

Context

Main objective of the project	Innovation
Project Title	EUropean - Robotic Access To Everybody
Project Acronym	EU-RATE
Project Start Date (yyyy-mm-dd)	2020-10-01
Project Total Duration	34 months
Project End Date (yyyy-mm-dd)	2023-07-31
National Agency of the Applicant Organisation	FR01 Agence Erasmus+ France / Education et Formation
Language used to fill in the form	English

For further details about the available Erasmus+ National Agencies, please consult the following page:

<https://ec.europa.eu/programmes/erasmus-plus/contact>

Project Summary

Please provide a short summary of your project. Please recall that this section (or part of it) may be used by the European Commission, Executive Agency or National Agencies in their publications. It will also feed the Erasmus+ Project Results Platform.

Be concise and clear and mention at least the following elements: context/background of project; objectives of your project; number and profile of participants; description of activities; methodology to be used in carrying out the project; a short description of the results and impact envisaged and finally the potential longer term benefits. The summary will be publicly available in case your project is awarded.

In view of further publication on the Erasmus+ Project Results Platform, please also be aware that a comprehensive public summary of project results will be requested at report stage(s). Final payment provisions in the contract will be linked to the availability of such summary.

In a world where digital tools are increasingly part of our daily lives, educating children and young people in their use and understanding is the responsibility of educational actors. Machines, algorithms, artificial intelligence are all terms that are now part of everyone's vocabulary, even though we do not always know what they mean.

The issues of conscious use, access for all, understanding, ethics, personal data protection, but also technical training for the professions of tomorrow are today more than ever at the heart of the debates of European societies, and the questions arise from early childhood onwards. Digital education, and education through digital technology, offers opportunities in terms of education, creativity and innovation, in addition to meeting a societal need.

We are 6 structures, from different European countries, that share reflections and common objectives in terms of educating young people and educational actors to digital tools, and in particular to machines, in order to give the keys to citizens to become active and not passive users of the tools. Different countries, but similar uses and issues.

The project we are presenting responds to the necessity of increasing young people's interest and success in science, technology, engineering and mathematics, making them actors in their use and promoting innovative methods, through playful robotic teaching kits accessible to all.

Partners share the same global priorities and OBJECTIVES for this project which are :

1/Provide the means for teachers who wish to offer turnkey robotics activities at low cost.

2/make children and young people understand the making of information through action so that they become creative and responsible actors

3/ educate to computer science and raise awareness on algorithmic logic underlying all the tools we use, in order to take over power on machines,

4/promote the mainstreaming of digital competence provision across the curricula

5/ foster critical thinking especially through teaching technology and science in line with the priorities of school education.

6/ prepare children and young people to robotics challenges as RoboCup, which are great opportunities for learning in many fields (technology, mathematics, logic, English, project management...) and self-improvement.

7/make children and young people, especially girls, want to take an interest in engineering and digital professions.

To reach these ambitious objectives, the EU-RATE project will TARGET PUBLIC in a direct or indirect way :

* The direct public > primary and secondary school teachers, especially those who do not have access to robotics for reasons of funding, knowledge, distance, etc. but also the educational community at large (educators, parents, animators) that will have access to the training online; Students of 14+ as co-developers of the project (participating in the LTTA1 C1 and LTTA 2 C2, testing, experimenting, giving feedback.

* The indirect public: youngsters from 8 to 10 and from 11 to 14 years old that will take part to extra curricular and/or in-school activities

These objectives will be achieved through the implementation of 4 intellectual outputs : IO1 learning sequences, IO2 hardware, IO3 Software and IO4 production testing, 2 trainings one on prototyping and the other one on finalisation of prototypes and pedagogy and 6 multipliers events. Every production will be open source and accessible to all during and after Erasmus + funding. Dissemination will be a big part of the project. We've plan to work throughout the project and also after the Erasmus + funding to involve more schools, associations, networks, stakeholders to test and disseminate the project results and to reach more educational actors and teachers, and through them, children and Young people from all countries.

Applicant Organisation

Organisation ID	Legal name	Country
E10087198	Ligue de l'Enseignement Nouvelle Aquitaine	France

Partner Organisations

No	Organisation ID	Legal name	Country
1	E10252147	EleKtrons Libres	France
2	E10178845	Gymnasium Goetheschule	Germany
3	E10131490	SCUOLA DI ROBOTICA	Italy
4	E10146324	Escola Secundária/3 de Barcelinhos	Portugal
5	E10253022	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU)	Germany

Project Budget Summary

Budget Items	Grant
Project Management and Implementation	59.500,00 EUR
Transnational Project Meetings	28.750,00 EUR
Intellectual Outputs	168.527,00 EUR
Multiplier Events	9.000,00 EUR
Learning, Teaching, Training Activities	50.058,00 EUR
Exceptional Costs	47.500,00 EUR
Total Grant	363.335,00 EUR

Transnational Projects Meetings

ID	Meeting Title	No. of Participants	Grant
1	Kick off meeting	12	5.750,00 EUR
2	2nd partners meeting	12	5.750,00 EUR
3	3rd partners meeting	12	5.750,00 EUR
4	4th partners meeting	12	5.750,00 EUR
5	5th partners meeting (at the same time of E2)	12	5.750,00 EUR
Total			28.750,00 EUR

Intellectual Outputs

ID	Output Title	Category of Staff	No. of Working Days	Grant
O4	Productions Tests	Teachers/Trainers/Researchers/Youth workers	260	51.097,00 EUR
O1	Learning sequence Design	Teachers/Trainers/Researchers/Youth workers	258	50.284,00 EUR
O2	Hardware Design	Teachers/Trainers/Researchers/Youth workers	132	27.093,00 EUR
O3	Software Design	Teachers/Trainers/Researchers/Youth workers	132	27.093,00 EUR
O2	Hardware Design	Technicians	40	6.480,00 EUR
O3	Software Design	Technicians	40	6.480,00 EUR
Total			862	168.527,00 EUR

Multiplier Events

ID	Event Title	Country of Venue	Local Participants	Foreign Participants	Grant
E5	Local event France	France	10	0	1.000,00 EUR
E6	Final conference	France	20	10	4.000,00 EUR
E1	Local event Italy	Italy	10	0	1.000,00 EUR
E2	local event Hannover	Germany	10	0	1.000,00 EUR
E3	Local event Portugal	Portugal	10	0	1.000,00 EUR
E4	Local event Land Hessen	Germany	10	0	1.000,00 EUR
Total			70	10	9.000,00 EUR

Learning, Teaching, Training Activities

ID	Activity Type	Travel Grant	Grant for Exceptional Costs for Expensive Travel	Individual Support Grant	Linguistic Support Grant	Grant
C1	Short-term exchanges of groups of pupils	9.330,00 EUR	0,00 EUR	15.984,00 EUR	0,00 EUR	25.314,00 EUR
C2	Short-term exchanges of groups of pupils	8.760,00 EUR	0,00 EUR	15.984,00 EUR	0,00 EUR	24.744,00 EUR
Total		18.090,00 EUR	0,00 EUR	31.968,00 EUR	0,00 EUR	50.058,00 EUR

Exceptional Costs

ID	Description and Justification	Grant
1	<p>External evaluator work (around 2 to 3 days). partners will decide on the kick of meeting the need to have an external evaluator. 3 different possibilities: pedagogy (laboratory), technical (laboratory or university) or quality approach in general and dissemination (cabinet or other)</p>	2.000,00 EUR
2	<p>Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in IO4 (1000€) Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.</p>	7.000,00 EUR
3	<p>Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in IO4 (1000€) Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.</p>	7.000,00 EUR
4	<p>Materials for the LTTA2 training (C2) (500€) Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in IO4 (1000€) Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.</p>	7.500,00 EUR
5	<p>Materials for the IO2 production (500€) Materials for the LTTA1 training (C1) (500€) Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in</p>	8.000,00 EUR
Total		47.500,00 EUR

ID	Description and Justification	Grant
	IO4 (1000€) Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.	
6	Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in IO4 (1000€) Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.	7.000,00 EUR
7	printing of promotion documents and the KIT for the final conference	2.000,00 EUR
8	Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in IO4 (1000€) Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.	7.000,00 EUR
Total		47.500,00 EUR

Budget per Participating Organisation

Organisation	Country of Organisation	Grant
Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France	73.904,00 EUR
EleKtrons Libres (E10252147, FR)	France	57.364,00 EUR
Gymnasium Goetheschule (E10178845, DE)	Germany	67.748,00 EUR
SCUOLA DI ROBOTICA (E10131490, IT)	Italy	63.500,00 EUR
Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal	50.689,00 EUR
Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	Germany	50.130,00 EUR

Budget Details per Participating Organisations (Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR))

Budget Items	Grant
Project Management and Implementation	17.000,00 EUR
Transnational Project Meetings	4.600,00 EUR
Intellectual Outputs	28.676,00 EUR
Multiplier Events	4.000,00 EUR
Learning, Teaching, Training Activities	8.628,00 EUR
Exceptional Costs	11.000,00 EUR
Total Grant	73.904,00 EUR

Budget Details per Participating Organisations (EleKtrons Libres (E10252147, FR))

Budget Items	Grant
Project Management and Implementation	8.500,00 EUR
Transnational Project Meetings	4.600,00 EUR
Intellectual Outputs	27.636,00 EUR
Multiplier Events	1.000,00 EUR
Learning, Teaching, Training Activities	8.628,00 EUR
Exceptional Costs	7.000,00 EUR
Total Grant	57.364,00 EUR

Budget Details per Participating Organisations (Gymnasium Goetheschule (E10178845, DE))

Budget Items	Grant
Project Management and Implementation	8.500,00 EUR
Transnational Project Meetings	5.750,00 EUR
Intellectual Outputs	36.440,00 EUR
Multiplier Events	1.000,00 EUR
Learning, Teaching, Training Activities	8.058,00 EUR
Exceptional Costs	8.000,00 EUR
Total Grant	67.748,00 EUR

Budget Details per Participating Organisations (SCUOLA DI ROBOTICA (E10131490, IT))

Budget Items	Grant
Project Management and Implementation	8.500,00 EUR
Transnational Project Meetings	4.600,00 EUR
Intellectual Outputs	33.842,00 EUR
Multiplier Events	1.000,00 EUR
Learning, Teaching, Training Activities	8.058,00 EUR
Exceptional Costs	7.500,00 EUR
Total Grant	63.500,00 EUR

Budget Details per Participating Organisations (Escola Secundária/3 de Barcelinhos (E10146324, PT))

Budget Items	Grant
Project Management and Implementation	8.500,00 EUR
Transnational Project Meetings	4.600,00 EUR
Intellectual Outputs	20.961,00 EUR
Multiplier Events	1.000,00 EUR
Learning, Teaching, Training Activities	8.628,00 EUR
Exceptional Costs	7.000,00 EUR
Total Grant	50.689,00 EUR

Budget Details per Participating Organisations (Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE))

Budget Items	Grant
Project Management and Implementation	8.500,00 EUR
Transnational Project Meetings	4.600,00 EUR
Intellectual Outputs	20.972,00 EUR
Multiplier Events	1.000,00 EUR
Learning, Teaching, Training Activities	8.058,00 EUR
Exceptional Costs	7.000,00 EUR
Total Grant	50.130,00 EUR

Timetable

Note that Transnational Project Meetings, Intellectual Outputs, Multiplier Events and Learning, Teaching and Training activities will be listed in this table automatically once you have created them in the dedicated section of the form.

ID	Activity Type	Starting Period	Description
1	Transnational Projects Meeting	10-2020	Kick off meeting
2	Intellectual Output	10-2020	Learning sequence Design
3	Transnational Projects Meeting	03-2021	2nd partners meeting
4	Intellectual Output	04-2021	Hardware Design
5	Intellectual Output	04-2021	Software Design
6	Intellectual Output	04-2021	Productions Tests
7	Transnational Projects Meeting	12-2021	3rd partners meeting
8	Short-term exchanges of groups of pupils	04-2022	LTTA 1
9	Transnational Projects Meeting	06-2022	4th partners meeting
10	Short-term exchanges of groups of pupils	10-2022	LTTA 2
11	Multiplier Event	12-2022	Local event Italy
12	Multiplier Event	12-2022	local event Hannover
13	Multiplier Event	12-2022	Local event Portugal
14	Multiplier Event	12-2022	Local event Land Hessen
15	Multiplier Event	12-2022	Local event France
16	Transnational Projects Meeting	07-2023	5th partners meeting (at the same time of E2)

ID	Activity Type	Starting Period	Description
17	Multiplier Event	07-2023	Final conference

Participating Organisations

Please note that the Organisation ID has replaced the PIC as the unique identifier for the organisation to apply for Erasmus+ and European Solidarity Corps actions managed by National Agencies. Organisations that have a PIC and have previously applied for funding in these programmes through the National Agencies have been assigned an Organisation ID automatically. Please use the Erasmus+ and European Solidarity Corps platform to check an Organisation ID, update information linked to it or register a new organisation: <https://webgate.ec.europa.eu/erasmus-esc/organisation-registration>

Applicant Organisation

Organisation ID	E10087198
Legal name	Ligue de l'Enseignement Nouvelle Aquitaine
Legal name (national language)	
National ID (if applicable)	32385851400017
Address	château bétailhe 72 avenue de l'église romane 33370 artigues près bordeaux (siège social)33 rue st denis 86000 Poitiers (siège administratif)
Country	France
Postal Code	33370

City	33370 artigues près bordeaux (siège social) 86000 Poitiers (siège administratif)
Website	http://liguenouvelleaquitaine.org/
Telephone	+33643742448

Profile

Type of Organisation

Non-governmental organisation/association

Is the organisation a public body?

No

Is the organisation a non-profit?

Yes

Associated Persons

Please provide information about this organisation's legal representative and contact persons for the project. Legal representative is the person authorised to sign legally binding documents on behalf of the organisation, while the contact persons are people who will be managing the project.

One of the contact persons must be designated as 'preferred contact'. This person will be contacted by the National Agency if there are questions about the project or the organisation, and in case the project is selected they will receive access to project management and reporting tools.

Legal Representative (Ligue de l'Enseignement Nouvelle Aquitaine)

Gender	Male
First Name	Dadou
Family Name	Kehl
Position	President
Email	s.general@liguenouvelleaquitaine.org
Telephone	+33674898000
Preferred Contact	No
If the address is different from the one of the organisation	No

Contact Person (Ligue de l'Enseignement Nouvelle Aquitaine)

Gender	Female
First Name	Rita
Family Name	Silva Varisco
Position	In charge of development of education, youth, digital and european projects
Email	rsilva@liguenouvelleaquitaine.org
Telephone	+33674898000
Preferred Contact	Yes
If the address is different from the one of the organisation	No

Background and Experience

Please briefly present the organisation/group (e.g. its type, scope of work, areas of activity and if applicable, approximate number of paid/unpaid staff, learners and members of the group)

Ligue de l'Enseignement Nouvelle Aquitaine (regional union of 12 federations) was created in 2017 after the fusion between the regions Aquitaine, Poitou-Charentes and Limousin (policy in France) and is affiliated/member to Ligue de l'Enseignement (national) and shares the same aims: - Training responsible citizens - Fighting against all inequalities - building a fairer and more independent society Ligue de l'Enseignement is a movement of more than 150 years. It aims to guarantee access to education for everyone and further promotes a secular society, solidarity among citizens and active citizenship. Laïcité (humanism or secularism) The movement defends a republican idea, based on equality of rights; facing transformation of French society into a multicultural society. Humanism or secularism are the closest translations of the notion 'laïcité'. It represents the separation between church and state, freedom of thought, freedom to believe or not to believe. Associative Life support to member organisations on social/solidarity-based economy More than 30 000 associations at the national level (sport, culture, education). trainings for board members and other volunteers (all ages); facilitates the construction of common projects; support, manage and train civic service volunteers and their mentors; insures the members for their activities. Culture Ligue de l'Enseignement believes culture is not limited to arts and heritage but enables us to understand the world. Cultural education and youth policies should be consistent and each of them should be led democratically, by involving citizens. Four priorities lead its work: reinforcing artistic education, diversity, participation and lifelong learning. Several festivals are organised by Ligue de l'Enseignement Nouvelle Aquitaine. In 2017/18 Ligue de l'Enseignement Nouvelle Aquitaine is working on a research on cultural rights connected to the Unesco declaration in the region Nouvelle Aquitaine. Environment and sustainable development Ligue de l'Enseignement is committed to implement civic activities and it favours community education to involve citizens. Examples: implementing trainings to schools, associations and local authorities on sustainable development and producing an action plan, development of a citizenship environment-sustainable development label (CED) on children and youth centers and management of "mon village, espace de biodiversité" (my village, a space of biodiversity) that is a project that connects science and citizens environmental actions. Sport Ligue de l'Enseignement promotes school sport and sport for all through its sports federations USEP and UFOLEP. Their goal: to give everybody the possibility to practise physical activities, as part of culture and a means of education, involving all people and especially children in the perspective of favouring an inclusive society. Actions throughout the year. To summarize Ligue de l'enseignement Nouvelle Aquitaine intervenes in several fields for the progress of democracy and citizenship: cultural action, audio-visual, communication, sport and outdoors, holidays and tourism, social recreation, educational actions in school, preschool, afterschool, holidays centers and within families, economical information, scientific and digital activities, VET training, europe and international actions, the environnement... Ligue de l'enseignement Nouvelle Aquitaine is a member of the Regional Committee of youth and popular education associations (CRAJEP) and the Committee of partner associations of the public school (CAPE). She sits on the social and environmental economic Council (CESER) of Nouvelle Aquitaine region.

What are the activities and experience of the organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project?

Ligue de l'Enseignement, strong in its historical, national, regional and departmental experience, accompanies school institutions, communities and associations in the context of educational policies and practices. It is regularly asked to provide expertise in educational and pedagogical projects. By its proximity to the ministry of education, it is a resource center on the evolution of the educational system and the training of professionals and education actors (teachers training, student delegates, youth leaders/workers, support to schooling, parents of pupils, local elected representatives). Finally, through its knowledge of contractual arrangements and youth issues, it accompanies associations and communities in their reflection for the implementation of concerted local educational policies. Ligue de l'enseignement is a member of the national and regional council of school programs, trains teachers (during university studies and also during their work with kids trains, supports in different kind of projects connected to school projects culture, science, etc), animators and all educational actors (parents included).

Ligue de l'enseignement has been investing for several years in education in and through digital, in particular through the deployment of the national project "D-Clics numériques" which aims to train educational actors in the animation of educational sequences (digital video, digital photo, social media, robotics, code and video games, web radio, raspberry pi, etc.) and support volunteers in civic service and volunteers, called "D-Coders", in their digital mediation actions with all audiences.

Ligue de l'Enseignement Nouvelle Aquitaine has worked on pedagogy and has partnerships with labs on participatory science (coding, robots, digital learning...) approach for children, young people, youth leaders, teachers and all public. Ligue is a partner of Robocup 2020 (now 2021 in France) and has been working closely with the ministry of education, universities, enterprises on training youth leaders, organising workshops for children and young people from 8 to 18 in all region Nouvelle Aquitaine (urban, rural, disadvantaged, girls, etc) about coding and robotic, supporting junior teams for the competitions, co-organizing the regional, national and worldwide competition in Bordeaux.

Ligue works closely with scientific labs on pedagogy and materials for robots and has experts in the board members and strong partnerships with INRIA, University of Bordeaux, CAP sciences, ESpace Mendes France, etc.

Has the organisation participated in a European Union granted project in the 3 years preceding this application?

Yes

Please indicate:

EU Programme	Year	Project Identification or Contract Number	Applicant/Beneficiary Name
Erasmus +	2018	2018-2-FR02- KA105- 014601	Ligue de l'Enseignement Nouvelle Aquitaine

Partner Organisations

Organisation ID	E10252147
Legal name	EleKtrons Libres
Legal name (national language)	EleKtrons Libres
National ID (if applicable)	W643011769
Address	3 rue du Maréchal Harispe
Country	France
Postal Code	64000
City	PAU
Website	www.elekronslibres.fr
Telephone	+33660788537, +33679464041

Profile

Type of Organisation

Non-governmental organisation/association

Is the organisation a public body?

No

Is the organisation a non-profit?

Yes

Associated Persons

Please provide information about this organisation's legal representative and contact persons for the project. Legal representative is the person authorised to sign legally binding documents on behalf of the organisation, while the contact persons are people who will be managing the project.

One of the contact persons must be designated as 'preferred contact'. This person will be contacted by the National Agency if there are questions about the project or the organisation, and in case the project is selected they will receive access to project management and reporting tools.

Legal Representative (EleKtrons Libres)

Gender	Male
First Name	Laurent
Family Name	SABRIER
Position	President
Email	laurent.sabrier@yahoo.fr
Telephone	+33682042117
Preferred Contact	No
If the address is different from the one of the organisation	No

Contact Person (Elektrons Libres)

Gender	Male
First Name	Laurent
Family Name	Verdier
Position	Project manager
Email	laurent.verdier@elektronslibres.fr
Telephone	+33660788537
Preferred Contact	Yes
If the address is different from the one of the organisation	No

Background and Experience

Please briefly present the organisation/group (e.g. its type, scope of work, areas of activity and if applicable, approximate number of paid/unpaid staff, learners and members of the group).

Our organization is a non-profit association under French law (1901).

Its purpose is to promote the promotion of science and technology among young people, particularly those with the least opportunities, by relying on the education and research sectors, in France and abroad.

And this, in the fields of physics, chemistry, biology, mathematics, computer science, astronomy and robotics.

The association was created on September 11, 2019 by teachers, parents of pupils and pupils who have already participated in several robotics and science competitions. It has 40 members, is supported by the town hall of Pau and the Helioparc technopole which has made available premises which usually house companies working in the field of new technologies. For the year 2020, she was entered in the academic, national and international Robocup championships.

The training members of EleKtrons Libres have many years of experience in teaching, setting up and following up projects with young audiences. They intend to put their experience at the service of this project, as much in its hardware, software and pedagogical design parts as in the test parts with young people in the age range of the targeted public.

