Unlock:

Functional Specification

Version 5.0

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Document Control

Version	Date	Sections changed	What was changed
1.0	29/1/2018		
2.0	14/2/2018	Vision	Improved the detail of the project vision
		User stories	1) User story 1.0.0 – load a document changed to load a PWS XML file 2) Added a terminology table 3) Defined a sub-feature
		Wireframes	Linked wireframes to user stories
		Acceptance criteria	Mentioned that the acceptance criteria are not final, will be changed as the product progresses and user stories are added
3.0	15/3/2018	User stories	User stories for first iteration updated
4.0	24/5/2018	User stories	Changed the way certain user stories were worded and removed all administrator user stories apart from S01.0.0
5.0	6/6/2018	User stories	User stories for first iteration updated
			S02.1.1, S02.1.2 removed for phone. All S06 removed. S09.1.0 removed S10.0.0 removed
			S03.1, S03.2 added.S04.0.0 S04.1.0 edited from unlocking rewards to unlocking POI. S05.1.1 edited to see locations (not rewards). Added S07.2.2. S07.3.1 edited to remove fast forward and rewind but include changing timestamp. S07.4.1 for third iteration. S07.5.1 third iteration. S08.1.1 edited to remove fast forward and rewind but include changing timestamp. S08.5.0 added. S08.3.1 for third iteration. S12.1.0 third iteration. S13.1.0 changed to remove notification but add animation settings. S13.3.0 edited to remove social media settings. S13.3.2 edited to setting a username when account is created.

Contents

Unlock: York is an application for tourists to discover and engage with local attractions in a way they couldn't before. Users can navigate the local area, discover new things, and receive rewards for visiting attractions. Local business owners can draw in new visitors by participating in the app. Local tourism boards can help to drive new enthusiasm towards their locations.

The application can bring the stories and history of the attractions to life with interactive multimedia linked to specific points of interest.

We will be piloting in the City of York with a view to expand to other destinations after refining the concept.

Terminology

Point of Interest (POI)	A significant tourist attraction within a city
Sub-Point of Interest (sPOI)	An interesting feature or location within the Point of Interest
Project-Wide Specification XML (PWS XML)	A common XML-based file-format between multiple organisations which allows loading of multimedia into the application

Overview

The application is split into two versions:
- The kiosk, for installation at tourist destinations (Point-of-Interest) in the City of York,
- The phone app, that individual users will install on their phones to explore the city.

The *User Stories* section below indicates whether a story applies to the kiosk, phone, or both.

The user can view an overview of the City where they can see available Points of Interests. They can zoom in and see Sub-Points of Interest (sPOI) as well as content related to the location.

The phone app will operate in the same way as the kiosk but will have additional features for a more personalised user experience. These include:
- a leader board to compare score with friends and people in your area;
- a reward system for unlocking POI and sPOI;
- bonus content in the form of hidden locations.

User Stories

Story ID	Priority (1-5)	Phone (P) or Kiosk (K)	As a...	I can...	So that...
S01.0.0	5	K	Administrator	Load a PWS XML file	New maps and features can be set on the application
S02.0.0	5	PK	User	See a map with all major POI visible in the location	I can view all the content
S02.1.0	5	PK	User	Zoom into and out of the main map	I can view the map in more detail or view the full map on my screen
S02.1.1	5	K	User	Scroll the mouse wheel	The zooming is triggered at different levels
S02.1.2	5	K	User	No longer Zoom in/out when at a lower/upper limit on the map	I am unable to zoom in/out to a point were a can no longer read the map
S02.1.3	5	PK	User	See different levels of detail at different zoom levels	I can view detail relevant to my current level
S02.2.0	5	PK	User	Click and drag on the map	The map pans around the screen
S02.3.0	5	PK	User	Click on a POI	A POI specific action happens
S03.0.0	4	PK	User	See my current location relative to the POI as a dot on the map	I can navigate around the map and see nearby POI
S03.1.0	4	K	User	Find gps location of kiosk point and map this to map image	Kiosk can be be mapped to image via expected GPS coordinate
S03.2.0	4	K	User	Kiosk stays at same point when changing between zoom level	I am able to know where the Kiosk is compared to other POI
S04.0.0	4	P	User	Unlock rewards from visiting locations	I am incentivised to keep visiting new places
S04.1.0	2	P	User	Have a celebration animation and sound effect when	I feel a sense of achievement

