



# ARCHES

H2020 – 693229

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## Deliverable 4.7 “Report on system integration-2<sup>nd</sup> version”

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**Abstract**

The present deliverable contains all the advances related to the design and development of the mobile applications in ARCHES. The design and functionalities arise from the needs and suggestions of the exploration groups and the requirements detected in the “D4.1 -Report on system requirements for handles devices”[3].

The advances is being iterative and based on the feedback from the people with differences and difficulties associated with perception, memory, cognition and communication This is intended to more appropriate and effective results.

The present deliverable also shows what was changed upon the takeover of the responsibility of the deliverable by another member of the consortium.

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## Document Information

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<b>Abstract (for dissemination)</b>	<p>The present deliverable contains the definition, analysis and design between subsystems of the ARCHES platform, an updated version of the data model, the use case analysis from the web system requirements defined in the deliverable D3.1 “Report on system architecture definition” [1] and a first definition of the graphical user interface (GUI).</p> <p>The partners have worked together to reach the best initial possible design meeting the stakeholders' needs. The design will be iterative and will allow the technical developers to implement modifications, adaptations or improvements based on the feedback from the people with differences and difficulties associated with perception, memory, cognition and communication, leading to more appropriate and effective results.</p> <p>The present deliverable also shows what was changed upon the takeover of the responsibility of the deliverable by another member of the consortium.</p>
<b>Keywords</b>	App, Routes, Museums App, graphical user interface

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15-03-2019	0.1	Christoph Bitzner	Update of the general information
24-03-2019	0.2	David Turewicz	Updates on technical sections
28-03-2019	0.3	Stefan Schmied	Review
29-03-2019	1.0	Christoph Bitzner	Format and final version



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## Abbreviations

**ICT:** Information and Communication Technologies

**OU:** The Open University

# 1 Introduction

This deliverable will presents the advances in the development and design of the web applications in the ARCHES platform.

The methodology selected for the design and implementation is based in prototypes. Showing is always better than telling. If people can interact with the ideas, then they're better able to understand them. This allows a better communication and collaboration with the exploration groups. The developers and the groups can play with a prototype and explore limitations and possibilities and it is possible to find problems and fix them earlier in the process,

The deliverable is divided in several sections. Each section is dedicated to each of the applications

- **Our story:** It is to serve as an accessible virtual research diary that can be used by anyone in any environment to record and present their museum experiences. Also, it can serve as an inexpensive tool for creating simple, accessible tours within museum spaces.
- **Unity ARCHES test application:** this is a prototype designed and created for validate the needs identified by the exploration groups at the Victoria and Albert Museum and The Wallace Collection. Some of them are: zoom, include text to speech, read QR, image processing, etc. All functionalities will be evaluated and test it with the exploration groups to approve or discard in the next developments.
- **Museum application Design:** A complete redesign of the application was implemented after the takeover of responsibility of this deliverable by another member of the consortium.

In Section 2.1 and 3.1 it is the update on Our Story and Unity 3D described.



## 2 Our Story

### 2.1.1 UPDATE on Our Story

The App was completed by TreeLogic and it was given over to OU. There it will be completed and adapted. All the learnings from the user-groups have been used for the development of the other applications.

## **3 Unity 3D**

### **3.1.1 UPDATE on Unity3D**

After a thorough investigation and analysis of Unity and the Use Cases concerning the app, it has been concluded, that Unity is not useful for this application. The learnings have been very helpful for the further development of the application. All this information has been added to the application as it is right now. Chapter 4 describes the museum application in further detail.

## 4 Museum application Design

We analyzed the use cases and needs of the museums and groups thoroughly and designed an app that is accessible, visually appealing, interesting and also gives the participants an enjoyable time in the museums.

