

Interreg
CENTRAL EUROPE



InAirQ

European Union
European Regional
Development Fund

TRANSNATIONAL ADAPTION ACTIONS FOR INTEGRATED INDOOR AIR QUALITY MANAGEMENT

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FOREWORD

Indoors is the place where most of EU population spend up to 90% of their time: at home, at school, at work. The indoor air quality in our homes, schools and workplaces is an extremely variable parameter, as it is the result of many factors: building and furniture materials, plant efficiency, household cleaning methods and products, scope of the room, temperature, humidity, ventilation, indoor activities (e.g., cooking, cleaning), etc.

Some people are more vulnerable than others to indoor air pollution: children, elderly people, pregnant women, people with cardiovascular and chronic respiratory diseases. In particular, children may be more vulnerable than adults to certain indoor air pollutants; this means that air quality in schools can have a significant impact on children's

health and learning performance. Respiratory health in schools is particularly affected by air pollutants, with allergic subjects being at higher risk. Indoor air quality in schools may be responsible for acute health effects (e.g. respiratory irritation), chronic effects (e.g. asthma and allergies), symptoms associated with sick building syndrome (SBS; headaches, nausea etc.) and lack of concentration.

In order to determine whether, and to what extent, air pollution may cause health effects on vulnerable population it is necessary to study the toxicity of pollutants and their concentration in indoor air, exposure of people to indoor air pollutants and exposure-response relationship.

These studies are the starting point of InAirQ project, heading for

experimental, low cost solutions aimed at improving indoor air quality in Central European schools attended by 6-14 year-old children. These solutions will be collected in specific action plans, which will be drafted thanks to the involvement of main stakeholders (school managers, regional and local authorities, paediatricians, parent associations etc.), whose awareness will be raised towards the major health concern related to poor quality of indoor air.

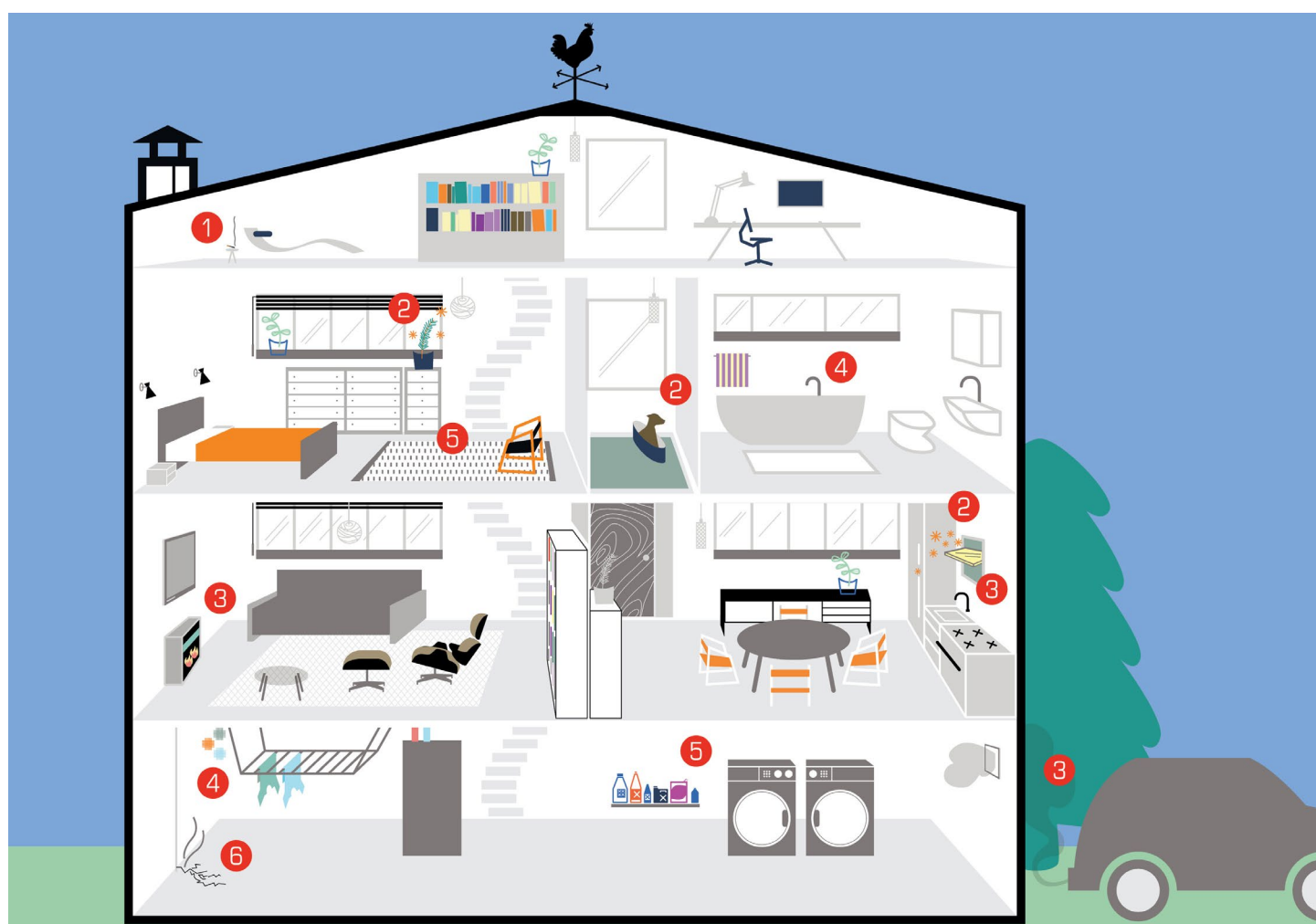
The recommendations provided by the action plans will be transferred through capacity building activities aimed at giving stakeholders training on how to implement actions defined in action plans, as a legacy that InAirQ will leave to relevant decision makers to pursue the final goal to protect children's health and improve work environment of school workers.





