



**R4C**

**Reflecting for Change**

**Deliverable 6.4**

**Project Website**



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### Document Control Page

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<b>Abstract</b>	This document describes the functional design, the user interface and the content of the R4C project website.
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### Document Control Page

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2.0	December 10th 2019	Luca Laszlo	Revised version
3.0	December 17th 2019	Luca Laszlo	Final version considering feedback and comments by the partners

## **Executive summary**

This document describes the functional design, the user interface and the content of the R4C project website.

The website will be regularly updated with the developments in the project, and will include a resource center where the R4C activities will be hosted and support for the schools that will want to adapt the project approach and tools will be offered.

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# 1 Introduction

## 1.1 Purpose of the document

The project Reflecting for Change (R4C) aims at proposing an advanced support framework, as well as a set of core policy recommendations, to schools seeking to introduce a type of holistic change that will ensure a meaningful uptake of sustainable innovation, with an emphasis on achieving improved learning outcomes as set by the Europe 2020 strategy. In R4C approach, innovation is understood in terms of a school's pathway to digital maturity (e-maturity) and its comprehensive relationship to the use of ICT, as well as a school's pathway to openness demonstrated in its relationship with external stakeholders, in parental engagement, in fostering the well-being of its community as a whole, in its ability to combine the delivering of the curriculum with a study of local challenges, in its willingness and capacity to share its achievements with other schools and in its engagement with contemporary Responsible Research Innovation (RRI) challenges.

The consortium will organise and coordinate large scale pilots with schools to evaluate the effects of, and systematically validate the proposed approach by implementing numerous activities and exploiting at the same time the opportunities offered by major ongoing initiatives and reforms, in Greece, Portugal and Italy. The project will be implemented with a bottom up approach in 300 primary and secondary school, in urban as well as in rural areas while the sample for the validation of the proposed approach will consist of 1,500 teachers and 15,000 students.

The website will be based upon the three pillars of the R4C project:

- The R4C model: a framework that enables schools to become and Open or R4C School and redefine their role in their communities
- The R4C accelerators: good practices and real-life projects that schools can implement to become open communities of learning.
- The R4C incubators: a community of 300 R4C Schools in Greece, Italy and Portugal

These pillars correspond with the logo of the R4C project.

The first version of the website will be built in English only. The project partners will decide on national language versions after the website has been launched. The webpage will contain an online translator that translates in all major languages.

Timeline

The next steps are:

1. functional design by ESHA (by 10.12.2019)
2. review, and text suggestion by partners (by 16.12.2019)
3. text finalization by ESHA (by 18.12.2019)
4. website design, clickable demo by ESHA (by 23.12.2019)
5. First version of the full website by ESHA (by 31.12.2019)

## 2 Structure of the R4C website

### 2.1 Summary

This report includes the functional requirement specification for the website of the R4C project. This functional design describes per page the desired functionalities, the integration scenarios with the social media and partner web pages and some basic requirements for the future design of the site.

The site will be built with WordPress.

The site will use Google Analytics plug in, in order to gather data about our impact.

The site will have a search function, and the posts will be tagged in order to help searching.

On the website we will not post recognizable pictures of the faces of children, in order to respect their right to be forgotten.

The website will contain the following content:

Home page: Welcome, most important reasons for participation, Twitter integration (with the display of the most recent Tweets), referral to the most important target audiences (teachers, school heads, parents, students, policy makers) using pictures.

1. The R4C Community
  - Map of participating schools in Europe including contact information
  - Reasons for joining the Reflecting 4 Change movement. The project members have identified the following target audiences. Each target audience has their own specific value proposition (and brochure?). For each target audience, we will create a separate page (and brochure?).
    - Students
    - Teachers
    - School heads
    - Parents to become involved in the learning of their children
    - Other (policy makers, universities, science centres, local businesses)
2. The R4C Model
  - The R4C model
  - Support + Overview of national contact coordinators with contact info
3. Page for the 'sister projects'- special attention to OSOS with link
4. News and events (promotional and awareness raising events)
5. About:
  - contact information about all partners with link

### 2.2 The sitemap

The following overview gives a detailed overview of the structure of the website.

