



# **GeoDEMA**

---

# **APP**

---

# **Training**

---

Project Reference Number **2020-1-TR01-KA203-092920**



# INDEX

The Goal	3
The Learning outcomes	3
The Module Tasks	4
Module 2 - What the App does	5
Module 3 - What data collects	5
Module 4 - 5 - User experience and User interface	5
Module 6 - The thematic maps	6
Module 7 - The coding of the App	6
Module 8 - The Open Badge definition	7

## The Goal

The training program on the App Geo-DEMA. is about understanding the process of an App creation from both the designer and user's point of view. It doesn't look for the perfect App design but to understand what kind of services can be developed once you have designed the right features. The training does not include the coding part, but you enhance the results if you include a coder.

## The Learning outcomes

1. Understanding the process of an App creation
2. Understanding how to implement design thinking steps
3. Understanding UX, UI and coding the APP

### **The SMARTDEMA module includes:**

1. How to find out what App features
2. What the App does
3. What data collects
4. User experience
5. User interface
6. The thematic maps you can make with the stories published by the citizens.+
7. The coding of the App
8. The Open Badge definition

### **Development of Skills**

1. Graphic design
2. Agile framework
3. Dealing with the client and the coder

## The Module Tasks

To follow, we explain how to structure the creation of an App based on the way the SMARTDEMA APP has been designed.

SMARTDEMA is just one of the ways to do it, but you may have a different one.

### Module 1 - How to find out what App features

The creation of an App is based on the design thinking concept + Agile framework.

In a few words, design thinking requires you to follow the four steps: ideation, prototyping, testing and iteration.

The agile framework explains the importance of having a backlog with all the features the App must do and how you will code the features across different sprints.

Combining both DT+Agile is essential since you will be interacting with the final user and the coder most of the time.

#### The steps you have to follow are these:

- 1. You need to know your client's needs, understand the fit for the App, why the client may need this App and its features. **How do you understand your client's needs?** The only option is you ask them.  
See as an example:
  - The multiplier event report on SmartDEMA project
  - Transnational Project Meeting
  - <https://www.smore.com/enspf>
- 2. Create a first draft; that is the ideation process of Design Thinking. We strongly suggest you use MIRO boards for the first design and prototype.
- 3. You have made both face-to-face and online; now is the time to iterate based on the insights you got from the clients.

#### Assignment for your students:

Given a particular problem, e.g. "how to capture citizen's sentiment to design new products and services."

1. Ask them to design a mock-up idea of an App
2. Ask them to prototype the concept using the MIRO board
3. Ask them to organize a face to face meeting to present the App
4. Ask them to circulate the MIRO board link with the idea to get online feedback.
5. Make a retrospective of the insights
6. Redesign the App features
7. Make a new iteration test with a different target group

## Module 2 - What the App does

You need to understand what the App should do and what it should not do. Many times happens, some of the features requested are not used. The recommendation is, do not code what you really do not need.

Understanding the fit "for purpose" of the App is essential. **What information do you want to collect or enable the user to have?**

Assignment for your students:

1. Ask them to explain what purpose each APP feature serves and use the SCAMPER model (<https://www.designorate.com/a-guide-to-the-scamper-technique-for-creative-thinking/>)
2. You will discover many interesting things and certainly improve the features.

## Module 3 - What data collects

The primary purpose of any App is to collect data in text, photos, video, or maps.

You must understand what you will do with the collected data and how you will analyze the data; moreover, if you are looking for quantitative or qualitative data and what software you will use for the analysis.

Assignment for your students:

1. Ask them to define the kind of data and for what purpose they will use the data.
2. Double-check if the data has a feature that enables the information collection. We suggest you implement <https://www.liberatingstructures.com/1-1-2-4-all/> to extract ideas about the data connected to the features.

## Module 4 - 5 - User experience and User interface

We refer to the App design and what the user can do with the App. The importance of feedback through multiple iterations has been highly demonstrated. Another point to consider is that the user is already immersed in many different Apps, so somehow, the facto standard is available on Instagram, Facebook, and many other Apps. Start from there.

Business—and life in general—has become increasingly dependent on the internet, web apps and mobile apps. As a result, companies have found that the best way to compete on the web is **to prioritize building an attractive and efficient user interface (UI) that optimizes the user experience (UX)**. In this article, we define what a user interface is, discuss elements of UI vs UX and provide tips for creating an interface that converts users into customers.

"User experience" encompasses all aspects of the end-users interaction with the company, its services, and its products.

<https://www.nngroup.com/articles/definition-user-experience/>

The user interface (UI) is the point at which human users interact with a computer, website or application. The goal of effective UI is to make the user's experience easy and intuitive, requiring minimum effort on the user's part to receive the maximum desired outcome.