EleKtrons Libres is a member of Ligue de l'Enseignement Pyrénées atlantiques which is federated by Ligue de l'Enseignement Nouvelle Aquitaine. EleKtrons members have been working with Ligue for several years on digital projects in the pyrenées atlantiques departement even before the administrative creation of the association EleKtrons.

What are the activities and experience of the organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project? Please explain how the organisation brings an essential added value to the project.

The skills of EleKtrons Libres members can be put to good use in the fields of mechanical and electronic hardware design, but also in software design as well as in the writing of pedagogical support documents.

Their partnerships with primary and secondary schools, leisure centres, give them access to a panel of target pupils who will be able to test the productions.

The young members who participate in the activities of the association EleKtrons libres are enrolled in junior high school, high school and engineering school (14 to 24 years old). Their task will be to assist the trainers of the association in the development and production of the project. Their action will mainly be to test the alpha-productions before having them tested by non-specialists.

At the same time, the trainers of the association have a network of education professionals who will come to the second level to test the beta-productions with their students. The target groups will be primary school pupils, secondary school pupils and pupils in sectors providing adapted teaching (SEGPA for example).

People in charge of this project:

William Metref: teacher of Physical Sciences in high school and higher education in French and English, Robotics trainer. Participated in the Erasmus TRYAT project for research on weather sensors.

Co-organizer of the World Robocup in France.

Laurent Verdier: teacher of physical sciences in high school and higher education in French and German, computer teacher and robotics trainer. Participated in the Erasmus TRYAT and Hurobo projects as coordinator of the French team and IT manager. Was from 2010 to 2019 Erasmus High Education referent in his school.

Co-organizer of the World Robocup in France, and of the academic and French phases. Project manager at the rectorate of Bordeaux for the promotion of teaching robotics.

François Vié: teacher of electronics and computer science, participated in the Erasmus Hurobo project

Aude Dran: mechanical teacher

Has the organisation participated in a European Union granted project in the 3 years preceding this application?

No

Partner Organisations

Organisation ID	E10178845
Legal name	Gymnasium Goetheschule
Legal name (national language)	Gymnasium Goetheschule
National ID (if applicable)	65134
Address	Franziusweg 43
Country	Germany
Postal Code	30167
City	Hannover
Website	www.goetheschule.de
Telephone	+4951116847620
Fax	+4951116847606

Profile

Type of Organisation

School/Institute/Educational centre – General education (secondary level)

Is the organisation a public body?

Yes

Is the organisation a non-profit?

Yes

Associated Persons

Please provide information about this organisation's legal representative and contact persons for the project. Legal representative is the person authorised to sign legally binding documents on behalf of the organisation, while the contact persons are people who will be managing the project.

One of the contact persons must be designated as 'preferred contact'. This person will be contacted by the National Agency if there are questions about the project or the organisation, and in case the project is selected they will receive access to project management and reporting tools.

Legal Representative (Gymnasium Goetheschule)

Title	Oberstudiendirektor
Gender	Male
First Name	Michael
Family Name	Schneemann
Position	Schulleiter (Principal)
Email	Michael.schneemann@goetheschulehannover.de
Telephone	+4951116847620
Preferred Contact	No
If the address is different from the one of the organisation	No

Contact Person (Gymnasium Goetheschule)

Gender	Male
First Name	Joachim
Family Name	SELKE
Position	Studiendirektor
Email	Joachim.selke@goetheschulehannover.de
Telephone	+4951116847620
Preferred Contact	Yes
If the address is different from the one of the organisation	No

Background and Experience

Please briefly present the organisation/group (e.g. its type, scope of work, areas of activity and if applicable, approximate number of paid/unpaid staff, learners and members of the group).

The Goetheschule is the largest general education grammar school in the city with currently 1201 pupils. It is the only grammar school in this district and co-founded the school association Herrenhausen-Stöcken, which links all schools in the district. The social heterogeneity goes hand in hand with the linguistic heterogeneity of the student body. About 30% of the pupils from Stöcken have a migration background. Many families with a migrant background are more likely to be classified as educationally disadvantaged. However, due to the school's high profile (music branch, promotion of gifted children), very educationally oriented families are also represented. The pedagogical "balancing act"; required in this way is a challenge for the teachers and a high degree of flexibility for the school. The way families deal with the media varies greatly, so that the Goethe School urgently needs a uniform media concept. We already cooperate with Smily e. V. in the field of media education in year 7. To make school a pleasant place to live for many children and to enable equal opportunities through cultural participation is realised in the part-time full day. The variety of offers with about 30 working groups is impressive and is very popular. Here, our very successful Robot AG can be mentioned in particular, which has taken top places in many competitions in the region, in Germany and at the world championships. Furthermore, there is a 3D-Druck AG. The school is also distinguished by numerous regular activities within the framework of regular lessons. We have regular computer science lessons from year 5 onwards and also offer this as an examination course in the higher section of the Abitur. This part of the course is flanked by a scientific profile, which is chosen by the students from grade 5 onwards. Central persons are Mr. Gardinowski, who has already gained experience with two Comenius projects and who is the head of the Computer Science student council, takes care of the setup of laptop classes, and is responsible for the Robot AG. Mr. Selke is a teacher for math, physics and computer science and is also a technical advisor to the Ministry of Education of Lower Saxony for the subject of computer science and is thus informed about the latest structures and processes with regard to the Education Pact 2019. As European School Coordinator, Mr Menkens supports the application and coordinates the target action 1. The other colleagues already have a focus on new media and come from various specialist areas, so that a broad spread can be achieved. Participation in competitions and extra-curricular cooperation is a further plus point here, enriching school life and allowing the school to enter into a lively exchange with institutions and partners from the business world. Against this background in particular, participation in the Erasmus+ project is a coherent and worthwhile addition for this school. Beneath the experiences we achieved with our extensive exchange programs we educate our students in an international and especially in an European way. To showcase our association to Europe and to present our wide-opened, european-focussed education, our school has the certificate "Europaschule", because our curricula links and supports European thoughts and topics in the different subjects.

As we perform many international activities and our education is European-focused, our staff is Europe-affine and experienced in project work, financial treatment, international communication and European values. We are used to work in networks or to organize our work virtually and cooperative. The results of our international work are used by several generations of teachers.

Some of our colleagues have special competences and tasks fitting our project: one of our teachers (who will be also involved in this project) is an advisor for information technologies in the state lower saxony, so he's a professional for ICT and he will improve the students competences in ICT-workshops. Another teacher of our school is responsible for teaching student teachers in Hannover in physics. She wants to present her trainees good and practical opportunities and possibilities to get the science beyond the classroom, just so they can inspire their own students. On this way we can be sure, that the results and the output won't stay in our school but will be spreaded (at least) over all schools in Hannover.

Beneath these just introduced teachers our teachers generally are Comenius- und Europe-experienced teachers. We also have a close contact to local companies like Volkswagen or Continental which are always interested in sharing their knowledge and improving the skills of their future applicants. Other world-leading technical and industrial companies settle near Hannover, so we can use them and their student's programmes to get the Erasmus+-students their "hands on science".

What are the activities and experience of the organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project? Please explain how the organisation brings an essential added value to the project.

We already get our students to know the “science beyond the classroom”: Near to our school is a lab called TechLab for pupils (run by the university of Hannover and free to book for all schools in Germany) where pupils can experiment on all-day-phenomena and get to know the scientific backgrounds for example for digital-analog-converter, mobile phone network & network coverage, power generation in a dynamo and techniques of pouring liquid metals. In 2005 the Goetheschule Hannover took part in the INTECH shooting trial of the state of Lower Saxony. The motivation for participation was that pupils at grammar schools often have few points of contact with technology. As a result, they are less likely to opt for technical professions. The project “InTech”; - computer science with technical aspects - addresses this problem. The aim is to integrate technology-related content into computer science lessons in grades 7 to 9 at grammar schools. Using a modular system, students were able to build model robots and control them using appropriate software. The first “InTech”; round was conducted between 2005 and 2008 at six grammar schools in Lower Saxony. The experience gained in this process was passed on to teachers of new “InTech”; schools in a training course. This experience was then incorporated into the core curriculum of computer science at secondary level I in Lower Saxony. 2010 saw the starting signal for the nationwide expansion and continuation of the project. We would like to bring these experiences gained in the school experiment into the Erasmus+ project. The network “Robot Laboratory Schools”; of the NiedersachsenMetall Foundation also emerged from this school experiment. The Goethe School has been a member of the network since its inception and has long been involved in the conceptual development of further education. In the robot laboratory network, schools work together, exchange their experiences and take part in competitions. Teachers in this network can regularly attend further training and exchange meetings and consult experts from universities and industry.

Since 2010 the Goetheschule Hannover has been organising the RoboCup qualification tournament for GermanOpen in Hannover. In 2019, the Goethe School was in charge of organising the EuropeanOpen of the RoboCup at the IdeenExpo in Hannover. Together with the newly founded association MINTMACHWERK the Goetheschule Hannover tries to realize the following goals:

- Implementation and organization of national and international robot competitions.
- Robot seminars for pupils who have distinguished themselves in the current school year through special commitment and performance
- organisation and implementation of HackDays in the schools of MINTMACHWERK
- Personal and professional development of the pupils for a successful informational and scientific career
- Further training of the teachers at the different locations of the MINTMACHWERK
- Further training of the pupils at the workshops of the University of Applied Sciences and Arts Hannover
- Economic security of the institution through close contact and enthusiasm of the supporters

We would like to bring this expertise into the project.

People in charge of the project:

Studienrat Kai Hinrichs is a mathematics and physics teacher at the Goethe School.

Oberstudienrat Gernot Gardinowski is a mathematics, physics and computer science teacher at the Goethe School.

Joachim Selke, Goetheschule Hannover

Thorsten Behrens, Gymnasium Langenhagen

Torsten Hoch, Gymnasium Langenhagen,

Has the organisation participated in a European Union granted project in the 3 years preceding this application?

Yes

Please indicate:

EU Programme	Year	Project Identification or Contract Number	Applicant/Beneficiary Name
Erasmus +	2017	NI-2017-1-1DE03-KA101-035123	X
Erasmus +	2018	2018-1-CZ01-KA229-048028	X

Partner Organisations

Organisation ID

E10131490

Legal name

SCUOLA DI ROBOTICA

Legal name (national language)

National ID (if applicable)

1033/1

Address

STUDIO MARTINETTO, VIA FIESCHI 20/9

Country	Italy
Postal Code	16149
City	GENOVA
Website	www.scuoladirobotica.it
Telephone	+393480961616, +393479132151
Fax	+39106475200

Profile

Type of Organisation

Non-governmental organisation/association

Is the organisation a public body?

No

Is the organisation a non-profit?

Yes

Associated Persons

Please provide information about this organisation's legal representative and contact persons for the project. Legal representative is the person authorised to sign legally binding documents on behalf of the organisation, while the contact persons are people who will be managing the project.

One of the contact persons must be designated as 'preferred contact'. This person will be contacted by the National Agency if there are questions about the project or the organisation, and in case the project is selected they will receive access to project management and reporting tools.

Legal Representative (SCUOLA DI ROBOTICA)

Title	DR Eng
Gender	Male
First Name	Emanuele
Family Name	Micheli
Position	President and Legal Responsible
Email	micheli@scuoladirobotica.it
Telephone	+393292289986
Preferred Contact	No
If the address is different from the one of the organisation	No

Contact Person (SCUOLA DI ROBOTICA)

Title	DR
Gender	Male
First Name	Gianluca
Family Name	PEDEMONTE
Position	Project manager
Email	pedemonte@scuoladirobotica.it
Telephone	+393402369320
Preferred Contact	Yes
If the address is different from the one of the organisation	No

Background and Experience

Please briefly present the organisation/group (e.g. its type, scope of work, areas of activity and if applicable, approximate number of paid/unpaid staff, learners and members of the group).

Scuola di Robotica (School of Robotics) is a no profit Society appointed as Educational and Training Center by the Italian Ministry of Education, Research and University. A Committee consisting of robotics scientists and of scholars in Humanities has instituted School of Robotics (2000). Actually, School of Robotics is upholding the transdisciplinary of its mission.

The aim of the “Scuola di Robotica” is to promote the knowledge of the science of Robotics among students and young people, in the range of undergraduates, to teachers and the general public. It provides for the widest practicable and appropriate dissemination of information concerning the results of the R&D in the field of Robotics, ICT and of about complementary developments of other disciplines (Artificial Intelligence, Neuroscience, Philosophy, Psychology, Applied Ethics, Education). Scuola di Robotica has been key in promoting Roboethics (Ethical, Legal and Societal Aspects in Robotics - ELSA) and it was the ELSA Referee for the European Action CARE (Coordination Action for Robotics in Europe). It is a member of European Centre for Women and Technology (ECWT). It is the National Centre of the Project Roberta, Girls Discover Robot; Regional Partner of the FIRST@ LEGO® League (FLL); it is the National Coordinator of EC euRobotics Week. It the National Organizer of the NAO Challenge, and European Refence for the Humanoids Festival.

Since 2004 Scuola di Robotica has contributed to the birth and definition of Roboethics, the ethics applied to advanced robotics. In 2007 Scuola di Robotica coordinated the Atelier of Roboethics, which drew up the Roadmap on Roboethics:

(<http://www.roboethics.org/atelier2006/docs/ROBOETHICS%20ROADMAP%20Rel2.1.1.pdf>).

School of Robotics is deeply involved in the study of the complex interaction between Robotics and Society, and is supporting the international project for the development of Roboethics, the ethics applied to robotics.

The main aims of Robot at School are:

- Understanding the impact of ICT, of Robotics and of new technologies in general with regard to the processes and learning methodologies;
- Technical, scientific and methodological update for the teachers working in secondary technical and vocational schools;
- Development and diffusion of a highly innovative didactic methodology through a multidisciplinary Virtual Laboratory on the Internet.;
- Promoting cooperation between the different disciplines with regard to the realization of an innovative experiment;
- Promoting knowledge and responsible use of ICT and the New Media.

School of Robotics has acquired a deep experience of Research Projects based on its working philosophy of the concept of the Virtual Lab. This allows to lead student multidisciplinary working groups developing the H/W and S/W programs to be exploit within this project.

School of Robotics was the main body committed to promoting the dissemination of the E-Robot and E-Robot 2 missions of the National Research Council (CNR)-Robotlab, organizing many “Science live” experiments, specifically structured for students. In collaboration with the SPACE Foundation, School of Robotics organized a national contest, E-Robot School Contest, among Technical and Vocation Italian Schools with the aim to design and build an experiment to be carried out and performed in Antarctica by the CNR underwater robot Romeo. The winning school could pilot via Internet its experiment, installed on the robot Romeo in Antarctica. In the E-Robot2 Experiment, one hundred students in several Italian cities could be connected via Internet with scientists and researchers in the Arctic, in the Svalbard Islands, where the E-Robot2 Expedition was carrying out important experiments. The students could pilot the robot Romeo, diving the seabed of the Kongsfjorden, where robot Romeo became the working tool for several European research centres. Furthermore, School of Robotics co-ordinates a network of almost 100 schools from primary to secondary where robotics is employed as educational platform to learn many subjects and to improve skills.

Over the past 19 years, School of Robotics has been committed to integrating Robotics into the Undergraduate Education not as an aim but as a tool for: 1) Providing continuous refresher courses for teachers; 2) Making it easier for new high school graduates to find a job; 3) sustain Gender Methodology in STEM Education; 4) Selecting and coaching of graduates interested in university careers; 5) helping societies and workers keep abreast of new technologies; 6); support the Special Need Education. It does it in cooperation with the School of Robotics nationwide network of educators started from the Robot-in-the-Classroom (in Italian, Robot@Scuola), which was originally funded by the Italian Ministry of Education (2005) and following School of Robotics kept supporting and feeding this network .

What are the activities and experience of the organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project? Please explain how the organisation brings an essential added value to the project.

Ongoing Research and Projects:

Vertical Integration of Educational Robotics in K-12 Education (by way of standard robotics kits; artifacts; an open environment in which students are able to design their own program for a robot)

Gender Education: Girls Discover Robots

Inclusive Education: Educational Robotics for kid with Special Needs (autism, cognitive impairments, in collaboration with several Autism Research Centers in Italy)

Development of Educational App's

Responsible use of the Internet and of the New Media.

Devices and Robotics kits used and developed:

Lego kits (WeDo, EV3)

MBot kit

Use of Arduino as programming breadboard for High Schools

Training Drones

Underwater robots

Humanoids robots (NAO; Pepper, Elf)

3D Printing devices

Artificial Intelligence (Alexa, etc)

The main expertise that the School of Robotics pivots around the experience of 20 years of Educational Robotics Projects implemented in cooperation with ICT companies. School of Robotics has managed activities devoted to youth career and vocational guidance; to girls in STEM's; to young people with Special Needs. These skills are tools - not final aims - for young people to cope with current and future professions and careers, whatever their jobs would be, either in ICT or in any other field. Today, ICT skills are unavoidable and instrumental.

Emanuele Micheli

Graduate in Mechanical Engineering, University of Genoa, Italy, in 2004 with a thesis on the modular worm robot. In his first research activity he worked on rescue robotics. He has worked as designer for Telerobot, where he followed a humanoid project. After this he was responsible for the organization of the Robot@School Network originally founded in 2005 by the Italian Ministry for Education. At the end of the funding, he lead the network as deputy head of School of Robotics. Project Manager of the Regional Center of "Roberta goes EU" in Italy. In recent years he has organized a considerable amount of teacher training courses and since 2009 he has been collaborating with the University of Genoa (for Industrial Design) on a project on Design and robotics. He researches robotics for people with special needs and follow many theses such as: Roboable, a interactive device for autistic children or people with cognitive difficulties; the design of iCub, a thesis about the study of a cover for a humanoid; the Godi Project is on the creation of a device for creating and designing living spaces, Robot-Era is the last thesis on design of a humanoid robot dedicated to assistance for the elderly. In the 2010 he is studying the use of educational robotics with autistic children and in hospital. From 2012 to 2013 he followed a research project about Cloud Robotics and the creation of robot-human interfaces. His skill is really to introduce industrial robotics at high school level.

Gianluca Pedemonte

Graduated in History, Public Communication and Journalism, has been working for the School of Robotics since 2016 in the areas of science communication, design and research. During this period he worked on projects dedicated to environmental sustainability and disabilities in schools using technology and robotics. Specifically he worked on the Roboable project dedicated to autism and children with special needs working on the coordination and communication of the project. In the area of environmental sustainability, he was the

referent of the project 'Il mare in 3d' dedicated to the recycling of plastic materials through the use of 3d printers. In the European project Erasmus + he is coordinator for the E-Media Literacy projects where he contributed to develop the manual dedicated to robotics and the Early project where he contributed to develop the lessons plans and produce the videos required by the project. He also works on the Nao Challenge project dealing with management and event organization. In the area of didactic training he is working on the ATENA project financed by the Liguria Region with the aim of training over 1600 teachers in the region.

Fiorella Operto

Educated in Philosophy, she collaborated with the Italian Research Council (IAN and IEIIT Institutes) on the social impact of Advanced Robotics applications. In 2000, with robotics scientist, Gianmarco Veruggio, she founded the School of Robotics Society, and is its Chair today. Operto contributed to the definition and development of Roboethics (Ethical, Legal, and Societal Issues in Robotics). In 2006 she was engaged as the School of Robotics Reference Person for "The Roboethics Roadmap", a project funded by the European Commission's EURON Robotics Network; and in 2007 was so engaged for the EU funded Euron Roboethics Atelier and in 2008-2010 for the Ethicbots European project (Emerging Technoethics of Human Interaction with Communication, Bionic, and robotic systems). She was a Partner (WP ELS Issues in Robotics) with the EU funded "CARE" Project devoted to roadmap the European robotics academy, industry and research activities.

Has the organisation participated in a European Union granted project in the 3 years preceding this application?

Yes

Please indicate:

EU Programme	Year	Project Identification or Contract Number	Applicant/Beneficiary Name
H2020	2019	688095	Fraunhofer IZB – Sankt Augustine, Germany
Erasmus +	2017	2017- VG-IN-BW-17-36-035615	Kepler Lyceum, Weil der Stadt, Germany
Erasmus +	2018	2018-1-ES01-KA204-050475	Building Bridges Association from Spain
Erasmus +	2018	2018-1-TR01-KA203-058832	Ahi Evran Üniversitesi, Public University, Bağbaşı Kampüsü Ahi Evran Üniversitesi Rektörlüğü Dış İlişkiler Ofisi, Kırşehir, Turkey
Erasmus +	2018	2018-1-FR01-KA201-048117	Ligue de l'Enseignement France
Erasmus +	2019	2019-1-TR01-KA203-074720	Dalvíkurskóli Primary school, Poland Duzce University, Public University, Konuralp Campus, Turkey

Partner Organisations

Organisation ID	E10146324
Legal name	Escola Secundária/3 de Barcelinhos
Legal name (national language)	Escola Secundária/3 de Barcelinhos
National ID (if applicable)	403787
Address	Rua Areal de Baixo
Country	Portugal
Postal Code	4755-056 Barcelinhos
City	Barcelos
Website	http://www.esbarcelinhos.pt
Telephone	+351253839260
Fax	+351253833482

Profile

Type of Organisation	School/Institute/Educational centre – General education (secondary level)
Is the organisation a public body?	Yes
Is the organisation a non-profit?	Yes

Associated Persons

Please provide information about this organisation's legal representative and contact persons for the project. Legal representative is the person authorised to sign legally binding documents on behalf of the organisation, while the contact persons are people who will be managing the project.

One of the contact persons must be designated as 'preferred contact'. This person will be contacted by the National Agency if there are questions about the project or the organisation, and in case the project is selected they will receive access to project management and reporting tools.

