

# W A S A B Y

Water and Soil contamination and Awareness on Breast cancer risk  
in Young women

## M2.3 WASABY App Proposal

Concept note for an online primary prevention course to increase awareness on cancer risk to female adolescents

By the Association of European Cancer Leagues (ECL)

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# BACKGROUND

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## INTRODUCTION

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- The WASABY Project is a 3-year project co-financed by the European Commission under the 3rd EU Health Programme (Call PP-2-5-2016).
- The project aims to:
  1. collaborate with population-based cancer registries to identify areas of high breast cancer risk;
  2. improve the use of deprivation indexes in spatial analysis by cancer registries to help understand the influence of socio-economic status;
  3. prepare an ecological study on the association between water and soil contamination and breast cancer risk;
  4. **prepare an educational tool to promote cancer prevention messages to young females aged 13-19 years old (NB. this will be focused on established risk factors only).**

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## ECL'S ROLE

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- The Association of European Cancer Leagues (ECL) is responsible for overall dissemination and developing the online tool to promote cancer prevention messages as outlined in the European Code against Cancer.
- ECL considers the potential for an **online tool** would appeal best to the target age group to provide relevant education material about cancer prevention and general health promotion in a cost-effective and reproducible manner.
- ECL will devise suitable content for this tool and wishes to do this in collaboration with cancer leagues. The methodology is, therefore, subject to revision depending on available resources and feedback of the cancer leagues and selected technical partner.
- A private third-party company (the “technical partner”) will be contracted to develop the technological aspects of the tool. The format is likely to be a mobile application (“app”) with an in-built educational component appropriate for the target group.
- The goal will be to increase knowledge amongst the target group of health promotion measures to be taken to reduce cancer risk, prioritising gender specific matters (including, but not limited to, breast cancer).



## CANCER LEAGUES' ROLE

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- Cancer leagues have been contacted by ECL and provided with background information about the project in order to gauge the possible interest of cancer leagues to support this project.
- Cancer leagues can be involved by **joining an informal working group** to support the content development of the online tool. This entails:
  - Contributing to the development of the content of the cancer prevention tool. For example, by sharing with ECL the materials and information used by cancer leagues to reach this target group;
  - Provide feedback on the development of the tool from the perspective of the end user. This can include supporting initial testing of the tool;
  - Provide feedback on the development of the tool considering cultural and social preferences. This can also include supporting the translation of the tool into the key languages used by the cancer league in their health promotion activities;
  - Facilitating final testing of the tool once developed by the technical partner, for example, amongst a representative sample of 15-25 people from the target group.
  - Promoting the tool through the league's health education programmes and online via social media platforms.
- The main benefit for cancer leagues for joining this endeavour is the prospect of receiving – at no cost to the leagues – the final product, which cancer leagues will then be able use in their routine health education programmes.
- This product will be available in the main language(s) of the league's activities and can feature the branding of the cancer league.

## NETWORK AND PARTNERS STATUS

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**Technical provider** Salumedia (ES), subcontractor agreement signed as of 5 June 2019

**Design provider:** Outcrowd Studio (IO), currently ongoing discussions

**WASABY cancer leagues network:** 5 cancer leagues (according to indicators)

- French League Against Cancer
- Cancer Focus Northern Ireland
- Romanian Cancer Society
- Slovenian Association of Cancer Societies
- Spanish Association Against Cancer

The Romanian Cancer Society might no longer be available. Currently ECL is in discussions to involve the Swiss Cancer League.





## TIMELINE OF ACTIVITIES

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The timeline has been agreed as follows:

<b>Activity</b>	<b>Month</b>
Informal Working Group established	30 April 2019
WASABY app concept note share with project leader	15 October 2019
First version of content produced	30 November 2019
Development of IT solution	30 November 2019
Final revision of IT and content	End of 2019
End-user testing	1 January 2020 - 30 March 2020
Translations into national languages	1 March – 30 April 2020
Launch of online tool	25 May 2020 (EWAC)



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# PROJECT DESIGN

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## THE INTERVENTION

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### MAIN AIM

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To develop a “WASABY” mobile application as a platform that can be embedded in **already existing interventions carried out by the cancer leagues** among the target population in terms of cancer prevention. The main goal is to assess **knowledge acquisition** in regard to cancer prevention and the ECAC messages.