THE EUROPEAN COMMISSION, JOINT RESEARCH CENTRE INDOOR AIR POLLUTION

We spend a large part of our time indoors - in our homes, workplaces, schools or shops. Certain air pollutants can exist in high concentrations in indoor spaces and can trigger health problems.



1 TOBACCO SMOKE

Exposure can exacerbate respiratory problems (e.g. asthma), irritate eyes and cause lung cancer, headaches, coughs and sore throats.

2 ALLERGENS (INCLUDING POLLENS)

Can exacerbate respiratory problems and cause coughing, chest tightness, breathing problems, eye irritation and skin rashes.

3 CARBON MONOXIDE (CO) AND NITROGEN DIOXIDE (NO₂)

CO can be fatal in high doses and cause headaches, dizziness and nausea. NO₂ can cause eye and throat irritation, shortness of breath and respiratory infection.

4 MOISTURE

Hundreds of species of bacteria, fungi and moulds can grow indoors when sufficient moisture is available. Exposure can cause respiratory problems, allergies and asthma, and affect the immune system.

5 CHEMICALS

Some harmful and synthetic chemicals used in cleaning products, carpets and furnishings, can damage the liver, kidneys and nervous system, cause cancer, headaches and nausea, and irritate the eyes, nose and throat.

6 RADON

Inhalation of this radioactive gas can damage the lungs and cause lung cancer.



OVERVIEW OF THE INAIQ PROJECT

The World Health Organisation (WHO) and the European Commission's DG Health have warned that air pollution - indoor and outdoor - is a major environmental health concern, which can lead to serious health effects. Much progress has been made in the EU to improve outdoor air quality and reduce the emission of pollutants. In fact, the emission of air pollutants in EU countries tended to decrease between 2002 and 2011, although this was not the case in some Central Europe countries, such as Poland and Slovakia, characterised by economic transition and an inheritance of the industrial pollution from the past.