Home page	Dropdown option	Page	Separate page	Content
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Welcome	Home	www.reflecting4change.eu/home	Y	Welcome, most important reasons for participation, Twitter (with the display of the most recent Tweets) and Facebook integration, some good practices, referral to the most important target audiences,
	Join us!	/community	y	R4C community Description, access to target group specific information
	Teachers	....community/teachers	Y	Information that inspires teachers to implement good practices. Focus on child behaviour
	School heads	....community/schoolheads	Y	Information about the R4C approach. Focus on R4C and open school model
	Parents	....community/parents	Y	Information about getting more involved in the learning of their children
	Students	....community/students	Y	Inspirational information: R4C schools are fun and challenge kids, what can students do to make their voices heard
	Other	....community/Other	Y	Policy makers, universities, researchers, businesses, science centres

	R4C-Model	.../r4cmodel	Y	Information about the R4C model <a href="#">with</a> reference to <a href="#">the</a> Open School Model
	Support	.../ r4cmodel/Support	Y	Information about and link to the Inspiring Science Education platform and contact information of the national coordinators  Support structure by schools + Map of the R4C Schools
	News and Events	.../news+events	Y	Calendar with all upcoming events, news
	About	.../about	Y	Contact information association, contact address, links
	OSOS	/OSOS	Y	Link and information to the Open Schools for open Societies project
	Search		N	Search function on the website
	Language		N	Language selection with built in translator

## 2.3 Menu structure and navigation options

- Home
- OSOS
- Join us! (R4C community)
  - Students
  - Teachers
  - School heads
  - Parents
  - Other
- The R4C Model
  - The R4C model
  - Support
- News and events
- About



- the project
- deliverables
- project partners
- search

The site consists of 12 pages. The pages are accessible through the permanently displayed menu bar at the top of each page. The pages are accessible by 7 main menu items at the home page.

The main areas correspond with the colour scheme of the R4C logo.

The 7 main menu items are displayed as a horizontal ruler at the top of each page. The menu bar will be displayed continuously, even when the user scrolls down the pages.

On this site, the main menu is permanently displayed on all pages, even when the visitor scrolls down the pages.

## 2.4 Integration options

There are several integration options for the web site. These options are discussed per page:

The home page ([www.reflecting4change.eu](http://www.reflecting4change.eu))

The following integrations will be realized on the home page:

- Twitter and Facebook: ESHA set up a Twitter and a Facebook account. Each Tweet and post will be monitored and, if the content is suitable, published on the home page of the site.

### Reference sites:

The website will have the same navigation options as the following sites:

- [www.esha.org](http://www.esha.org)

In contradiction to the above-mentioned sites, the R4C website will have a more modern look and feel.

For references, the following sites were mentioned:

- [www.rijksmuseum.nl](http://www.rijksmuseum.nl)
- <http://www.space-awareness.org/en/>
- [www.genderequalitymatters.eu](http://www.genderequalitymatters.eu)
- <http://themes.wplook.com/?themenname=charitas>  
<http://www.thp.org/>

### 3 Website pages

For each page, the following content is proposed:

#### 3.1 Home

[www.reflecting4change.eu](http://www.reflecting4change.eu)

The home page consists the following content:

- Welcome
- Logo of the project
- Twitter integration (with the display of the most recent Tweets),
- Facebook integration (with the display of the most recent post)
- Referral to the most important target audiences (communities pages)
- Recent news
  - Announcement of conferences, science contest, open information days, workshops, science contests for teachers and students, thematic meetings with external experts and presentations in conferences
  - Announcement of the first consortium meeting in Greece

Text:

Welcome to the official site of the Reflecting4Change project!

We are aiming at proposing an advanced support framework, as well as a set of core policy recommendations to schools seeking to introduce a type of holistic change that will ensure a meaningful uptake of sustainable innovation, with an emphasis on achieving improved learning outcomes as set by the Europe 2020 strategy.

#### 3.2 Join us!

[www.reflecting4change.eu/community](http://www.reflecting4change.eu/community)

The community page includes the following content:

- The Logo of the project
- Short summary of the main reasons why schools should participate in the community.
- 1 video testimonial from every target audience:
  - Teacher
  - School head
  - Parent
  - Students
  - Other
- Relevant (non-)scientific publications

Text:

The R4C community is a group of like-minded learners and educators committed to creating a school that is open and welcoming.

We are here to help!