<https://www.indeed.com/career-advice/career-development/user-interface>

Assignment for your students:

1. Ask your students to use Canva, photoshop, illustrator, in-design, or any other software to create the first design Mock-up.
2. When the Mock-up is ready, test it over the net and get feedback for a new iteration.

## Module 6 - The thematic maps

Graphic visualization of the collected data is essential.

The concept we need to use is filtering and mapping data.

Three main elements need to be combined, **the map** (Google is the best choice because it enables different layers of existing information), **the geo-coordinates** that have to be captured automatically when the user interacts with the App and **the filters** for creating the maps. For example, filter for emotions.

Assignment for your students:

1. Ask your students to analyze Google maps and create a potential list of filters. When done, print the maps to discuss with the students the information contained in the maps they have created and connect it with services and products.
2. There is plenty of information in the Goggle maps for this exercise.

## Module 7 - The coding of the App

Between the phases of ideation, prototyping, testing and iteration, there is a coding step.

There are two ways of coding, one for an App that you put in the Apple store and Google play. We recommend not doing that and instead of creating a Progressive Web App.

The main difference is that the Progressive App will work on your phone as an App, but it will work on your computer.

On top, it will be much easier to introduce changes at a lower cost.

The Agile framework plays a role in this module because you create the backlog of features and divide them into Sprints.

The Sprints for testing and iteration are coded one after the other based on the insights of the user.

However, you have to decide on a minimum App structure.

We suggest you use this <https://www.liberatingstructures.com/7-15-solutions/>

#### Assignment for your students:

1. Define the must contain the App. Use the criteria from the user's point of view. Must be able to.....?
2. Once you have the features, look for a coder and have a conversation to experience how they think and what they can do.

**Resources: The teacher's job contribution is to be based on the training content and look for the resources.**

#### *Conclusions:*

- *From these seven steps, you can create the App prototype for any purpose you may need.*
- *The more you develop critical thinking with your students, the better and easier it will be to coder the App.*
- *If you plan to create a service or a specific product with the App data, it is worth involving the final target group in the conversation.*

## **Module 8 - The Open Badge definition**

As a trainer, you start explaining

### **1. What OPEN Digital BADGE is**

A Digital Badge represents a skill, learning achievement, or experience. Digital badges can be earned in a wide variety of environments

- Digital Badges can represent competencies and involvements recognized in formal or informal learning
- In addition to the image-based design, badges have metadata to communicate details of the badge to anyone wishing to verify it or learn more about the context of the achievement; it signifies
- Badges are issued by individual organizations who set criteria for what constitutes earning a badge
- Earners can display their Digital Badges online and can share digital badge information through social networks

## 2. Why use OPEN BADGE

- **Skill Recognition.** Students can use the ODB to recognize achievement in any setting across the different stages of an individual's life.
- **Pathways of Expertise.** Students can use the ODB to build pathways to support individuals to work towards learning goals, provide routes into employment, and nurture & grow talent within organizations
- **Transfer of Skills.** They are based on the Open Badges standard, which enables badges to be issued and transferred across the web and other digital exchanges, across different learning providers, and across borders.
- **Talent Identification.** They provide a new way to identify talent based on competency and attitude, helping employers and educators better match individuals with non-traditional experiences to relevant opportunities.
- **Alternative Validation.** They provide an alternative way for learners to get validation for their skills and achievements and share them with employers

## 3. Tools & Platforms

The platform choice depends on your criteria; each platform offers different possibilities. Explore one by one. SMARTDEMA Open Badge uses <https://info.badgr.com>

- <https://info.badgr.com/> (previously Mozilla backpack)
- <https://openbadgepassport.com/>
- <https://openbadges.me/mybadges>
- <https://openbadgefactory.com/en/service-levels/>
- <https://credly.com>

Design tools

- <http://www.makebadg.es/site>
- <https://badge.design/>
- <https://www.adobe.com/fr/express/create/badge>

Assignment for your Students:

1. In creating your Open Digital Badge, they should answer these questions and make the Image of the Badge. These questions are mostly the questions they will find on the platforms.
2. You need to choose one platform, create an account and fill in the data.
  - **Who is the issuer of badges?**
  - **Who are the earners, and who is my target group?**
  - **Why will they take my badge (the advantage of my open badge compared to the existing open badge)?**



- What skills will the learner acquire? And which criteria will be used to assess the acquired skills?
- How will the earner develop these skills?
- When the open badge has been issued, or will it be issued? Is the open badge limited in time?
- What “understandable” name will you attribute to your badge name?
- Bonus: Am I applying a standard that can give more weight to the open badge?

The example of SMARTDEMA OPEN BADGE

<https://eu.badgr.com/public/badges/ust6tlrqRcOiWzmcZ8lL-w>