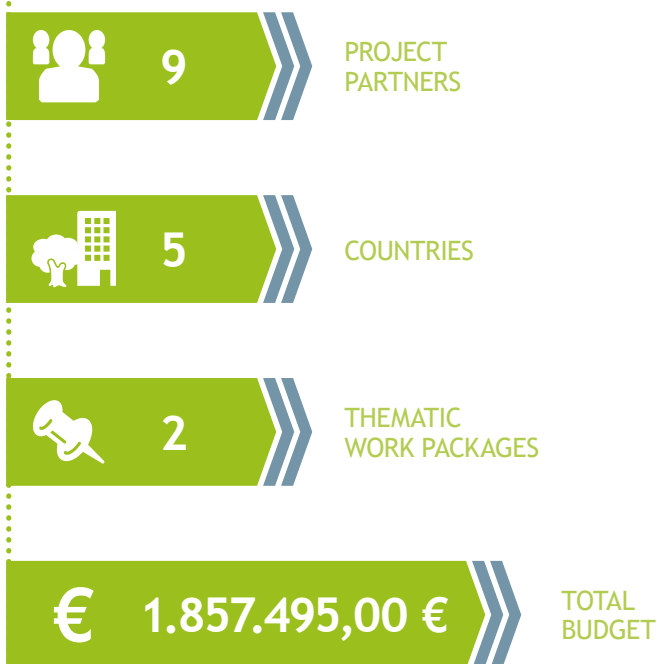
To some extent indoor air quality is determined by the quality of the outdoor air; however, in the case of indoor sources of pollutants, their concentration can far exceed outdoor levels. This also means that the higher the outdoor air pollution, the greater the risk to human health inside public and household buildings.

Poor indoor air quality can be especially harmful to vulnerable groups such as children between 6-14 years old attending school, which represent 11% of the total Programme area's population. Even at low levels, air pollutants may disrupt the development of their lungs, cause coughs, bronchitis and other respiratory diseases, and make asthma worse.

Starting from these considerations, InAirQ Consortium will cooperate to deliver tools, methods and testing for improving indoor air quality in primary and secondary schools.

Therefore, the project results gained from this cooperation will contribute to making schools better places for living and working.

FACTS AND FIGURES



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THE PROJECT

The InAirQ project involves 9 partners among public and private bodies, national/regional/local authorities, schools, research institutes, NGOs. They represent 5 Central European countries. The project's main objective is to trigger the elaboration of policies and practical actions and initiate capacity building to reduce the adverse health effects of indoor air quality in the Central Europe area.

InAirQ will describe the health impacts of indoor air quality on the vulnerable population and to take action to improve the healthy environment in schools in Central Europe. The project will develop a **Virtual Health Repository** to help decision makers monitor the indoor air quality and its changes.

National action plans will be elaborated, tested and implemented, striving to raise standards of human health through improvements in the indoor environment.

Capacity-building courses will be organised, tailored to the school managers and local/regional school operating bodies for the best implementation of the action plans, while the transnational Environment Quality Forum will

provide the follow up of the project results and sustain the co-operation to the potential stakeholders.

Knowledge-providing partners - national/regional health authorities and institutions - will provide the baselines of indoor air quality and its health impacts at transnational scale. Local and regional authorities, network of schools and the pilot schools will contribute to elaborating, testing and implementing the action plans. They will also conduct capacity-building activities.

Central Europe strategy, tools, action plans and capacity building activities will offer a contribution to the environmental sustainability of social activities, improving the quality of life as measured by positive changes in human health and environmental indicators, and improving competitiveness in terms of higher standards of environmental quality.

The technical Work Packages (WPs) will be focused on:

- transnational base lining and monitoring with stakeholder involvement (WP T2),
- action plans and capacity building (WP T3).