Legal Representative (Escola Secundária/3 de Barcelinhos)

Gender	Male
First Name	Antonio
Family Name	Carvalho
Position	headmaster
Email	direcao@esbarcelinhos.pt
Telephone	+351253839260
Preferred Contact	No
If the address is different from the one of the organisation	No

Contact Person (Escola Secundária/3 de Barcelinhos)

Gender	Male
First Name	Rui
Family Name	Baptista
Department	Sciences department
Position	Teacher - Physics and Chemistry teacher - Permanent staff
Email	ruivcbaptista@gmail.com
Telephone	+351253839260
Preferred Contact	Yes
If the address is different from the one of the organisation	No

Background and Experience

Please briefly present the organisation/group (e.g. its type, scope of work, areas of activity and if applicable, approximate number of paid/unpaid staff, learners and members of the group).

Escola Secundária de Barcelinhos (Barcelinhos Secondary School) is a public secondary school located in Barcelos, a town in the northwest of Portugal. It was founded in October 1986 and it has contributed to the education of thousands of students who live mainly on the left bank of the Cávado River. It is situated in a more rural area even though it is just 1 km away from the town of Barcelos. Most students live in the surrounding villages which can be described as a mixture of countryside but slightly suburban in some areas. Most students come from families with a low-income. Some parents are farmers but the majority work in local factories or commerce.

The school has classes from year 7 to year 12. Their ages range from 12 to 19. Currently there are 650 students grouped in 29 classes and there are 74 teachers. The largest group of students are of secondary level (10th to 12th grades). Most students attend regular secondary courses, such as Sciences and Technology, Social and Economic Sciences and Languages and Humanities. Vocational courses are also offered in three major areas: Tourism, Sports Management and ICT and Business Management. There are 20 students with special needs. There are no students who are refugees nor come from Roman families.

The Secondary School in Barcelinhos is a general school with more of 800 students, from the 7th to the 12th grade. There is a robotics club at the school that has about 20 members, every school year. The students who attend to the Club are between 14 and 18 years old. In the 7th grade (12-13 years old) the students have a specific class in Robotics and Programing. This students will all participate in this project.

The majority of the students who attend the regular secondary courses are very interested in continuing their education in universities. Some of the vocational students also aspire to get a higher education and have succeeded in getting accepted in courses that are more technical. However, the majority of these vocational students start looking for a job after completing their secondary education.

This school is a very dynamic one. Students are tested at a national level in subjects like Portuguese, Foreign Languages, Maths, Biology and Geology, Physics and Chemistry, Economy, among others. They can also participate in sports and scientific and cultural events through its clubs and extracurricular activities: Sports Club (Desporto Escolar), Robotics Club, Erasmus+ Project, Drama Club, among others. The school also publishes its own yearly magazine, Schola, written by students, parents, teachers and staff.

The school also participated for the first time in an Erasmus+ project in cooperation with three partner schools in 2014. We have acquired some practical experience in implementing international projects.

What are the activities and experience of the organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project? Please explain how the organisation brings an essential added value to the project.

Portugal has considerable activity in robotics compared to the relatively small size of its population (approximately 10 million inhabitants). Several groups from different universities and (usually small) companies carry out research and development activities in industrial and service robotics, actively participate in European Commission and ESA-funded projects, and regularly publish papers in major robotics journals and conferences.

The most significative steps to introducing robotics to basic and secondary school students as an attractive and involving way of learning (among others, mechanics, electronics, programming, physics, and math) were caused by the organization of robotics festivals, involving high school students (fifth to 12th grades). The Portuguese Robotics Open started in 2001, as an initiative of some of the most active Portuguese university groups working in robotics. From an initial number of about 80 participants in 2001, the event participation has grown about one order of magnitude, up to more than 800 participants in the last year.

Robotics and programming (2015-2017):

One department of Ministry Of Education carried out a census on the various programming and robotics clubs in Portuguese public and private schools. It launched a competition, aimed at all registered schools who supported and conducted activities related to programming and robotics, developed within these clubs. These activities in the clubs together provided a diversified learning, allowing students to explore their creative potential and increase their sense of responsibility.

<http://erte.dge.mec.pt/clubes-de-programacao-e-robotica>

Our Robotics Club has participated in national and international competitions. In 2014, our school Robotics team won the RoboCupJunior Dance Superteam award in João Pessoa, Brazil; in 2016, our Robotics team was second place in the Junior CoSpace Rescue League at RoboCup2016 in Leipzig, Germany. Every year our students have made 2017 we participated at RoboCup in Nagoya, Japan, RoboCup 2018 in Montreal, Canada and RoboCup 2019, in Sydney, Australia.

We have a lot of experience in the areas of entrepreneurship and new business ideas. Our students often participate in events and contests and they are successful.

Our city is known for tourism and crafts. One of the symbols of Portugal is the Barcelos rooster and is known worldwide. The city of Barcelos is recognized by UNESCO as a creative city.

The school has a strong connection to the Polytechnic Institute of Cávado and Ave, located in our city. One of the strongest areas of this institute is the area of digital creativity.

Erasmus + team is a group of 10 teachers, led by one coordinator, Rui Baptista, the person in charge of the contacts.

The teachers involved in this new project are of different areas which will cover different skills and competences: Physics and Chemistry (local coordinator of project); Biology; English.

This team has participated successfully in the Matters of Matter Erasmus+ project described previously. Other areas can be involved in this project if required, including Physical Education teachers. All teachers involved are experienced in the use of ICT.

The local coordinator has great experience in the use of Arduino, robotics, ICT, 3D printing. He is also involved in national projects, such as in the area of Robotics, and has been responsible for the participation of Portuguese secondary schools in the international event of RoboCup for several years. This teacher has been awarded the BEST STEM TEACHER AWARD at Science on Stage 2017 in Hungary.

People involved in the project:

Department of ICT

- Rita Maio
- Carla Alves
- Maria João Costa
- Jerónimo Sousa
- Jorge Vale

English Teachers

- Paula Araújo
- Dulce Macedo
- Constança Domingues

Has the organisation participated in a European Union granted project in the 3 years preceding this application?

Yes

Please indicate:

EU Programme	Year	Project Identification or Contract Number	Applicant/Beneficiary Name
Erasmus +	2017	2014-1-IT02-KA201-003604_3	Escola Secundária de Barcelinhos
Erasmus +	2018	2018-1-CZ01-KA229-048205_4	Escola Secundária de Barcelinhos
Erasmus +	2018	2018-1-EE01-KA229-047116_4	Escola Secundária de Barcelinhos

Partner Organisations

Organisation ID	E10253022
Legal name	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU)
Legal name (national language)	MNU-Landesverband Hessen
Address	Asternweg 4
Country	Germany
Postal Code	34355
City	Staufenberg
Website	
Telephone	+4915201983959

Profile

Type of Organisation

Non-governmental organisation/association

Is the organisation a public body?

Yes

Is the organisation a non-profit?

Yes

Associated Persons

Please provide information about this organisation's legal representative and contact persons for the project. Legal representative is the person authorised to sign legally binding documents on behalf of the organisation, while the contact persons are people who will be managing the project.

One of the contact persons must be designated as 'preferred contact'. This person will be contacted by the National Agency if there are questions about the project or the organisation, and in case the project is selected they will receive access to project management and reporting tools.

Legal Representative (Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU))

Gender	Male
First Name	Jorg
Family Name	Steiper
Department	Albert-Schweitzer-Schule Kassel, Schülerforschungszentrum Nordhessen
Position	chairmanoftheboard
Email	schule@steiper.de
Telephone	+4905543303955
Preferred Contact	No
If the address is different from the one of the organisation	No

Contact Person (Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU))

Gender	Male
First Name	Jörg
Family Name	Steiper
Department	Albert-Schweitzer-Schule Kassel, Schülerforschungszentrum Nordhessen
Position	chairman of the board
Email	schule@steiper.de
Telephone	+4905543303955
Preferred Contact	Yes
If the address is different from the one of the organisation	No

Background and Experience

Please briefly present the organisation/group (e.g. its type, scope of work, areas of activity and if applicable, approximate number of paid/unpaid staff, learners and members of the group).

The MNU was founded on 05.10.1891. The MNU of Hesse became an independent legal entity on 27.09.2007. Details on the history of MNU can be found at <https://www.mnu.de/bundesverband/#geschichte>

As the Hessian regional association of the German Association for the Promotion of Mathematics and Science Education (MNU), we are intensively committed to the promotion of young pupils in the subjects of mathematics, biology, chemistry, computer science and physics in the sense of competence-oriented learning growth in the context of a constructivist learning theory.

Our indispensable guiding principle is the fundamental conviction that competence acquisition is not possible without content and that competences are only acquired through active engagement with significant content. This does not mean, however, that it is limited to technical and methodological competencies. Social competence and personal competence also have their place, the latter especially when learning on one's own responsibility. We represent this objective voluntarily in discussions with colleagues, with representatives of the Hessian Ministry of Education and Cultural Affairs and in cooperation with other associations and institutions.

What are the activities and experience of the organisation in the areas relevant for this project? What are the skills and/or expertise of key persons involved in this project? Please explain how the organisation brings an essential added value to the project.

Our organisation primarily has secondary school teachers as members and target group. Therefore, the primarily accessible groups of pupils would fall into this age group (10-19 year old pupils) and school type (German secondary level I and II). However, we are also striving to expand our offerings to other school forms (middle schools, comprehensive schools and primary schools) and age groups (6-9 year old pupils).

The Federal Association MNU has numerous cooperations which the respective regional associations can also access (<https://www.mnu.de/bundesverband/#kooperationen>). The regional association Hessen is well connected to the various universities, companies and business associations in Hessen. On a personal level, there are contacts with schools in Spain and Italy, cooperation talks with the AIF Emilia-Romagna are currently suspended due to Covid-19.

We organise further training courses that take into account the content requirements of our subjects, their interlocking with each other, their importance and embedding in our living environment as well as access to newer teaching methods and newer "technical teaching equipment". We also offer various conferences at local, regional and state level. Our broad-based Hessian State Conference gives our approximately 500 members and anyone interested the opportunity to experience a day of lectures on didactics and technical subjects, stimulating discussions and a larger exhibition of teaching materials.

People involved in the project: Dirk von Sierakowsky (Managing Director), Christian Wach (Assessor IT in the board), Dominik Marok (Vice Chairman of the board)

Has the organisation participated in a European Union granted project in the 3 years preceding this application?

No

Project Description

Priorities and Topics

Please select the most relevant horizontal or sectoral priority according to the objectives of your project.

SCHOOL EDUCATION: Increasing the levels of achievement and interest in science, technology, engineering, and mathematics

If relevant, please select up to two additional priorities according to the objectives of your project.

HORIZONTAL: Innovative practices in a digital era

HORIZONTAL: Supporting educators, youth workers, educational leaders and support staff

Please comment on your choice of priorities.

In a world where digital tools are increasingly part of our daily lives, educating children and young people in their use and understanding is the responsibility of educational actors. Machines, algorithms, artificial intelligence are all terms that are now part of everyone's vocabulary, even though we do not always know what they mean.

On average, each French household has 99 items of electrical or electronic equipment, according to an Ipsos study commissioned by the WEEE (Waste Electrical and Electronic Equipment) industry. Their number depends on the type of home: while apartments have 73, houses have 118 on average. All of these items weigh 450 kilos per household, or 200 kilos per inhabitant. 58.2% of them express a positive opinion about the idea of living in a connected home that helps them in their daily lives, according to a study by the Smart Home League association. This is far less than the Spanish and Italians, who are more than 80% convinced by home automation.

In correlation, according to a study published by Dell and the Institute for the Future, 85% of the jobs of 2030 do not yet exist. Artificial intelligence and robotics will not only profoundly transform existing professions but also create new ones, the outlines of which are still difficult to draw, such as ethicists and psydesigners. However, some of the professions of tomorrow are already a reality. Robotician, data scientist, civil drone pilot, 3D printer, BIM manager...

The issues of conscious use, access for all, understanding, ethics, personal data protection, but also technical training for the professions of tomorrow are today more than ever at the heart of the debates of European societies, and the questions arise from early childhood onwards. Digital education, and education through digital technology, offers opportunities in terms of education, creativity and innovation, in addition to meeting a societal need.

On 12 February 2019, the European Parliament adopted a new resolution on a comprehensive European industrial policy on artificial intelligence. Parliament points out that curricula should be adapted, including by establishing new training pathways and using new transmission technologies, and that pedagogical aspects should be adequately addressed; in particular, the acquisition of digital skills, including programming, should be included in education and training, from basic education to lifelong learning.

In France, since 2014, school programs indicate that teachers of all specialities should use coding and robotics in order to help their students understand the logic of programming and computer language. Other European countries are in the process of formalizing in the school programs the teaching of coding and others suggest it to teachers. Despite what some people believe, we are not born as digital natives just because we know how to use technology, like our mobile phones. The education of young citizens plays a really important role and so does the training of teachers. The partners have come to the common analysis that we need to invest in teachers as transformers and awakers if we want to empower the new generation of citizens in using digital technology effectively and in a responsible manner.

The Council of Europe has been working on this subject for several years, in its Europe 2020 project and its digital strategy, as well as in its report on the role of early childhood and primary education in fostering creativity, innovation and digital competence (2015). The report highlights in particular the role of teachers and early childhood education and care professionals in helping children to become creative and innovative adults; the importance of games and the use of digital tools from an early age for development and learning; shows that the appropriate use of digital tools can improve educational activities and enhance motivation, understanding and learning; and stresses the need to teach children to use digital technologies safely and responsibly and to interpret, use, share, create and critically evaluate available information.

The project we are presenting responds to these priorities of increasing young people's interest and success in science, technology, engineering and mathematics, making them actors in their use and promoting innovative methods, through playful robotic teaching kits accessible to all.

Please select up to three topics addressed by your project.

ICT - new technologies - digital competences

Open and distance learning

Pedagogy and didactics

Project Description

Please explain the context and the objectives of your project as well as the needs and target groups to be addressed. Why should this project be carried out transnationally?

In our increasingly connected society, where digital tools have become indispensable to us, new questions arise every day about our dependence on these objects that connect us to the world and make our lives easier. Studies show that every year Europeans are acquiring more digital tools and other connected machines.

The issues of conscious use, access for all, understanding, ethics, protection of personal data, but also technical training for the professions of tomorrow are today more than ever at the heart of the debates of European societies, and the questions arise from early childhood onwards. Digital education, and education through digital technology, offers opportunities in terms of education, creativity and innovation, in addition to meeting a societal need. Indeed, children and young people are high-frequency consumers of these tools: a Médiamétrie study of 2019 carried out on French people aged between 15 and 24 years old highlights a screen time of 3 hours 19, of which 2 hours 52 for the mobile phone alone, 20 minutes for the tablet and 56 minutes for the computer.

Despite what some people believe, we are not born as digital natives just because we know how to use technology, like our mobile phones.

The education of young citizens plays a really important role and so does the training of teachers. The partners have come to the common analysis that we need to invest in teachers as transformers and awakers if we want to empower the new generation of citizens in using digital technology effectively and in a responsible manner.

Partners share the same global priorities and OBJECTIVES for this project which are :

1/Provide the means for teachers who wish to offer turnkey robotics activities at low cost.

2/make children and young people understand the making of information through action so that they become creative and responsible actors

3/ educate to computer science and raise awareness on algorithmic logic underlying all the tools we use, in order to take over power on machines,

4/promote the mainstreaming of digital competence provision across the curricula

5/ foster critical thinking especially through teaching technology and science in line with the priorities of school education.

6/ prepare children and young people to robotics challenges as RoboCup, which are great opportunities for learning in many fields (technology, mathematics, logic, English, project management...) and self-improvement.

7/make children and young people, especially girls, want to take an interest in engineering and digital professions.

To reach these ambitious objectives, the EU-RATE project will TARGET PUBLIC in a direct or indirect way :

* The direct public > primary and secondary school teachers, especially those who do not have access to robotics for reasons of funding, knowledge, distance, etc. but also the educational community at large (educators, parents, animators) that will have access to the training online; Students of 14+ as co-developers of the project (participating in the LTTA1 C1 and LTTA 2 C2, testing, experimenting, giving feedback.

* The indirect public: youngsters from 8 to 10 and from 11 to 14 years old that will take part to extra curricular and/or in-school activities

The TRANSNATIONAL approach is really important in order for the EU-RATE project to succeed. In certain countries in Europe, teaching robotics, coding and media literacy is already in the school programs. In others it is not obligatory but highly recommended. The consortium will rely on the knowledge of the partners that already have an experience in these subjects to create an online training for the teachers all over Europe. We will then adapt this training to the culture and needs of each partner country thus providing a European response to a European priority.

What results are expected during the project and on its completion?

The following results are expected during the EU-RATE project and on its completion :

1. Results for the management and supervision :

- a. 5 transnational meetings, final reports together with administrative and financial material
- b. creation of a online group in Slack (<https://slack.com>) or Telegram for distance collaboration

2. Results for the support to be provided to teachers of primary, secondary and high school and educational actors :

> Robotics : ROBOTIC KIT (learning sequences, hardware and software and evaluation tool in all languages of the countries + English) for teachers and youth leaders dealing with students from 8-10 and from 11 to 14 y.o. Robotics is a ludic and playful way to talk about computer language, data processing and algorithms. It is important to underline that these subjects have not been identified randomly and are not only related to the know-how of the project's partners. The KIT will have a pedagogical progressiveness and an educational logic which may create a global coherent coding and robotic approach to better understand the world and the objects in it. First, pupils understand how a computer receives and processes data (ROBOTICS), then they will discover how data is produced (MEDIA LITERACY) and they'll be able to understand how it works to develop their own robots, actions.

3. online course on Moodle platform (example) or other existing platforms (open source and free) of at least 6 hours about robotics and media literacy and the robotic KIT for teachers and youth leader, allowing people from all over the world to discover the robotics pedagogical kit and to develop their knowledge.

4. Results for the exploitation activities :

a. 2 training periods of 4 days each (+ 2 days travel each) in order to Cross-guiding of test and evaluation protocols (LTTA1 - C1) and share of everyone's designs and first prototype kits and training methodology for IO4(LTTA 2 - C-2) by +14 year old students and their teachers and/or youth leaders from different partners.

4. Results for quality assurance :

- a. a strategy of quality assurance will be designed and followed by the 4 leaders of IOs and of course all partners in order to assess the different outputs.
- b. a questionnaire will also be made and sent to national and European stakeholders in order to enhance the degree of appropriation of the tools and strategy.

5. Results for the dissemination activities :

- a. at least one event organised in each partner country to present the project EU-RATE, the IOS made which are free of use for the teachers and all educational actors, the Open Online Courses and the existence of national tutors that can accompany the teachers (partners of the application)
- b. Publication of at least one article in each partner country at the end of the project to announce the results in the community of teachers and all educational actors.
- c. one newsletter published per partner country after each transnational event (meeting and training in English).
- d. Project partners are planning to use the following platforms to disseminate and share the project results:
EPALE > all content related to distance learning of adults (professionals)
School education gateway > IO1, IO2, IO3, IO4
Erasmus + project results platform > for all the activities
- e. Publication of photos, videos and articles on the social networks of the associations involved.

In addition to the expected results listed in the different activities, the project should enable :

- make robotics more accessible to educational actors without specific skills;
- enable a large audience of young people to have access to robotics sessions, both in and out of school; and from different backgrounds (rural, urban, underprivileged areas...).
- to develop an appetite for technical disciplines among young people, both girls and boys;
- to develop critical thinking skills and to understand the influence of machines and algorithms around us;
- to enable young people to become "active" rather than "passive" users of the machines around them.

In what way is the project innovative and/or complementary to other projects already carried out by the participating organisations?

This project responds to a need identified by all the organizations participating in the project. Indeed, even if the projects around robotics education are numerous, they are not as complete and accessible as the one we propose here.

Other projects have already carried out about robotics in education and media literacy. However, very few are addressed to teachers of primary and secondary school in Europe. The EU-RATE project will gather examples of tools and methods having designed in the framework of previous complementary European projects such as :

- 2015 – 2017 University of Latvia “Robotics-based learning interventions for preventing school failure and Early School Leaving” ERASMUS+ (international code: 2015-1-IT02-KA201-015141).
- 2015 - 2017 researchers in University of Latvia for research Project No IPSC / G06 /E-CIT by European Commission, Joint Research Center (JRC) “Young children (0-8) and Digital technology”.
- 2015 European Commission project: “Young children and digital technology: a qualitative exploratory study” the framework of the JRC’s Project ECIT, Empowering Citizens’ Rights in emerging ICT
- 2015-2017, Erasmus+ Programme, Key Action 2: Strategic Partnerships, “Codemob project” on teaching coding, <http://all-digital.org/projects/teaching-coding-mobile-devices-telecentres/>
- 2018-2020, EACEA 07/2017, ERASMUS+ KA3 “Social Inclusion through Education, Training and Youth”, “Coding for Inclusion (CODINC) project”, <http://all-digital.org/projects/codinc-coding-inclusion/>

The EU-RATE will be innovative by :

- > providing new learning opportunities for teachers and animators, by creating for the first time a complete robotics education solution, including both a turnkey pedagogical kit, a robot designed for educational actors and dedicated software that is accessible and easy to use, by a collective of European actors specialized in robotics and education.
- > using the e-learning methodology in order to train more teachers and animators but also face to face training of national tutors in the partner countries in order to motivate and accompany the teachers in their online courses.
- > involving young people 14 + into building pedagogical tools and prototypes materials and plans to help teachers and animators in the improvement of the pedagogy with youngsters from 8 to 10 and from 11 to 13 years old.

Moreover, the EU-RATE will be innovative in its pedagogical strategy as a collaborative approach will be implemented:

- > The investment of 6 structures, including 2 schools and 4 associations for an approach as complete as possible;
- > Structures wich complement each others : 2 associations specialized in robotics (Elektrons Libres, France and Scuola di Robotica, Italy) and 2 education associations (MNU, Germany - science teachers / Ligue de l'enseignement Nouvelle-Aquitaine, France - lifelong education) as well as 2 schools with young people of different ages (Escola Secundaria de Barcelinhos - Portugal / GoetheSchule - Germany).
- > Each partner will support the development of the project : the Learning sequences, the hardware, the software and the testing and evaluation, depending on their speciality, as a duo association/school ; but every participant will be involved and give opinion during all the project.

> the pedagogical material (software and hardware) used during the activities written in the booklets and presented in the e-learning courses are Open source and as friendly and easy to use as possible.