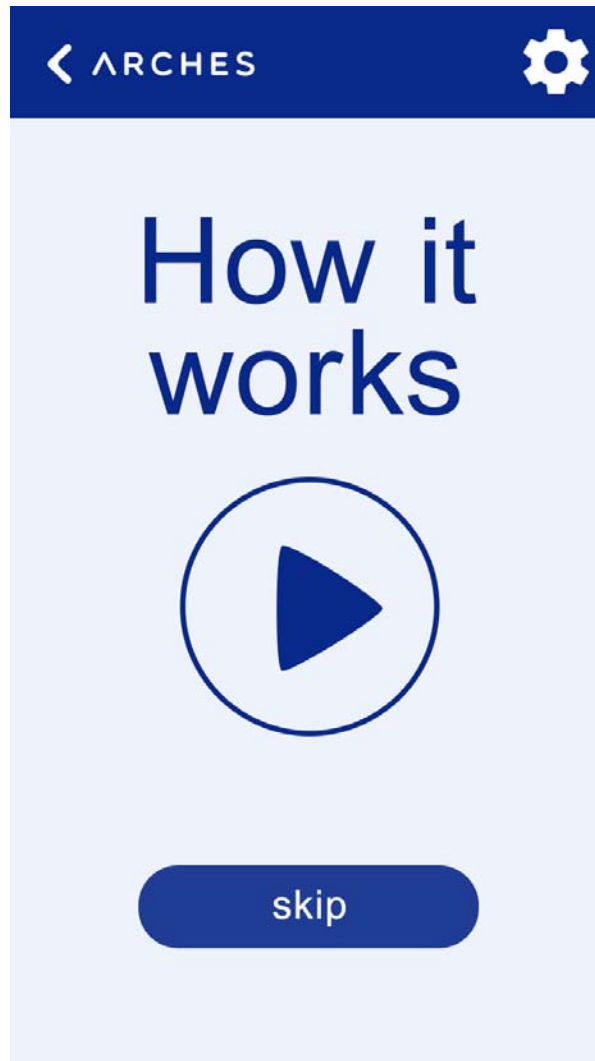
### 4.1 Introduction screen

This is the introductory screen of the app (see Figure 1: “Intro” screen). It gets blended in shortly after loading the app and disappears after a few seconds



Figure 1: “Intro” screen

## 4.2 How It works - Screen



**Figure 2: "How it works" screen**

In this screen (see Figure 2: "How it works" screen) an explanatory-video tells the user how to use the app. It can be skipped immediately. This introduction video is made accessible to all user groups and explains also how the app can be customized to the individual needs of the user.

