SOTERIA

SUBCONTRACTING

RO e-vote

2023

Terms of reference

Co-funded by the
European Union

PROJECT – SUBCONTRACTING: Testing the requirements of the SOTERIA platform in the case of online voting by the educational actors from the Romanian pre-university and university education system (RO e-voting)
Identificator: H2020-SU-DS-2018-2019-2020 Sub-topic A: *Protecting citizens' security, privacy and personal data,* Număr: 101018342. Acronym: SOTERIA

PURPOSE
Testing the demonstration models (functional/experimental) for the SOTERIA project.

KEY ELEMENTS
The key elements of the RO e-voting case studies:

- users from high schools/colleges or universities >18 years old,
- SOTERIA platform facilities
- e-voting services
- the relationships between these elements.

INTRODUCTION

In the case of online voting, it is necessary to ensure, among other security requirements, the confidentiality and anonymity of voters, but also that voters are eligible and properly authenticated (it will be avoided that a voter can vote more than once). Thus, a robust authentication system is required. This is usually done using user/password voting credentials or a third-party authentication system. The first option has complicated logistics to ensure the security of the process and needs voters to keep track of their credentials at least until the vote is completed. The second is more convenient for both the voter and the organizer of the election, but it is usually less secure. It does not allow storing recoverable private information during the voting session (for example, partially filled ballots, voting receipts, etc.).
Testing the requirements of the SOTERIA platform in the case of online voting by educational actors from the Romanian pre-university and university education system was called, in short, **RO e-voting**.
RO e-voting involves a set of behaviours that the SOTERIA platform develops in interaction with users in universities and colleges and that generate quantifiable results that contribute to achieving the projected objectives.
In the pilot testing, the online voting solution will be integrated into the SOTERIA platform, gathering the advantages of both systems: the authentication process will be secure and convenient through the SOTERIA application, and the SOTERIA virtual data wallet will allow the user to securely store the private data generated during the voting session, as a voting receipt.
The resulting solution will be validated in real conditions through students, teachers and auxiliary staff in pre-university and university education who have reached **the age of 18**.

- Selection of test participants:

Electronic voting centers will be organized at the level of subcontracted universities and colleges, which will be selected through an open competition in Romania. Once selected, subcontractors will contribute to the recruitment process. The study will follow the General Data Protection Regulation (GDPR). The voting process will be explicitly defined together with the subcontractor.

SPECIFIC OBJECTIVES

- to measure attitudes (the feelings of security/privacy) towards online operation
- to measure *sustainability*[1] related to SOTERIA identification and data wallet

METHODOLOGY

There will be three different **scenarios for online voting**:

SCENARIO I:

Conditions:

Participants ***can choose or NOT to authenticate on the Scytl platform with SOTERIA and to store the voting receipt***, depending on their preferences.

Are educational particularities?

- Yes, participants who decide to choose the SOTERIA are then randomized into two groups:
  - group A is trained using version no. 1[2] of the educational content
  - group B is trained using version no. 2[1] of the educational content

SCENARIO I/Phase I

Aim?

- to measure *attitudes (the feelings of security/privacy)* towards online operation

Measuring tool?

- *a mixed questionnaire developed by SOTERIA partners*

When participants' beliefs will be tested?

- after the first online voting round

Eligibility?

- participants >18 years old who agree to complete the first online voting round using Scytl platform **with/without** SOTERIA (see Figure 1)

[1] Reasons behind the choice to use (or not) the SOTERIA platform again and to remeasure levels of felt security and/or perception of privacy

[2] Version 1 differs from version 2 by training method

Figure 1. Scenario I. Stage I

SCENARIO I/Phase II

Aim?

to measure *sustainability*[3] related to SOTERIA identification and data wallet.

Measuring tool?

- *a mixed questionnaire developed by SOTERIA partners*

When participants' beliefs will be tested?

- after some time (1 to 2 months) from the first online voting round and after performing a second online voting with or without SOTERIA (choice)

Eligibility?