				unlocking a POI	
S04.2.0	5	P	User	Scan a QR code at a specific location to unlock content related to that location	I can view the content related to a place I am visiting
S05.0.0	5	P	User	Log into the application and choose my username	I can track my progress
S05.1.0	3	P	User	See how many POIs/sPOIs I haven't yet unlocked	I can view my progress for the area
S05.1.1	3	P	User	Tap the unlock bar to see all the locations user has previously unlocked	I can view my overall progress
S05.2.0	2	P	User	See a leaderboard for all users	I can compare my progress with others
S07.0.0	5	PK	User	Press a POI icon	I can find all the interesting features of the location on a smaller map with icons
S07.1.0	3	PK	User	See opening times/prices for the location	I can plan my day as well as the cost
S07.2.0	4	PK	User	See the description of the location	I can learn about the POI
S07.2.1	4	PK	User	Scroll up and down the page	I can view all the information of it doesn't all fit to my screen
S07.2.2	4	P	User	Have text-to-speech for text descriptions for POI	I can hear the text description spoken aloud from my phone speaker
S07.3.0	4	PK	User	Watch videos related to the location	I can learn about the POI
S07.3.1	3	PK	User	Play/pause/change timestamp with seekbar/change vol/etc	I can re-listen/pause or adjust the video volume or playback time
S07.4.0	2	PK	User	hear audio clips related to the location	I can learn about the POI

S07.4.1	2	PK	User	Play/pause/fast forward and rewind/ change vol/etc	I can re-listen/pause or adjust the audio volume or playback time
S07.5.0	4	PK	User	see photos related to the location	I can visualise the POI
S07.5.1	3	PK	User	Zoom into and out of the photos	I can view the photo in more detail or view the full photo on my screen
S08.0.0	3	PK	User	Press a sPOI icon	I can see the description of the sPOI
S08.1.0	3	PK	User	Watch videos related to the sPOI	I can learn about the sPOI
S08.1.1	2	PK	User	Play/pause/change timestamp with seekbar/ change vol/etc	I can re-listen/pause or adjust the video volume or playback time
S08.2.0	2	PK	User	Hear audio clips related to the sPOI	I can learn about the sPOI
S08.3.0	3	PK	User	See photos related to the sPOI	I can visualise the sPOI
S08.3.1	2	PK	User	Zoom into and out of the photos	I can view the photo in more detail or view the full photo on my screen
S08.4.0	2	PK	User	Scroll up and down the page	I can view all the information if it doesn't all fit to my screen
S08.5.0	4	P	User	Have text-to-speech for text descriptions for sPOI	I can hear the text description spoken aloud from my phone speaker
S09.0.0	4	PK	Sponsor	Promote my business in the map (has to be a cafe/shop at the POI or nearby)	Users will visit as part of their city tour
S11.0.0	2	P	User	Lock my phone whilst audio is playing	I can continue listening to the audio guide
S12.0.0	2	P	User	Unlock locations that are not marked on the map (discover	I am encouraged to keep using the app

				hidden history)	
S12.1.0	2	P	User	Automatically be notified when at a new secret location	It is challenging but not to difficult.
S13.0.0	3	PK	User	Access app settings	I can customise my user experience
S13.1.0	3	PK	User	Toggle audio and animation settings	I can control the the entire apps media settings
S13.2.0	1	P	User	Toggle whether a selected POI autoplays	I can control the pacing of my user experience
S13.3.0	2	P	User	Edit leaderboard settings	I can opt in and out of social media
S13.3.1	3	P	User	Choose whether my unlock stats are put on the public leaderboards	I have a choice over how my data is shared
S13.3.2	2	P	User	Set a username for leaderboards when creating an account	I can create an anonymous and unique username

Acceptance Criteria

Note: these are not the final Acceptance Criteria and should be considered provisional for the early design. They will be checked and refined as the design evolves.