### 4.3 Settings - Screen

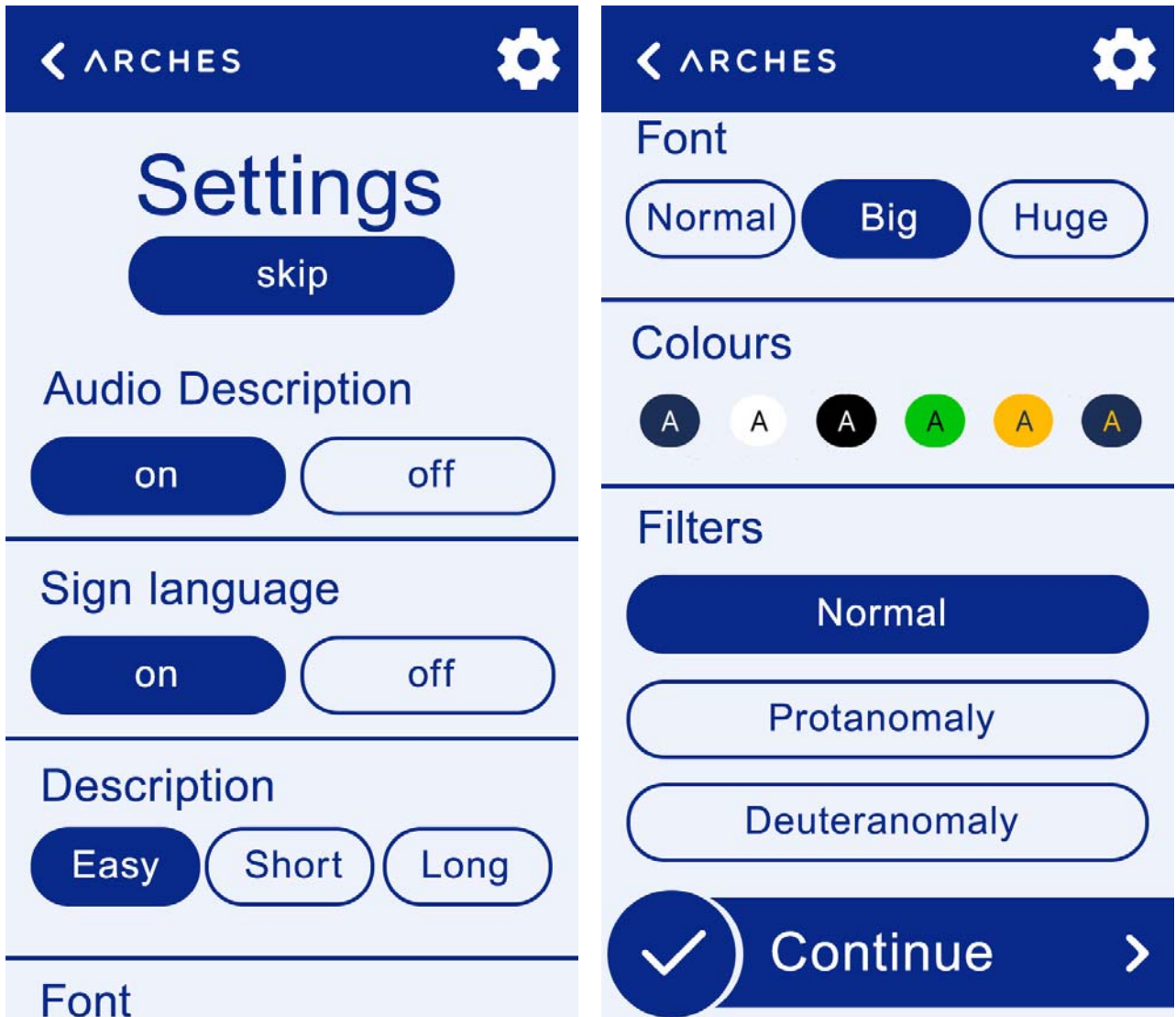


Figure 3: “Settings” screen

The settings screen (see Figure 3: “Settings” screen) shows all the different options the user can choose from to assess the accessibility of every different user-group. These settings determine how the app will be presented in general. This page is always accessible through the icon on the right top corner.

The users are able to change the description to easy-description, to a sign language video or to Audio-Description. Furthermore, the font-size can be changed and the colours of the app adjusted between six different settings. Finally, a set of filters give users with various visual problems the possibility to see the images in different formats.

#### 4.4 Main - Screen

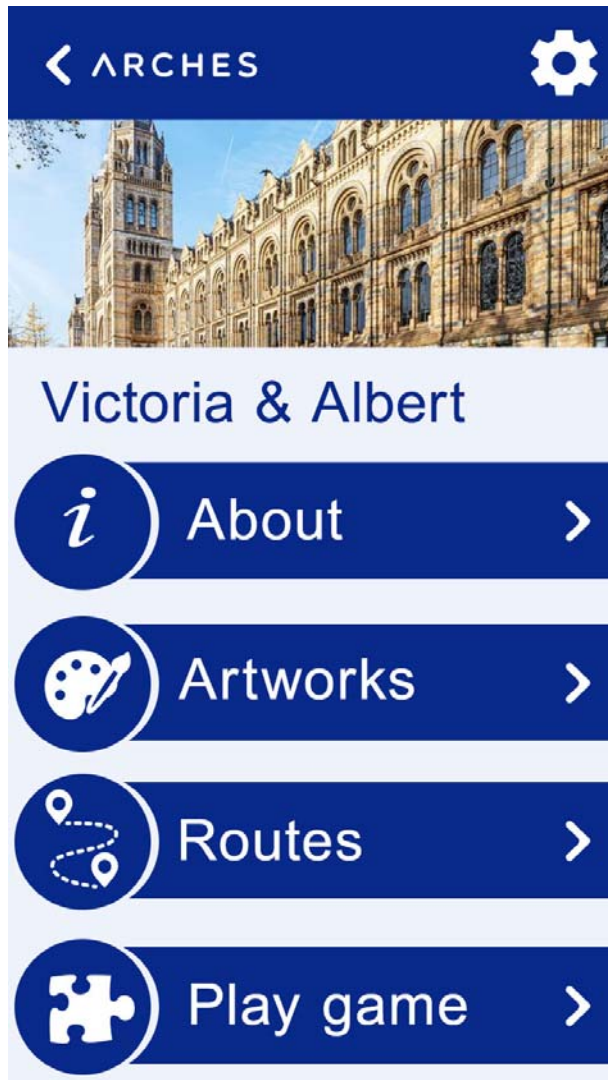


Figure 33

Figure 4: “Mainpage” screen

The “Mainpage” Screen (see Figure 4: “Mainpage” screen) shows all the different paths that can be gone inside the app. There are 4 different sections that can be accessed through this menu. These sections shall be described further on the next slides.