### SECONDARY OBJECTIVES

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- To make WASABY end-product available on Android / iOS shop in case any independent user wants to follow the course
- To assess behavioural change among target population in regard to healthy lifestyles that can lead to cancer prevention, through the cancer leagues ongoing longstanding interventions.
- Further secondary objectives to be established along with the WASABY cancer leagues network.

### APP SECTIONS

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The WASABY app will feature the following sections:

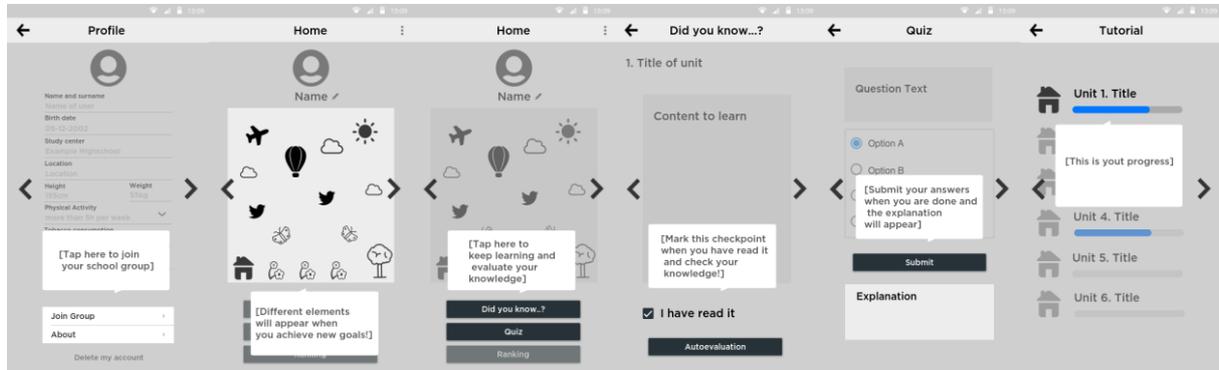
1. Tutorial
2. Profile
3. Home screen
4. Modules
5. Course progress and ranking
6. About



# WASABY

## TUTORIAL

Tutorials work as static images where a specific element is highlighted or explained with a chat bubble. Below an initial draft of the tutorial wireframes.

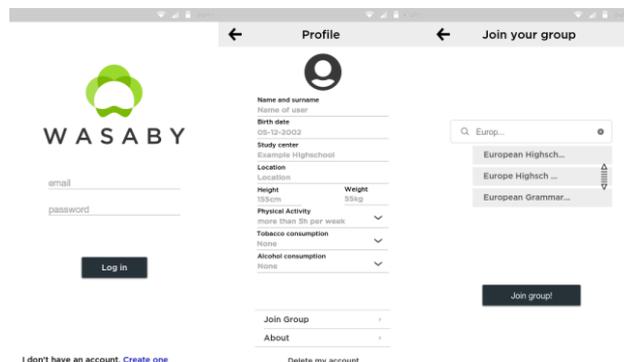


## PROFILE

The profile section will include the following information:

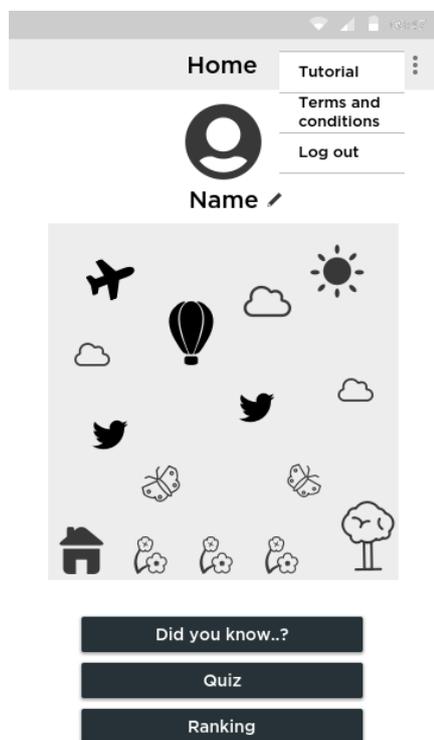
- Username
- Password reset button
- Nickname
- Profile picture
- Language: English, French, Spanish, Romanian, Slovenian
- Personal information
  - Age
  - Country
  - Study center (provided by the cancer leagues, coded for research purposes)
  - Personal lifestyle (cancer risk factors including body weight and height, tobacco and alcohol consumption, amount of physical activity, etc.).