EXPECTED RESULTS



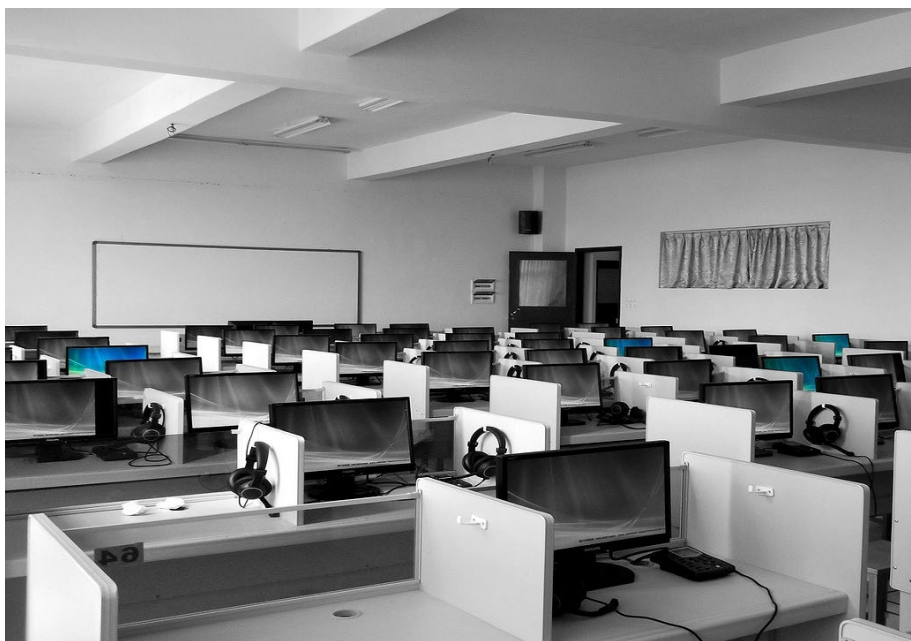
The project results will enshrine in the following outputs:

- **Joint Transnational Strategy for Indoor Air Quality action plans**
- **Indoor Air Quality Action Plan**
- **Virtual Health Repository**
- **Transnational Environment Quality Forum**
- **Pilot actions**
- **Capacity Building to implement the action plans**

InAirQ will focus on elaborating transnational actions: policies and practical actions which will lead to the mitigation of the human health risks from exposure to indoor air pollution. The project partners will take action and test and implement such through pilot activities. Along with the action plans, capacity building measures in each partner country for the potential target groups will be taken to strengthen management capacities to improve indoor air quality in situ.

The InAirQ project results will contribute to limit the effects of air pollution aggravated by human activity, compiling joint transnational mitigation strategy, and to reduce the adverse health effects of air pollution on the most vulnerable population by improving awareness and knowledge and by harmonising adoption measures in the public sector.

A set of integrated tools will be developed to monitor and mitigate indoor air quality effects at the local level. Through this decision support tool, the joint strategy and action plans will be tested and implemented under the coordination of different groups of stakeholders including local governments, churches, association and national/regional/local authorities which are responsible for management of schools.





WORK PACKAGES

WP M PROJECT MANAGEMENT
Led by National Public Health Center - NPHC (Hungary)

ACTIVITIES
4

DELIVERABLES
18

TIMELINE
7.2016 - 6.2019

WP T2 TRANSNATIONAL BASELINING AND MONITORING WITH STAKEHOLDER INVOLVEMENT
Led by Nofer Institute of Occupational Medicine - NIOM (Poland)

ACTIVITIES
3

DELIVERABLES
21

TIMELINE
9.2016 - 3.2019

WP T3 ACTION PLANS AND CAPACITY BUILDING
Led by National Public Health Center - NPHC (Hungary)

ACTIVITIES
5

DELIVERABLES
18

TIMELINE
04.2017 - 11.2017

WP C COMMUNICATION MANAGEMENT
Led by Higher Institute on Territorial Systems for Innovation - SiTI (Italy)

ACTIVITIES
5

DELIVERABLES
13

TIMELINE
07.2016 - 06.2019



PRESENTATION OF THE INAIRQ PARTNERS

WHO WE ARE

Partners from five Central European Programme countries join their forces to improve indoor air quality in primary and secondary schools.