#### 3.3 Teachers

[www.reflecting4change.eu/community/teachers](http://www.reflecting4change.eu/community/teachers)

The teachers page consists of the following content:

- Main menu with the 7 main pages on top of the page
- The Logo of the project

- An overview of information/reasons that inspires teachers to take on an Open School / R4C project.
- A video referral (In the first year this referral will be the same as on [www.reflecting4change.eu/community](http://www.reflecting4change.eu/community). After 1 year, there will be new referrals posted on this page (if available)
- Some relevant publications
- Announcement contest
- The R4C brochure for teachers

#### Text

Teachers are committed in educating the future generations. We encourage them, to not stick to conventional methods, but use their creativity and open up the classroom to parents and the community. Teachers should be not only educators but learners as well, building of the knowledge of their peers, students, community members, exploiting the gifts of technology to create an inspiring learning environment, where curiosity is embraced and pupils have a chance to connect with real-world examples.

### **3.4 School heads**

#### [www.reflecting4change.eu/community/schoolheads](http://www.reflecting4change.eu/community/schoolheads)

The school heads page consists of the following content:

- Main menu with the 7 main pages on top of the page
- The Logo of the project
- An overview of information/reasons that inspires school heads to take on an Open School / R4C project.
- A video referral (In the first year this referral will be the same as on [www.reflecting4change.eu/community](http://www.reflecting4change.eu/community). After 1 year, there will be new referrals posted on this page
- A short introduction of the innovation model + link to the model page
- Some relevant publications
- Announcement of the science contest
- The R4C brochure for school heads

#### Text

School heads are a vital actors of change in schools, their commitment will inspire other stakeholders. Cooperation with the students, the teaching body, the parents and the community will ensure a

Changing the whole approach, and becoming an open school is not easy, but the R4C tools are here to help.

### **3.5 Parents**

#### [www.reflecting4change.eu/community/parents](http://www.reflecting4change.eu/community/parents)

The parents page consists of the following content:

- Main menu with the 7 main pages on top of the page
- The Logo of the project
- An overview of information/reasons that inspires parents to become more involved with the learning of their children
- A video referral (In the first year this referral will be the same as on [www.reflecting4change.eu/community](http://www.reflecting4change.eu/community) . After 1 year, there will be new referrals posted on this page
- Some relevant publications
- The R4C Brochure for parents

## Text

Those students, whose parent's are more engaged in their learning have higher academic achievements. In an open school parents are considered as partners, and their role as primary educators of children is acknowledged and respected. Parents can actively contribute to creating a school where everybody is welcome and learning is celebrated.

### **3.6 Students**

[www.reflecting4change.eu/community/students](http://www.reflecting4change.eu/community/students)

The students page consists of the following content:

- Main menu with the 7 main pages on top of the page
- The Logo of the project
- An overview of information/reasons that inspires kids to participate.
  - R4C Schools are fun and challenging
  - How can pupils make their voices heard in school decision making
- A video referral (In the first year this referral will be the same as on [www.reflecting4change.eu/community](http://www.reflecting4change.eu/community). After 1 year, there will be new referrals posted on this page
- A possibility to submit your project to the project team
- The R4C Brochure for parents

## Text

We believe, that everybody should be a learner and an educator at the same time. We value the ideas and experience of students. In an open school, students are equally important to other stakeholders, their voices are heard and their opinion is respected and taken into consideration. Students can be agents of change helping to create a school where they feel happy and enjoy the learning.

An open school fosters and embraces the creativity of children, enabling them to explore the world and connect to their environment and community.

### **3.7 Other**

[www.reflecting4change.eu/community/policymakers](http://www.reflecting4change.eu/community/policymakers)

The other community members page consists of the following content:

- Main menu with the 7 main pages on top of the page
- The Logo of the project
- A video referral (In the first year this referral will be the same as on [www.reflecting4change.eu/community](http://www.reflecting4change.eu/community). After 1 year, there will be new referrals posted on this page
- Relevant research reports
- The R4C Brochure
- This page is for community members such as universities, policy makers, science centres, local businesses... etc.

## Text

An open school also functions as a community centre, realising the value community members can bring in, and contribute to learning. In an open school there is a strong cooperation with local businesses, universities, science centres, museums, theaters, cinemas and other formal or non-formal educational or cultural institutes or organizations. We are all learners and educators at the same time!