Story	Step	When…	Then…
S01.0.0	1	The administrator moves the configuration file into the load directory	
	2		The system loads the file and displays the map
	3	The administrator moves the configuration file into the load directory but the file is unable to load	
	4		The system displays an error message "unable to load file from the load directory"
S02.0.0	1	The user opens the app	
	2		An overview map is visible showing the entire local area covered by the app
S02.1.0	1	The user presses the zoom-in/zoom-out buttons	
	2		The map view zooms into or out of a smaller, more detailed area
S03.0.0	1	The user opens the map	
	2		The user's position is displayed on the overview map
	3	The user opens the map but is unable to	

		detect the user's location using GPS	
	4		The system displays a error message "Unable to detect current location"
S04.0.0	1	The user visits a location they haven't visited before	
	2		Content boxes that were previously locked/disabled are now visible and can be interacted with
S04.1.0	1	The user visits a location they haven't visited before	
			An animation and sound effect in the application informs the user that they have unlocked a new location
S04.2.0	1	The user scans a QR code at a specific location	
	2		Content relating to the location is displayed
S05.0.0	1	The user creates an account with an email address, password and username	
	2		There is a visible indication of how many POI/features have been unlocked and not unlocked.
S05.1.0, S05.1.1	1	The user taps the progress bar	
	2		A screen is displayed showing more information about what is left to discover

S05.2.0	3	The user taps the leaderboards icon	
	4		The screen changes to display information about what other users have discovered/how their scores compare
S07.0.0	1	The user presses a POI icon...	
	2a	If the user is on the kiosk, and at the correct location...	
	3a		The map zooms into the sub-location and shows all available content for the POI
	2b	If the user is on the kiosk, and at a different location...	
	3b		The map zooms into the sub-location, but the extra content is locked with a message explaining that the user must visit the location to see the content
	2c	If the user is on the smartphone app...	
	3c		The application shows all the content the user has unlocked at the particular location
S07.1.0	1	The user taps on a POI icon for a location that has opening hours...	
	2		One of the visible content panes displays the opening times of the POI
S07.2.0	1	The user presses a POI icon...	

	2		The map zooms into the location
	3		One of the visible content panes displays a text description of the location
S07.2.1	1	The user scrolls down in a content pane	
	2		More content becomes visible
S07.2.2	1	The user presses the text-to-speech icon	
	2		The text description of a particular location is automatically converted to speech and is spoken aloud through the phone speaker/headphones
S07.3.0	1	The user presses a POI icon...	
	2		One of the content panes that becomes visible contains video content related to the location
	3	The user taps/clicks on video content	
	4		The video starts playing
S07.3.1	1	The user clicks the transport controls on a visible video for a location	
	2		All transport controls perform the appropriate action on the video
S07.4.0	1	The user presses on audio content related to a location	
	2		The audio content starts to play

S07.4.1	1	The user clicks on the transport controls for audio that is playing at a location	
	2		The audio content responds appropriately
S07.5.0	1	The user presses a POI icon...	
	2		..the user can see photos related to the location
S08.0.0	1	The user presses a Sub-Point of Interest (sPOI) icon	
	2		One of the visible content panes displays a text description of the location
S08.0.1	1	The user scrolls down the page	
	2		More content becomes visible
S08.1.0	1	The user taps/clicks on video content	
	2		The video starts playing
S08.1.1	1	The user clicks the transport controls on a visible video for a location	
	2		The audio content responds appropriately
S08.2.0	1	The user presses on audio content related to a location	
	2		The audio content starts to play
S08.2.1	1	The user clicks on the transport controls	

		for audio that is playing at a location	
	2		The audio content responds appropriately
S08.3.0	1	The user presses an sPOI icon	
	2		The user can see photos related to the location
S08.3.1	1	The user zooms in and out of the image	
	2		The picture becomes bigger and smaller
S08.4.0	1	The user scrolls down in a content pane	
	2		More content becomes visible
S08.5.0	1	The user presses the text-to-speech icon	
	2		The text description of a particular location is automatically converted to speech and is spoken aloud through the phone speaker/headphones
S09.0.0	1	A user looks at the overview map...	
	2		...sponsored/suggested locations (cafés, shops, attractions) are visible
S11.0.0	1	The user locks their phone whilst audio content is playing	
	2		The audio content continues playing without stopping
S12.0.0	1	The user visits a 'hidden' location not	

|			
		listed on the app	
	2		They receive a notification saying that they are at a hidden location
	3		They receive an unlock/award for that location
	4		It appears on their map for the future
	5		Some minor content becomes available for it
S13.0.0	1	The user opens the app settings...	
	2a		They can see an option to toggle audio settings for the app
	2b		They can see an option to toggle animation settings for the app
	2c		They can toggle whether a selected POI autoplays
	2d		They can edit and leaderboard settings
	2e		They can choose whether unlock stats are put on the public leaderboards
	2f		They can set a username for the leaderboard