## 4.5

## About Museum - Screen



Figure 5: "About Museum" screen

The "About Museum" Screen (see Figure 5: "About Museum" screen) shows the most important information regarding the museum.

## 4.6

## Routes - Screen

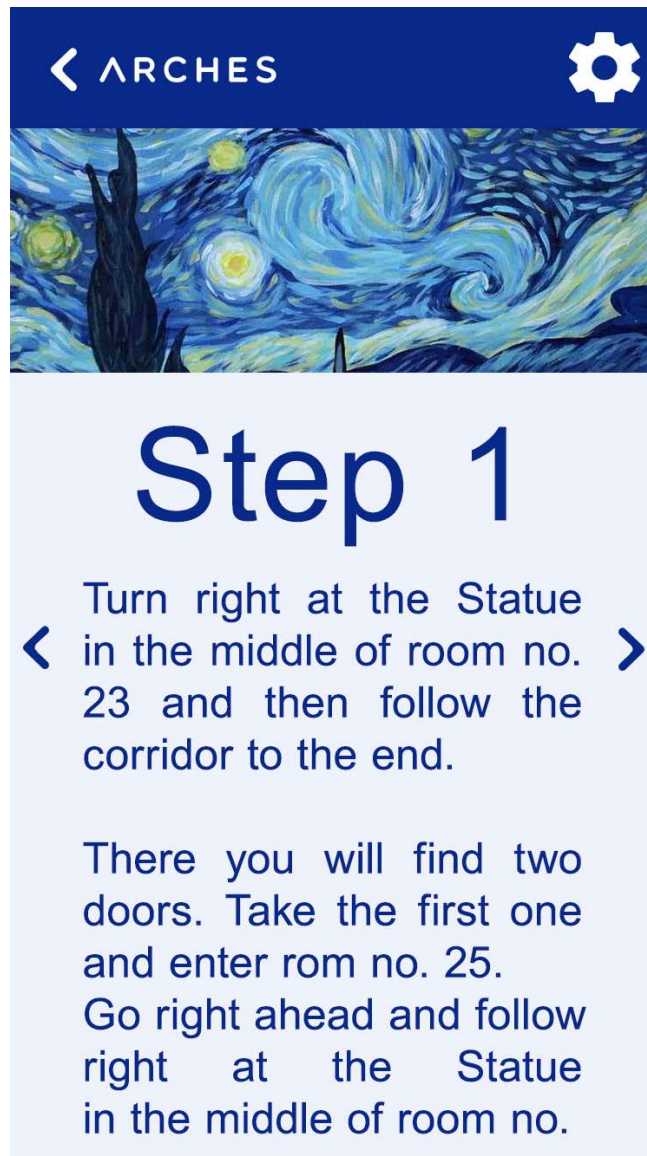


Figure 6: "Routes" screen

The "Routes" Screen (see Figure 6: "Routes" screen) shows all the different routes the app has to offer.



## 4.7 Step - Screen



**Figure 7: "Steps" screen**

The "Steps" Screen (see Figure 7: "Steps" screen) shows all the steps inside a route. Most Steps are connected to Artworks which are then shown after the steps.

