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PULCHRA

Participatory Urban Learning Community Hubs through
Research and Activation

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D4.1. Plan of the network of schools

WP4	Design and development of the Open Schooling network
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Executive summary

This document is the deliverable D4.1 of the PULCHRA project, which addresses the network of schools in the PULCHRA project. It describes the aim of the deliverable, the methodology used, the requirements to be met by schools and other stakeholders in support of open schooling as well as the operational patterns of the Open Schooling Network. Prerequisites for an open and inclusive network with the capacity to expand are also mentioned.

Version History

Version	Date
0.1 Draft for comments	06/01/2020
1.0 Final version	30/01/2020



1. Description of the Deliverable

The deliverable D4.1 is the result of task 4.1 - Define requirements and operational patterns for the Open Schooling School Network.

In WP 4 and specifically in task 4.1 an assessment of the requirements to be met by schools and other stakeholders in support of open schooling is made. Furthermore, the operational patterns as needed for the operation of the Open Schooling Network are defined and categorized with respect to the type of participating stakeholder. Prerequisites for an open and well-functioning network, with the capacity to expand, also are defined.

Partners involvement: Lead: BVS. Contribution: by all partners but mostly by TEREZA, NKUA, CORALLIA, UNIUD and GRID-Warszaw.

2. The methodology of work on the Plan of the Network of Schools

The plan was prepared on the basis of the provisions as described in the PULCHRA proposal as well as previous experience of the leading partner BVS in a number of national and international projects, like GLOBE program (international science and education program), Lessons from Nature (EU Long Life Learning program), Motivate and Attract Students to Science (EU Long Life Learning program), Naturewatch Baltic (Environmental Education network around Baltic Sea) which all involved forming and maintaining networks of schools, involving from 30 to 160 schools in Latvia. Given that PULCHRA aims to create a school network of at least 5 schools per participating country (at least 50 schools in total) the methodology followed in the aforementioned projects supports the design of the PULCHRA School Network.

In addition, recommendations were collected from experts with similar experience in Latvia, i.e. the UNESCO National Commission, who coordinates the Network of UNESCO Associated Schools, as well as representative of the management group of ongoing competency-based curriculum reform in Latvia.

The draft plan of the school network was discussed with the PULCHRA project partners and the final draft version was developed, based on their recommendations. The plan is presented in the following sections.

3. Terms used

School Network - a network of at least 5 schools per participating country (at least 50 schools in total)

Open Schooling Network - schools and other stakeholders acting together to create new partnerships in local communities to foster science education for all citizens.



4. Requirements for the schools

The *school network* is the core element in the PULCHRA project – crucial for the implementation of the open schooling concept. Each partner country creates an open network of at least five (5) pilot schools, with the capacity to expand during the project implementation and after the end of the project. The pilot schools will serve as example and excellence centres for other interested schools during and after the project; thus, it is very important to carefully select and evaluate the best candidate school.

Selection of schools

Each partner selects a set of five schools, preferably but not exclusive to GLOBE-Europe schools. An open invitation will be issued by the partners for the selection of schools to form the PULCHRA School Network. The selection of schools will be made following open calls to be published at the Horizon 2020 Participants Portal, the project's web site as well as the websites of the partners. The call will remain open for at least two months. Within one month from the closure of the call, the project will publish the outcome of the call. A template of the open call is given in Annex I.

Criteria for selecting schools

The selection criteria of the five (5) schools will ensure the active and efficient participation of the schools into the project. They should target on defining the schools that are capable to explore the open schooling concept in the theme “Cities as urban ecosystems”. In general, the open schooling concept provides an open and inclusive learning environment. It supports the development of innovative projects and provides points of access for all members of society. Student projects meet the real needs of the community by drawing upon local expertise and experience.

In order to become a member of the PULCHRA School Network, a school should comply with certain criteria as divided into two categories: the mandatory (required) and the priority (recommended) ones.