### **3.8 R4C model**

[www.reflecting4change.eu/r4cmodel](http://www.reflecting4change.eu/r4cmodel)

The model page consists of the following content:

- Main menu with the 7 main pages on top of the page
- The Logo of the project
- Introduction about Whole School Approach and RRI
- Planning and progress about the development of the model
- The model
- Instructions on how to apply the model

### 3.9 Support

[www.reflecting4change.eu/support](http://www.reflecting4change.eu/support)

The support page consists of the following content:

- Main menu with the 7 main pages on top of the page
- The Logo of the project
- Introduction of the support structure on the R4C-platform (similar to OSOS)
- Link for “R4C” members to the R4C-platform
- Explanation of the support model of R4C
- Link to the national coordinators for additional support

### 3.10 News and events

[www.reflecting4change.eu/news+events](http://www.reflecting4change.eu/news+events)

The events page consists of the following content:

- Main menu with the 7 main pages on top of the page
- The Logo of the project
- Overview of all relevant R4C events and news

The events will be sorted in a chronological order.

This page will include information about conferences, open information days, workshops, (science) contests for teachers and students, thematic meetings with external experts, presentations in conferences and the courses that are offered by the partners of the project.

Text

On this page you will find all events that can help you get to know the project better and enhance your skills and competences to be a successful agent of change towards an open schooling approach!

#### OSOS Summer School

Are you a school head, a teacher, a policy maker, a researcher in education seeking to bring innovation to schools? Do you want to see schools opening-up to local communities and become inspiring knowledge hubs? The OSOS Summer School aims to offer a high-impact and transformative experience, both in personal and organizational levels, through a series of inimitable workshops, best practices and challenges.

Find out more here (<http://osos.ea.gr/>)

### 3.11 About

[www.reflecting4change.eu/About](http://www.reflecting4change.eu/About)

The about page consists of the following content:

- Main menu with the 7 main pages on top of the page
- The Logo of the project
- Project description
- Deliverables description and later direct access
- List of project partners with contact

## 3.12 The project

### Reflecting4Change

2019 Nov – 2021 Nov (Oct)

**Focus** Promoting the use of self-reflection tools to support innovation and systemic change in schools

The project Reflecting for Change (R4C) aims at proposing an advanced support framework, as well as a set of core policy recommendations, to schools seeking to introduce a type of holistic change that will ensure a meaningful uptake of sustainable innovation, with an emphasis on achieving improved learning outcomes as set by the Europe 2020 strategy. In R4C approach, innovation is understood in terms of a school's pathway to digital maturity (e-maturity) and its comprehensive relationship to the use of ICT, as well as a school's pathway to openness demonstrated in its relationship with external stakeholders, in parental engagement, in fostering the well-being of its community as a whole, in its ability to combine the delivering of the curriculum with a study of local challenges, in its willingness and capacity to share its achievements with other schools and in its engagement with contemporary Responsible Research Innovation (RRI) challenges.

The consortium will organize and coordinate large scale pilots with schools to evaluate the effects of, and systematically validate the proposed approach by implementing numerous activities and exploiting at the same time the opportunities offered by major ongoing initiatives and reforms, in Greece, Portugal and Italy. The project will be implemented with a bottom up approach in 300 primary and secondary school, in urban as well as in rural areas while the sample for the validation of the proposed approach will consist of 1,500 teachers and 15,000 students.

#### 3.12.1 Deliverables

- **School Innovation Model**  
It will define the specific elements of innovation in schools (based on SELFIE and OSOS-SRT indicators).
- **School Profile and Analytics Framework**  
In order to populate school innovation profiles, the fields of Teaching, Learning and/or Academic Analytics will be utilized in order to propose an overarching School Analytics framework towards providing holistic decision support to school leaders across all school layers.
- **School Innovation Profiling Tool and the School Innovation Planning Recommender System**  
The school innovation profiling tool that will be used to profile the innovation status of the school involved in the R4C pilot activities and for visualizing the different elements of the individual schools innovation profile for the school heads, and the school innovation planning recommender system will be used for providing recommendations (and tracking the implemented innovation pathway) to school heads and teachers for strategic school innovation based the school innovation profile.
- **School Innovation Support Mechanism**  
The consortium will design and set in action a community support mechanism that will empower teachers and learners and facilitate innovation in the participating school settings. The core activity in this framework will be to build a group of change leaders who will share leading innovative practices.
- **School Innovation Strategies**  
This document will describe the necessary strategies that will help every single school to improve, reinvent, supplement and transform according to its profile and identified needs.
- **School Innovation Roadmap**  
The roadmap will be a set of guidelines that will be informed from the implementation findings. It will aim to support the schools to be engaged in the innovation process

setting up their innovation pathways based on a self-reflection process that will help schools to identify their weaknesses and needs.