Below an initial draft of the profile section appearance.



Salumedia will ensure compliance with GDPR requirements. ECL and the cancer leagues partners will only have access to anonymised data.

In this section there is a space where different elements will appear depending on the completion of different goals following the gamification strategy. 15 goals / key actions have been established:



1. You have filled your Profile!
2. You have joined your Group!
3. Now you know all forms of Tobacco are harmful for your health!
4. Congratulations, now you know there is no safe level for alcohol drinking
5. Great! You're an expert in healthy food!
6. Brilliant, you understand now the importance of regular exercise!
7. Perfect! You now know the importance of maintaining a healthy body weight.
8. Great! Now you know vaccines work.
9. Now, you know why it is so important to protect yourself from sun exposure.
10. Brilliant! You understand now the benefits of breastfeeding.
11. Congratulations, you know about the European Code Against Cancer
12. Congratulations! You have successfully learned 25% of the questions in the Quiz!
13. Congratulations! You are halfway. You have successfully learned 50% of the questions in the Quiz!
14. Brilliant! You have successfully learned 75% of the questions in the Quiz! You are almost there!
15. Excellent! You have become a master of cancer prevention! You have learned all the questions of the quiz!

## MODULES

- A gamified section with content and spaced learning-based questions to consolidate the breast cancer contents generated and provided by the WASABY consortium.
- Content spread into a 2 to 3weeks-long programme.
- Modules will be open to complete in a free order, avoiding the discouragement of participants that wouldn't want to initiate the course on tobacco topics, for instance.
- Content will be input in HTML format according to Salumedia's guidelines [link](#).
- Questions will be input in Salumedia's website [link](#).

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## MODULES STRUCTURE

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**Theoretical content** distributed in 3 sections, with a max of 150-200 words and expected completion time of 2'. Level of difficulty should be in accordance to 12-14 years old adolescents.

1. Teaser “Did you know...” short statement on the topic (eg. "did you know that... tobacco can cause NANA lung cancer every year")
2. Introductory video (20-30") on the content. Either videos in English with subtitles, or animations with subtitles, will be used. Materials should come from authoritative sources or ECL through the Youth Ambassadors.

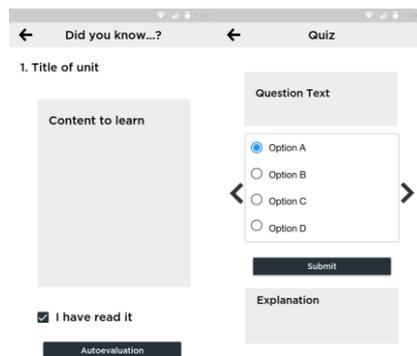
3. Explanatory text

Following a **quiz** with 5-7 questions per module (around 50-70 in total) based on the theoretical contents. Some might go a bit further than the literally stated text. Questions should be time-framed (about 15-20') with only 1 answer being correct.

- 3 self-assessment questions per theme which do not count for the ranking, they only count to mark the theme as completed
- Apart from those 3 questions per theme, you have a pool of questions in the spaced learning quiz-game. The 3 theme-specific questions might be included in the pool of questions for the quiz.

**Further information** displayed after choosing answer, accompanied with a button “Want to know more”.

Below an initial draft of the modules section appearance.




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## SPACED-BASED REPETITION LEARNING FRAMEWORK

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Questions that are wrongly answered will be repeated again until correctly answered twice in a row (the second time that they are answered will be in a different day). Only when they are answered correctly twice in a row they are 'discarded' and considered as learnt. Otherwise, you could go in an infinite loop answering correctly and incorrectly, until you learn it.

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## MODULES OUTLINE

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10 themes based on the message of the European Code Against Cancer (ECAC).