>the design and implementation are conducted on both a national and European level as they will be tested among national stakeholders and target groups in at least 4 different countries (France, Portugal, Germany, Italy) but also on a transnational level during the trainings. The young people involved could be helping too.

We believe that this project, by involving all the specialized partners as well as the young people themselves, and by trying to respond as much as possible to all the needs identified by the educational actors, will allow everyone to grasp the issue of educational robotics even when they are not geeks.

How did you choose the project partners and what will they bring to the project? Does it involve organisations that have never previously been involved in a Strategic Partnerships project?

The project partners are very complementary to each other as they have worked on different projects and initiatives at the national and European level that match each other (see above).

Ligue being at the initiative of this project, contacted the potential partners. When developing this consortium, priority was given to identifying the competencies each partner would bring to the project and to the development of the foreseen intellectual outputs as detailed in the previous answer. Therefore the consortium is a mix of longstanding partners of Ligue at international level (SCUOLA DI ROBOTICA), a member Partner that had a major role in building the project Framework (EleKtrons Libres) but also long term partners of EleKtrons libres and their expert teachers and the french federation of robotics (MNU, GoetheSchule, Escola secundaria de Barcelinhos).

We decided to have leading and co-leading School/association in each IO and of of course each partner will contribute to all the deliverables of the project, one partner taking the lead depending on its expertise and competences.

MNU, being an association with a major network in Germany, europe and also USA and Canada ,will also focus on the wide transnational dissemination of the project and to relevant stakeholder at EU level (see dissemination part below). All partners will also support dissemination plans at the local, regional, national and international level by their networks, participating in events not covered by the project but connected to the theme (Robocup junior, regional, national, european and international, congresses, teachers meetings and trainings, etc) but also by new contacts made on preparation time and during and after the project.

All partners have taken part to an EU-funded project (as individuals, teachers mobility, non formal education projects) in the recent years (see partner description above), they all have worked on the subject at least national level and at international level). Ligue de l'Enseignement Nouvelle Aquitaine is supported by Ligue de l'Enseignement National level who is used to managing and participating in KA02 projects.

As you can see, the structures complement each others : 2 associations specialized in robotics (Elektrons Libres, France and Scuola di Robotica, Italy) and 2 education associations (MNU, Germany - science teachers / Ligue de l'enseignement Nouvelle-Aquitaine, France - lifelong education) as well as 2 schools with young people of different ages (Escola Secundaria de Barcelinhos - Portugal / GoetheSchule - Germany). Combining all the experiences, the competences and the areas of experimentation, the partners are confident about a successful realization of the project implementation in the time given.

How will the tasks and responsibilities be distributed among the partners?

Taking into consideration the profile, experience, expertise and interest of each partner's organisation, the distribution of responsibilities will be done in co-leadership according to their expertise, with daily collaboration from all partners, to ensure high quality standards and balanced participation:

* La LIGUE NOUVELLE AQUITAINE (FRANCE)

- Coordinate and manage the project: co-host the kick-off meeting (TM1) ;
- Participate in all outputs IO1, IO2, IO3 and lead IO4;
- develop a quality assurance plan to assess the tools developed (IO4)
- Disseminate at large national and European scale: i.e. organize the French multiplier event - final conference (E6)

* Scuola di Robotica (ITALY)

- Hosts 2nd partners meeting (TM2)
- Participate to all outputs bringing specific input concerning education to robotics (IO2 and IO4), co-leads IO1 and leads IO3
- Host the 1st training session LTTA 1 (C1)
- develop a quality assurance plan to assess the tools developed.(IO3)
- Disseminate at large national and European scale: i.e. co-organize the Italian (E2) local dissemination event.

* ELEKTRONS LIBRES (FRANCE)

- co-host the kick off meeting (TM1) with Ligue de l'Enseignement Nouvelle Aquitaine
- participate to all outputs (IO1, IO3, and IO4) and co-leads IO2
- Disseminate at large national and European scale: i.e. organise (E5) local dissemination event.

* GOETHESCHULE (GERMANY)

- participate to all outputs (IO1, IO4), leads IO2 and co-leads IO3
- Host the 2nd training session LTTA 2 (C2)
- develop a quality assurance plan to assess the tools developed.(IO2)
- Disseminate at large national and European scale: i.e. organize the Land hannover (E2) local dissemination event.

* Escola secundaria de Barcelinhos (PORTUGAL)

- hosts the 4th partners meeting (TPM4)
- participate to all outputs (IO2, IO3), leads IO1 and co-leads IO4
- develop a quality assurance plan to assess the tools developed.(IO1)
- Disseminate at large national and European scale: i.e. organize the portuguese (E3) Local dissemination event

* MNU (GERMANY)

- hosts the 3rd partners meeting (TPM3)
- Participate to all outputs (IO1, IO2, IO3, IO4)
- In charge of the dissemination plan transnationally
- Disseminate at large national and European scale: i.e. organize the Land hessen (E4) local dissemination event.

If relevant, please identify and explain the involvement of associated partners, not formally participating in the project. Please explain how they will contribute to the implementation of specific project tasks/activities or support the dissemination and sustainability of the project.

A certain number of organisations have already expressed their will to support the project without being identified as formal partners.

Associate partners to the project will:

- participate in the project providing advice and information, depending on their field of expertise, bringing valuable input to the project activities and outputs;
- facilitate the contacts of the project partners with appropriate data sources in their country/network;
- review the outputs being produced;
- and disseminate and share the project results within their networks (formal and informal).

They will carry out these activities mostly by means of e-mail, telephone conferences, attendance to events and participation in project meetings (only if considered absolutely necessary). In this last case, participation costs will be covered by the project budget under the line "Implementation and management".

Some partners have provided support letters (attached) and some of them, as COVID-19 has blocked a lot of structures were not able to send us a letter before the application deadline.

* LifeLong Learning Platform (LLL-P): an umbrella association that gathers 39 European organisations active in the field of education and training, coming from all EU Member States and beyond. Currently these networks represent more than 50 000 educational institutions (schools, universities, adult education and youth centres, etc.) or associations (involving students, teachers and trainers, parents, HRD professionals, etc.) covering all sectors of formal, non-formal and informal learning. Their members reach out to several millions of beneficiaries.

* The Association for Teacher Education in Europe (ATEE): a non-profit European organisation, whose aim is to enhance the quality of Teacher Education in Europe and support the professional development of teachers and teacher educators at all levels. The members of the ATEE are individuals and institutions involved in the research and practice of teacher education, both within and outside higher education.

* The National Network of Educational Robotics (RNRE) is an official public community of more than 50 public schools based mainly in the Italian Ligurian Region. It was funded three years ago and the leading member is the Nautical Institute San Giorgio of Genova. The RNRE members are public schools from kindergarten to high school. The main aim of the RNRE is to introduce innovation in the educational system using online learning, coding and educational robotics. The RNRE offers training courses for teachers to upgrade their competences.

* The French Institute for Research in Computer Science and Automation (INRIA), a French national research institution focusing on computer science and applied mathematics with national and international recognition for their work in educational robotics.

* The French Federation of Robotic (FFROB), french national association for the promotion of robotics and the support of robocup events (local, regional, national and international) in France.

* CAP SCIENCES, renowned centre of scientific culture in Bordeaux (Nouvelle-Aquitaine) which, among other things, organised an exhibition "Robots" during the 2019-2020 school year in connection with the Robocup 2020, which was due to take place in Bordeaux (postponed to 2021).

* The Portuguese robotics society (Sociedade Portuguesa de Robotica) of which main goals are to foster education, scientific research, technological development and applications (industry and services) of robotic systems. Their annual event is the Portuguese Robotics Open, including robot competitions for university and high school levels, as well as a technical conference which has been co-sponsored by IEEE in last few years.

* The RoboCup Committee of Germany, made up of robotics and education specialists, which organizes the annual World Robotics Event.

* The INSPE, the National Higher Institute of Professorship and Education, that trains future teachers in Bordeaux, France.

* The Espace Mendès-France welcomes the public in its premises located in the historic heart of the city of Poitiers (France). It offers scientific exhibitions throughout the year to the general public. It coordinates several major regional operations such as La Fête de la science, La Science se livre or Images de sciences, sciences de l'image and co-organises or

assists with many events in Poitou-Charentes. It also maintains a permanent mission on the theme of science, innovation and territories, creativity and territories and develops international partnerships.

* the MPIS lab (Pau, France). The MIPS Lab is a space dedicated to creation and which will allow everyone to be able to move from the imagination of a project to its realization.

*Liceo Scientifico Statale Leonardo, Brescia <http://www.liceoleonardobs.it/sito/> ; Future Education Modena <https://www.fem.digital/>; Università Cattolica <https://piacenza.unicatt.it/facolta/scienze-della-formazione>;Terza Cultura, Firenze

Is the partnership specifically aimed at regional cooperation and led by local and/or regional school authorities from different countries?

No

Participants

Please briefly describe how you will select and involve participants in the different activities of your project.

* The direct public > primary and secondary school teachers, especially those who do not have access to robotics for reasons of funding, knowledge, distance, etc. but also the educational community at large (educators, parents, animators) that will have access to the training online; Students of 14+ as co-developers of the project (participating in the LTTA1 C1 and LTTA 2 C2, testing, experimenting, giving feedback.

The direct participants will be from within the partner organisations or their networks (schools, associations). Each partner will select within their staff, members the most relevant people to take part to the project.

* The indirect public: youngsters from 8 to 10 and from 11 to 14 years old that will take part to extra curricular and/or in-school activities.

As for indirect participants, they will be the students of schools partners and/or the members of associations and they will be testing the kits with the testings teachers/animators/youth leaders (8-10 and 11-14). These youngsters will test the kit and it may be a classe/school project (obligation) or on the basis of volunteering and will express their interest to the partner organisations at local level. Partners will seek to reach a wide variety of school/educational settings.

Participants with fewer opportunities: does your project involve participants facing situations that make their participation more difficult?

No

Preparation

Please describe what will be done in preparation by your organisation/group and by your partners/group before the actual project activities take place, e.g. administrative arrangements, communication about the activities, selection of the persons, coaches, involvement of stakeholders, etc.

Already at the application stage, there have been a number of joint activities in order to prepare the project proposal in a collaborative way through online meetings with the partner organisations and stakeholders. Before the project's start in October 2020, partners will anticipate their common work (research, informing their stakeholders, networks, preparing teams, asking for cofinancing...).

La Ligue de l'enseignement Nouvelle Aquitaine, as coordinator of the project will:

1. inform all partners as soon as the funding is confirmed and organise an online meeting in July or September 2020 with all partners to inform them on the first step of the project and set a date for the kick-off meeting.
2. set up an online collaborative space (Google Drive) where all the documentation related to the project will be available to all partners all along the project + a collaborative messaging service such as Slack for partners to chat directly when needed.
3. prepare the partner agreements and organisation budgets so they are signed before the first transnational meeting
4. develop the work breakdown structure and the list of deliverables as outlined in the e-form + key dates of the project based on the Gantt diagram attached to this application.

Bilateral online meetings will be carried out as often as necessary with partners to make sure the roles/tasks/budget of everyone are clear, in order to start the project with a clear idea of its expectations in mind. These preliminary activities and tasks will enable the partnership to start working hand in hand and in a confident way. It will permit to have an efficient first face-to-face steering committee.

Management

Funds for Project Management and Implementation

Funds for 'Project Management and Implementation' are provided to all Strategic Partnerships based on the number of participating organisations and duration of the project. The purpose of these funds is to cover diverse expenses that any project may incur, such as planning, communication between partners, small scale project materials, virtual cooperation, local project activities, promotion, dissemination and other similar activities not covered by other types of funding. A partnership may receive a maximum of 2750 EUR of 'Project Management and Implementation cost' per month

Organisation Role	Grant per organisation and per month	Number of Organisations	Grant
Applicant Organisation	500,00 EUR	1	17.000,00 EUR
Partner Organisation	250,00 EUR	5	42.500,00 EUR
Total		6	59.500,00 EUR

Please provide detailed information about the project activities that you will carry out with the support of the grant requested under the item 'Project Management and Implementation'

The budget line "Project management and Implementation" will be used by the coordinator and its partners to carry out administrative and financial management tasks of the project which do not fall under the other budget lines, such as: - ensure a solid consortium cooperation for the sound implementation of the project: respecting deadlines, contacting regularly the partners to evaluate their activities and also their commitment, ensure proper communication between partners and good cooperation spirit of the partnership ; - take care of project administrative and financial management: making sure partners have understood from the beginning reporting and financial rules; making the payments to the partners, collecting financial invoices, proofs of mobility and of other costs according to EU rules. Advising partners when they have to choose external providers for example for translation based on its previous experience and that of partners who also have long experience in transnational projects ; - regularly share the project results with other stakeholders, presenting the project in events, working groups, etc. Disseminating information on its website and social media.

Transnational Project Meetings

Transnational project meetings: how often do you plan to meet, who will participate in those meetings, where will they take place and what will be the goal?

Five transnational meetings are planned in the project, as follows:

- * Kick off meeting - M1 co-hosted by la Ligue de l'Enseignement Nouvelle Aquitaine (FR) , lead partner, and ELEKTRONS LIBRES (FR) this meeting will be organised in Pau (EleKtrons city). It will have the objective to deal with: > partner presentation and mutual knowledge > financial & administrative issues > thorough project presentation in order to ensure that all partners are aware of upcoming tasks and of the objectives to be achieved > draft dissemination and exploitation strategy, which will encourage the partnership to promote the project from the very beginning
- * Partner meeting #2 - M6 Hosted by Scuola di Robotica (IT) // > progress report of IO1> prepare the specifications and evaluation for IO2 and IO3 > preparation of reports (NA/partners...)
- * Partner meeting #3 - M15 Hosted by MNU (GER) // > progress report IO1, IO2 and IO3 work (Final synthesis of hardware and software technical choices and launch of prototyping). Work on the training (common concept/Framework) LTTA 1 (C1); Work on how the promotion of the project can be reinforced during the end of the Erasmus + project. preparation of reports (NA/partners...)
- * Partner meeting 4 - M21 Hosted by ES Barcelinhos (PT)//> progress report IO1, IO2, IO3 work (return of the first tests and launch of analyzes, first feedback for designers). Work on the training (common concept/Framework) LTTA2 (C2); Work on the Multipliers events per country (public, Framework, program); communication and promotion of the project, preparation of reports (NA/partners...)
- * Partner meeting #5 - M34 Co-hosted by Ligue de l'Enseignement Nouvelle Aquitaine and ELEKTRONS LIBRES (FR) This meeting will be organised in Bordeaux (Ligue's city and regional capital near the ministry of education regional, the university, and other stakeholders) > overall assessment of the project > feedback on local multiplier events and synergies developed > preparation of final report > further dissemination > sustainability. The multiplier event E2 will be organised simultaneously (see corresponding section below) Two representatives of each organisation will attend these meetings, every time a person in charge of admin and finances and the other person in charge of pedagogical issue.

Transnational Project Meetings Summary

Please specify the funds requested to organise the planned Transnational Project Meetings.

ID	Leading Organisation	Meeting Title	Country of Venue	Starting Period	No. of Participants	Grant
1	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	Kick off meeting	France	10-2020	12	5.750,00 EUR
2	SCUOLA DI ROBOTICA (E10131490, IT)	2nd partners meeting	Italy	03-2021	12	5.750,00 EUR
3	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	3rd partners meeting	Germany	12-2021	12	5.750,00 EUR
4	Escola Secundária/3 de Barcelinhos (E10146324, PT)	4th partners meeting	Portugal	06-2022	12	5.750,00 EUR
5	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	5th partners meeting (at the same time of E2)	France	07-2023	12	5.750,00 EUR
Total					60	28.750,00 EUR

Transnational Project Meetings Details 1

Meeting Title

Kick off meeting

Leading Organisation

Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)

Starting Period

10-2020

Country of Venue

France

Transnational Project Meetings Groups

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Id	Sending Organisation	Country of the Sending Organisation	No. of Participants	Distance Band	Grant per Participant	Grant
1	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
2	EleKtrons Libres (E10252147, FR)	France	2	0 - 99 km	0,00 EUR	0,00 EUR
3	Gymnasium Goetheschule (E10178845, DE)	Germany	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
4	SCUOLA DI ROBOTICA (E10131490, IT)	Italy	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
5	Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
6	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	Germany	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
Total						5.750,00 EUR

Transnational Project Meetings Details 2

Meeting Title

2nd partners meeting

Leading Organisation

SCUOLA DI ROBOTICA (E10131490, IT)

Starting Period

03-2021

Country of Venue

Italy

Transnational Project Meetings Groups

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Id	Sending Organisation	Country of the Sending Organisation	No. of Participants	Distance Band	Grant per Participant	Grant
1	SCUOLA DI ROBOTICA (E10131490, IT)	Italy	2	0 - 99 km	0,00 EUR	0,00 EUR
2	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
3	EleKtrons Libres (E10252147, FR)	France	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
4	Gymnasium Goetheschule (E10178845, DE)	Germany	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
5	Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
6	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	Germany	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
Total						5.750,00 EUR

Transnational Project Meetings Details 3

Meeting Title

3rd partners meeting

Leading Organisation

Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)

Starting Period

12-2021

Country of Venue

Germany

Transnational Project Meetings Groups

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Id	Sending Organisation	Country of the Sending Organisation	No. of Participants	Distance Band	Grant per Participant	Grant
1	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	Germany	2	0 - 99 km	0,00 EUR	0,00 EUR
2	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
3	EleKtrons Libres (E10252147, FR)	France	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
4	Gymnasium Goetheschule (E10178845, DE)	Germany	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
5	SCUOLA DI ROBOTICA (E10131490, IT)	Italy	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
6	Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
Total						5.750,00 EUR

Transnational Project Meetings Details 4

Meeting Title

4th partners meeting

Leading Organisation

Escola Secundária/3 de Barcelinhos (E10146324, PT)

Starting Period

06-2022

Country of Venue

Portugal

Transnational Project Meetings Groups

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Id	Sending Organisation	Country of the Sending Organisation	No. of Participants	Distance Band	Grant per Participant	Grant
1	Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal	2	0 - 99 km	0,00 EUR	0,00 EUR
2	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
3	EleKtrons Libres (E10252147, FR)	France	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
4	Gymnasium Goetheschule (E10178845, DE)	Germany	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
5	SCUOLA DI ROBOTICA (E10131490, IT)	Italy	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
6	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	Germany	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
Total						5.750,00 EUR

Transnational Project Meetings Details 5

Meeting Title

5th partners meeting (at the same time of E2)

Leading Organisation

Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)

Starting Period

07-2023

Country of Venue

France

Transnational Project Meetings Groups

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Id	Sending Organisation	Country of the Sending Organisation	No. of Participants	Distance Band	Grant per Participant	Grant
1	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France	2	0 - 99 km	0,00 EUR	0,00 EUR
2	EleKtrons Libres (E10252147, FR)	France	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
3	Gymnasium Goetheschule (E10178845, DE)	Germany	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
4	SCUOLA DI ROBOTICA (E10131490, IT)	Italy	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
5	Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
6	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	Germany	2	100 - 1999 km	575,00 EUR	1.150,00 EUR
Total						5.750,00 EUR

Project Management

How will you ensure proper budget control and time management in your project?

All partners have experience in transnational projects and are therefore already familiar with the multi-tasks work that it involves. They notably all have a clear understanding of what EU-funded projects imply in terms of financial and administrative requirements and processes. Budget control, allotted to coordinator, will be object of a rigorous reporting process, supported by practical tools. In this purpose, la Ligue de l'Enseignement Nouvelle Aquitaine will rely on the well mastered tools it implemented in previous national and european projects (FSE, FAMI, Erasmus +) The reporting deadlines will be anticipated in the project work plan and will be supervised by a dedicated staff member. This will ensure the regularity and continuity expected in this field. On top of that, the budget control will also be object of individual feedback to each partner, in order to 1°) answer partners' demands of information (regarding eligibility, accuracy, etc.), 2°) guarantee the cost-efficiency of the budget regarding the deployed activities plan: ensuring that economical options are preferred, promoting responsible consumption, taking advantage of IT solutions in order to save, etc. Cost-efficiency will be a basic principle in the budget management. The Grant Applicant will be responsible for general funding and implementation strategy of the project. Budget and cost effectiveness in this project are planned according to the funding and allocation rules of the program. The budget has been carefully planned in order to achieve the expected results with minimum budget for all 8 partners. During project preparation, a number of options were examined to identify the most cost-effective, this consisted of assessing options for bringing sustainable management practices. All 6 partners will ask for co-financing for the project because some of the costs will not be covered by Erasmus + (i.e. translations, financial help for the participation of national participants in trainings, materials, for prototypes, etc...).

How will the progress, quality and achievement of project activities be monitored? Please describe the qualitative and quantitative indicators you will use. Please give information about the involved staff, as well as the timing and frequency of the monitoring activities.

The project management and implementation will seek to achieve all envisaged intellectual outputs in an efficient and effective way all by taking into account partners' strengths and expertise as well as financial considerations. In order to create a feasible working structure, the activities have been broken down into work packages leading to the intellectual outputs of the project. The project will be managed and administered by the lead partner Ligue with the support of the partners. Activities carried out under the item Project Management and Implementation are: a) Elaboration of Guidelines outlining the contractual work plan with deadlines, milestones, and partner responsibilities b) Allocation of tasks and responsibilities which will be settled during the kick-off meeting c) Implementation of an internal reporting system - Standardized formats and procedures for internal reporting of progress and expenditure will be fixed in the partners' agreement. Partners will be encouraged to report problems, obstacles and potential difficulties rather than success stories. Deadlines of the internal reports correspond to those of the reports to the NA. d) Monitoring at milestones - Significant steps in the project are marked by milestones which allow for thorough reviews of what has been accomplished. e) Organization of transnational project meetings - At these meetings all major decisions will be taken, whenever possible by consensus, when necessary by majority vote. They correspond with important project milestones to allow for monitoring. f) Frequent Online Meetings (ONM) - ONM will be organized once a month, in a fixed date. This will ensure the update and monitoring of the activities and tasks progress and fulfillment. g) Implementation of a communication system - To ensure intensive cooperation between partners virtual communication between meetings is vital. To this end clear communication rules (tools, frequency, reaction time to emails etc.) will be established and monitored. Common templates to guarantee an homogeneous collection of comparable data and information during the research activities. h) Elaboration of quality management plan providing criteria, guidelines and tools for assessing the quality and impact of project processes and outcomes. i) Dissemination activities supporting the visibility and sustainability of the project, e.g. multiplier events to present final products to key actors and stakeholders, website with demonstration versions of products and relevant materials for download, project flyers in all partner languages and English, ... j) Elaboration of Exploitation Plan providing the partnership with an action plan how to put the project results into practice after the funding. k) Evaluation throughout the project on two levels, the level of project management and of work. It will support the project management (continuous recording instruments for feedback..).