Mandatory criteria

1. An application is submitted, duly signed by the school's principal or any other authorized person.
2. The school resides in an urban area;
3. School provide education for students between the age of 12 to 18 years;
4. The school involves a team of at least 3 teachers, covering a mix of thematic subjects.

Priority criteria

1. Proven previous environmental education experience at the domestic or international level.



2. Proven ongoing or previous involvement in science education projects at the local, national and/or international level.
3. Support from the local authority.
4. Support from a scientific community.
5. Proven links to the local society and other stakeholders.

The selection process will be conducted by the PULCHRA partner country teams in two rounds. At first, the application will be assessed against the mandatory criteria. This is a GO/NO GO round; schools which comply with the mandatory criteria will be then evaluated on the basis of the priority criteria. It should be mentioned that taken the differences in the educational systems of the partners in the PULCHRA project into account, minor changes to the priority criteria may apply per partner country.

It is important to use criteria in an *inclusive way* and adapt to the local and national conditions - not to exclude a school, for instance, because it has never been involved in a science education project. Thus, it is not necessary that all schools should comply with all priority criteria above. In practical terms, schools that comply with most of the priority criteria will be selected.

A draft template of the application form is provided in Annex II. As already mentioned, partners may limitedly modify the application form according to their national needs; yet modifications cannot be applied regarding the mandatory criteria.

Selected schools will be asked to sign a letter of commitment aligned to the role of the PULCHRA schools (see Role of Schools).

5. Involvement of stakeholders in the Open Schooling Network

The PULCHRA Open Schooling Network promote partnerships that foster expertise, networking, sharing and applying science and technology research findings and thus bringing real-life projects to the classroom. The Open Schooling Network is open to a wide range of the stakeholders which may be interested to support the Schools Network.

As identified in the deliverable *D2.2 User requirements* the key stakeholders of the PULCHRA project can be grouped in the following two categories as below:

Educational Sector	Community Sector
Schools	Local authorities
Teachers	Parents
Students	Enterprises
Researchers	NGOs
Universities and research centres	Policy makers



The list of the possible stakeholders is open to any other interested member to participate, taken that they express interest and are willing to support the open schooling network.

To ensure the smooth cooperation of the Open Schooling Network and especially the cooperation between the schools and the participating stakeholders, certain requirements are set regarding the stakeholders to potentially join the PULCHRA project. In particular, the stakeholder is:

- interested in the project and the open schooling network;
- thematically connected to one or more of the fields of the selected City Challenges (to be defined in the WP5);
- situated close to the school or at least in the same city;
- willing to act as a mentor or visit the schools or accept schools to visit its premises;
- able to feed the City Challenges Platform;
- willing to disseminate and exploit project results.

It is not necessary that all stakeholders should comply with all requirements above, criteria should work in an inclusive way in order to be able to diversify and expand the open schooling network in the future. At the same time, interest in the open schooling network, expertise in the one or more fields related to the PULCHRA project and proximity to the school, are considered important requirements to ensure good cooperation during the project and in the future.

Stakeholders from the tobacco, alcohol and gambling sectors will not be able to attend the network. Furthermore, the PULCHRA project and its partners retain the right to exclude a partner from the network, following to a justified reasoning.

6. Operational patterns for Open Schooling Network

During the project, a flexible and adaptive Open Schooling Network will be developed with the potential to sustain and grow after the project ends. The national conditions and traditions should be considered, but overall basic rules should apply to every participant country in order to reach the project goals.

In order to define operational patterns for school, we need to know, what schools will do as members of the PULCHRA open schools network. A short description of the planned school involvement in the PULCHRA project follows.

Forming a team. Each school develops its PULCHRA Science education team (Details in WP5), involving different stakeholders. Roles are assigned to the students. Teachers are a critical part of the Science Teams as they motivate students, coordinate projects, establish cooperation with other stakeholders and facilitate the involvement of parents.



In this phase, schools can use stakeholders from all categories to enrich their Science Teams on a scientific, technical, innovative and social level. Also, schools can choose persons from the educational sector to be members of the Science Teams during the City Challenges.