5
COUNTRIES

2 HU **2** IT

2 PL

1 CZ

2 SI

9
PROJECT PARTNERS

7 PUBLIC
2 PRIVATE

6
PUBLIC AUTHORITIES

1
SCHOOL

1
HIGHER EDUCATION & RESEARCH CENTRE

1
NETWORK GDO





ORSZÁGOS KÖZEGÉSZSÉGÜGYI KÖZPONT

LEAD PARTNER

NATIONAL PUBLIC HEALTH CENTER (NPHC)

HU

PUBLIC

NATIONAL
AUTHORITY

The National Public Health Center (NPHC) is the Hungarian national health authority. It is designated by law to carry on the following activities:

- Research in the field of public health (nutrition health, environment and urban health, radiation health, cosmetics, healthcare conformity and chemical safety, children and youth health) at national level
- Laboratory tests in the field of epidemiology
- Improvement of public health (health protection, health education and health promotion, organization and coordination of health monitoring, including noncommunicable disease epidemiology, health impact assessment of public health checkups)
- Management and coordination of health policies at national level.

The role of NPHC in the InAirQ project is both managerial (as Lead Partner) and thematic.

VÁRPALOTA VÁROS ÖNKORMÁNYZATA

MUNICIPALITY OF VÁRPALOTA (VÁRPALOTA)

HU

PUBLIC

LOCAL
AUTHORITY

The Várpalota region, which is located 120 km away from Budapest to southwest and in the northeast of Lake Balaton, is the wider area around City of Várpalota and the second largest heavy chemical industrial area in the country. The most severe environmental concern is still the high air pollution. According to the statistical figures the health condition of inhabitants are moderate.

Várpalota manages 6 schools, primary and secondary, together. Thus the municipality has the opportunity to control the indoor air quality in the schools and implement action the plan.

INSTYTUT MEDYCYNY PRACY IM. PROF. DRA MED. JERZEGO NOFERA

NOFER INSTITUTE OF OCCUPATIONAL MEDICINE (NIOM)

PL

PUBLIC

NATIONAL
AUTHORITY

Nofer Institute of Occupational Medicine (NIOM), located in Łódź, was established in 1954 as an independent resort scientific research institute under the supervision of the Minister of Health. It is a scientific and research center that deals with issues related to public health, environmental health and to all the fields of study connected with broadly understood occupational medicine. For more than 60 years it has been co-creating and developing occupational health care system through carrying out its scientific, therapeutic, experimental, implementation, training and publishing activities.

The objective of NIOM is to ensure the best available practical systemic solutions that improve conditions of work and life. Due to the high standard and quality management in research it is one of the most important scientific research units in the country.



URZĄD MARSZAŁKOWSKI WOJEWÓDZTWA ŁÓDZKIEGO

MARSHAL OFFICE OF ŁÓDZKIE REGION (MOL)

PL

PUBLIC

REGIONAL
AUTHORITY

The Lodzkie Region (LR) is one of 16 regional self-government authorities in Poland. It is inhabited by 2.5 mln people, which ranks it sixth in the country. Despite an excellent location, investment and research potential, Lodzkie faces several demographic and economic challenges.

Main business of the Lodzkie Region is responsible inter alia for the socio-economic development of the region, including the stimulation of economic activity and improve the competitiveness and innovation of the region's economy. Among its activities, it also deals with the field of public health. The Lodzkie Region supports the development of economic activities in the labor market through its institutions and takes action to promote employment and labor market development in the region. It is the Managing Institution of the Regional Operational Program, coordinator for the implementation of the Smart Specialization and Innovation strategy and the provider of information on the EU opportunities and policies in the Region, through the Regional Office of the Lodzkie Region in Brussels, and its membership in the Committee of the Regions for the last 3 years.