How will you evaluate to which extent the project reached its results and objectives? What indicators will you use to measure the quality of the project's results?

Quality assurance and project achievement monitoring are activities that are fully integrated in the project work program. This following is an overview of main indicators of achievement that can be proposed by the EU RATE project partners regarding achievement of activities and results:

1) Cooperation: - Number of staff involved - overall satisfaction of the implemented processes of cooperation (communication, monitoring, share of responsibility, organization of activities, time management); - Feedback and satisfaction of the partners' members and staff related to their participation in transversal and / or specific activities; - Feedback and satisfaction of the partners' members and staff related to intermediary and final products / results. 2) Activities and results: The achievement of the project's objectives and results will be measured through the following: - Feedback and satisfaction of stakeholders in the collaboration during the project - Number of participants of the 2 trainings (> 70 people foreseen) - Number of participants in local/regional/national and european multipliers events (E) (> 200 people foreseen) 3) Acknowledgment of target group's needs and returns: connected to the IO1 + IO2 + IO3 + IO4 testings + trainings + multipliers events + project results 4) Number and level of new competencies in the identified sector acquired by final beneficiaries; 5) Number of testing workshops in extra curricular times (10 workshops minimum) - Feedback and satisfaction of beneficiaries in the collaboration during the project - Feedback and satisfaction of beneficiaries regarding the final results .

Interim outcomes will be evaluated during the transnational meetings and will then be processed and adjusted for the next evaluation period. This leads to the necessary flexibility, when monitoring particular project results. Central project management controls the results and, if necessary, adjusts the planning of the work packages in agreement with the partners. This permits a regular detailed planning of the partner activities as well as cost control of partner budgets. Finally, internal processes will be monitored to maintain an overall high the level of contentment within the project. For this purpose, in addition to online questionnaires, Ligue is in charge of the internal evaluation will carry out structured reflection rounds at the beginning of each meeting. Hence, monitoring (quality check) is connected to each meeting. Additionally, there will be structured minutes from each of the monthly online meetings that allow each partner to check envisaged & reached aims/targets. This can be useful especially, for cross-cutting targets, for instance, in connection with dissemination products (publications, newsletters, events, social media).

External evaluator - The consortium wishes to ask for the support of an external evaluator. This has not been included in the budget asked in the frame of this application. This decision is connected to the wish of partners to work together in a quality approach.

What are your plans for handling risks which could happen during the project (e.g. delays, budget, conflicts, etc.)?

Ligue de l'Enseignement Nouvelle Aquitaine has the capacity to handle risk inherent to such projects. In order to prevent any imponderable, partnership, activities and everything related with the project management will be stated in the project agreement, and discussed in the kick-off meeting. All major decisions will be taken in the transnational steering meetings, decisions will be taken unanimously where possible and by majority vote where necessary. Results of the transnational meetings will be documented in Minutes on which partners have the opportunity to comment before they become officially agreed upon. A list of possible risks and respective measures have been compiled in order to anticipate them: - Low level of motivation among project partners > partners will be encouraged to express interests, suggestions and share the work according to their tasks. - Poor communication among partners > systematic communication plan which will be followed during the project will be introduced, discussed and agreed at the kick-off meeting. - Risk not delivering tasks in time > online meetings and follow up communication will always help to see, to be updated between partners for the current situation of specific tasks and to tackle problems before they occur. - Unclear roles > detailed work plans will be specified and agreed at the kick-off meeting. - Failure to reach project aims > comprehensive quality management system in place. - Project outputs do not meet requirements > extensive research and analysis at project start, frequent feedback loops, project standards catalogue. - Partner withdrawal > disposition and penalties specified in the partner's agreement, reshuffle of tasks and budget, amendment of the initial agreement with the National agency. Ligue de l'Enseignement Nouvelle Aquitaine will have the support of Ligue de l'Enseignement Nationale which has a lot of experience in European and transnational projects in case of major problems.

Implementation

Please explain how will the project activities lead to the achievement of the project objectives and delivery of the planned results.

The coordinator will monitor the project in its globality and will ensure that activities planned are being carried out in the right conditions and that expected results are produced. This is the project's progress monitoring and evaluation. In this sense, la LIGUE will ask partners on a bi-annual basis to update the partnership with achieved activities and outputs, on the basis of the reference Gantt chart. If risk situations (delays, re orientation of activity or result, etc.) occur, partner in charge of the activity / intellectual output will be in a position to explicit this and provide solutions, with the support of the coordinator and the partners. The results will be presented during each transnational meeting.

The following criteria will be used in order to evaluate the activity's quality:

*Before the activity

- The activity's objectives are clearly set and shared by the partners
- The calendar of the activity is shared with the partners
- The common instructions / modalities of realization and related tools are shared with the partners

*Monitoring the activity

- The activity started on time (If not, why?)
- The tools are efficient (If not, why?)
- The objectives of the activity are being reached (If not, why?)
- The target group participates in the activity (If not, why?)
- The target group responds positively (If not, why?)
- Some changes have been undertaken to improve the process?

*After the activity:

- The activity finished on time (If not, why?)
- The tools were efficient (If not, why?)
- The objectives of the activity have been reached (If not, why?)
- The target group participated in the activity (If not, why?)
- The target group responded positively (If not, why?)
- Give 3 main feedback from the target group participating in this activity
- To your opinion, what did work? What did not work?

*As for ensuring quality of the produced results, the following criteria will be used in order to evaluate the quality of the results:

- The aims of the result are clear and shared by partners
- The outputs are elaborated on the basis of the needs analysis collected by each partner towards the given target group.

How will you communicate and cooperate with your partners?

Partners know from experience from previous projects that smooth, efficient and transparent communication is key to the success of a project. Therefore, crucial attention will be given to this aspect through :

- a dedicated mailing list will be set up so that emails can be sent to everyone so that everyone has the chance to have a say in various exchanges
- cooperative communication tools will be used, such as Slack or telegram : they are instant communication messaging platforms which favor direct exchanges and sharing of documents/informations/files which are “in progress” before they are filed in a more permanent way.
- online meetings will be organised through Adobe connect technology or Teams which enables the creation of virtual webconference spaces dedicated to the project.
- as lead partner, la Ligue will be available to all partners to discuss any matter related to the project, whether its has to do with administration/finances (Rita Silva Varisco) or pedagogical issued (Sarah Gourvil). Specific time slots dedicated to bilateral discussion will be included in the agenda of transnational meetings.

Have you used or do you plan to use eTwinning, School Education Gateway, EPALE or the Erasmus+ Project Results Platform for preparation, implementation or follow-up of your project? If yes, please describe how.

Project partners are planning to use the following platforms to disseminate and share the project results:

EPALE > all content related to distance learning of adults (professionals)

School education gateway > IO1, IO2, IO3, IO4

Erasmus + project results platform> for all the activities

Intellectual Outputs

Do you plan to include Intellectual Outputs in your project?

Yes

In case you plan to include Intellectual Outputs please describe them here.

Intellectual Outputs Summary

ID	Leading Organisation	Output Title	Starting Period	Grant
O1	Escola Secundária/3 de Barcelinhos (E10146324, PT)	Learning sequence Design	10-2020	50.284,00 EUR
O2	Gymnasium Goetheschule (E10178845, DE)	Hardware Design	04-2021	33.573,00 EUR
O3	SCUOLA DI ROBOTICA (E10131490, IT)	Software Design	04-2021	33.573,00 EUR
O4	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	Productions Tests	04-2021	51.097,00 EUR
Total				168.527,00 EUR

Output Title O1

Output Title	Learning sequence Design
Output Type	Course / curriculum – Design and development
Start Date (yyyy-mm-dd)	2020-10-01
End Date (yyyy-mm-dd)	2023-07-31

Output Description (including: needs analysis, target groups, elements of innovation, expected impact and transferability potential)

Goal :

All partners of this project have felt a lack of educational matter that is easy to use and cheap enough to be widely spread around their country in the field of robotics. The aim of this project is to fill this lack. But how ? With the four intellectual output described here and by providing an educational and universal robotic kit. Among all, IO1 is the most important because it constitutes the spine of the project. Indeed, its goals are numerous. Quantifying the needs for each public, analysing the different educational curricula to define specifications. The diversity of partners (schools, associations, different countries) will be a strength and a warranty that the production will be as universal as it can be. The network and the skills of each partner members (teachers, educational workers...) will ease the access, the understanding and the analysis of all educational curricula. Once these specifications digested, another aim of this IO is to build learning sequences (at least one for each age group : 8-10 yo and 11 to 14 yo) and to produce all associated educational formats. This will of course be the main goal of this IO as it will define the architecture of the productions from training documents for the teachers to DIY building equipment and of course timeline of the sequences and each session in it. This will of course be a joint work with IO2 and 3 for the technical part and IO4 for the feedback and improve part. We'll keep in mind that the aim is to establish courses of initiation and training in robotics using software and materials adapted to the target audience (ages, technical and financial means), it should be offered on supports adapted to all (materials and immaterial) and that these kits must be easy to use for any educational worker and that their cost must be as low as possible. In order to guarantee to answer an educational need we will confront our educational sequences prototypes to various experts in technical and pedagogical fields who are outside of the project. As one of the main goal of the project is to make universal kits, this IO's aim will also be to disseminate our production by creating a support (web platform) but also by translating all the production in English and in the language of each partner.

Please describe the division of work, the tasks leading to the production of the intellectual output and the applied methodology

IO1 A1-Identification of the age of the public and its specificities and associated educational objectives, skills to be acquired by country and public. In each partner country, a census will be carried out to identify the target age groups. Based on the organization of the education system in each country, it will be decided which level of education is most appropriate for the intervention. We'll keep in mind the 2 predefined age groups which are 8-10 years old and 11-14 years old. They usually correspond to the end of primary schools and the

beginning of secondary schools.

A survey will be carried out in each partner country to characterize the profile of the student who will be the target audience for each age group (school and leisure center in France for example)

As the curricula of the countries involved are different, learning guides will be produced according to the activities will be formatted to fit each target audience, according to the restrictions of the educational systems and educational needs of the students (school programs, age-related skills, etc.)

All partners will do a desk research of the best practices carried out in schools and educational centers in their countries. Scientific articles published with studies of works carried out will be referenced.

For each age groups, the first ideas of educational sequences might appear in relation to the results (summary of the different needs, constraints...)

IO1 A2-Define the educational constraints in the specifications of IO2 and IO3

Each partner is integrated in a different educational system, with its own reality in terms of physical and human resources. A good diagnosis in IO1 will have a strong impact in the following phases (particularly in IO3 and IO4).

As the first learning sequence ideas arrive, they will make the first material constraints appear.

These educational constraints will of course be added and guided by other larger constraints such as costs, technical constraints, environmental constraints... This work will of course be made jointly with IO2 and IO3.

Every partner will have an important role on the design of the educational specifications, hardware and software of the kit. Surveys will be made on the schools from the area of the partners to make an inventory of the hardware and software resources that each one has access to. The sources of financing to which schools have access will also be listed in order to estimate the possible financial effort of each school to implement the activities that will be prepared. Even if at the beginning of this action it will be possible to shuttle back and forth with prototyping (in IO2 and IO3), choices will have to be made in order to move on to the next steps.

IO1 A3 Implementation of associated educational formats (files, digital, distance training...)

This action is the most important of this IO1 and maybe of the project, because the choices and the work made here will constitute the DNA of our kits. Indeed, knowing all the educational constraints for each age group, the educational goals (skills we are aiming at) and having in minds the universality we want to reach, all the partners will take part in building the learning sequences. We'll have to define various things such as the duration (how many sessions, how long for each session), the content (jointly with IO2 and IO3), the time organisation in each session....

We will have to shuttle back and forth with IO4 to improve the sequences made after each tests series. For each age group, docs will be produced in which everything will be described to use the kits and perform the educational sequence.

IO1 A4 – Submission of productions to experts

During two different periods in the project (see Ganttchart), we will submit our productions to experts. Educational field experts will assess the learning sequence. It can be university teachers, INSPE (teachers training in France)... Technical field experts will also assess the technical choices we have made compared to our goals. Some institutions, potential providers of experts have already given their support to the project (see letters of support attached). All the partners will then make improvements in view of the comments made by these experts.

IO1 A5 - Dissemination Supports Creation (web platform...)

In order to make the project accessible to everyone, dissemination supports must be created.

We will establish a sustainable web platform. Indeed this platform must continue to be online once the Erasmus project is completed. It also has to be easy to use, to reach and we will have to communicate its existence.

We will discuss the choice of the platform. It could be for example : Wiki, CMS, third-party multimedia broadcasting system already existing.

There will be work to install and configure the platform but also to put online all the content.

IO 1 - A6 – Translation of teaching materials

All educational docs will be translated in all languages of the project partners + english

Leading Organisation

Escola Secundária/3 de Barcelinhos (E10146324, PT)

Media

Other

Publications

Website

Video

Participating Organisations

EleKtrons Libres (E10252147, FR) Gymnasium Goetheschule (E10178845, DE)
Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen
und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE) Ligue de
l'Enseignement Nouvelle Aquitaine (E10087198, FR) SCUOLA DI ROBOTICA
(E10131490, IT)

Languages

English French German Portuguese Italian

Intellectual Output Budget

Please specify the staff resources which you need to produce the Intellectual Output.

Id	Organisation	Managers	Teachers/Trainers/Researchers	Technicians	Administrative Support Staff	Grant
1	Escola Secundária/3 de Barcelinhos (E10146324, PT)	0,00 EUR	8.768,00 EUR	0,00 EUR	0,00 EUR	8.768,00 EUR
2	EleKtrons Libres (E10252147, FR)	0,00 EUR	7.490,00 EUR	0,00 EUR	0,00 EUR	7.490,00 EUR
3	Gymnasium Goetheschule (E10178845, DE)	0,00 EUR	7.490,00 EUR	0,00 EUR	0,00 EUR	7.490,00 EUR
4	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	0,00 EUR	7.490,00 EUR	0,00 EUR	0,00 EUR	7.490,00 EUR
5	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	0,00 EUR	7.490,00 EUR	0,00 EUR	0,00 EUR	7.490,00 EUR
6	SCUOLA DI ROBOTICA (E10131490, IT)	0,00 EUR	11.556,00 EUR	0,00 EUR	0,00 EUR	11.556,00 EUR
Total		0,00 EUR	50.284,00 EUR	0,00 EUR	0,00 EUR	50.284,00 EUR

Intellectual Output Budget Details E10146324

Organisation	Country of the Organisation
Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	64	64
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	137,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	8.768,00 EUR	8.768,00 EUR

Intellectual Output Budget Details E10252147

Organisation	Country of the Organisation
EleKtrons Libres (E10252147, FR)	France

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	35	35
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	7.490,00 EUR	7.490,00 EUR

Intellectual Output Budget Details E10178845

Organisation	Country of the Organisation
Gymnasium Goetheschule (E10178845, DE)	Germany

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	35	35
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	7.490,00 EUR	7.490,00 EUR

Intellectual Output Budget Details E10253022

Organisation	Country of the Organisation
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Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	Germany
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Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	35	35
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	7.490,00 EUR	7.490,00 EUR

Intellectual Output Budget Details E10087198

Organisation	Country of the Organisation
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Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France
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Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	35	35
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	7.490,00 EUR	7.490,00 EUR

Intellectual Output Budget Details E10131490

Organisation	Country of the Organisation
SCUOLA DI ROBOTICA (E10131490, IT)	Italy

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	54	54
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	11.556,00 EUR	11.556,00 EUR

Output Title O2

Output Title	Hardware Design
Output Type	Methodologies / guidelines – Other
Start Date (yyyy-mm-dd)	2021-04-01
End Date (yyyy-mm-dd)	2023-07-31

Output Description (including: needs analysis, target groups, elements of innovation, expected impact and transferability potential)

GOAL: Propose documentation to produce a robotic system and its experimental environment. It must be easily and inexpensively duplicable and proper for functionality extended to different teaching practices

An essential aspect in the development of suitable hardware is that the robot system to be created can be replicated at low cost and ideally can be used for various aspects of learning. But also, as far as possible, made with components manufactured in Europe. When creating the appropriate hardware, the age of the learners and the different requirements of the robot must be taken into account. Therefore different robots in the respective age groups can be assumed. At the beginning the question arises, if a project is needed at all, where hardware is to be developed. Is there a need at all, especially in the age group of pupils addressed. The answer to this question is of course yes. The life world of the pupils, also already of the children at the age of 8- 10 years has changed in the last years and will continue to change in the coming years. New technical developments are changing the lives of learners at a breathtaking pace. It is impossible to imagine the children's lives without technology and newly developed technology. This makes it all the more important for learners to deal with this new challenge. Learners should become responsible European citizens who are open and possibly critical of new technical developments but always have a sound knowledge base. Understanding, developing and planning technical contexts in a European context will be the tasks of the next generation. Together with the European partners, an innovative and technology-oriented Europe can thus be created. Therefore the project of a hardware development is the first step for the learners on their way to become critical and responsible citizens of Europe.

Learners aged 8 to 10 years are particularly suited to this project. Curious and without bad previous experience they approach the topic of robotics and hardware. Irrespective of the gender and origin of the learners, they dealt with the technology and learning environments provided to me. The 11 to 14-year-olds are already able to handle the hardware in a more reflective manner and can discuss socio-political problems in a discourse. One aim of this project is to become a research centre for all learners participating in the project. With the goal of sustainability, however, other learners should also participate in the experiences of the project. Regardless of the origin of the pupils and the educational level of the parents, robotics should be encouraged, challenged and inspired. For the younger researchers, the focus should be on playful access to the various aspects of robotics. With increasing age of the pupils, the access to science should become more science-preparatory and career-oriented. By participating in the project, the students are to be shown perspectives in robotics for their school, professional and scientific future. The chosen approach can serve as a model for various areas of European education.

Please describe the division of work, the tasks leading to the production of the intellectual output and the applied methodology

IO2A1 Drafting of hardware (HW) specifications

In order to find a sound and sustainable answer to the question of which HW to use, various parameters must be examined and questioned. At the beginning of the dev. process, the decision for a suitable HW will be made. In order to find a sound and sustainable answer to the question of which HW to use, various parameters must be examined and questioned. The learner must be at the centre of the development and planning of suitable HW. Due to the appropriate age and possible previous experience of the learner with the subject of robotics, the HW to be selected will be limited. Previous experience with robotics will most likely vary from country to country. It may even differ regionally from country to country. It is crucial to get an overview of the curricular requirements of the different countries in order to select the appropriate HW on this basis. In the age group of the 8- 10 y.o hardly any robotics or computer science will be taught in schools under technical aspects, so that no previous experience can be expected in this age group. This may already be different for 11- 14 y.o. learners. In secondary schools, students may already have taken their first steps in robotics. In a first step, these previous experiences must be evaluated. In addition to the decisive factors of age and previous experience, the functionality of the robot to be developed is decisive in the selection of the HW. 8-10 have different priorities in terms of functionality than older learners. For younger learners, manageability and stability are much more important than for older students.

IO2A2 Material choices and design

When selecting the material and design, it must be taken into account whether the robot to be developed should have a static platform or a moving model. The decision for a suitable platform directly influences the required functionality of the required sensor technology. When deciding on the material and design, the age and previous experience of the learners are again of great importance. However, the financial aspect should also play a role when considering sensor technology. The goal should be that the hardware to be developed is inexpensive, so that the robot is reproducible at a reasonable price and as far as possible, made with components manufactured in Europe. It goes without saying that the selection of suitable sensor technology also requires an evaluation of the school's internal curricula, since students have different experiences with the physics of sensors. Younger students are becoming B. be overtaxed with image recognition, as this exceeds the level of abstraction of 8 to 10-year-old learners. Older learners may find this motivating and particularly appealing and have already gained experience in the field. Choice depends on age, previous experience and intellectual abilities of the learners as well as the task set to the robot. The question must be discussed whether the prototype to be developed should be a mobile, i. e. drivable, robot or a static robot. This pedagogical decision must be discussed in a decision-making process. Key aspects here are the motivation incentives for learners and the financial possibilities. Once a decision for or against a mobile robot has been reached, a decision must be made for the deployment environment. This operational environment can be on one side of an industrially simulated production line or a possible scenario for the use of mobile robots. Maximising the motivation incentives to be created among learners must be a key factor in the decision to be taken. When choosing the controller to be used, the age of the students and also the previous experience of the learners plays a decisive role. It is important to consider whether learners aged 8-10 are able to work with complex controllers. Learners aged 11-14 years could already have gained experience in teaching or through their own private interests. Financial resources should play an equally important role in the decision to be taken. All these aspects will have to be evaluated, checked when choosing a suitable controller, in order to then make a well-founded choice.

IO2A3 Prototype (PT) production

After deciding on the material, functionality and controller, the creation of a prototype will follow. It should be discussed whether the PT should be produced by the learners or whether it should be industrially manufactured and purchased. This decision will again be a question of the learner's age, financial possibilities and level of learning development.

IO2A4 Production of technical doc

For the creation of docs, an individual approach will have to be examined and discussed. Creation of learning videos or even of tutorials must be considered and weighed up. Age of learners will be of great importance. The extent to which younger learners can work independently with materials needs to be discussed.

