Unlock:

Functional specification

Version 3.0

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Document Control

Version	Date	Sections changed	What was changed
1.0	29/1/18	-	-
2.0	14/2/18	Vision	Improved the detail of the project vision
		User stories	1)User story 1.0.0 – load a document change 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 project progresses and user stories are added
3.0	15/3/18	User stories	User stories for first iteration updated

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 leaderboard to compare score with friends and people in you 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

S01.1.0	3	K	Administrator	make objects to contain all the information from the dom structure	the information can be accessed quicker when a presentation is loaded
S01.2.0	2	K	Administrator	load presentation defaults from the dom structure into the presentation object	will be used to for defaults for subsequent objects when information not supplied in the dom
S01.3.0	2	K	Administrator	Load meta data from dom structure into Meta object and add to presentation object	the meta data can be easily accessed later
S01.4.0	2	K	Administrator	Load gps data from dom structure into GPS object and add to presentation object	the gps data can be easily accessed later
S01.5.0	3	K	Administrator	Iterate and find all slides in the dom structure and add each slide to the presentation object	all slides can be contained in an array of slide objects allowing them to be assessed later
S01.6.0	4	K	Administrator	load Text elements from the dom structure and add to the appropriate slides	allows text to be found easily for each slide
S01.6.1	4	K	Administrator	allow format changes to be made and updated during text elements	allows different words/sentences within a paragraph to have different formats
S01.6.2	4	K	Administrator	Text elements missing attributes can use slide/presentation defaults	ensures text elements always have a format
S01.6.3	4	K	Administrator	add line breaks into the text elements when specified in the xml	line breaks will allow paragraphs to be defined
S01.7.0	4	K	Administrator	load shapes from dom structure into Shape objects and add to appropriate slides	allows shapes to be easily found later
S01.7.1	4	K	Administrator	if no colour attributes have been specified for a shape in the xml the slide/presentation defaults can be used	ensures shapes always have a colour or fill
S01.8.0	4	K	Administrator	load images from dom structure into a image object	images can be accessed later from the correct slide

				and added to appropriate slides	
S01.9.0	4	K	Administrator	load video from dom structure into a video object and added to appropriate slides	video objects can be accessed easily and from the correct slide
S01.10.0	4	K	Administrator	load audio from dom structure into audio object and add to appropriate slides	audio can be easily accessed from the correct slides
S01.11.0	5	K	Administrator	validate xml file with the given schema	checks that the xml file is the correct format
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	PK	User	Scroll the mouse wheel	The zooming is triggered at different levels
S02.1.2	5	PK	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
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 unlocking an award	I feel a sense of achievement
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	3	P	User	See how many major/minor POI I haven't yet unlocked on the main and sub maps	I can view my progress for that area
S05.1.0	3	P	User	Tap the unlock bar to see all the locations/rewards	I can view my overall progress

S05.2.0	2	P	User	See a leaderboard for the local area and between friends	Compare my progress
S06.0.0	4	P	User	Download a personalised version of the tour with additional features available on my phone	I can have a portable version of the app
S06.1.0	3	P	User	When visiting a location, extra content is unlocked	I am encouraged to explore the city
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	I can see opening times/prices for the location	I can plan my day as well as the cost
S07.2.0	4	PK	User	I can 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
S07.3.0	4	PK	User	I can watch videos related to the location	I can learn about the POI
S07.3.1	3	PK	User	Play/pause/fast forward and rewind/ change vol/etc	I can re-listen/pause or adjust the video volume or playback time
S07.4.0	2	PK	User	I can 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	I can 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 an sPOI icon	I can see the description of the sPOI
S08.0.1	2	PK	User	Scroll up and down the page	I can view all the information of it doesn't all fit to my screen

S08.1.0	3	PK	User	I can watch videos related to the sPOI	I can learn about the sPOI
S08.1.1	2	PK	User	Play/pause/fast forward and rewind/ change vol/etc	I can re-listen/pause or adjust the video volume or playback time
S08.2.0	2	PK	User	I can hear audio clips related to the sPOI	I can learn about the sPOI
S08.2.1	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
S08.3.0	3	PK	User	I can 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
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
S09.1.0	3	P	User	Receive rewards (vouchers / achievements) for visiting a certain number of POI	The app provides an additional incentive to visit the POI
S10.0.0	2	P	User	See a suggested route around the locations	I can find my way more easily
S11.0.0	2	P	User	Lock my phone whilst audio is playing	Continue listening to the audio guide
S12.0.0	2	P	User	Discover hidden history	I am encouraged to keep using the app
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 notification settings	So I can control the the entire apps media settings
S13.2.0	1	P	User	Toggle whether a selected POI autoplays	So can control the pacing of my user experience
S13.3.0	2	P	User	Edit social media and	So that I can opt in and out of social

| S13.3.1 | 3 | P | User | Choose whether my unlock stats are put on the public leaderboards | So I have a choice over how my data is shared |
| S13.3.2 | 2 | P | User | Set a username for the leaderboard | I can create an anonymous and unique username |