- School Innovation Academy

The School Innovation Academy will propose a school innovation support service, which will facilitate the process for envisioning, managing and monitoring change in school settings by providing a localised and flexible structure to follow.

### 3.12.2 Partners

#### 3.12.2.1 Ellinogermaniki Agogi – Greece (coordinator)

Ellinogermaniki Agogi (EA, <https://www.ea.gr>) is an educational organization of private law, officially recognized by the state. Established in 1995, the Research and Development Department of EA provides the test bed for research applications for the design, development and implementation of the research activities in education. The R&D Department acts therefore as an interface between the pedagogical research, the technological innovation and the school community. It focuses on the design, implementation and support of pedagogical and technological innovations in educational practice, both through internal research as well as through collaborations with numerous educational, research and commercial institutions in Europe and the world. EA is an institutional member of EDEN (European Distance Education Network), of EEPN (European Education Policy Network) and of ECSITE (European Network of Science Centres and Museums) network, as well as a partner school of the German Schools-Excellence Network.

The work of the R&D Department which currently employs 16 full time researchers (6 PhD level, 10 MSc) focuses on the following areas, relevant to this proposal:

- Building, monitoring and supporting learning communities of practice at an international level.
- Design of technology enhanced educational and learning activities and the development of innovative teaching methodologies and practices in education.
- Large scale implementation of learning activities in real school environments at national and international level.
- Design and implementation of short- and long-term professional development of teachers including the organization of international summer courses for teacher trainings.
- Development of methodologies and empirical classroom-based research to investigate processes of learning and knowledge acquisition in various subject matter areas.
- Cooperation and collaboration with Universities, research centers, museums and private companies for the development and testing of educational material and software;
- Design of technology-supported learning environments.

Its work in EU projects over the last 20 years has established EA as a leading pioneer in innovative approaches to school education. Since its establishment, the R&D Department has coordinated and supported the participation of EA, either as coordinator or as partner, in more than 200 national and international collaborative research projects and networks (H2020, eContentPlus, ICT-PSP, SiS in FP7 and FP6, IST in FP5 and ICT in FP6, LLP-ICT, Socrates, Leonardo da Vinci, Erasmus+), the majority of which have been concerned with the fields of science and new technologies in education. Overall, EA has a very strong and proven experience in actively extending the dialogue between scientific and the educational community, enforcing the collaboration between schools and research organizations, centres and museums, and helping young people to acquire better understanding of the role of science and technology in the society.

EA has a very strong vision-generated interest and rich research and development activity in the fields of formal and informal learning with an emphasis on social inclusion, combined with innovative technical solutions, and game-based education, aiming to empower learners and teachers to thrive in the landscape of unprecedented challenges and opportunities in the 21st century. Under this

approach, EA has taken up the challenge to embed pedagogical practice that effectively uses ICTs in every classroom to overcome barriers and support inclusion, as well as driving up student academic outcomes across the school. EA has a very strong and proven experience in actively extending the dialogue between scientific and the educational community, enforcing the collaboration between schools and research organizations, centers and museums, and helping young people to acquire better understanding of the role of science in society. Furthermore, the EA team has long experience in implementing large scale projects to school communities, operating a network of more than 5,000 schools at European level (<https://portal.opendiscoveryspace.eu/en>). EA had a leading role in the Open Discovery Space Policy (ODS) Support initiative, which has developed and tested a self-reflection tool to assess the e-maturity of the schools. The SELFIE tool has been built using the ODS self-reflection tool as the main reference. Currently EA coordinates the large scale Coordination Action Open Schools for Open Societies (OSOS) ([www.openschools.eu](http://www.openschools.eu)) which has developed a new version of the ODS Self-reflection tool that aims to assess the openness of the school environment.

