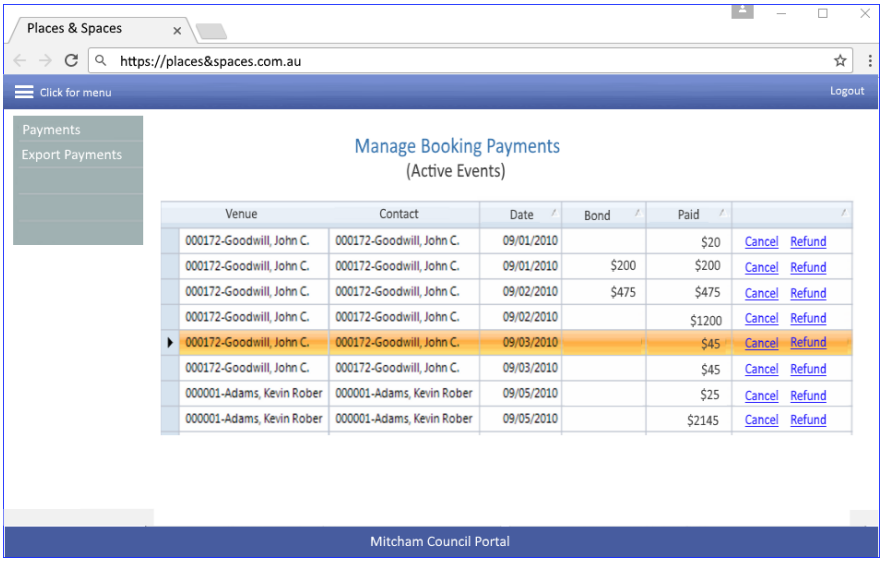


5.3.5 **Fully Customisable**

Each venue has a specific set of rules and requirements that customers need to be respect when booking. For example, minimum and/or maximum booking times; strict booking "blocks" to eliminate wasteful gaps in your schedule; different kinds of customers that need individual consideration; different conditions and/or pricing for off-peak times; customising the conditions and pricing under which users book your spaces; sophisticated scenarios like overlapping/shared spaces; duration-based pricing and fixed-rate; customisation of content in the booking process and confirmation notifications.

5.3.6 **Online Payment Gateway**

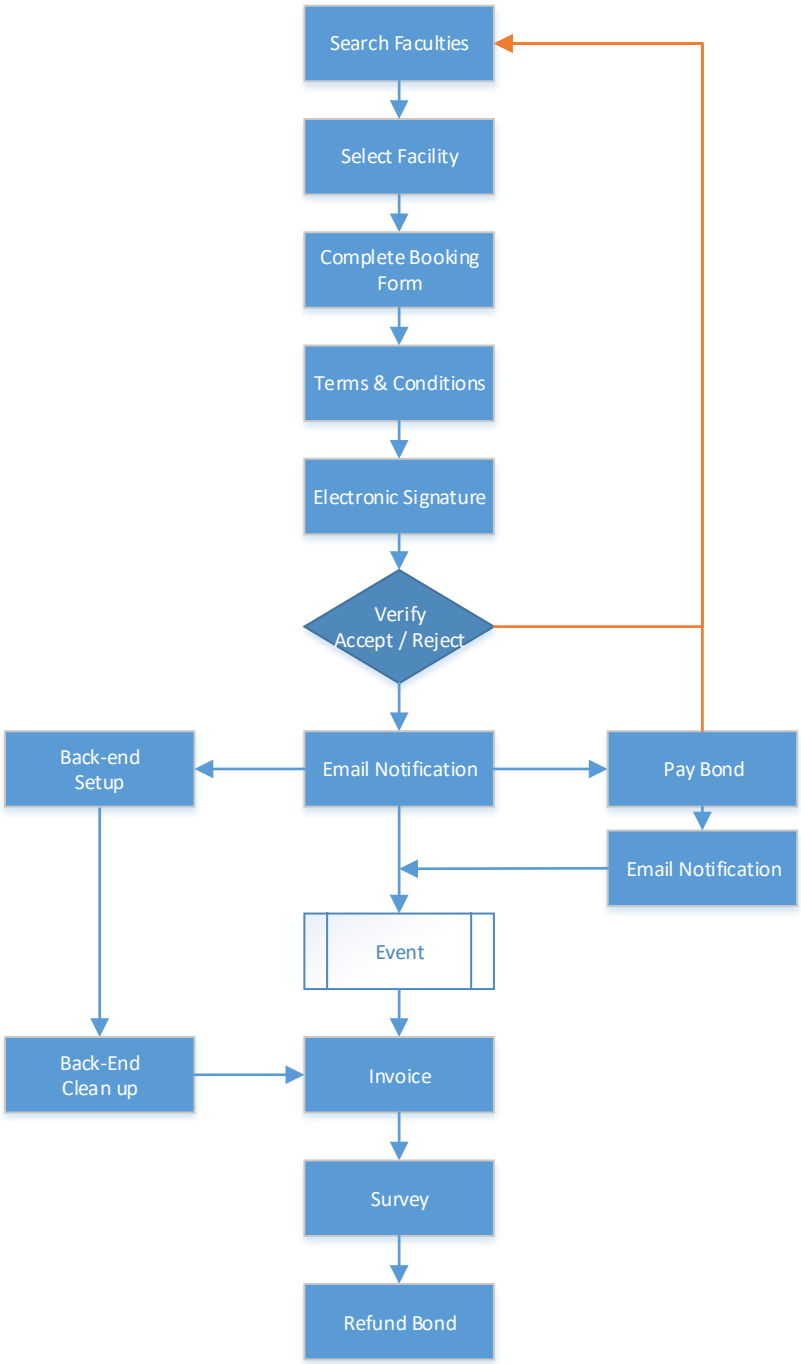
Collecting payments for the use of your space can be a pain. Even without the inevitable no-shows and cancellations, managing and recording payment information is already a significant job; choose between *Upfront* and *Book Now, Pay Later*; integrate with the latest payment gateways, giving you the power to manage payment in the way that suits your venue.



