Interactive Music Science Collaborative Activities

Team Teaching for STEAM Education

Deliverable 7.3
First Report on Dissemination Activities

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Dissemination level:	PU
Work package	WP7 – Dissemination and exploitation
Version:	1.0
Keywords:	dissemination, communication, communities, scientists, industry, general public
Description:	Report on the dissemination activities up to the mid-term of the project.

H2020-ICT-22-2016 Technologies for Learning and Skills
iMuSciCA (Interactive Music Science Collaborative Activities)
Project No. 731861
Project Runtime: January 2017 – June 2019

Executive Summary

The aim of this deliverable is to address how iMuSciCA will handle the various issues related to the dissemination and communication of the project. The dissemination and communication plan outlines the identification of different stakeholders and the respective strategy devised. It also details the different communication and dissemination tools adopted, along with specific actions foreseen to address any issues relating to the educational community (both learners and teachers), the scientific community, industry and the general public.

In particular, it reports on the iMuSciCA dissemination and communication tools designed and implemented in the reporting period, with reference to project corporate identity, the website, flyers and brochures, social media and report on iMuSciCA visibility numbers (at the time of writing of this report). It also reports on dissemination activities for the different project stakeholder categories, according to the project dissemination strategic plan, implemented activities targeting the scientific community, including presence in reportitories, participation in conferences, project related publications and talks. Finally, actions targeting the Educational Community, complemented by dissemination activities performed targeting the Industry, the General Public, the Policy Makers, Informal Learning Centres and Concertation Actions are described.

Version Log			
Date	**Version No.**	**Author**	**Change**
12-03-2018	0.1	Evita Fotinea (ATHENA), Vassilis Katsouros (ATHENA)	Initial content
20-03-2018	0.2	Pierre Laborde (CABRI), Celine Palermo (CABRI)	Additions
21-03-2018	0.3	ALL	Input of individual partners
04-04-2018	0.9	Evita Fotinea (ATHENA)	Consolidation and submit to interval review
19-04-2018	1.0	Evita Fotinea (ATHENA), Vassilis Katsouros (ATHENA)	Final version submitted to EU

Disclaimer

iMuSciCA is an H2020 project funded by the European Union.

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LIST OF ABBREVIATIONS

Abbreviation	Description
PU	Public Report
EU	European Union
WP	Work Package
DoA	Description of Action
KPI	Key Performance Indicator
ORD	Open Research Data
IPR	Intellectual Property Rights
SME	Small Medium Enterprise
ATHENA	ATHENA RESEARCH AND INNOVATION CENTER IN INFORMATION COMMUNICATION & KNOWLEDGE TECHNOLOGIES
UCLL	UC LIMBURG
EA	ELLINOGERMANIKI AGOGI SCHOLI PANAGEA SAVVA AE
IRCAM	INSTITUT DE RECHERCHE ET DE COORDINATION ACOUSTIQUE MUSIQUE
LEOPOLY	3D FOR ALL SZAMITASTECHNIKAI FEJLESZTO KFT
CABRI	Cabrilog SAS
WIRIS	MATHS FOR MORE SL
UNIFRI	UNIVERSITE DE FRIBOURG

1. Introduction

Dissemination[1] is the public disclosure of the results of the project in any medium. Dissemination is a process of promotion and awareness-raising right from the beginning of a project, and makes research results known to various stakeholder groups (such as research peers, industry and other commercial actors, professional organisations, policymakers) in a targeted way, to enable them to use the results in their own work. The present report is complemented by the report on communication and outreach activities (see D7.4 - First Report on Communication and Outreach Activities).

Section 2 reports on the iMuSciCA dissemination and communication tools designed and implemented in the reporting period, with reference to project corporate identity, the website, flyers and brochures, social media and report on iMuSciCA visibility numbers (at the time of writing of this report). Section 3 reports on dissemination activities for the different project stakeholder categories, according to the project dissemination strategic plan. Implemented activities targeting the Scientific Community are reported, including presence in reportitories, participation in conferences, project related publications and talks. Next actions targeting the Educational Community follow, complemented by dissemination activities performed targeting the Industry, the General Public, the Policy Makers, Informal Learning Centres and Concertation Actions.

2. iMuSciCA tools

In line with Deliverable D7.1-Dissemination and Communication Plan, where the project identified different stakeholders, such as policy makers, teachers communities, informal learning centres, individual families/parents, organizations that promote innovative solutions/approach, other collaborative actions, scientific community and the general public, a palette of tools have been devised and implemented to serve the different dissemination purposes.