IO2A5 Technical doc and datasheet translation

Leading Organisation

Gymnasium Goetheschule (E10178845, DE)

Media

Participating Organisations

Languages

Publications

Website

Video

Other

EleKtrons Libres (E10252147, FR) Escola Secundária/3 de Barcelinhos (E10146324, PT) Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE) Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR) SCUOLA DI ROBOTICA (E10131490, IT)

English French German Portuguese Italian

Intellectual Output Budget

Please specify the staff resources which you need to produce the Intellectual Output.

Id	Organisation	Managers	Teachers/Trainers/Researchers	Technicians	Administrative Support Staff	Grant
1	Gymnasium Goetheschule (E10178845, DE)	0,00 EUR	8.774,00 EUR	3.240,00 EUR	0,00 EUR	12.014,00 EUR
2	EleKtrons Libres (E10252147, FR)	0,00 EUR	6.634,00 EUR	3.240,00 EUR	0,00 EUR	9.874,00 EUR
3	Escola Secundária/3 de Barcelinhos (E10146324, PT)	0,00 EUR	2.055,00 EUR	0,00 EUR	0,00 EUR	2.055,00 EUR
4	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	0,00 EUR	3.210,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR
5	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	0,00 EUR	3.210,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR
6	SCUOLA DI ROBOTICA (E10131490, IT)	0,00 EUR	3.210,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR
Total		0,00 EUR	27.093,00 EUR	6.480,00 EUR	0,00 EUR	33.573,00 EUR

Intellectual Output Budget Details E10178845

Organisation	Country of the Organisation
Gymnasium Goetheschule (E10178845, DE)	Germany

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	20	0	41	61
Grant per Day	0,00 EUR	162,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	3.240,00 EUR	0,00 EUR	8.774,00 EUR	12.014,00 EUR

Intellectual Output Budget Details E10252147

Organisation	Country of the Organisation
EleKtrons Libres (E10252147, FR)	France

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	20	0	31	51
Grant per Day	0,00 EUR	162,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	3.240,00 EUR	0,00 EUR	6.634,00 EUR	9.874,00 EUR

Intellectual Output Budget Details E10146324

Organisation	Country of the Organisation
Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	15	15
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	137,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	2.055,00 EUR	2.055,00 EUR

Intellectual Output Budget Details E10253022

Organisation

Country of the Organisation

Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)

Germany

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	15	15
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR	3.210,00 EUR

Intellectual Output Budget Details E10087198

Organisation

Country of the Organisation

Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)

France

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	15	15
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR	3.210,00 EUR

Intellectual Output Budget Details E10131490

Organisation	Country of the Organisation
SCUOLA DI ROBOTICA (E10131490, IT)	Italy

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	15	15
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR	3.210,00 EUR

Output Title O3

Output Title	Software Design
Output Type	Methodologies / guidelines – Methodological framework for implementation
Start Date (yyyy-mm-dd)	2021-04-01
End Date (yyyy-mm-dd)	2023-07-31

Output Description (including: needs analysis, target groups, elements of innovation, expected impact and transferability potential)

First part: Propose a documentation to set up a software platform to program the robots developed from IO2 production. This study should correspond to the expectations of the project. That is to say, to use free software, to be easily modifiable and adaptable to the needs of the project, to be easily distributable and installable on free and non-free operating systems, and finally to be easy to use and user-friendly for the end user, children and teenagers.

Part 2: Develop libraries for the chosen software platform to allow the end user to use all the functionalities of the hardware. These libraries in their presentation as well as in their use will have to be easily importable into the robot programming platform and adapted to the robot as well as to the age of the young people who will have to program them.

The whole set will have to be delivered in the form of packages that can be downloaded on an internet server, the content of which will remain accessible even after the Erasmus project is over. In order to keep it alive and ensure its continued development, the sources will be published on a Wiki system set up at the start of the project. The aim will also be to create an international community that will work on the development of new functionalities as well as on the improvement and optimisation of existing ones. For example, it will also be able to implement libraries to manage sensors that were not supported during the initial project. It will also be in charge of adapting the libraries to the evolutions of the initially chosen support platform.

Please describe the division of work, the tasks leading to the production of the intellectual output and the applied methodology

IO 3 - A1 – Software specifications writing (OS, objectives) in connection with IO1-A3

Definition of the constraints of the human-machine interface adapted to the public:

- Ergonomics.
- Interfaces to access the hardware functionalities.
- Didactics: the actions carried out in this phase will aim to allow the greatest possible integration of the software that will be developed in the following phases, especially from an educational point of view therefore we will try to obtain a product that can be dedicated to different age groups. Furthermore, we will try to favour software that can be used online with

the aim of making the developed software compatible with as many devices as possible (computers, tablets and smartphones) in order to increase the number of potential beneficiaries.

Moreover, in this phase a software specific needs analysis will be carried out through the creation of online surveys in all the languages of the partnership to understand the needs of teachers in this educational sector and focus groups will be carried out to analyse these needs.

IO 3 - A2 - Software platform selection

- Study of the different programming solutions already existing and adaptable to the project. In this phase, the state of the art of free and open source software platforms currently on the world market will be analyzed in order to adapt one or more of these software platforms to dialogue and program the robotic kit developed in IO2.
- Tests of use, adaptation or writing of modules specific to the different functionalities of the hardware platforms. In this phase, a precise analysis of the adaptability of the selected platforms will be carried out in order to understand to what extent the software can be modified and the degree of modifiability. Among all the platforms analysed, the one with the highest degree of compatibility will be chosen.

This will be determined by the following factors:

- Ability to read the software of the largest number of sensors present in the pedagogical kit developed in previous ROs.
- Ability to connect the software of the largest number of actuators/outputs present in the pedagogical kit developed in the previous ROs.

IO 3 - A3 – Prototype production

- Adaptation (if already existing) or creation of the final software platform for the different OSes (Linux, Microsoft, IOs, Android) allowing to program the robots :
- Interfacing between the micro-controller and the robot programming system (tablet, smartphone, computer...),
- Routines for validating the robot's hardware functionalities,
- Modules for reading the values acquired by the sensors,
- Control modules for the various actuators (drive, articulated parts),
- Simplified routines for robot handling.

IO 3 - A4 – Production of technical documentation

- Writing of all the documentation associated with the software environment imagined, designed and produced. During this phase several technical tests will be carried out with the aim of testing the software developed with different technologies and activities to ensure the compatibility of the software with as many systems as possible.

In order to achieve an accurate dissemination but above all a correct use by the direct and indirect beneficiaries, user manuals and video tutorials will be produced with the aim of explaining the blocks developed to adapt the software to the robotic kit created in IO1. This system will expand the offer of video tutorials already existing for the software identified and will be developed a system of explanation through high quality graphic videos, online tutorials and learning scenarios for the use of the software.

It will also be possible to differentiate the offer of video tutorials by type of target audience. Specifically, videos dedicated exclusively to teachers could be developed with the aim of communicating the didactics related to the software and the robotic kit and videos dedicated to a wider audience that also includes students and young people in general.

IO 3 - A5 – Technical documentation and datasheet translations

- Translation of design and production documents for this intellectual production into the languages of all partners + english

Leading Organisation

SCUOLA DI ROBOTICA (E10131490, IT)

Media

Other
Publications
Video
Website

Participating Organisations

EleKtrons Libres (E10252147, FR) Escola Secundária/3 de Barcelinhos (E10146324, PT) Gymnasium Goetheschule (E10178845, DE) Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE) Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)

Languages

English French Italian Portuguese German

Intellectual Output Budget

Please specify the staff resources which you need to produce the Intellectual Output.

Id	Organisation	Managers	Teachers/Trainers/Researchers	Technicians	Administrative Support Staff	Grant
1	SCUOLA DI ROBOTICA (E10131490, IT)	0,00 EUR	8.774,00 EUR	3.240,00 EUR	0,00 EUR	12.014,00 EUR
2	EleKtrons Libres (E10252147, FR)	0,00 EUR	3.210,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR
3	Escola Secundária/3 de Barcelinhos (E10146324, PT)	0,00 EUR	2.055,00 EUR	0,00 EUR	0,00 EUR	2.055,00 EUR
4	Gymnasium Goetheschule (E10178845, DE)	0,00 EUR	6.634,00 EUR	3.240,00 EUR	0,00 EUR	9.874,00 EUR
5	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	0,00 EUR	3.210,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR
6	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	0,00 EUR	3.210,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR
Total		0,00 EUR	27.093,00 EUR	6.480,00 EUR	0,00 EUR	33.573,00 EUR

Intellectual Output Budget Details E10131490

Organisation	Country of the Organisation
SCUOLA DI ROBOTICA (E10131490, IT)	Italy

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	20	0	41	61
Grant per Day	0,00 EUR	162,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	3.240,00 EUR	0,00 EUR	8.774,00 EUR	12.014,00 EUR

Intellectual Output Budget Details E10252147

Organisation	Country of the Organisation
EleKtrons Libres (E10252147, FR)	France

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	15	15
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR	3.210,00 EUR

Intellectual Output Budget Details E10146324

Organisation	Country of the Organisation
Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	15	15
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	137,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	2.055,00 EUR	2.055,00 EUR

Intellectual Output Budget Details E10178845

Organisation	Country of the Organisation
Gymnasium Goetheschule (E10178845, DE)	Germany

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	20	0	31	51
Grant per Day	0,00 EUR	162,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	3.240,00 EUR	0,00 EUR	6.634,00 EUR	9.874,00 EUR

Intellectual Output Budget Details E10253022

Organisation	Country of the Organisation
Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	Germany

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	15	15
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR	3.210,00 EUR

Intellectual Output Budget Details E10087198

Organisation	Country of the Organisation
Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	15	15
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	3.210,00 EUR	3.210,00 EUR

Output Title O4

Output Title

Productions Tests

Output Type

Methodologies / guidelines – Evaluation method and tool

Start Date (yyyy-mm-dd)

2021-04-01

End Date (yyyy-mm-dd)

2023-07-31

Output Description (including: needs analysis, target groups, elements of innovation, expected impact and transferability potential)

Throughout our project, we will develop several educational resources on different media. A booklet for educational actors, but also a robot, which must be as accessible and simple as possible, as well as a programming software for this robot, fun and easy to use, all developed in creative commons.

As a reminder, the objectives of the project are to create a robotic kit for different levels:

- 8-10 years
 - First steps in robotics and scientific bases
 - Programming by hardware blocks
 - Introduction to mechanics and electricity
 - Creation of an accessible and playful robot
 - Expertise of a teacher
- 11-14 years
 - Open Source software (programming hardware and software blocks)
 - Creation of an accessible and playful robot
 - Test track in interchangeable modules
- 14-20 years of development and prototyping carried out by young people

Our objective, through this intellectual output 4, is to allow us to test and evaluate all the resources produced, from the beginning of the productions until the end of the project, in order to tend towards the most complete, relevant, and impacting proposal possible. These resources must be accessible to educational actors from all horizons: school teachers, teachers specialized in technical subjects, extra-curricular activities, volunteers...

The kit should be able to meet all the needs identified by these educational actors. We will carry out a survey prior to the start of production in order to define them as closely as

possible to their expectations, which could be, for example :

- Easy to access and set up educational activities in all educational times,
- Accessible activities according to the level of the educational actor (from beginner to advanced),
- Gradual and diversified activities, adaptable by the educational actor according to the size of his group, the age and level of the children,
- Activities that are consistent with the school program and that promote the acquisition of key skills for student success,
- Theoretical contributions about robotics, allowing to build a solid knowledge about robotics, its history, but also societal issues, and activities to address these issues with children,
- A low production and purchase cost for the developed robot, in order to be able to equip the structures,
- A face-to-face training at the beginning of the project, in order to take the tools in hand, (1 per structure, 25 attendees max, 2 days of training)
- But also remote support in case of problems,
- A "Do It Yourself" approach with a robot to be assembled by oneself, to acquire electronics and robotics skills, and to be in the "doing",
- A software compatible with all platforms (Windows, Gnu/Linux and Mac OS),
- Resources developed in creative commons,
- Additional resources to go further.

Our approach to testing these productions will include several steps (test and evaluation protocol for each tool):

- Surveys of educational actors in each country, through a questionnaire, for each tool;
- Surveys of young people of the target ages, through their teachers/facilitators (online questionnaire for the class / group), for each tool;
- The co-development of each of the resources by an association and a school (leader and co-leader), ensuring the double point of view of specialist + educational actor;
- the submission to identified groups of young people, aged 8-10 years and 11-14 years, as a "test group";
- the co-development of each of the resources by an association and a school (leader and co-leader), ensuring the double specialist + educational actor point of view
- the setting up of at least 10 test workshops in the partner structures of the Ligue de l'enseignement, in extra-curricular time (IO4 leader) with evaluation by the students and the facilitator at the end of each activity;
- the implementation of test workshops with evaluation by the students and the facilitator at the end of each activity;
- the setting up of training courses for educational actors in each country, to enable them to test the kit developed, with evaluation at the end of the training (1 per structure, 25 attendees max, 2 days of training);
- the sending of a questionnaire to obtain feedback from the educational actors who have tested the kit in an animation situation, 3 months after the training, then 6 months after the training;
- rereading, testing and validation by technicians, scientists and teacher trainers.

Our testing approach is innovative in that it includes young people between the ages of 8 and 20 from the outset, as well as teachers and facilitators, the target group for this project. Their involvement will allow us to stay as close as possible to their expectations and avoid possible pitfalls. All the complementary steps will guarantee a kit developed in a coherent way and in response to the needs that will have been raised by the educational actors and the young people.

Please describe the division of work, the tasks leading to the production of the intellectual output and the applied methodology

The evaluation of the kit will take place over the entire project, i.e. the 34 months. However, this evaluation will be carried out in stages as detailed below:

IO 4 - A1 – Definition of needs, development of a test protocol and an evaluation tool

The first step is identify the educational needs, through online questionnaires in english. This study will enable us to identify each of the needs very precisely, in terms of the supports used, training time, privileged material...but also to establish the knowledge already acquired by the educational actors and young people in the different countries, the material already at their disposal and the software they usually use. Also very important is the definition of the skills to be acquired for the children who will participate in robotic activities. By studying school curricula in the fields of technology, logic, mathematics, but also autonomy, group work, etc.. in each country, we will propose to the educational actors to identify the most important skills to acquire, through the questionnaire.

The next step is to develop a relevant test and evaluation procedure for the kit. It can be paper or online questionnaires (for users, for children ...) upstream, hot or downstream, video shots, documents describing the test procedure. These evaluations will be different depending on the context (training, workshop ...). This will allow us to evaluate, for exemple : the degree of satisfaction of the participants, the degree of understanding, the degree of empowerment, the ease of handling, the transposability into animation/teaching time, the degree of motivation... Etc.

Indicators will be identified to facilitate the analysis of the results. (Example: the purchase cost of the developed robot will be considered satisfactory if 80% of the educational actors having tested it found it sufficiently accessible for their structure). Among these indicators, the skills acquired by young people in carrying out these activities will be verified. Tests will be carried out by the facilitators on groups downstream of activities to verify this.

Evaluation material will be created by Ligue de l'enseignement and Escola Secundaria de Barcelinhos but used by all partners during the test phases. The technical viability tests of the robot and the software will be carried out by the designers, and by technicians identified by leaders and coleaders of IO2 and IO3.

IO 4 - A2 – Research of representative samples of each audience (school, and outside school) in each country

The first step is draw up a panel of testers: schools, leisure centers, association ... in each country. we will make it a point of honour to diversify the educational actors (primary and secondary school teachers, extra-curricular activities, volunteers, civic service volunteers, etc.). (Our general panel will be made up of a minimum of 100 people from each partners networks (25 by country). After that, we will contact the different testers, explain their role, the procedures, etc.

IO4 - A3 --Tests related to IO1-A4 (Confrontation and tests with experts in the respective fields (pedagogical as well as technical) IO3-A5 ('IO 3 - A5 – Technical documentation and datasheet translations) and IO2-A5 ('Technical documentation and datasheet translations)

A training will be organized in each structure involved, to test the kit and all of the resources. This training will take place during 2 days, with 25 participants maximum (teachers, youth leaders, volunteers) in the local language. We will do an evaluation at the end of the training. We will send a questionnaire to obtain feedback from the educational actors who have tested the kit in an animation situation, 3 months after the training, then 6 months after the training.

Each intellectual output will undergo a set of pedagogical and technical tests, by designers, by trained people, and lastly by young people between 8 and 14 years old, as defined in IO4 A1. After all the tests, the technical documentation and datasheet translations will be also tested by native people of each language (Italy, France, Portugal, Germany) to make sure they understand well.

IO 4 - A4 -- Analysis of test evaluations and feedback remarks to IO1,2 and 3

The first step is recovery all the tests and evaluations done during the project, by questionnaires, videos, photos, testimonies, and classify all of these contributions in order to be able to analyse them afterwards. We will then carry out a qualitative and quantitative assessment of the data received and make comparisons with the indicators defined in IO4-A1. These

evaluations will allow us to adjust the productions throughout the implementation of the project and up to its finality. The last part of this analysis will concern the writing of the report and its publication on our online platform.

Leading Organisation

Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)

Media

Publications

Other

Video

Website

Participating Organisations

Escola Secundária/3 de Barcelinhos (E10146324, PT) EleKtrons Libres (E10252147, FR) Gymnasium Goetheschule (E10178845, DE) Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE) SCUOLA DI ROBOTICA (E10131490, IT)

Languages

English French German Portuguese Italian

Intellectual Output Budget

Please specify the staff resources which you need to produce the Intellectual Output.

Id	Organisation	Managers	Teachers/Trainers/Researchers	Technicians	Administrative Support Staff	Grant
1	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	0,00 EUR	14.766,00 EUR	0,00 EUR	0,00 EUR	14.766,00 EUR
2	Escola Secundária/3 de Barcelinhos (E10146324, PT)	0,00 EUR	8.083,00 EUR	0,00 EUR	0,00 EUR	8.083,00 EUR
3	EleKtrons Libres (E10252147, FR)	0,00 EUR	7.062,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR
4	Gymnasium Goetheschule (E10178845, DE)	0,00 EUR	7.062,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR
5	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	0,00 EUR	7.062,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR
6	SCUOLA DI ROBOTICA (E10131490, IT)	0,00 EUR	7.062,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR
Total		0,00 EUR	51.097,00 EUR	0,00 EUR	0,00 EUR	51.097,00 EUR

Intellectual Output Budget Details E10087198

Organisation

Country of the Organisation

Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)

France

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	69	69
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	14.766,00 EUR	14.766,00 EUR

Intellectual Output Budget Details E10146324

Organisation

Country of the Organisation

Escola Secundária/3 de Barcelinhos (E10146324, PT)

Portugal

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	59	59
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	137,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	8.083,00 EUR	8.083,00 EUR

Intellectual Output Budget Details E10252147

Organisation	Country of the Organisation
EleKtrons Libres (E10252147, FR)	France

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	33	0	0	0	0	33
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR

Intellectual Output Budget Details E10178845

Organisation	Country of the Organisation
Gymnasium Goetheschule (E10178845, DE)	Germany

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	33	0	0	0	0	33
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR

Intellectual Output Budget Details E10253022

Organisation					Country of the Organisation				
Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)					Germany				
Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	33	0	0	0	0	33
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR

Intellectual Output Budget Details E10131490

Organisation		Country of the Organisation	
SCUOLA DI ROBOTICA (E10131490, IT)		Italy	

Category of Staff	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Managers	Technicians	Administrative support staff	Teachers/Trainers/Researchers	Total
No. of Working Days	0	0	0	33	0	0	0	0	33
Grant per Day	0,00 EUR	0,00 EUR	0,00 EUR	214,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	
Grant	0,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	0,00 EUR	7.062,00 EUR

Multiplier Events

Do you plan to include Multiplier Events in your project?

Yes

Multiplier Events Summary

ID	Leading Organisation	Event Title	Starting Period	Grant
E1	SCUOLA DI ROBOTICA (E10131490, IT)	Local event Italy	12-2022	1.000,00 EUR
E2	Gymnasium Goetheschule (E10178845, DE)	local event Hannover	12-2022	1.000,00 EUR
E3	Escola Secundária/3 de Barcelinhos (E10146324, PT)	Local event Portugal	12-2022	1.000,00 EUR
E4	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	Local event Land Hessen	12-2022	1.000,00 EUR
E5	EleKtrons Libres (E10252147, FR)	Local event France	12-2022	1.000,00 EUR
E6	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	Final conference	07-2023	4.000,00 EUR
Total				9.000,00 EUR

Grant support for Multiplier Events can only be asked for if the project intends to produce substantial Intellectual Outputs. Other dissemination activities will be supported via the grant item Project Management and Implementation.

Multiplier Event Details E1

Event Title

Local event Italy

Country of Venue

Italy

Start Date (yyyy-mm-dd)

2022-12-01

End Date (yyyy-mm-dd)

2023-01-31

Event Description (Including : Targets groups and objectives)

1 day event organised between december 2022 and january 2023 aiming at promoting a public presentation of the project outputs (prototypes of the robots, their software and the associated tutorials), involving at least 25 stakeholders, including teachers, educational actors, school representatives, experts and decision and policy-makers, as well as obtain respective legitimacy and acceptance. During this day, the participants in this event will be able to test the teaching materials and make returns which will be used for the final development

Specific objectives are to encourage discussion and sharing of perspectives and experiences and offer networking opportunities to strengthen further implementation of the testings (IO4), teacher trainings and the use of the kit after the end of the project, etc.

Our Partner having a huge network of schools, teachers a strong contact with the Ministry of education and partners at the national and international level will associate many partners to this event.