User Interface

Overview of UI Workflows

Phone
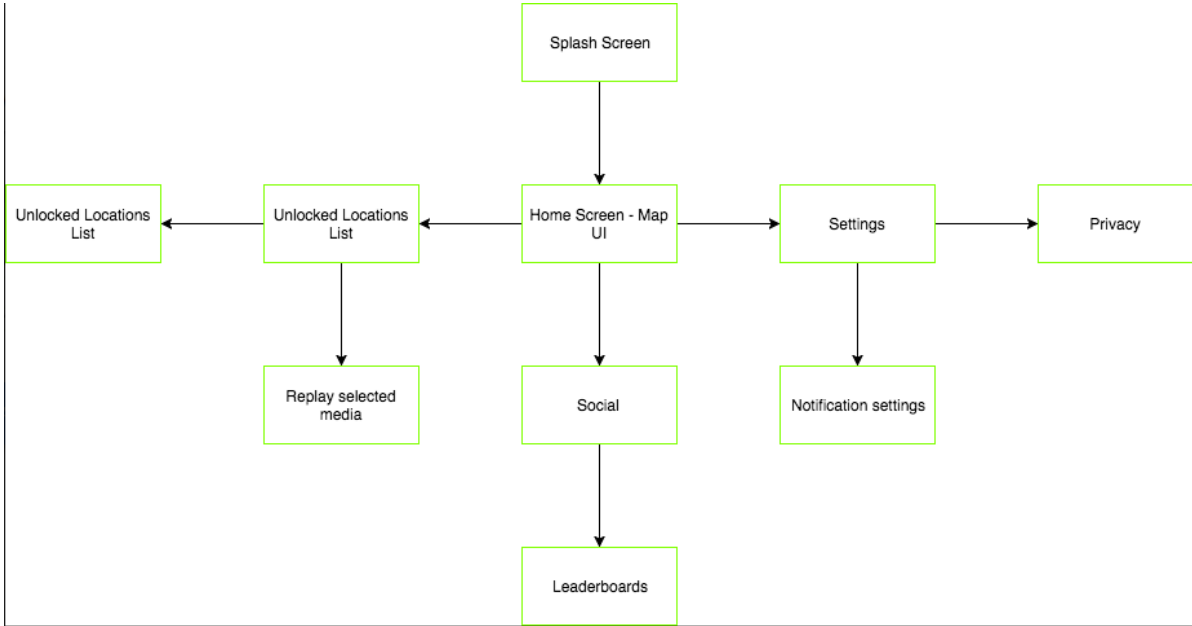
Kiosk
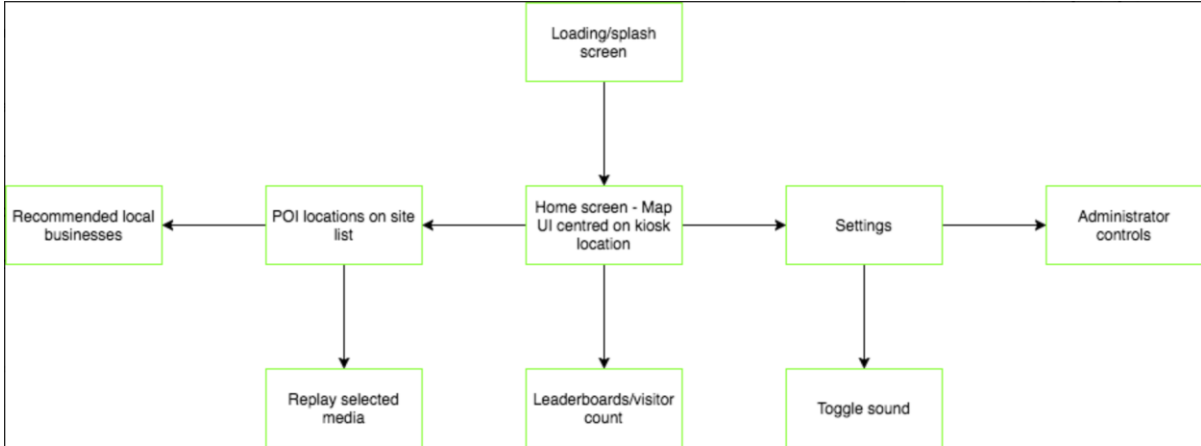
Wireframe Mockups

All the images in this section are pre-development ideas of the visual aspect of the app and may change as the project proceeds.