1. Tobacco
2. Alcohol
3. Food and nutrition
4. Physical activity
5. Healthy body weight
6. Vaccination
7. Sun UV exposure
8. Breastfeeding
9. Facts & Myths
10. Recap and conclusions on cancer prevention, including the ECAC

ECAC messages on radiation and occupational health will not be addressed given the target audience. Furthermore, early diagnosis will not be addressed given its complexity.

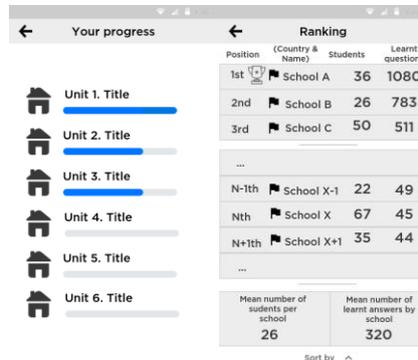
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## COURSE PROGRESS AND RANKING

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Section featuring the course progress statistics and quiz achievements. A ranking on module progression and quiz achievement by user and community will be available.

Below an initial draft of the progress and ranking section appearance.




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## ABOUT

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Section including information on:

- WASABY project aim
- Developers
- Acknowledge European Commission and IARC
- Funding and disclosure of any conflict of interest
- GDPR compliance

Salumedia will provide certain legal terms to protect the IP of the technical solution.



W A S A B Y

## APP GRAPHIC DESIGN

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Material requested by Salumedia:

- WASABY identity brand (logos and colour palette)
- ECAC and ECL logos (code pics available at [www.cancercode.eu](http://www.cancercode.eu))
- Wireframes x8 following Salumedia's [instructions](#) and [templates](#).
- Tutorial wireframes (in every language)
- Icons for homepage goals

Design will have a Japanese end-design, featuring a gender-neutral character for the “did you know” section in the modules and 15 icons on specific defined goals.

## APP FEATURES

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### LANGUAGE INTERFACE

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WASABY will feature a multi-language interface.

Content translations will be carried out by a third-party company and revised by the cancer leagues.

### ACCESSIBILITY

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ECL aims at designing the app as accessible as possible within the boundaries of what is possible and budgeted for.

### ADAPTATION TO iOS

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In the case of iOS, Salumedia will need to adapt the interface a bit to make Apple-style. It is important to keep any design in vectorial format so that can be rescaled for iOS development.



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## THE TECHNICAL SOLUTION

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Salumedia (ES) signed a subcontractor agreement to provide with a technical solution for WASABY app. Salumedia will offer the usage of an adapted version of “CamonPal: Breast Cancer”, a mobile app developed by the same company to empower breast cancer patients through *AdhereHealthcare* platform.

Find Salumedia’s proposal attached as annex to this concept note.

# PROJECT EVALUATION

## METHODS

### STUDY DESIGN AND POPULATION

13-16 female adolescents (age to comply with COPPA regulations) as primary target group. Secondary target groups will include 17-19 female adolescents and 13-19 male adolescents, according to the cancer leagues ongoing projects and requirements.

### DATA COLLECTION

Data collection will be carried out through app registration, modules uptake and quiz responses. Salumedia will ensure compliance with GDPR requirements. ECL and the cancer leagues partners will only have access to anonymised data.

### OUTCOMES AND INDICATORS

WASABY consortium agreed to evaluate the app according to:

Specific Objective Number	SO-5	
Specific Objective	Design courses on breast cancer risk factors awareness	
Process Indicator(s)	Target	Value at M18 (May 2019)
Number of target countries where promoting the online course	>=5	5 confirmed, 4 TBC
Number of participants per target country taking part in "alpha test" of online course	>=15	NA
Number of participants per target country taking part in final "beta test" of online course	>=15	NA
Mean age of participants to testing phase	14.5 yrs	NA
Output Indicator(s)	Target	Value at M18
Number of unique visits to online course per target country	>=5,000	NA
Engagement rate of Facebook page (or other social media metric)	>=50%	NA
Mean age of participants to online course	14.5 yrs	NA
Outcome/Impact Indicator(s)	Target	Value at M18
Number of unique visitors completing online course per target country	>=4,000	NA
Number of downloads of additional/complementary information by unique visitor after completion of course per country OR Number of unique visitors following hyperlinks to referral information / partner web pages after completion of course per country	>=1,000	NA