5.3.7 Facility Work Flows

Business processes, tasks and prerequisites are necessary to book each facility, venue, hall or park.

The system must allow one or more tasks to be defined and configured in the process of booking a venue online. For example; notifying staff managing facilities as well as support staff. The following diagram is an example of a basic workflow.



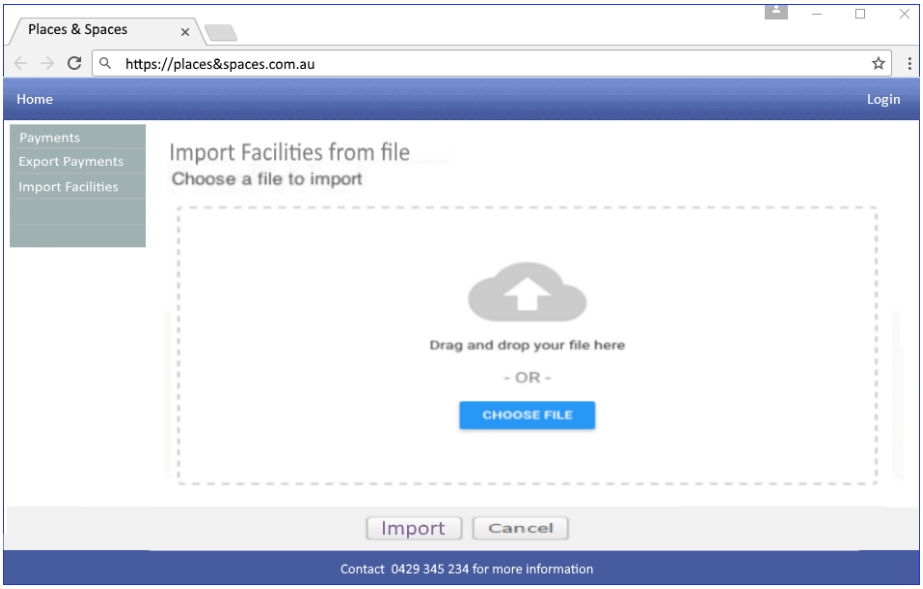
5.3.8 Integration – Export Data

This web page will allow ad hoc selection and downloading booking payments for importing into other systems.

5.3.9 Integration – Import Data

Importing faculties, venues, halls and parks etc. into Places and Spaces.

Most likely a one off process at the time of setup.



5.3.10 **Booking Reports**

Perform analysis of facilities bookings and determine usage and profitability metrics.

5.3.11 **System Dashboard**

See at a glance - (Current | Daily | Average) usage, E-mail/SMS processing, Payment processing, Av response times, etc.

5.3.12 **Background Processor**

As highlighted in the feasibility report, custom development is the only solution capable performing complex scheduled tasks (e.g. e-mail, SMS, reports, manage workflows, etc.). These tasks would require the development of an additional program which could be run in background to perform real-time and scheduled tasks.

This application would have no UI and run as a background process.

5.3.13 **Data Integration Platform**

Platform to allow third parties to build applications to exchange data between internal council systems to avoid duplicating data entry. This could allow for data to be exported at scheduled intervals as opposed to the more ad hoc approach discussed earlier.

This data integration platform would most probably be left to later in the project if at all.

5.4 Glossary of Terms

Facility – any venue, hall, room, tennis courts, oval, park, etc. available for booking.

Customer – the end user booking the facility.

Promoter – hirers who run events open to other members of public.

Registered User – customers known to the system. For example; customers who have a current booking will have a link to edit their booking.

Bump-in/Bump-out – refers to a specified period of time before and after an event used by the customer for setup and clean-up.

Mobile Devices – smart phone and/or tablets.

Auditorium – a purpose-built performance room.

Cancellation Clause – policy or statement that details the terms and conditions under which a person or group may terminate the agreement/reservation and/or contract.

Caterer – an individual or company hired to provide food (and sometimes beverages) at an event.

Catering – a food service for a function.

Check In – to announce arrival.

Check Out – to announce departure.

Compensation – payment received for services provided.

Confirmation – the act of confirming a reservation.

Exclusive Use – private use, solely for the use of a specific group or people.

Event – an event can be anything from a small charity fundraiser to wedding or large music concert.

Exhibition – a public display or demonstration.

Exhibitor – a person who displays works of art or other items of interest at an exhibition.

Feedback – information that normally highlights both positive and negative elements with ways to improve.

Floor Plan – the layout of the room to include table and seating arrangements along with entertainment or stage area.

Forum – online or offline meeting place where ideas and views on a specific issue are discussed.

Group Booking – a reservation for a large number of people.

Group Rate – a special or discounted rate given for a large group booking.

Guests – people invited to an event or function.

Lead Time – the amount of time that passes between the start of a process and its completion.

Maximum Capacity – the total amount of people permitted.

Overbooking – the process of taking in too many reservations for an event or event venue than there is room for.

Registration Fee – an initial sum of money or deposit required to ensure registration, placement or enrolment. Not normally returned upon cancellation.

Site – the location for an event.

Supplier – the individual or company that sells goods or services to another company; term often used synonymously with "vendor".

Vendor – the company retained by an event planner to handle one or more aspects of an event; term sometimes used synonymously with "Supplier".

Vendor Agreement – a legal contract between event planner and vendor.

Venue – place or site where an event is to take place.