Kiosk

Story	Image
S02.0.0 **Map**	
S08.0.0 **Sub-Point of Interest**	

Phone

Story	Image
S02.0.0 **Map**	

S07.2.0 **Point of Interest**	
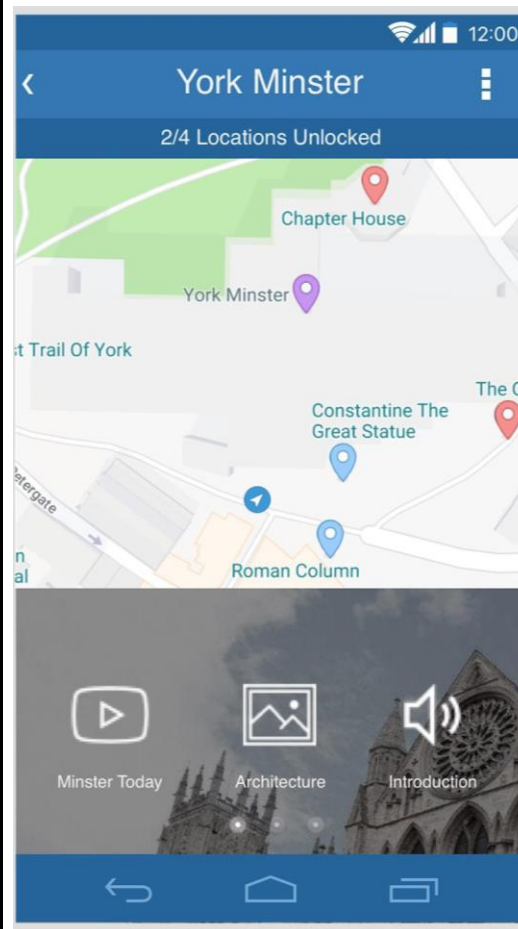
S04.0.0 and S05.2.0	
User Profile	
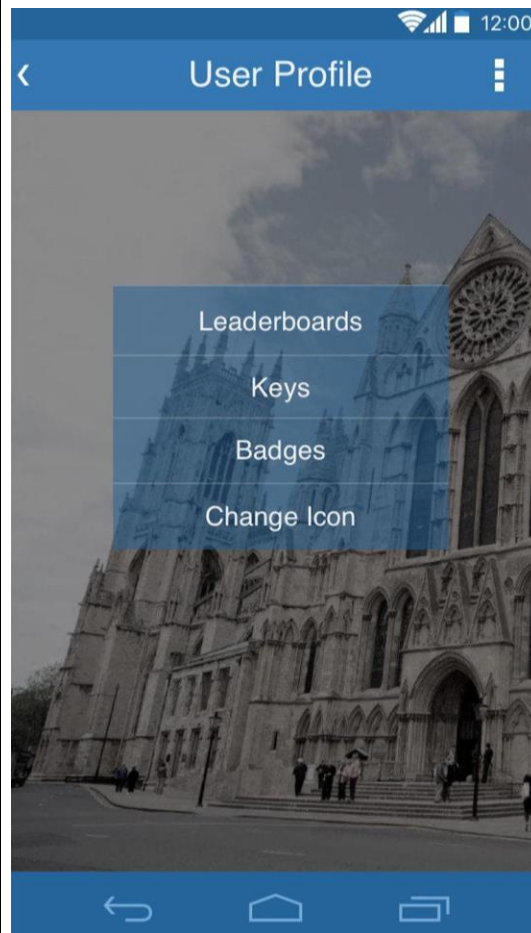
S08.0.0 **Sub-Point of Interest**	

S13.0.0

Settings