NACIONALNI INŠTITUT ZA JAVNO ZDRAVJE (NIJZ)

SLOVENIAN NATIONAL INSTITUTE OF PUBLIC HEALTH

SI

PUBLIC

NATIONAL
AUTHORITY

The beginnings of NIJZ stretch in 1923 when the Central Hygiene Institute was established in Ljubljana. While representing a central institution in the field of public health, NIJZ, with its 400 employees and numerous partners from various social sectors and non-governmental institutions, strives to fulfil its mission - contribute to better health and welfare of Slovenian population. Among the main NIJZ activities are the following:

- monitoring and evaluation of healthcare system and the health of the population;
- recognizing health threats and developing measures to control them;
- managing health and healthcare services databases; and
- promotion health and developing professional bases for adopting health-friendly policies, programs and measures for disease prevention.

Besides working in the above mentioned fields, NIJZ contributes to new solutions by participating in numerous international public health projects. By spreading new knowledge and best practices, it fulfils its role in the field of research, education and training public health professionals.



OSOVARNA ŠOLA KARLA DESTOVNIKA-KAJUH (OS-KDK)

PRIMARY SCHOOL KARLA DESTOVNIKA-KAJUHA

SI

PUBLIC

SCHOOL

Primary school Karla Destovnika - Kajuha (OS-KDK) exists since 1993. It is active members of national and international networks dealing with the improvement of education environment and care of the students' physical health and mental hygiene. The school is among the founder schools of the Slovenian Network of Health Promoting Schools, which nowadays involves the majority of primary schools of Slovenia. Primary school Karla Destovnika - Kajuha, through its leading role in the network, has contributed to promote the theme of healthy environment in schools by systematically planning, implementing and evaluating school activities from the field of health. Three times a year it organises meetings with leaders of school teams and regional coordinators, with lectures related to health issues, information about events and activities concerning health and exchanging experiences and cases of good practices. It offers teachers training programs and materials to implement them in a school practice; among them: Promotion of Mental Health; Promotion of Health of Young People in Europe; Planning and Evaluation of Health Promotion Programmes; Let's Promote of No Tobacco Use; Alcohol? Adults can Help; Relationships between Teachers, Parents and Children; Coping with Stress; Pears Mediation; Apple in a School; Model of Healthy Life-Style.

Primary school Karla Destovnika - Kajuha is a regular and active representative of Slovenian schools in SHE - Schools for Health in Europe.

STÁTNÍ ZDRAVOTNÍ ÚSTAV

NATIONAL INSTITUTE OF PUBLIC HEALTH (NIPH)

CZ

PUBLIC

NATIONAL
AUTHORITY

The National Institute of Public Health (NIPH) is a health care establishment for basic preventive disciplines - hygiene, epidemiology, microbiology and occupational medicine. Its main tasks are health promotion and protection, disease prevention and follow-up of environmental impact on the health status of the population. The main activities of the Institution comprise science and research, reference and methodological advice, providing expert opinions on the health safety of various products (such as cosmetics, food supplements, items of daily use etc.), systematic monitoring of the environmental impact on population health in the Czech Republic, preparation of legislation in the field of health protection, including harmonization of Czech legislation with the norms of the European Union. In the field of health promotion and disease prevention, NIPH concentrates on the most important health problems - epidemiological surveillance of severe infections and promotion of a healthy life style.

The Institute plays an active role in pre- and postgraduate training of physicians and other health care workers and provides consultations to professionals working in the field. The department of Environmental Health studies the extent of exposure to environmental pollutants and factors to identify possible health risks to the population from these exposures. One part of the Institute is Laboratory Centre which provide wide spectrum of a chemical, physical and microbiological laboratory analysis and sampling campaigns of all types of environment.