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| | | | | leaderboard settings | media |

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 in the application informs the user that they have unlocked a new location
S05.0.0	1	The user is viewing the map at any level	
	2		There is a visible indication of how many POI/features have been unlocked and not unlocked
S05.1.0	1	The user taps the indication of what is locked unlocked	
	2		A screen is displayed showing more information about what is left to discover
S05.2.0	1	The user taps the indication of what is locked unlocked	
	2		A screen is displayed showing more information about what is left to discover
	3	The user taps a social/leaderboard indicator	
	4		The screen changes to display information about what friends have discovered/how their scores compare
S06.0.0	1	The user installs the app and opens it	
	2		The app opens successfully
S06.1.0	1	The user visits a location on the additional content is unlocked	
	2		The display information screen now shows all the information for the current POI

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 map zooms into the location and 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		The map zooms into the location
	3		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
S07.3.0	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
S09.0.0	1	A user looks at the overview map...	
	2		...sponsored/suggested locations (cafés, shops, attractions) are visible
S10.0.0	1	The user is at a particular POI...	
	2		...suggested route(s) around the POI is visible to the user
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 notification settings for the app
	2c		They can toggle whether a selected POI autoplays
	2d		They can edit social media 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
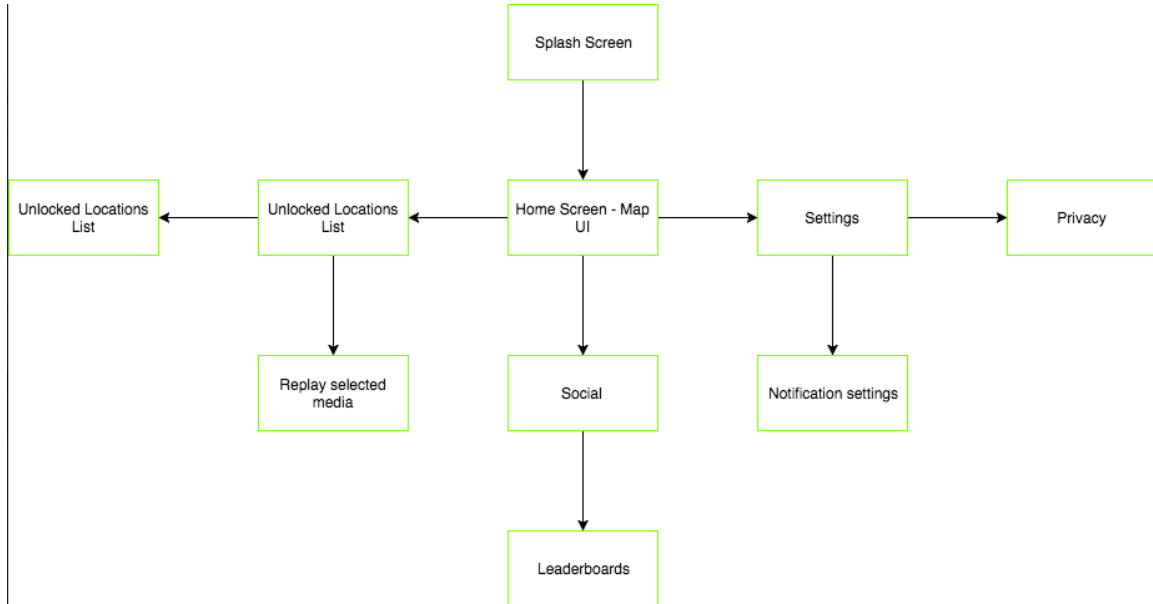
Kiosk
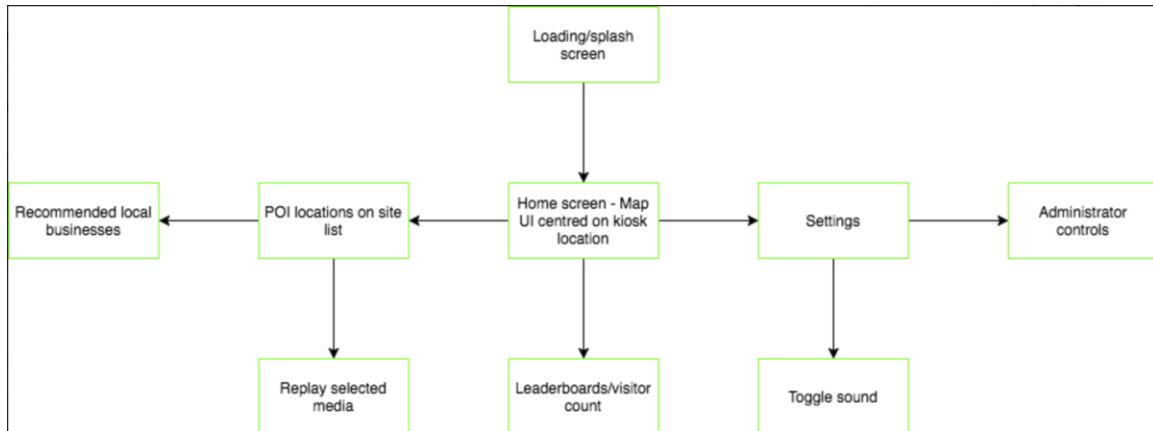
Wireframe Mockups