Training of the team. Schools will be provided with educational resources supporting inquiry-based learning. Teachers and pre-service teachers will be trained accordingly (Details in WP8). In this phase, schools can use stakeholders from the educational sector for coaching/mentoring either by inviting them to the school or by visiting them. Schools can use public and private entities as well as NGOs to provide them with expertise on urban issues.

Organizing City Challenge events. In this phase, Science Teams develop projects on the chosen challenge theme. Real-life projects are brought in the classrooms in each of the participating schools, through multi-partner synergies [school—academic and research community – enterprise(s) - civil organization(s)]. The school should exploit the expertise of the educational sector in order to gain scientific advice about urban issues, engage with the local community to discuss the consequences of urban issues in everyday life and exploit the expertise from enterprises to find the best solutions. At last, the Science education teams organize the City Challenge Events (Details in WP 10).

Communication. Schools run City Science Reporters (Details in WP9) to collect information in support of their project and to disseminate lessons learned during the City Challenges. Schools should invite the local community to information events where the City Reporters disseminate the Science Team activities and results. Stakeholders from the local press can also be invited to help City Reporters.

Implementation and exploitation. Each Science education team will determine the critical path to the implementation and potential exploitation of the solution. Solutions and exploitation pathways will be delivered to local authorities and published for the general public and will populate the City Challenges Platform in view of their dissemination and potential replication. The achievement of high-quality science teaching requires the combined and continued support of all involved stakeholders. Stakeholders could be involved in the different roles and different stages of the project as well as for different purposes depending on their type and expertise in order to support the open schooling concept or be a part of the scientific activities during the different science events organized by participant schools. Coaching/mentoring of schools by Universities, Research Centres and enterprises is provided so as students can work out the City Challenges and develop their projects. Challenges from interested stakeholders could be solved by school teams.



It is recommended (but not required) that partners form a working group (WG) which coordinate activities of the PULCHRA Open Schooling Network in their country. The working group consists of the representative of the PULCHRA partner (school network coordinator - SNC) and one teacher from each science education team (school coordinator SC). The WG is flexible and adaptable to fit the actual situation. Depending on the project phase, City Challenge topic and actual activities, other representatives (e.g. – responsible for Science reporters, City challenge coordinator, representatives from stakeholders, local authorities etc.) could be involved in a WG as well. Each WG develops its working plan (WP), agrees on the meetings – time, frequency, face-to-face or online and plans all actual events in the project.

7. Sustainability of the Open Schools Network

In order to expand the school network during the project and to sustain it after the end of the project (part of WP11), the City Challenges Platform will play a crucial role; thus, it is very important to use a light and flexible way of communication within the City Challenges Platform, avoiding heavy management. That is why the design of the City Challenges Platform should be easy to operate and interactive where schools/teachers can easily find local experts for their science teams or communicate with other teachers and stakeholders (details in WP7).

8. A detailed timeline of the WP4

1-9 month (September 2019 – May 2020)

D 4.1. Plan of the network of schools due to January 2020

MS3 School Network – Announcement in the website, selection process, the role of schools (January 2020)

1. M 1-5 – development of the plan, criteria for schools, operational patterns, selection process
2. M 6-9 – forming the school network



Annex I. Open Call for Schools

About project

The project “Science in the City: Building Participatory Urban Learning Community Hubs through Research and Activation” (PULCHRA) aims to explore the open schooling concept in the theme “**Cities as urban ecosystems**”, in view of creating new partnerships in local communities to foster environmental science education for all citizens. The open schooling concept provides an open and inclusive learning environment; it supports the development of innovative school projects and establishes points of access for all members of the society. Student projects will meet the real needs of the community by drawing upon local expertise and experience

Duration of the project September 2019 – August 2022.

[For publications outside PULCHRA project website] The PULCHRA consortium consists of twelve (12) partners from ten (10) EU Member States (Greece, Czech Republic, Cyprus, Germany, Ireland, Italy, Latvia, Poland, Romania, and Sweden) that collectively constitute a team fully capable of achieving the project objectives.