- the same participants who completed the first online voting round using Scytl platform **with/without** SOTERIA (see Figure 2)

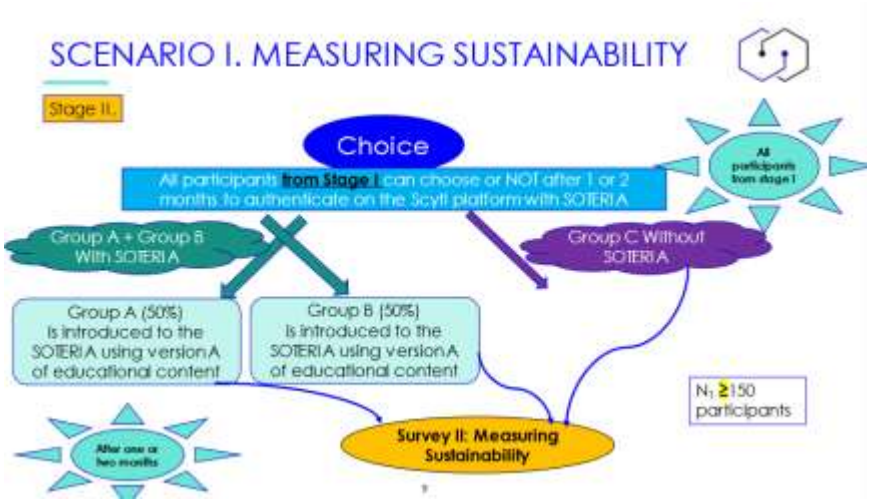

Figure 2. Scenario I. Phase II

[3] Reasons behind the choice to use (or not) the SOTERIA platform again and to remeasure levels of felt security and/or perception of privacy

SCENARIO II:

Conditions:

Participants ***are required to authenticate on the Scytl platform <u>with</u> SOTERIA***

Are educational particularities?

Yes, all participants involved in Scenario II will be randomized into two groups:

- group A is trained using version no. 1^1 of the educational content
- group B is trained using version no. 2^1 of the educational content

SCENARIO II/Phase I

Aim?

- to measure *attitudes (the feelings of security/privacy)* related to SOTERIA identification and data wallet

Measuring tool?

- *a mixed questionnaire developed by SOTERIA partners*

When participants' beliefs will be tested?

- after the first online voting round

Eligibility?

participants who agree to complete the first online voting round using Scytl platform **with** SOTERIA ***(see Figure 3)***

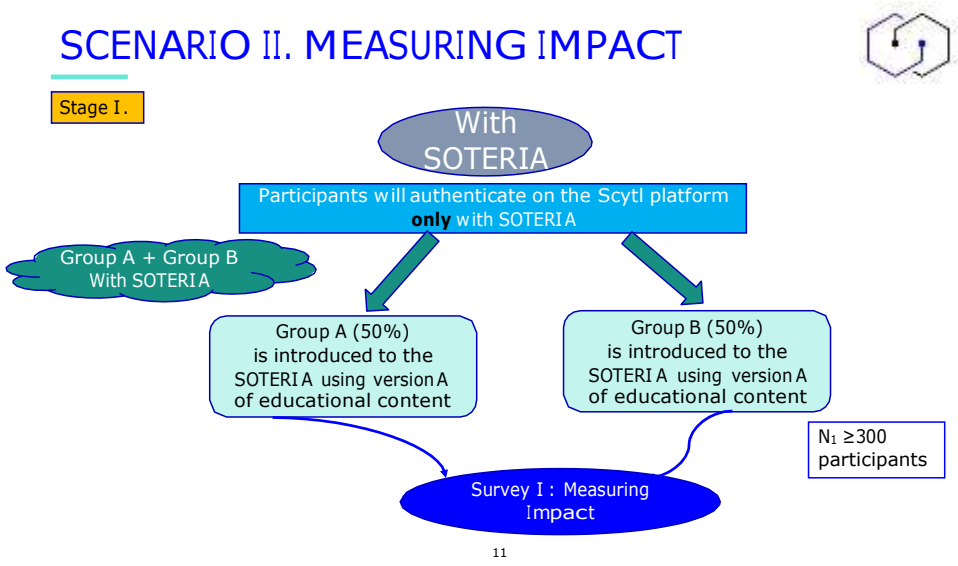

Figure 3. Scenario II. Phase I

SCENARIO II/Phase II

Aim?