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**	

Story	Image
S02.0.0 **Map**	

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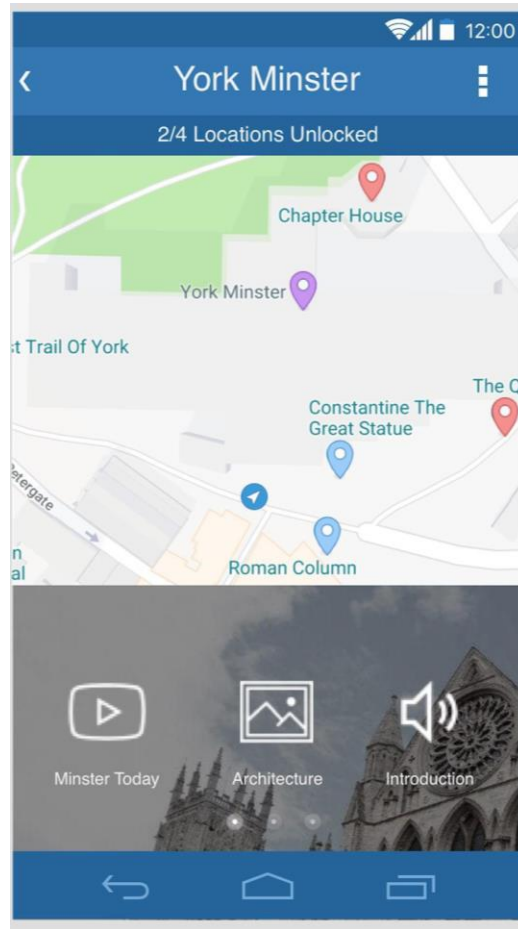
S04.0.0 and S05.2.0 **User Profile**	

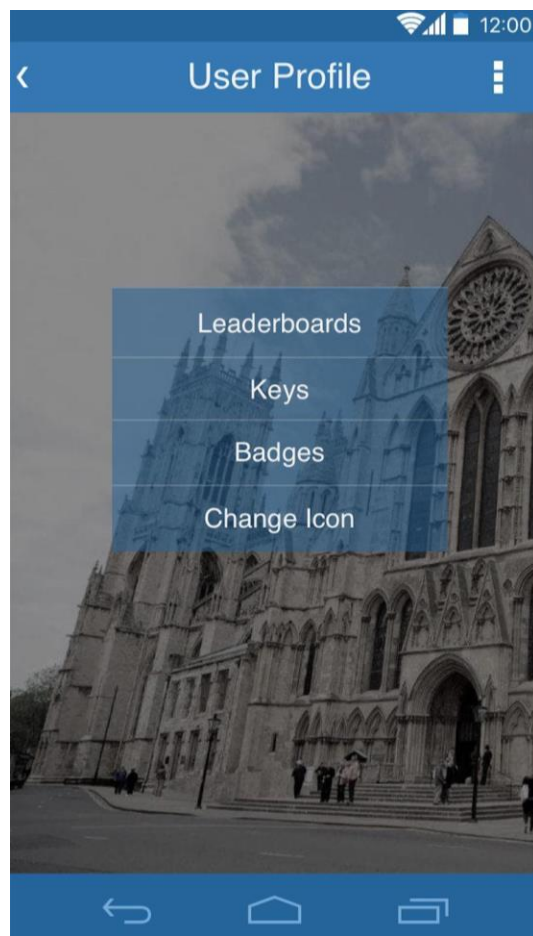|	
S08.0.0 **Sub-Point of Interest**	

S13.0.0

Settings