## 4.8 Artwork Screen

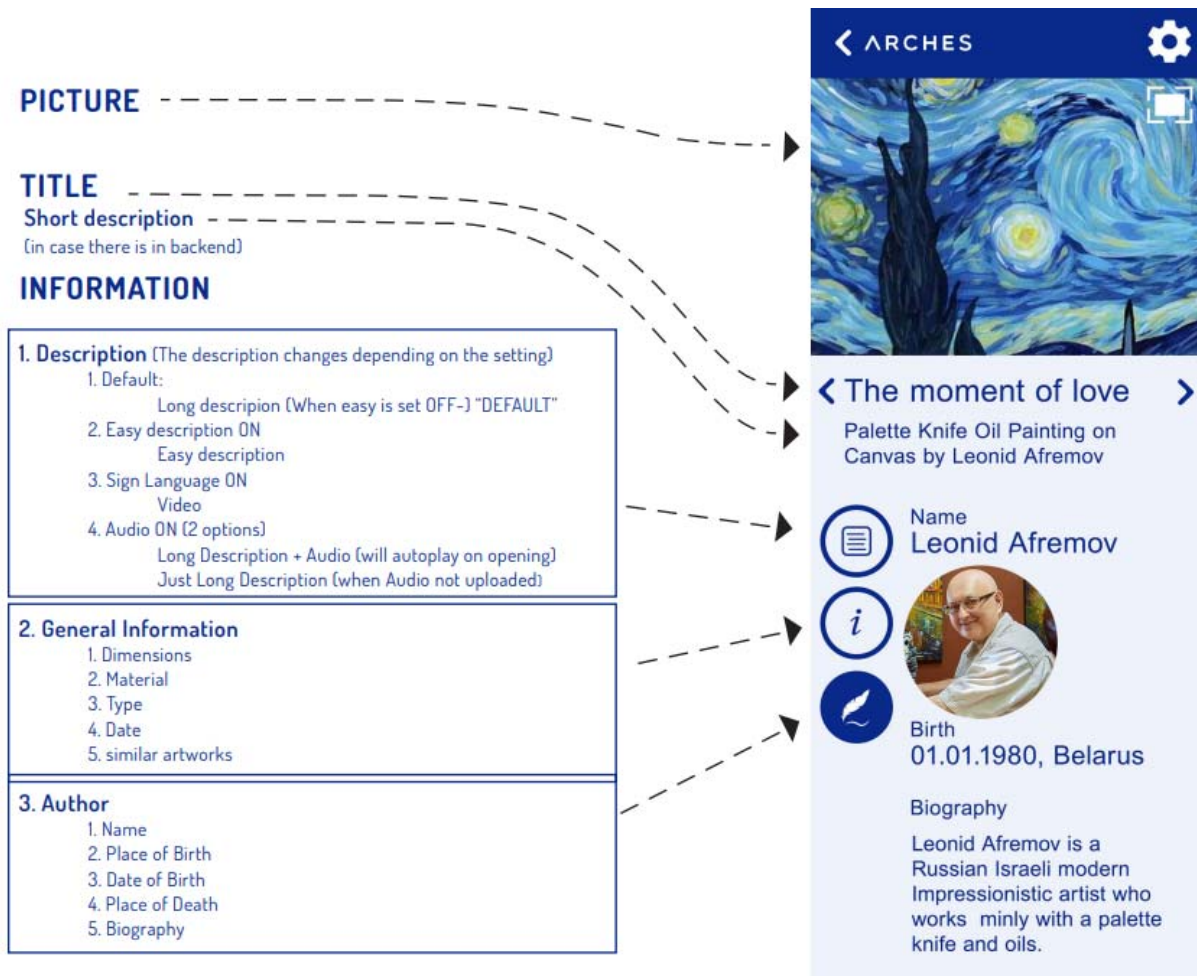


Figure 8: "Artworks" screen

The "Artworks" section (see Figure 8: "Artworks" screen) shows the Artworks in Detail. Depending on the Settings page the first section which consists on the descriptions will be shown differently. Either as easy description, sign-language or Audio-description.

This screen is still **Work in Progress**. There will be used another icon for the author-symbol and also the order of the icons shall be changed. Besides there is also an implementation of the "red dots-section" that is in discussion and will be described in detail in the next deliverable.

## 5 Conclusions

This document defines the advances in the development and design of the web applications in the ARCHES platform.

In this document, the sections have been divided per application:

- Our Story
- Unity3D ARCHES test application
- Museum application Design

The development of the applications is in progress. The learnings from the User-groups have been very valuable for the development of all functionalities. Our Story is finished and taken over by OU. In the Museum App all feedback, especially regarding the accessibility settings has been implemented. Within the next month, there will be testing sessions with the participant groups and the final version of the app will be released for each museum within the next months.

The next advances and results will be included and detailed in the following deliverables:

- D4.8 Report on system integration- 3<sup>rd</sup> version: this is the final version of the report on the integration once the pilot exercises have been completed. In addition, a brief user guide will be included as the how-to-video to give assistance on how to use the application.

## References

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