- to measure *sustainability* related to SOTERIA identification and data wallet

Measuring tool?

- *a mixed questionnaire developed by SOTERIA partners*

When participants' beliefs will be tested?

- after some time (1 to 2 months) from the first online round, and after performing a second online voting **with or without** SOTERIA (choice)

Eligibility?

- the same participants who completed the first online voting round using Scytl platform **with** SOTERIA ***(see Figure 4)***

Figure 4. Scenario II. Phase II

SCENARIO III[4]

Conditions:

*Participants **are required*** to authenticate on the Scytl platform **<u>without</u>** SOTERIA tool

Are educational particularities?

- No

[4]Participants will use the same voting platform as the other scenarios (the one proposed by Scytl), the difference is that they won't be able to authenticate on the Scytl platform with SOTERIA and to store the voting receipt on SOTERIA

SCENARIO III

Aim?

- to measure *attitudes (the feelings of security/privacy)* related to the online operation they have performed

Measuring tool?

- *a mixed questionnaire developed by SOTERIA partners*

When participants' beliefs will be tested?

- after the first online voting round

Eligibility?

- participants who agree to complete the first online voting round using Scytl platform **without** SOTERIA ***(see Figure 5)***

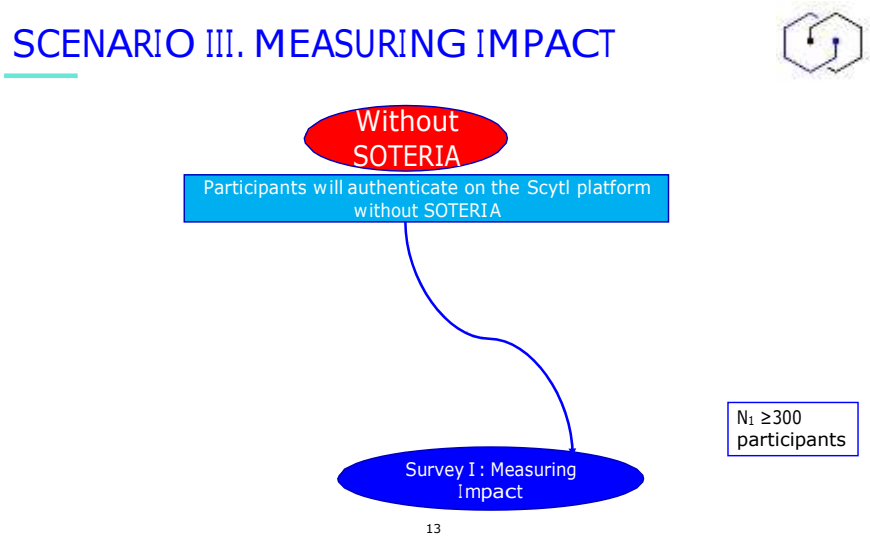

Figure 5. Scenario III

TARGET GROUPS

The different users who are intended to participate in the pilot are:

- High school students over 18 years old
- High school teachers
- Auxiliary teachers in the pre-university system
- Students
- University professors
- Auxiliary teachers in universities

These participants will have to possess socio-demographic characteristics representative of their population. In particular, diversity of gender, age and level of digital skills will be ensured.

Note: ***Number of participants for each scenario: minimum 300. The minimum target group for all three scenarios is 900. All universities and/or high schools declared winners will contribute to fulfilling the target group***.

For each category of users, universities or high schools can organize the elections they want.