Network of schools

Fifty (50) participant schools from ten (10) EU countries (5 schools per country) together with other interested stakeholders will form the Open Schooling Network. Schools, in cooperation with other stakeholders, will become an agent of community well-being, taken the theme to be explored encompasses the natural environment, the built environment and the socio-economic environment in cities.

Benefits for schools

The participation in the project is an opportunity for the school and its educational community (teachers and students) to take part in an international innovative project dedicated to urban environmental challenges. Through the application of the open schooling concept as well as participatory and co-productive processes, the project will bring real-life projects as related to **cities as urban ecosystems**, in the classrooms through focused collaborations with Universities, research centres, local authorities, NGOs and enterprises from the private sector.

An important pillar of the project is the integration of innovation, for instance with the use of new technologies, Earth Observation and navigation tools.



Role of the schools

Forming a team. Each school develops its PULCHRA Science education team, involving different stakeholders (teachers, students, parents, scientists, representatives of the local authorities, experts from the private sector, etc.) with emphasis given to the school community.

Organizing City Challenge events. Science Teams will develop real-life projects in the overall theme of “Cities as urban ecosystems”. Projects are to be presented to the local community through an open City Challenge Workshop to take place in the school or any other selected venue. Presentations, open dialogue, invited lectures, open discussions, etc. will enrich the Workshop and its participatory character.

Communication. Each school will define a team called “City Science Reporters”. The task of the team is to disseminate the project, its activities and results to the local community and the public in general. Although the particular type of dissemination tools are to be defined in the course of the project in a co-production process with the schools, one of the tools will be the production of the e-newsletter.

Exploitation. Solutions and exploitation pathways as developed by the PULCHRA schools will be delivered to local authorities, will be published for the public and will populate the City Challenges Platform in view of their dissemination and potential replication.

A limited amount of organizational and transportation expenses will be covered by the PULCHRA project, in agreement with the respective partner per country. School expenses will be managed by each of the PULCHRA partners according to the provisions of the Contract Agreement.



Criteria for schools

In order to become a member of the PULCHRA School Network, a school should comply with certain criteria as divided into two categories: the mandatory (required) and the priority (recommended) ones.

Mandatory criteria

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3. Support from the local authority.
4. Support from a scientific community.
5. Proven links to the local society and other stakeholders.

The selection process will be conducted in two rounds. At first, the application will be assessed against the mandatory criteria. This is a GO/NO GO round; schools which comply with the mandatory criteria will be then evaluated on the basis of the priority criteria. It should be mentioned that taken the differences in the educational systems of the partners in the PULCHRA project into account, minor changes to the priority criteria may apply per partner country.

Selected schools will be asked to sign a letter of commitment aligned to the role of the PULCHRA schools (see Role of Schools).

Deadline for application: 31.03.2020.

Announcement of the results in the project website and partners websites no later than 30.04.2020.



Annex II. Application Form

To be submitted by 31.03.20. [by regular mail, email or link, depending on partners choice]

Information about data processing, storing and participants rights [partners fill]. Data processing will be done according to PULCHRA project D1.3.H Ethics Requirements P. 2, 3 and 4 and according to Partners National Laws.

City/town

School (name, address, contact phone, e-mail)

Education level

Contact person

Contact information

Teachers involved (names, if available at the time of application and/or subjects, age group of students to be employed in the project)

1.

2.

3.

Please add if necessary



Please explain why is the school interested to become a member of the PULCHRA Schools network? (maximum 300 words)

Please describe the school's experience in similar domestic or international projects (environmental education, science/research, community involvement) (maximum 400 words)

Please explain what skills, expertise and experience would you bring to the project? (200 words)

Please describe how you plan to bring in the local community (including the parental community)? (maximum 200 words)



**Please explain what kind of the support*, would you get from your local authority?
You may wish to provide any relevant example from previous projects or attach a support letter! (maximum 200 words)**

**it may be funding, provisions of materials/consumables needed for the project, expert advice from local administrators, etc.*