ISTITUTO SUPERIORE SUI SISTEMI TERRITORIALI PER L'INNOVAZIONE (SITI)

HIGHER INSTITUTE ON TERRITORIAL SYSTEMS FOR INNOVATION

IT

PRIVATE

HIGHER
EDUCATION
& RESEARCH

SiTI is a non-profit association (Research Institute) set up in 2002 by the Politecnico di Torino (Technical University of Turin) and the Compagnia di San Paolo (foundation of bank origin), to carry out research and training oriented towards innovation and socio-economic growth. SiTI has a strong interdisciplinary approach, specifically devoted to territorial systems. Its activities are focused on the following sectors:

- Environmental Heritage and Urban Redevelopment, dealing with conservation, defence of the natural and cultural components of the environmental systems, urban planning and redevelopment, local development and tourism management.
- Logistics and Transport, dealing with transport planning oriented to urban and land sustainable development. Development of simulation models and system analysis are the main activities carried out to study the transport systems at different territorial scales and provide plans, strategies and actions aimed at easing people's mobility and rationalizing freight transport, meeting society's environmental, social and economic needs whilst minimizing transport undesirable impacts.
- Environmental Protection, dealing with the field of energy governance, based upon an experimental approach combining technology and innovative business models. It carries out research on security and safety of critical infrastructures, with special focus on security assessment and cascading effects, and cultural heritage.

FONDAZIONE PER LA SCUOLA DELLA COMPAGNIA DI SAN PAOLO (FPS)

SCHOOL FOUNDATION COMPAGNIA DI SAN PAOLO

IT

PRIVATE

INTEREST
GROUPS
GDO

Established in 2001 in Turin, FpS is one of Compagnia di San Paolo Foundation's independent operating bodies (no profit foundation). Its main mission is to work with and for the schools of the metropolitan area of Turin to improve the quality and quantity of investments in knowledge, training and education. It operates through its own initiatives, in partnership with Compagnia di San Paolo Foundation and its operating bodies, but also through local, national and international partnerships (e.g. Turin Municipality, Ministry of Education - Regional Dpt, EUSTORY). The key leading guidelines for Fondazione per la Scuola in implementing initiatives are: Social usefulness of projects and Innovation of training models.

It works for schools in order to improve the quality of Education in Italy; bring schools closer to the highest European standards; facilitating the benchmark educational experiences and best practices among schools; promoting school inclusion and dropping out reduction. FpS applies different means to achieve its goals, depending on the type of project, such as: flexible and innovative meetings/training modules addressed mainly to schoolmasters and teachers; contests; school networks, to offer and disseminate innovation in didactics and organization; research/analysis to build common knowledge in the Foundation's fields of interest.



EVENT

KICK-OFF MEETING

26-27|09|16

BUDAPEST
HUNGARY

Kick-Off Meeting of InAirQ project was held on 26-27 September, 2016 in Budapest (Hungary), in the meeting room of the National Public Health Center (Országos Közegészségügyi Központ).

Tamás Pándics on behalf of the LP institute opened the session and welcomed the KoM participants. LP talked about the project, mentioning the background and the evolution of the project from the preparatory phase till the final approval; then, each PP shortly introduced its own institute and institution, and WP leaders presented the thematic work packages, listing activities and deliverables to be developed.

The meeting has represented the opportunity for PPs to know each other, to present the role of each partner in the project and to clarify some doubts and issues related to the development of project activities.

It was also an opportunity to get to know deeper the Interreg Programme guidelines, thanks to the presence of Ms Claudia Pamperl, representative of the Central Europe Interreg Joint Secretariat, which provided a general overview about the Programme and shared the most relevant steps and requirements of the implementation progress.

Next Meeting will take place on 21st-22nd of February, 2017 in Ljubljana (SI).



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Marshal Office of Lodzkie
region



National Institute of
Public Health



Municipality of Várpalota



Slovenian National
Institute
of Public Health



Higher Institute on
Territorial Systems
for Innovation



Nofer Institute of
Occupational Medicine



Primary School Karla
Destovnika-Kajuha



School Foundation
Compagnia
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