### **3.12.2.2 European School Heads Association (ESHA) – EU level**

ESHA, the European School Heads Association, is a professional non-profit organisation for European school leaders. Members of ESHA are national organisations for school heads and deputy school heads within (pre-) primary, secondary and vocational education. Nearly all European countries (both EU and non-EU) are represented within ESHA by one or more organisations, channelling the voices of 66.000 school leaders. ESHA is an international community where experiences, visions and views between members are exchanged and new ideas are born. ESHA connects school leaders, researchers and policy makers with the collective aim to learn from each other and offer more inclusive, quality education for all. ESHA has the mission to do high quality research and disseminate tested and inspiring practices, tools and methodology through the ESHA Magazine (17.600 subscribers), (regional) conferences, social media, newsletters and our website. Next to that, ESHA is also supporting the European Commission's policy work on teachers and school leaders, by leading the project that created the European Education Policy Network on Teachers and School Leaders (EPPN)."

<https://www.esha.org/>

### **3.12.2.3 European Distance and E-learning Network (EDEN) – EU level**

The **European Distance and E-Learning Network (EDEN)** exists to share knowledge and improve understanding amongst professionals in distance and e-learning and to promote policy and practice across the whole of Europe and beyond.

EDEN is the smart network for the professional community and a professional community for smart learning.

Established in 1991 as an international educational association and not-for-profit organisation, EDEN is open to institutions and individuals dealing with e-learning, and – more broadly speaking – open and distance education.

Providing versatile expertise, the Association embraces all levels of formal and non-formal education and training. EDEN has been consistently instrumental in the promotion of networking, international co-operation and professional development.

With more than 180 institutional members and over 1000 members in the Network of Academics and Professionals (NAP), EDEN assists a wide range of institutions, networks and individuals to become involved in professional information and networking activities. It does so through the organisation of acknowledged European conferences, its publications and information services, and by taking an active role in a wide range of important EU projects. EDEN has also proved successful with thematic activities such as the Open Classroom Working Group (school level distance education), and by contributing to,



and promoting, 'cutting edge' research in the field. In addition, EDEN has also provided extensive secretarial support to the European Journal of Open, Distance and E-Learning (EURODL).

[www.eden-online.org](http://www.eden-online.org)

#### **3.12.2.4 ScienceView – EU level**

Founded in 2008, Science View develops and runs science communication and science education activities to help bridge the gap between the scientific community, students and citizens.

The organisation organises initiatives, such as [Learning Science Through Theatre](#), that combine creativity and science to most effectively communicate scientific concepts to specific target groups. It is also involved in the field of educational management at all education levels as well as the development of evaluation and assessment methodologies and tools used by education and research institutions. Science View partners with large EU projects, connects activities in Greece to the rest of Europe and is involved in the organisation of large-scale science festivals, world conferences and science debates.

Thus, it aims to bring together scientists, students, artists, educators, communicators and entrepreneurs from all over Europe to foster a pan-European network of knowledge and ideas exchange.

[Click here to learn more](#)

#### **3.12.2.5 University of Bayreuth (UBT) – Germany**

<https://www.uni-bayreuth.de/en/>

The University of Bayreuth (UBT), founded as state university of Bavaria, is characterized by interdisciplinarity, individuality, innovation and internationality. Its seven faculties are granting standard degrees (Diploma, Magister Artium, State Examination, Bachelor, Master, PhD, Habilitation); Faculty I (Mathematics & Physics), Faculty II (Biology, Chemistry & Geosciences), Faculty III (Law, Business Administration & Economics), Faculty IV (Linguistic & Literary Studies), Faculty V (Cultural Studies), Faculty VI (Applied Sciences). The UBT enjoys partnerships with over 40 universities and research institutions across the globe and is particularly active in European mobility programmes.

The specific Centre of Math & Science Education (Z-MNU) provides the school-relevant training scenario for pre-service teachers in Mathematics and Science and is the focal point for frequent teacher enhancement courses. There are approximately 14.000 students on the campus, many of whom are trained to become a teacher. Students aspiring to become teachers study three subjects: Two major scientific subjects as well as Pedagogy/Psychology. The courses also include structural teaching programmes for secondary teachers. Furthermore, in-service teacher training courses are offered for qualified teachers. Within the 10 Bavarian universities, the Z-MNU is the only institution of this specification.

The Z-MNU under the directorship of Prof. F. Bogner has worked for many years in close to 20 EU-projects in the field of Science Education in contributing to the fields of inquiry-based science education, informal learning environments, professional development and e-learning. Additionally, Prof. Bogner had coordinated (i) the large scale PATHWAY-project (2011-2013), which succeeded to

train over 10.000 science teachers all over Europe and was selected as a “Best Practice” by the European Commission, (ii) the H2020 project CREATIONS (2015-2018) which combined Arts with STEM to STEAM as well as (iii) the H2020 project STORIES of TOMORROW (2016-2019) which successfully had integrated students’ visions on the future of space exploration.