The iMuSciCA dissemination tools, that can also serve communication purposes are in short presented below:

- website
- social media
- project flyers and newsletter
- project registration in repositories
- publications in scientific and technical conferences, workshops and journals
- demonstrators and videos available online showcasing project results
- project presentation/booth in trade-shows and conferences

2.1. iMuSciCA corporate identity

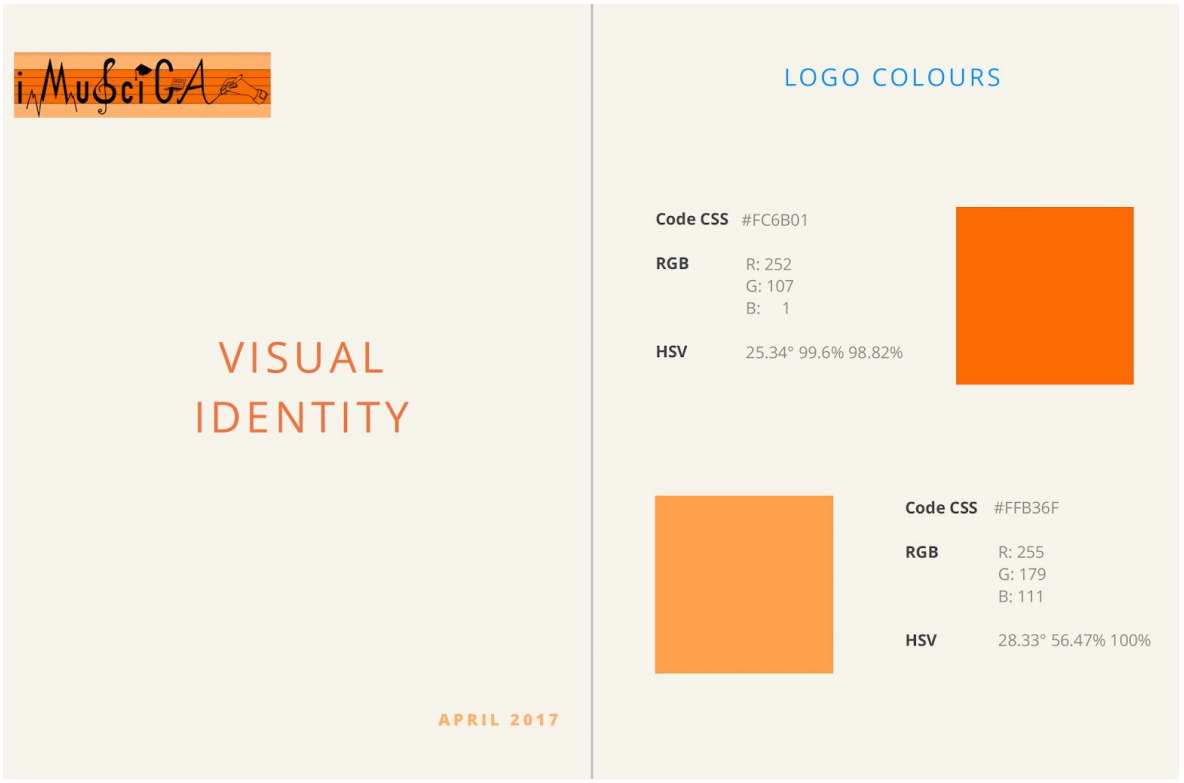
2.1.1. Dissemination materials

Different dissemination materials have been created to serve dissemination and communication purposes. All of those are available for download through the project's website (see subsection below).

[1] https://ec.europa.eu/research/participants/portal/desktop/en/support/faqs/faq-933.html