Intellectual Outputs Covered

Learning sequence Design

Hardware Design

Software Design

Productions Tests

Leading Organisation

SCUOLA DI ROBOTICA (E10131490, IT)

Multiplier Event Budget

ID	Organisation	Country of the Organisation	Local Participants	Foreign Participants	Grant per Local Participant	Grant per Foreign Participant	Grant
1	SCUOLA DI ROBOTICA (E10131490, IT)	Italy	10	0	100,00 EUR	200,00 EUR	1.000,00 EUR
Total							1.000,00 EUR

Multiplier Event Details E2

Event Title

local event Hannover

Country of Venue

Germany

Start Date (yyyy-mm-dd)

2022-12-01

End Date (yyyy-mm-dd)

2023-01-31

Event Description (Including : Targets groups and objectives)

1 day event organised between december 2022 and january 2023 aiming at promoting a public presentation of the project outputs (prototypes of the robots, their software and the associated tutorials), involving at least 25 stakeholders, including teachers, educational actors, school representatives, experts and decision and policy-makers, as well as obtain respective legitimacy and acceptance. During this day, the participants in this event will be able to test the teaching materials and make returns which will be used for the final development

Specific objectives are to encourage discussion and sharing of perspectives and experiences and offer networking opportunities to strengthen further implementation of the testings (IO4), teacher trainings and the use of the kit after the end of the project, etc.

We've decided to do 1 event in each land because the education is managed by the land and not by the country and it will able us to have more impact for the dissemination of the project. Our Partner being a member of national federation of robotics will associate national partners to this event.

Intellectual Outputs Covered

Learning sequence Design

Hardware Design

Software Design

Productions Tests

Leading Organisation

Gymnasium Goetheschule (E10178845, DE)

Multiplier Event Budget

ID	Organisation	Country of the Organisation	Local Participants	Foreign Participants	Grant per Local Participant	Grant per Foreign Participant	Grant
1	Gymnasium Goetheschule (E10178845, DE)	Germany	10	0	100,00 EUR	200,00 EUR	1.000,00 EUR
Total							1.000,00 EUR

Multiplier Event Details E3

Event Title

Local event Portugal

Country of Venue

Portugal

Start Date (yyyy-mm-dd)

2022-12-01

End Date (yyyy-mm-dd)

2023-01-31

Event Description (Including : Targets groups and objectives)

1 day event organised between december 2022 and january 2023 aiming at promoting a public presentation of the project outputs (prototypes of the robots, their software and the associated tutorials), involving at least 25 stakeholders, including teachers, educational actors, school representatives, experts and decision and policy-makers, as well as obtain respective legitimacy and acceptance. During this day, the participants in this event will be able to test the teaching materials and make returns which will be used for the final development

Specific objectives are to encourage discussion and sharing of perspectives and experiences and offer networking opportunities to strengthen further implementation of the testings (IO4), teacher trainings and the use of the kit after the end of the project, etc.

Our Partner being a member of national federation of robotics will associate national partners to this event.

Intellectual Outputs Covered

Learning sequence Design

Hardware Design

Software Design

Productions Tests

Leading Organisation

Escola Secundária/3 de Barcelinhos (E10146324, PT)

Multiplier Event Budget

ID	Organisation	Country of the Organisation	Local Participants	Foreign Participants	Grant per Local Participant	Grant per Foreign Participant	Grant
1	Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal	10	0	100,00 EUR	200,00 EUR	1.000,00 EUR
Total							1.000,00 EUR

Multiplier Event Details E4

Event Title

Local event Land Hessen

Country of Venue

Germany

Start Date (yyyy-mm-dd)

2022-12-01

End Date (yyyy-mm-dd)

2023-01-31

Event Description (Including : Targets groups and objectives)

1 day event organised between december 2022 and january 2023 aiming at promoting a public presentation of the project outputs (prototypes of the robots, their software and the associated tutorials), involving at least 25 stakeholders, including teachers, educational actors, school representatives, experts and decision and policy-makers, as well as obtain respective legitimacy and acceptance. During this day, the participants in this event will be able to test the teaching materials and make returns which will be used for the final development

Specific objectives are to encourage discussion and sharing of perspectives and experiences and offer networking opportunities to strengthen further implementation of the testings (IO4), teacher trainings and the use of the kit after the end of the project, etc.

We've decided to do 1 event in each land because the education is managed by the land and not by the country and it will able us to have more impact for the dissemination of the project. Our Partner having a huge network of teachers in the land, the national and international level will associate many partners to this event.

Intellectual Outputs Covered

Learning sequence Design

Hardware Design

Software Design

Productions Tests

Leading Organisation

Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)

Multiplier Event Budget

ID	Organisation	Country of the Organisation	Local Participants	Foreign Participants	Grant per Local Participant	Grant per Foreign Participant	Grant
1	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	Germany	10	0	100,00 EUR	200,00 EUR	1.000,00 EUR
Total							1.000,00 EUR

Multiplier Event Details E5

Event Title

Local event France

Country of Venue

France

Start Date (yyyy-mm-dd)

2022-12-01

End Date (yyyy-mm-dd)

2023-01-31

Event Description (Including : Targets groups and objectives)

1 day event organised between december 2022 and january 2023 aiming at promoting a public presentation of the project outputs (prototypes of the robots, their software and the associated tutorials), involving at least 25 stakeholders, including teachers, educational actors, school representatives, experts and decision and policy-makers, as well as obtain respective legitimacy and acceptance. During this day, the participants in this event will be able to test the teaching materials and make returns which will be used for the final development

Specific objectives are to encourage discussion and sharing of perspectives and experiences and offer networking opportunities to strengthen further implementation of the testings (IO4), teacher trainings and the use of the kit after the end of the project, etc.

Our Partner has been organising presentation on new technologies to teachers of primary and secondary school in the end of each year. He will work with Ligue, the Ministry of education, the french federation of robotics on assembling more teachers and strategical actors for this day.

Intellectual Outputs Covered

Learning sequence Design

Hardware Design

Software Design

Productions Tests

Leading Organisation

EleKtrons Libres (E10252147, FR)

Participating Organisations

Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)

Multiplier Event Budget

ID	Organisation	Country of the Organisation	Local Participants	Foreign Participants	Grant per Local Participant	Grant per Foreign Participant	Grant
1	EleKtrons Libres (E10252147, FR)	France	10	0	100,00 EUR	200,00 EUR	1.000,00 EUR
Total							1.000,00 EUR

Multiplier Event Details E6

Event Title

Final conference

Country of Venue

France

Start Date (yyyy-mm-dd)

2023-07-01

End Date (yyyy-mm-dd)

2023-07-31

Event Description (Including : Targets groups and objectives)

This event will be organized in connection with the last Partners' Meeting in France. It is envisaged that minimum 40 participants (national and European relevant participants (trainers, learners, policy makers, stakeholders, trade unions, research centres, ICT companies, NGOs, etc.) will attend. The aim is to promote the project outcomes also the European level and to engage stakeholders in further exploitation of these results. Partners will use their networks for inviting key organizations that can support the future implementation of the project outcomes. Some of them will be organizations that were already involved in the previous project activities, but the aim is to bring also new organizations around the table. Partners will encourage participants to intervene and thus will facilitate the exchange of practices and ideas. At the end of the conference participants will be invited to fill in an evaluation questionnaire that will allow the Consortium will analyse the results for further integrations. The exact date of the event will be defined by the Consortium based on its availability and on the opportunity. The conference will be organized in the occasion of the final Transnational Meeting, in order to allow all project partners to attend the seminar without extra costs.

Intellectual Outputs Covered

Learning sequence Design

Hardware Design

Software Design

Productions Tests

Leading Organisation

Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)

Participating Organisations

EleKtrons Libres (E10252147, FR)

Gymnasium Goetheschule (E10178845, DE)

SCUOLA DI ROBOTICA (E10131490, IT)

Escola Secundária/3 de Barcelinhos (E10146324, PT)

Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)

Multiplier Event Budget

ID	Organisation	Country of the Organisation	Local Participants	Foreign Participants	Grant per Local Participant	Grant per Foreign Participant	Grant
1	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France	20	10	100,00 EUR	200,00 EUR	4.000,00 EUR
Total							4.000,00 EUR

Learning, Teaching, Training Activities

Do you plan to include transnational Learning, Teaching or Training activities in your project?

Yes

Activities Summary

In case you plan to include Learning, Teaching or Training Activities please encode them here.

ID	Activity Title	Leading Organisation	Activity Type	Field	Starting Period	No. of Participants	No. of Accompanying Persons	Grant
C1	LTTA 1	SCUOLA DI ROBOTICA (E10131490, IT)	Short-term exchanges of groups of pupils	SCHOOLS	04-2022	24	12	25.314,00 EUR
C2	LTTA 2	Gymnasium Goetheschule (E10178845, DE)	Short-term exchanges of groups of pupils	SCHOOLS	10-2022	24	12	24.744,00 EUR
Total								50.058,00 EUR

Activity Details (C1)

In this section, you are asked to provide details about this specific activity.

The section consists of two parts: Activity Details and Groups of Participants.

In the first part (Activity Details) you are asked to provide information about the planned activity as a whole (e.g. its venue, duration, etc.), to define the activity's lead organisation, and to list the other participating organisations. The lead organisation is typically the one hosting the activity in its premises. In case you decide to organise the activity outside of the lead organisation's premises, you must respect the detailed rules provided in the Programme Guide and you need to provide an explanation for this choice as part of the activity description. The other participating organisations are all project partners who will send their participants to take part in the activity. Adding a partner organisation to the list of participating organisations will allow you to ask funding for their participants in the second part of this section.

In the second part (Groups of Participants) you are asked to provide some details about the participants who will take part in this activity. The main purpose of this section is to calculate the budget that the project will receive for the participants' travel, individual support and other expenses. The participants are organised in groups for easier calculation. Each group and its budget are linked to their sending organisation.

Field

SCHOOLS

Activity Type

Short-term exchanges of groups of pupils

Activity Title

LTTA 1

Activity Description (including profile of participants per organisation, goals and results of the activity)

The objective of this training is for the partners and the 14+ students to learn how to use the first different prototypes (hardware IO2 and software IO3) but also how to proceed to assess (IO4- A1) the different tests that will be made after. The different actors will share and acquire the hardware and software skills and learn how to integrate those production into the learning sequences. Each structures will come with 4 young people aged 14 and over : school children, young people involved in associations (for exemple, junior association - young people under the age of 18 involved in an association in France - , civic service volunteers, etc.) as well as 2 educational actors (youth leaders, socio-cultural coordinator, teachers, volunteers, etc.).

The training will take place in Italy (Scuola di Robotica, Genova). It will last 4 days (+ 2 days travel) following the program below :

Day 1 : Welcoming everybody / Demonstration of each hardware and software prototype.

Day 2 : Hardware prototypes : how to use it ? how to improve it ? / Software prototypes : how to use it ? how to improve it ?

Day 3 : Learning sequences : using the first kit including the prototypes.

Day 4 : Assessment protocole : the procedure to improve our kits.

Evaluation of the training will be done at the end of the training and also later to have feedback.

Leading Organisation

SCUOLA DI ROBOTICA (E10131490, IT)

Participating Organisations

EleKtrons Libres (E10252147, FR)

Escola Secundária/3 de Barcelinhos (E10146324, PT)

Gymnasium Goetheschule (E10178845, DE)

Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)

Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)

Duration (days)

6

Country of Venue

Italy

Starting Period

04-2022

Groups of Participants

In the following table, please define the groups of participants who will require funding to participate in this activity. Participants who do not require funding (for example local participants) do not need to be specified in this part.

ID	Sending Organisation	Distance Band	Duration (days)	No. of Participants	No. of Accompanying Persons	Grant
1	SCUOLA DI ROBOTICA (E10131490, IT)	100-499 km	6	4	2	3.744,00 EUR
2	EleKtrons Libres (E10252147, FR)	500-1999 km	6	4	2	4.314,00 EUR
3	Escola Secundária/3 de Barcelinhos (E10146324, PT)	500-1999 km	6	4	2	4.314,00 EUR
4	Gymnasium Goetheschule (E10178845, DE)	500-1999 km	6	4	2	4.314,00 EUR
5	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	500-1999 km	6	4	2	4.314,00 EUR
6	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	500-1999 km	6	4	2	4.314,00 EUR
Total						25.314,00 EUR

Group of Participants 1 Activity C1 (Short-term exchanges of groups of pupils - LTTA 1)

Sending Organisation - Country		Country of Venue		
SCUOLA DI ROBOTICA (E10131490, IT) - Italy		Italy		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel			
Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
100-499 km	6	180,00 EUR	1.080,00 EUR

Individual Support			
No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant			2.664,00 EUR

Group of Participants 2 Activity C1 (Short-term exchanges of groups of pupils - LTTA 1)				
Sending Organisation - Country		Country of Venue		
EleKtrons Libres (E10252147, FR) - France		Italy		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel			
Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
500-1999 km	6	275,00 EUR	1.650,00 EUR

Individual Support			
No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant			2.664,00 EUR

Group of Participants 3 Activity C1 (Short-term exchanges of groups of pupils - LTTA 1)				
Sending Organisation - Country		Country of Venue		
Escola Secundária/3 de Barcelinhos (E10146324, PT) - Portugal		Italy		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel			
Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
500-1999 km	6	275,00 EUR	1.650,00 EUR

Individual Support

No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant			2.664,00 EUR

Group of Participants 4 Activity C1 (Short-term exchanges of groups of pupils - LTTA 1)

Sending Organisation - Country		Country of Venue		
Gymnasium Goetheschule (E10178845, DE) - Germany		Italy		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel

Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
500-1999 km	6	275,00 EUR	1.650,00 EUR

Individual Support

No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant			2.664,00 EUR

Group of Participants 5 Activity C1 (Short-term exchanges of groups of pupils - LTTA 1)

Sending Organisation - Country		Country of Venue		
Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR) - France		Italy		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel			
Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
500-1999 km	6	275,00 EUR	1.650,00 EUR

Individual Support			
No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant			2.664,00 EUR

Group of Participants 6 Activity C1 (Short-term exchanges of groups of pupils - LTTA 1)				
Sending Organisation - Country		Country of Venue		
Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE) - Germany		Italy		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel			
Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
500-1999 km	6	275,00 EUR	1.650,00 EUR

Individual Support			
No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant		2.664,00 EUR	

Activity Budget				
Travel	Exceptional Cost for Expensive Travel	Individual Support	Linguistic Support	Total
9.330,00 EUR		15.984,00 EUR		25.314,00 EUR

Activity Details (C2)

In this section, you are asked to provide details about this specific activity.

The section consists of two parts: Activity Details and Groups of Participants.

In the first part (Activity Details) you are asked to provide information about the planned activity as a whole (e.g. its venue, duration, etc.), to define the activity's lead organisation, and to list the other participating organisations. The lead organisation is typically the one hosting the activity in its premises. In case you decide to organise the activity outside of the lead organisation's premises, you must respect the detailed rules provided in the Programme Guide and you need to provide an explanation for this choice as part of the activity description. The other participating organisations are all project partners who will send their participants to take part in the activity. Adding a partner organisation to the list of participating organisations will allow you to ask funding for their participants in the second part of this section.

In the second part (Groups of Participants) you are asked to provide some details about the participants who will take part in this activity. The main purpose of this section is to calculate the budget that the project will receive for the participants' travel, individual support and other expenses. The participants are organised in groups for easier calculation. Each group and its budget are linked to their sending organisation.

Field

SCHOOLS

Activity Type

Short-term exchanges of groups of pupils

Activity Title

LTTA 2

Activity Description (including profile of participants per organisation, goals and results of the activity)

After a serie of testings and modifications, the prototypes of the kits will have improved. Each partner will train the other partners and the 14+ students and learn from the others how to fully use the kits (8-10 years old kit and 11-14 years old kit) but also how to train future users of the kits and therefor prepare the multiplier events coming after. It will also be an occasion to learn how to use the webplatform in order to disseminate the work.

Each structures will come with 4 young people aged 14 and over : school children, young people involved in associations (for exemple, junior association - young people under the age of 18 involved in an association in France - , civic service volunteers, etc.) as well as 2 educational actors (youth leaders, socio-cultural coordinator, teachers, volunteers, etc.).

The training will take place in Germany (Goethe Schule, Hannover) . It will last 4 days (+ 2 days travel) following the program below :

Day 1 : Welcoming everybody / Demonstration of each new version of harware and software prototype.

Day 2 : Cross testings and uses of the robotic learning kits. Improvement needed.

Day 3 : Learning how to teach the future users of the kits.

Day 4 : Dissemination what and how do we show ? : multiplier events and web platform

Evaluation of the training will be done at the end of the training and also later to have feedbak.

Leading Organisation

Gymnasium Goetheschule (E10178845, DE)

Participating Organisations

EleKtrons Libres (E10252147, FR)

Escola Secundária/3 de Barcelinhos (E10146324, PT)

Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)

Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)

SCUOLA DI ROBOTICA (E10131490, IT)

Duration (days)

6

Country of Venue

Germany

Starting Period

10-2022

Groups of Participants

In the following table, please define the groups of participants who will require funding to participate in this activity. Participants who do not require funding (for example local participants) do not need to be specified in this part.

ID	Sending Organisation	Distance Band	Duration (days)	No. of Participants	No. of Accompanying Persons	Grant
1	Gymnasium Goetheschule (E10178845, DE)	100-499 km	6	4	2	3.744,00 EUR
2	EleKtrons Libres (E10252147, FR)	500-1999 km	6	4	2	4.314,00 EUR
3	Escola Secundária/3 de Barcelinhos (E10146324, PT)	500-1999 km	6	4	2	4.314,00 EUR
4	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)	100-499 km	6	4	2	3.744,00 EUR
5	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	500-1999 km	6	4	2	4.314,00 EUR
6	SCUOLA DI ROBOTICA (E10131490, IT)	500-1999 km	6	4	2	4.314,00 EUR
Total						24.744,00 EUR

Group of Participants 1 Activity C2 (Short-term exchanges of groups of pupils - LTTA 2)

Sending Organisation - Country		Country of Venue		
Gymnasium Goetheschule (E10178845, DE) - Germany		Germany		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel

Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
100-499 km	6	180,00 EUR	1.080,00 EUR

Individual Support			
No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant			2.664,00 EUR

Group of Participants 2 Activity C2 (Short-term exchanges of groups of pupils - LTTA 2)				
Sending Organisation - Country		Country of Venue		
EleKtrons Libres (E10252147, FR) - France		Germany		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel			
Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
500-1999 km	6	275,00 EUR	1.650,00 EUR

Individual Support			
No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant		2.664,00 EUR	

Group of Participants 3 Activity C2 (Short-term exchanges of groups of pupils - LTTA 2)				
Sending Organisation - Country		Country of Venue		
Escola Secundária/3 de Barcelinhos (E10146324, PT) - Portugal		Germany		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel			
Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
500-1999 km	6	275,00 EUR	1.650,00 EUR

Individual Support

No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant			2.664,00 EUR

Group of Participants 4 Activity C2 (Short-term exchanges of groups of pupils - LTTA 2)

Sending Organisation - Country		Country of Venue		
Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE) - Germany		Germany		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel

Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
100-499 km	6	180,00 EUR	1.080,00 EUR

Individual Support

No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant			2.664,00 EUR

Group of Participants 5 Activity C2 (Short-term exchanges of groups of pupils - LTTA 2)

Sending Organisation - Country		Country of Venue		
Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR) - France		Germany		
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel			
Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
500-1999 km	6	275,00 EUR	1.650,00 EUR

Individual Support			
No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant			2.664,00 EUR

Group of Participants 6 Activity C2 (Short-term exchanges of groups of pupils - LTTA 2)				
Sending Organisation - Country			Country of Venue	
SCUOLA DI ROBOTICA (E10131490, IT) - Italy			Germany	
Activity Type	Duration (days)	No. of Participants	No. of Accompanying Persons	Total No. of Participants and accompanying persons
Short-term exchanges of groups of pupils	6	4	2	6

Group of Participants Budget

To estimate the distances between places, please use the European Commission's [distance calculator](#)

Travel			
Distance Band	No. of Persons	Grant per Participant	Total Travel Grant
500-1999 km	6	275,00 EUR	1.650,00 EUR

Individual Support

No. of Participants	Duration per Participant (days)	Grant per Participant	Total (for Participants)
4	6	348,00 EUR	1.392,00 EUR
No. of Accompanying Persons	Duration per Accompanying Person (days)	Grant per Accompanying Person	Total (for Accompanying Persons)
2	6	636,00 EUR	1.272,00 EUR
Total Individual Support Grant			2.664,00 EUR

Activity Budget

Travel	Exceptional Cost for Expensive Travel	Individual Support	Linguistic Support	Total
8.760,00 EUR		15.984,00 EUR		24.744,00 EUR

Background Information

What is the added value of these Learning, Teaching or Training activities (including long-term activities) with regards to the achievement of the project objectives?

There will be Two European training sessions organised throughout the EU-RATE project.

LTTA 1 (C1)

This training will bring together young people (4 participants of 14+ per partner) and adults as teachers or experts or youth leaders (2 participants of 18+ per partner) that will give input and build the prototypes collectively in a multicultural environment.

They will help us unite, organise and develop prototypes from the realities of each partner. The training is a key project phase and strongly connected to the development of intellectual outputs (Tests related to IO1-A4 (') IO3-A5 (') and IO2-A5 ('))

The collective work of 36 people (youngsters and adults) from 6 different countries to deal with cross-guiding of test and evaluation protocols will able us to bring a collaborative approach on testing, associate other actors to the project (youngsters/students but also other teachers, experts, youth leaders and give a more innovative and quality approach of the multicultural testing and feedback much needed to the work on the IOs. It will also help to disseminate the project and its goals, results and assembly other actors around it (schools, Ministry, land, robotics federation, regional council ; it depends on the country and partner) that may be associated to participate in part of the training (official opening and/or participating on the training like the robotics federation as an example)

LTTA 2 (C2)

This training will bring together young people (4 participants of 14+ per partner) and adults as teachers or experts or youth leaders (2 participants of 18+ per partner) that will give input and work together on the testing of the improved kits, exchange about how to use the kits well, exchanging practises (peer to peer) and also work on the multipliers events coming after the trainings in each country. Having 14+ as actors of the project, testers, multipliers, and probably becoming adults working in robotics later-on is for us a great priority. The training is a key project phase and strongly connected to the development of multipliers events in each country following the training, the finalization of the IO1, IO2, IO3 and IO4 and the last multiplier event (M6) where we wish to invite some young people from each country to share the project results.