### 3.12.2.6 Institute of Educational Policy (IEP) – Greece

The **Institute of Educational Policy (I.E.P.)** is a scientific agency that provides support to the **Minister of Education and Religious Affairs** on issues regarding primary and secondary education, post-secondary education, transition from secondary to higher education, teacher training, student dropout and early school leaving.

Co-operation with I.E.P. is required for every relevant initiative or action taken by the Ministry of Education and Religious Affairs departments or the agencies supervised by it.

I.E.P. deals with scientific research and study of the issues mentioned above, and provides ongoing scientific and technical support on relevant educational policy planning and implementation.

**I.E.P.** has indicatively the following responsibilities:

- It issues opinion, in response to relevant queries submitted by the Minister of Education and Religious Affairs, or ex officio, in relation to the following: *educational policy formulation, modernisation and implementation in all types of school units, curricula, school books and teaching material, evaluation of the administrative and educational structures, education of expatriated Greeks, immigrants and refugees as well as intercultural education, primary, secondary and post-secondary education teacher training, training and certification policy of the training agencies.*
- It systematically studies issues relating to: *school life and ways of improvement, school dropout and early school leaving, special education as well as the teaching goals and needs of particular groups of the student population.*
- It designs and implements support actions on issues regarding the afore-mentioned responsibilities, in view of the implementation of new educational policies.
- It designs the national strategy on teacher training and monitors its implementation in accordance with its responsibilities.

### 3.12.2.7 Fondazione Idis-Città della Scienza – Italy

#### THE VISION

**Fondazione Idis-Città della Scienza** activities aim at building a new economy based on knowledge in order to create a greater social cohesion. Our mission based on the valorisation of territorial resources with a particular attention to the European and Mediterranean contexts. **Fondazione Idis** supports its local stakeholders (school networks, companies, enterprises, local bodies and associations) which become partners by contributing to test new cultural products and spread their effects through local actions. Moreover, **Fondazione Idis** plays its role in European and Euro –Mediterranean contexts, thanks both to its knowledge of the real condition of contemporary scientific and technology research and for the strategic position of Naples and Southern Italy.

#### VALUES

**Science for Society:** Fondazione Idis works to set up a new scientific citizenship, filling the gap between society and science, in order to bring the science out of laboratories through an open dialogue with citizens.

**Science for the new generation:** a rich and immersive scientific communication could arouse the interest of the youngsters, their creativity and capabilities by making them aware of the current scientific issues in order to bring them closer to the daily routine of scientific research.

**Science for economic development:** scientific matters contribute more and more to the improvement of the quality of life and to the creation of an “economy of knowledge”; access to the knowledge – thanks to new communication technologies – is an essential factor for the economic development.

**Accessibility and sustainability:** the search for a “virtuous” balance between cultural and social progress as well as an actual economic and financial sustainability (social management), is an innovative and indispensable principle of Fondazione Idis-Città della Scienza, which is giving its contribution to develop a sustainable economic renovation reconcilable both with a social and an ecological point of view.

**Culture of work:** work is the first factor to give social dignity and identity. Skills, competence and professionalism are the right starting points to reach personal goals and contribute to general wellness.

**Innovation skills and proposals:** innovation as a search of better and efficient solutions but also as a new space of resources and potentialities, as well as a way to be involved in the benefits of a more integrated and supportive society.

**Effective valorization and promotion of culture:** the common and shared values asset conceived as Fondazione Idis-Città della Scienza strategy and operation principles, as well as the main objects of its operating activities.

**From know-how to making knowledge:** a closer nexus among competences, projects and communication activities is the strategic and necessary element for the interactive involvement of Città della Scienza’s public.

Fondazione Idis-Città della Scienza is a non-profit organisation that has among its founding members the Nobel Prize Laureates; Rita Levi Montalcini and Carlo Rubbia. It boasts a number of scientific collaborations with major museums and scientific Institutions in Europe and worldwide. Città della Scienza started its activities in 1987 and was completed in 2001, in the western part of Naples, with a structure dedicated to the dissemination of scientific and technological culture, as well as to the innovation of the educational and business systems.