Examples of their roles that are relevant to the SOTERIA platform were identified (see Table 1):

Table 1. Examples of e-voting

User	Roles
A. High school students over 18 years old	a. e-voting for the best teacher of the school year *b.* e-voting for the election of the representatives in the management of the school organizations (*e-voting for the member of the administration councils (CA) of the pre-university education institutions (the representative of the students in CA)*)
B. High school teachers	a. e-voting for the election of representatives in the management of school organizations (*e-voting for the election of the representatives of the teaching and practical training staff by the teachers' council*) b. e-voting for the election of representatives in the management of trade union organizations
C. Nonteaching pre-university staff	a. e-voting for the election of representatives in the management of trade unions
D. Students	a. e-voting for the best teacher of the school year *b.* e-voting for the election of representatives in the management of university organizations (*e-voting for a member of the administration councils (CA) or senate of higher education institutions (student representative in CA / Senate, as the case may be)*)
E. University professors	a. e-voting for the election of representatives in the management of university organizations (*e-voting for the election of the representatives of the teaching staff in the Faculty / University Council, depending on the concrete case study*) b. e-voting for the election of representatives in the management of trade union organizations
F. Nonteaching staff auxiliary university	a. e-voting for the election of representatives in the management of trade unions

ELIGIBILITY CRITERIA

A. Eligible applicants
Colleges in public and private education in Romania
Universities in public and private education in Romania
B. Eligible subcontracted activities
Documentation, experimental design, data collection, voting organization
C. Eligibility of costs
The reimbursement of eligible costs may be based on the agreed budget specified.

CASE STUDIES. EXAMPLES

This subchapter summarizes how each category of users will perform tasks by interacting with the SOTERIA platform. The case studies include an index with several subtasks for each stage of the testing process and a demonstration of the usability, ease of use and effectiveness of the SOTERIA platform.
Thus, the behaviour of each category of users while responding to testing requests is outlined. A helpful element in designing e-voting will be given by the use case diagram which is a unified modeling language (UML) that provides an overview of the goals that users must achieve by using the system. Use cases in a graphic diagram will be organized and arranged according to their relevance, level of abstraction and impact on users. They can be interconnected to highlight relationships of dependency, inclusion and extension. The links between e-voting category and user category can be observed in Table 2.

E-voting role	User Category
I. e-voting for the best teacher of the school year	A. High school students over 18 years old
	B. Students
II. e-voting for the election of representatives in the management of educational organizations	A. High school students over 18 years old
	B. High school teachers
	D. Students
	E. University professors
III. e-voting for the election of representatives in the management of trade unions	B. High school teachers
	C. Auxiliary teaching staff in pre-university
	E. University professors
	F. Auxiliary teaching staff of the university

DURATION
12 months: May 2023 – April 2024

SUB-GRANTS DIMENSION
The total budget of subcontracting is 25,000 Euro. A maximum of 5 organizations (colleges / universities) will be financed. The budget of each institution will be at least 5000 Euro.

REPORTING
Within one month of the end of activities (May 2024). The report will describe activities in detail (selection of target group, selection of e-voting activities, etc.)

COMMUNICATION AND VISIBILITY
Minimum conditions:
Minimum 3 Popularization articles
Minimum 2 Posts per month on social media

SUBMISSION OF APPLICATIONS
Please submit your project proposal by sending:

1. Application form (Annex 1);
2. Budget (Annex 2);
3. List of projects realized in the last 5 years;
4. Copy of the certificate of registration of the **academic institution**

NOTE

The voting phases should start in December 2023

ADDITIONAL INFORMATION ON SUB-GRANTS

Questions for clarifications can be sent by e-mail, at least 5 days before the deadline for submission of applications, to the address below, clearly indicating the name of the application for applications: office@infocons.ro

SELECTION CRITERIA

Criteria	**Score**
Relevance of the project proposal to the project objectives	60
Involvement description of target groups	30
Description of the proposed activities	10

DEADLINE FOR SUBMISSION
The deadline for submitting applications is 12 May 2023, midnight CET.
Applications must be submitted by e-mail to the office@infocons.ro

INDICATIVE TIMETABLE

Deadline for submission of applications	May 12, 2023, 4 p.m.
Evaluation and selection process	May 15, 2023 – May 17, 2023 4 p.m.
Communication on selection	May 18, 2023
Implementation period	May 19 , 2023 – May 18 , 2024
Reporting	Submission within one month of completion of the selected projects