Creation of professional relationships between education actors (teachers, experts, youth leaders) and young people (14+) of 6 partners from 4 different countries will strengthen the sense of European citizenship and enrich the experiences. These sessions will also be an opportunity for professional and personal development and motivation to deepen participants skills such as linguistic competences.

How will you select, prepare and support participants and ensure their safety? Please describe the practical arrangements including training, teaching or learning agreements, if applicable.

Each training will be composed of: 2 adults and 4 14+ Young people per Partner

The selection of the participants (staff member or members of partners) will be based on their professional and personal skills. Each partner will bring 2 adult participants in each training. They will be teachers or trainers or experts or youth leaders of technology, maths, robotics, e-learning, digital skills or teachers' training. The Young people will be pupils 14+ having interest on the subject, studying during school robotics, students of the schools or members of associations, etc.

For Goethe and Barcelinhos: participants will be teachers and students from the school or connected schools (see list in annex)

For EleKtrons Libres: participants will be the members or from school partnerships (signed agreements will be settled in this case) The members of EleKtrons are teachers in schools, parents and Young people 14+ (their schools and others from the network are connected to the project).

For Ligue: participants will be the members (teachers, as exemple), employees (experts on pedagogy and robotics, youth leaders) or from school partnerships (teachers, experts) or youth leaders working in Partner associations (signed agreements will be settled in this case). Young people and their schools and others from the network are connected to the project.

For Scuola di Robotica: participants will be the members, employees (experts on pedagogy and robotics, teachers, youth leaders from school partnerships or youth leaders working in Partner associations (signed agreements will be settled in this case). Young people and their schools and others from the network are connected to the project.

As partner organisations are all familiar with transnational projects, they will prepare the mobility of the participants using their internal processes and tools (insurance, travel agency...). A preparatory meeting and follow up meeeting will be organised before (to ensure the expectations of the learners and objectives of the training are clear) and after each training session (to see if and how the expectations and objectives have been met).

Please also describe the arrangements for recognition or validation of the learning outcomes of the participants in Learning, Teaching or Training activities. Will your project make use of European instruments like Europass, ECVET, Youthpass, ECTS etc. or any national instruments/certificates?

The coordinator will deliver to each participant a "Europass mobility" attesting learning outcomes aquired through European training sessions, including:

- Skills and vocational or technical skills
- Skills and language skills acquired
- Organisational skills and competences acquired
- Social skills and competences acquired
- Other skills and competences acquired

These Europass Mobility will be issued in English and in the language of the participant.

The Ligue de l'enseignement Nouvelle-Aquitaine also proposes, on an experimental basis, the issuing of "open badges", badges of skills and informal achievements that allow experiences to be valued. Thus, we will be able to deliver these open badges on the dedicated platform for each young person who has participated in the setting up of the project, for example "robot creator".

Special Costs

In this section, you may request budget for types of expenses that are funded based on their actual cost. For more detailed information on what can be supported, please consult the Programme Guide or request advice from your National Agency.

Special Needs Support

ID	Organisation	Country of the Organisation	No. of Participants With Special Needs	Description and Justification	Requested Grant
Total					0,00 EUR

Exceptional Costs

ID	Organisation	Country of the Organisation	Description and Justification	Requested Grant (75% of Expected real cost)
1	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France	External evaluator work (around 2 to 3 days). partners will decide on the kick of meeting the need to have an external evaluator. 3 different possibilities: pedagogy (laboratory), technical (laboratory or university) or quality approach in general and	2.000,00 EUR
Total				47.500,00 EUR

ID	Organisation	Country of the Organisation	Description and Justification	Requested Grant (75% of Expected real cost)
			dissemination (cabinet or other)	
2	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France	<p>Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in IO4 (1000€)</p> <p>Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.</p>	7.000,00 EUR
3	EleKtrons Libres (E10252147, FR)	France	<p>Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in IO4 (1000€)</p> <p>Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.</p>	7.000,00 EUR
4	SCUOLA DI ROBOTICA (E10131490, IT)	Italy	<p>Materials for the LTTA2 training (C2) (500€)</p> <p>Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in IO4 (1000€)</p> <p>Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local</p>	7.500,00 EUR
Total				47.500,00 EUR

ID	Organisation	Country of the Organisation	Description and Justification	Requested Grant (75% of Expected real cost)
			partnerships with Fablabs or others institutions.	
5	Gymnasium Goetheschule (E10178845, DE)	Germany	Materials for the IO2 production (500€) Materials for the LTTA1 training (C1) (500€) Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in IO4 (1000€) Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.	8.000,00 EUR
6	Escola Secundária/3 de Barcelinhos (E10146324, PT)	Portugal	Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the testing in IO4 (1000€) Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.	7.000,00 EUR
7	Ligue de l'Enseignement Nouvelle Aquitaine (E10087198, FR)	France	printing of promotion documents and the KIT for the final conference	2.000,00 EUR
8	Landesverband Hessen des Deutschen Vereins zur Förderung des mathematischen und	Germany	Materials to create and build the hardware for the IO4 testing. The choice of materials will be defined by the partners during the work on IO2 and the	7.000,00 EUR
Total				47.500,00 EUR

ID	Organisation	Country of the Organisation	Description and Justification	Requested Grant (75% of Expected real cost)
	naturwissenschaftlichen Unterrichts (MNU) (E10253022, DE)		testing in IO4 (1000€) Laser cutter and/or 3D printer (6000€). The choice will be made during the kick off meeting and the needs of each partner, each territory and local partnerships with Fablabs or others institutions.	
Total				47.500,00 EUR

Follow-up

Impact

What is the expected impact on the participants, participating organisations, target groups and other relevant stakeholders?

The partners expect the following impacts from the project:

* participants:

- enhanced competencies in teaching coding and robotics
- increased knowledge of the subjects concerned
- capacity to work in a multicultural environment
- experience and knowledge sharing on approaches related to coding and robotics

* participating organisations

- synergies between the partner organisations will be enhanced with respect to cross-sectoral cooperation between formal and non-formal educational providers.
- emergence of new ideas as to how to organize and how to lead educational processes to scaffold students in era of digitization.
- development of new internal competences leading to the development of new educational project connected to robotics
- new opportunities of partnerships in the future on school education innovation

* target groups

Different target groups can be identified

DIRECT

> primary and secondary school teachers, especially those who do not have access to robotics for reasons of funding, knowledge, distance, etc. but also the educational community at large (educators, parents, animators) that will have access to the training online:

- develop competencies, skills and resources to teach students on coding and robotics for students from 8 to 10 and from 11 to 14
- > Students of 14+ as co-developers of the project (participating in the LTTA1 C1 and LTTA 2 C2, testing, experimenting, giving feedback.
- develop language,(working in english and other languages during the trainings and online) social, organisational skills, mobility skills
- competencies, skills and ressources on hardware, software, pedagogy. and on leading activities for children and Young people from 8-10 and from 11 to 14.

INDIRECT

Students from 8 to 10 and from 11 to 14

- ability to understand algorithmic logics at work in digital technologies and act on them through robotics
- Develop the acquisition of key skills for student success,
- To have a first approach to engineering and robotics, especially among female students.

* Other stakeholders

- awareness among education and training organisations/schools, civil society organisations, institutions and policy-makers about the importance of developing digital skills in order to foster active citizenship and professional development

What is the desired impact of the project at the local, regional, national, European and/or international levels?

This project will have an impact at all levels - local and regional, national and European. Indeed the partnership is composed of very complementary actors that are active both at the regional / national level and/or at the EU level.

It also brings complementary competences in terms of training, dissemination, capacity building, partnerships and quality assurance. It has a great potential to have a long-term impact as it aims to bring people and resources together. The project will thus benefit all of them which will ensure their commitment and ownership during and after the project implementation.

o At national, regional and local level:

- influencing the introduction of quality digital education in the curricula
- development of educational actions related to digital technologies and media education on all the territories concerned by the project
- foster critical thinking especially through teaching technology and science in line with the priorities of school education.
- to develop the orientation of young people towards engineering and robotics professions, especially for woman
- to promote the DIY, repair and empowerment of each person in relation to machines
- Encourage the development of Open Source
- prepare children and young people to robotics challenges as RoboCup, which are great opportunities for learning in many fields (technology, mathematics, logic, English, project management...) and self-improvement.

o At European level

- contribute to the EU goal of strengthening the professional profile of the Educators through the development of an innovative didactical methodology which includes the exchange and sharing of experiences and resources between different countries
- recognition of non-formal training organisations as innovative trainings centers, capable of catching up with the latest developments in digital economy and teaching digital skills as transversal skills in an accessible way to their specific target groups to foster social inclusion and social innovation
- provide evidence-based for policy making at European level
- contribute to cooperation between countries to develop solution of similar issues
- developing a European resource-sharing community

o At International level

- Encourage the development of tomorrow's talent in a sector of the future
- Develop a replicable solution for each countries, with or without financial resources
- Encourage the development of open source
- Encourage and prepare children and young people to international robotics challenges as RoboCup, and thus promote exchange and cooperation at the international level

How will you measure the previously mentioned impacts?

Quality assurance and project achievement monitoring are activities that are fully integrated in the project work program. We will be vigilant, throughout the project, to ensure that the objectives set (qualitative and quantitative) are met, through adjustment and testing (IO4).

This following is an overview of main indicators of achievement that can be proposed by the EU-RATE project partners regarding achievement of activities and results:

1) Cooperation:

- Number of staff and members involved
- overall satisfaction of the implemented processes of cooperation (communication, monitoring, share of responsibility, organization of activities, time management);
- Feedback and satisfaction of the partners' members and staff related to their participation in transversal and / or specific activities;
- Feedback and satisfaction of the partners' members and staff related to intermediary and final products / results.

2) Activities and results:

The achievement of the project's objectives and results will be measured through the following:

- Feedback and satisfaction of stakeholders in the collaboration during the project
- Number of participants in national and European multiplier events (> 200 people foreseen)
- Number of testing workshops in extracurricular activities (IO4) (>10)
- the number of visits to the online platform including project description, resources, etc.
- the visibility of our project in terms of communication (sharing on social networks, newsletters, newspaper articles, etc...)

3) Acknowledgment of target group's needs and returns:

- Indirect and direct number of final beneficiaries involved in the activities (LTTA 1 (C1) and LTTA 2 (C2) and the trainings in IO4 A2 of teachers and youth leaders, civic service testers)
- Number and level of new competencies in the identified sector acquired by final beneficiaries (8-10 and 11-14);
- Feedback and satisfaction of beneficiaries in the collaboration during the project
- Feedback and satisfaction of beneficiaries regarding the final results (> collected online and offline)

An external evaluator may be asked to intervene (technical, pedagogy or overall project). This will be decided on the Kick off meeting to ensure a quality approach that respects the challenges of the project.

Dissemination and Use of Project's Results

You are requested to make plans for the dissemination of your project results. Please provide answers to the questions below.

What will be the target groups of your dissemination activities inside and outside your partnership?

Please define in particular your target audience(s) at local/regional/national/EU level and motivate your choice.

This project will have an impact at all levels - local and regional, national and European. Indeed the partnership is composed of very complementary actors that are active both at the regional / national level and/or at the EU level.

Our target audiences are :

- 8-10 years, (local, regional, and EU level) a key age for discovering, developing new passions and understanding the world around you. This project allows 8-10 y.o children to :
 - Do their first steps in robotics and scientific bases
 - Programming by hardware blocks
 - Have a first introduction to mechanics and electricity
 - Create an accessible and playful robot
 - Have the expertise of a teacher

- 11-14 years , (local, regional, and EU level) a key age for developing knowledge, thinking about the professional future, understanding the issues of the digital society and artificial intelligence :
 - Discover Open Source software (programming hardware and software blocks)
 - Create an accessible and playful robot
 - Test track in interchangeable modules

- 14+ years, (local, regional, and EU level) a key age to define one's future profession, one's aspirations for the future, and to position oneself in the digital society as a player or consumer :
 - Help for development and prototyping carried out by young people (LTTA1 C1 and LTTA2 C2)

- Educational actors (local, regional, and EU level), as teachers, youth leaders, volunteers...
 - Be able to propose robotic activities adapted to groups, ages and educational expectations.

- Educational actors (local, regional, and EU level), as teachers, youth leaders, volunteers...

- Political figures (local, regional, national and EU level) for :
 - influencing the introduction of quality coding and robotics in the curricula
 - contribute to the EU goal of strengthening the professional profile of the Educators through the development of an innovative didactical methodology which includes the exchange and sharing of experiences and resources between different countries

- recognition of non-formal training organisations as innovative trainings centers, capable of catching up with the latest developments in digital economy and teaching digital skills as transversal skills in an accessible way to their specific target groups to foster social inclusion and social innovation
- provide evidence-based for policy making at European level about open source and data security

This project also brings complementary competences in terms of training, dissemination, capacity building, partnerships and quality assurance. It has a great potential to have a long-term impact as it aims to bring people and resources together. The project will thus benefit all of them which will ensure their commitment and ownership during and after the project implementation.

Which activities will you and your partner carry out in order to share the results of your project beyond your partnership?

As project coordinator, la Ligue de l'enseignement Nouvelle Aquitaine will care about analysing how the partners perceive the impacts of the project on their work and on that of their organisations qualitatively. It will monitor, for example, if and how they have used the project results in their own organisations; if they have developed/encouraged new practices and projects with other sectors or stakeholders, etc.

As we've wrote previously the consortium has many associate partners already who who will cooperate in the project and will be in charge of helping the projects results dissemination beyond our consortium. the fact that we'll continue to have open access to the project results after the ending of the Erasmus + funds will enable the project results to continue to be seen, tested, evolve...

Moreover, the impact of the developed Intellectual outputs and actions will be measured with the help of quantitative and qualitative indicators:

QUANTITATIVE

- *number of replies to online and offline questionnaires to identify the needs
- *number of replies to online questionnaires after the online training (1st semester 2021)
- *number of beneficiaries registering to the online training
- *number of downloads of educational booklets developed
- * number of connexion to the dedicated plateform
- *number of people registering to multiplier events (at least 25 in E1,2,3,4,5 total 125 and at least 40 in E6 so in total 165 minimum)
- * number of test training (expected, 1 per structure)
- * number of educational actors trained : if 25 people participate in the training, 150 educational actors benefiting from it.
- * number of pupils and young children reached out to: Each teacher/educational actor works directly with pupils and young people. If we estimate that each beneficiary reaches in average 15 pupils on the subject, it can be estimated that the impact of the action will be of 1500 pupils in 2021-23, young Europeans sensitized on coding and robotics. In addition, 2 schools are partners in our project, representing 2,000 students and 175 teachers who will benefit from this program. The 3500 associations affiliated to the ligue de l'enseignement Nouvelle-Aquitaine will be informed of the project and will be able to benefit from the experiments, on request. We have already 30 associations in different parts of the Nouvelle Aquitaine region that are interested in cooperating, testing and using the kit afterwards etc (examples: TUCS Corrèze, Amicale laïque du Gond Pontouvre Charente, CAVL Agir Creuse, urbain and rural areas with disadvantaged kids...).

QUALITATIVE

- * content of replies to online and offline questionnaires to identify the needs
- * content of replies to online and offline questionnaires during and after the online training for teachers and youth leaders
- *mobilisation of local partners not formally involved in the project
- *level of interest of people attending multiplier events through questionnaire and informal interviews

Who will be responsible for the dissemination activities within your partnership and which specific expertise do they have in this area? What resources will you make available to allow for the proper implementation of your dissemination plans?

La Ligue de l'enseignement Nouvelle Aquitaine will coordinate the communication activities related to the project in order to guarantee the widest and most efficient dissemination possible at European and national level of the material developed and experimentation carried out. For this purpose, it will rely on its Information and Communication department (ICD) which will structure the communication material to valorize the issues at stake, the implementation of the activities and the results of the project. The ICD will work in close collaboration with the communication departments/managers of the partner organisation in order to ensure the transnational legibility of the action.

Its dissemination channels are:

- our website,
- Existing social networks accounts
- our national groupes,
- our national newsletter,
- our national website.

In addition, each of the participants will share the progress of the project (articles, photos, videos) on their websites and social networks. We will also make it a point of honour to contact the press during our multiplier events and meetings.

Our experience from various projects shows that the impact of dissemination is very much dependent on a sound concept, which should be carefully planned, described and monitored during the project lifetime. This will be done in the virtual project space, during regular meetings and online conferences. The dissemination follows different purposes, according to the target group and the envisaged outputs.

Hence, dissemination activities can be broken down, according to the amount of people reached, the “depth” of information given and the envisaged involvement of the target groups into three different kinds:

a) mass dissemination

addresses the public and aims at achieving a high outreach, and at making the project public, here especially, in the local and regional environment. This involves mass publications and mass mailings.

b) tailor-made information

addresses expert or professional target groups. Again, mailings will be carried out as well as surveys, publications in known portals (Slide wiki, eLearningEuropa.info) but also webinars and the planned conference

c) individual capacity building activities

address the schools and the facilitators and teachers.

All these precautions will allow the communication around the project to be as coherent and impactful as possible.

Erasmus+ has an open access requirement for all materials developed through its projects. If your project is producing intellectual outputs/tangible deliverables, please describe how you intend to ensure free access for the public to a digital form of this material. If you intend to put any limitation on the use of the open licence, please specify the reasons, extent and nature of this limitation.

Our project is a common good. All our software, booklets and online courses will be free and Open Source (CC BY <https://creativecommons.org/licenses/?lang=fr-FR>) relatively to the horizontal priority "Open education and innovative practices in a digital era" as mentioned in the framework of the Strategic partnerships of the Erasmus+ program :

- promote innovative methods and pedagogies
- update and develop digital learning materials and tools, in particular OER, open textbooks and Free and Open Source Educational Software
- support the effective use of digital technologies and open pedagogies in education, training and youth.

in this context, all the productions made will remain freely accessible on the platform dedicated to the project, during and after. A presentation page of the project and access to this platform will be guaranteed on the websites of the project partners. The objective of our project is that all of our productions can be reused, modified, improved by everyone in order to adapt as well as possible to the constraints of each educational space.

How will you ensure that the project's results will remain available and will be used by others?

A presentation page of the project and access to the platform will be guaranteed on the websites of the project partners. All of our productions will be available for consultation with no time limit. The e-learning courses and/or MOOCs will remain accessible without time limitation or the need of direct facilitation.

Sustainability

What are the activities and results that will be maintained after the end of the EU funding, and how will you ensure the resources needed to sustain them?

Several strategies will take place in order to ensure the resources needed to sustain the activities and results of the project :

- 1) First of all the e-learning courses created during the EU-RATE project do not need a active facilitator for the participants, as mentioned above. They will be organized in a way that a direct facilitation will not be essential. This way we minimize the resources needed to sustain these online courses.
- 2) Secondly, the platform will continue to be open and links will be left in partners web pages with the KIT (learning sequences, materials needed, ...)
- 2) Thirdly, the EU-RATE project responds to a need identified in all partner countries, which makes easier to maintain the educational actions which stem from the project and keep them going after the EU funding.
- 3) In addition, each partner country will contact his education authorities to add KIT and IOS to the teacher training programme. (e.g. in France, the academic authorities promote robotics learning from cycle 3 onwards and our production could be a solution to meet this policy. Teachers have at their disposal e-learning platforms on which our production can be deposited). The partners also each have their own websites and collaborative spaces such as wikis, on which the production will also be hosted.
- 4) But also the courses for teachers and other education actors can be financed through fees paid by schools or other educational organisations.
- 5) Every partner will apply for new fundings in order to maintain the activities of the project.

Annexes

The maximum size of a file is 15 MB and the maximum total size is 100 MB.

The maximum number of all attachments is 100.

Please download the Declaration on Honour, print it, have it signed by the legal representative and attach.

File Name	File Size (kB)
déclaration honneur OK.pdf	326

Please download the Mandates, print them, have them signed by the legal representatives and attach them here.

File Name	File Size (kB)
mandats signés.pdf	1,000

Please attach any other relevant documents.

File Name	File Size (kB)
EU RATE GANTT CHART FINAL.xlsx	22
letters of support OK.pdf	278
Goetheschule + Escola S B Portugal information +.pdf	1,102
Total Size (kB)	2,728

Checklist

Before submitting your application form to the National Agency, please make sure that:

- It fulfils the eligibility criteria listed in the Programme Guide.
- All relevant fields in the application form have been completed.
- You have chosen the correct National Agency of the country in which your organisation is established. Currently selected NA is: FR01 Agence Erasmus+ France / Education et Formation

Please also keep in mind the following:

Mandates of each partner to the applicant, signed by both parties, should be submitted as an annex to the application form. If the application is approved for funding, signed mandates will be considered as a condition for signature of the grant agreement.

The documents proving the legal status of the applicant must be uploaded in the Erasmus and European Solidarity Corps platform (for more details, see Part C of the Programme Guide - 'Information for applicants').

The grant exceeds 60 000 EUR. If the applicant organisation is not a public body or an international organisation, please do not forget to upload the necessary documents to give proof of your financial capacity in the Erasmus and European Solidarity Corps platform (for more details, see the section 'Selection Criteria' in Part C of the Programme Guide).

Data Protection Notice

PROTECTION OF PERSONAL DATA

The application form will be processed electronically. All personal data (such as names, addresses, CVs, etc.) will be processed pursuant to Regulation (EC) No 45/2001 on the protection of individuals with regard to the processing of personal data by the EU institutions and bodies and on the free movement of such data. Any personal data requested will only be used for the intended purpose, i.e. the processing of your application in accordance with the specifications of the call for proposals, the management of the administrative and financial aspects of the project if eligible and the dissemination of results through appropriate Erasmus+ IT tools. For the latter, as regards the details of the projects' contact persons, an unambiguous consent will be requested.

For the full description of the collected personal data, the purpose of the collection and the description of the processing, please refer to the Specific Privacy Statement (see link below) associated with this form. http://ec.europa.eu/programmes/erasmus-plus/documents/epluslink-eforms-privacy_en.htm

I agree with the Specific Privacy Statement on Data Protection

Submission History

Version	Submission Time	Submitted by	Submission ID	Submission Status
1	22-04-2020 15:19:19	rsilva@liguenouvelleaquitaine.org	1649392	Submission OK