One of the main values of Città della Scienza is to set up a new form of scientific citizenship, bridging the gap between science and society, in order to bring the science outside of the realm of laboratories through an open dialogue with citizens and stakeholders. Hence, Città della Scienza aims at creating an efficient relationship between science, innovation and society for the economic and social development of the region and fostering social inclusion through social innovation.

Città della Scienza is based on a new knowledge-based sustainable development model, focused on: science education, environmental and cultural resources valorisation, innovation advanced services, research promotion, experimentation and production of intangible assets.

Active at the local, national and international levels, Città della Scienza combines an articulated system of functional areas: the Science Centre, the Business Innovation Centre, the D.RE.A.M Fablab, the Advanced Training Centre, and the Convention Centre, described below. The whole system of functional areas works as a hub, focusing on six priority sectors: manufacturing 4.0, smart cities, smart education, human health, blue growth, and agrifood.

- The Science Centre: opened in 2001, was the first hands-on science centre in Italy, includes today permanent exhibitions on the sea marine environment and research, a children’s area and a Biodiversity Garden with an open area on Mediterranean diet education and healthcare. Moreover the science centre hosts laboratories for science

education and ICT related educational programmes (education 2.0, robotics, coding, and digital fabrication), a web TV studio and a science theatre. Città della Scienza is now in a process of renovation and expansion. In March 2017, a thematic building, Corporea, opened to the public. Corporea is the first interactive science centre in Italy completely dedicated to the human body and health sciences. It is a building of 5,000 m<sup>2</sup> comprising of permanent exhibitions, educational labs, a training centre, in addition to a new generation planetarium, with a large dome for 3D educational shows about astronomy and other scientific topics.

- The Business Innovation Centre, for the development of innovative enterprises, start-ups and spin-offs; BIC of Città della Scienza is one of the most advanced centres in southern Italy. A space where technological innovation and scientific research are the hub for the creation of all activities realised inside the centre. It consists of 44 spaces where innovative companies are offered spaces and specialised services in order to foster their businesses. BIC also offers many network services such as: Coworking and Nomad Working. Moreover, Città della Scienza is a co-promoter of Campania NewSteel, the first certified incubator in the South of Italy that acts as a tool to connect start-ups and spinoffs with technological and business development opportunities, as well as one of the main national structures supporting innovative start-ups and spinoffs birth and development.
- The Digital Research for Emerging Advanced Manufacturing (D.RE.A.M.), is an advanced design and digital fabrication Fab Lab. It is also a platform for the development of new skills and innovative companies in the sector of digital fabrication. The current main sectors of specialisation are: biomedicine, exhibitions and cultural assets, design & fashion; architecture & building.
- The Advanced Training Centre is a training centre for non-academic education, for professionals and innovative job development. Training activities are realised in connection with the regional and national system of research and university-level education. The training centre hosts the Digital Research for Emerging Advanced Manufacturing Academy (D.RE.A.M. Academy); an international learning programme focused on developing products and services in the field of advanced manufacturing, promoting and enhancing skills, and strengthening professionalism and cultural networking.
- The Convention Centre, with a total capacity of about 2,000 seats, is composed of 13 different rooms with variable capacities (10 -1000 seats).

### **3.12.2.8 NUCLIO – Núcleo Interativo de Astronomia – Portugal**

NUCLIO – Núcleo Interativo de Astronomia (<https://nuclio.org/>) is a non-profit association and a Non-Governmental Organization for development that focuses on innovation in education and Science teaching. We believe that education is the fundamental pillar of human evolution and that teaching is one of the most important professions in the world so all our efforts focus on bringing development into schools and supporting all teachers willing to innovate and update their practice.

We coordinate and participate as partner in several national and international projects where we bring to schools innovative methodologies such as the Inquiry-Based Learning, Design Thinking, Open Schooling and embrace a STEAM approach through the integration of artistic approaches.

We coordinate the Galileo Teacher Training program, a vast network of teachers and training courses that reaches over 50 000 teachers all over the world and we are one of the coordinators of PLOAD, the Portuguese Language Office for Astronomy Development, an initiative that supports the Astronomy

for Development Strategic plan 2010 – 2020 by promoting Astronomy as a tool for development in Portuguese speaking countries and communities all over the world.

We are a group of researchers, scientists, educators and teacher trainers that work together to help schools become not just updated in relation to society but to be one step ahead!