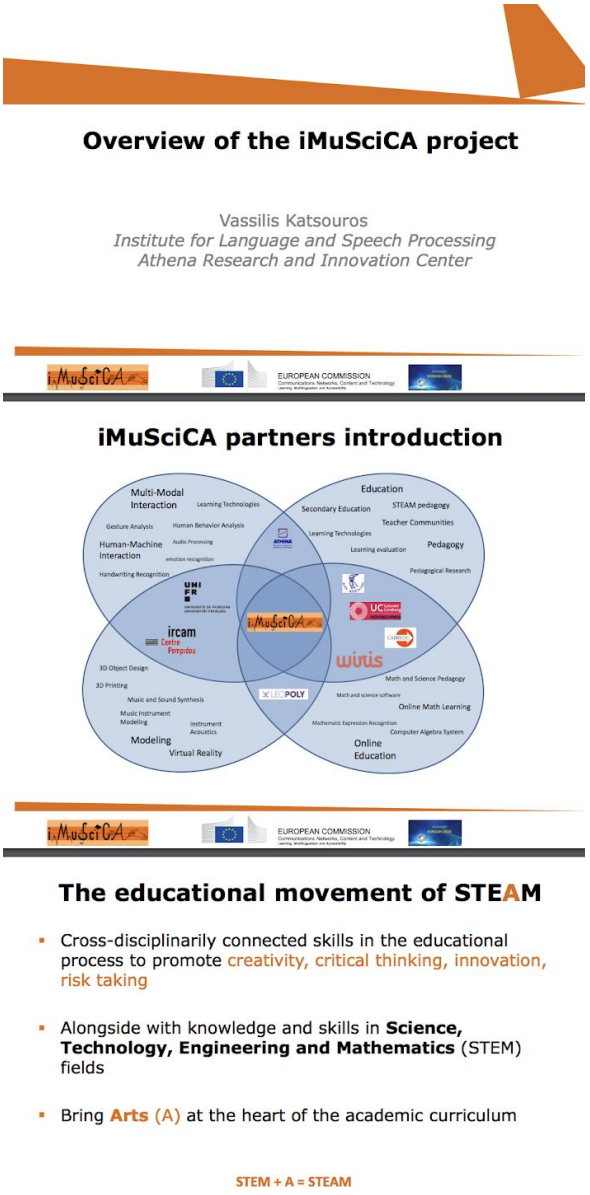
2.1.1.1. Project Logo & Visual Identity

http://www.imuscica.eu/wp-content/uploads/2018/03/visual-identity-imuscica.pdf



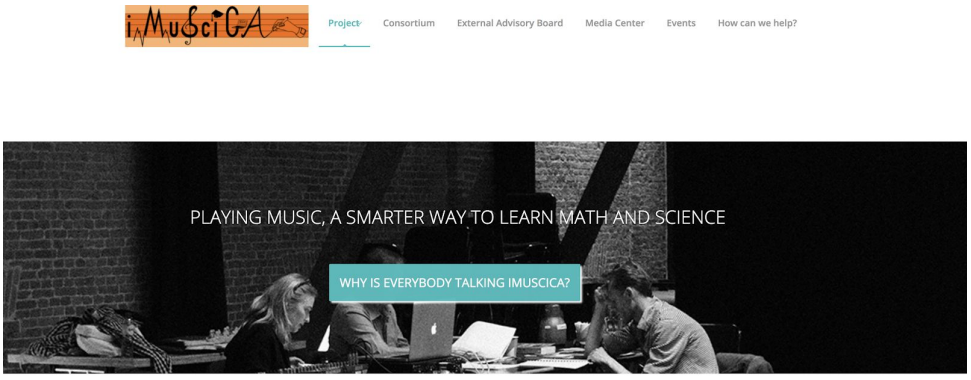
2.1.1.2. Project Presentation

Available in English at
http://www.imuscica.eu/wp-content/uploads/2018/03/iMuSciCA_Project_Presentation.pdf



2.2. The WebSite

An iMuSciCA's www facility has been created at the very early stages of the project to serve as information and communication backbone and is available at: http://www.imuscica.eu/
The project web site contains news on the project such as a description, the objectives, the work package structure, project deliverables, the timeline (all accessible from the menu "Project"), the institutions and companies behind the project (accessible from the menu "Consortium"), project news.



The iMuSciCA project

Problem-solving is one of the key skills for the 21st-century job market. STEM (Science, Technology, Engineering and Mathematics) teaching rely on the left half of the brain and thus is logic driven. Artistic activities, which uses the right side of the brain fosters creative problem-solving. STEM education is necessary but it is **not sufficient:**

Youngsters need STEAM (Science, Arts, Technology, Engineering and Mathematics) education to get ready for their future.

iMuSciCA is a **pioneering approach using music for fostering creativity and deeper learning**, thereby setting new grounds in the European STEAM curricula.

Learn Sciences through creative and stimulating music activities

The iMuSciCA project develops a set of practical activities to give learners many opportunities as the wonderful exploration of different phenomena and laws of physics, geometry, mathematics and technology through creative music activities. It is based on cross-disciplinary educational approaches.

Encourage students to engage in exciting interactive music activities

The iMuSciCA workbench engages secondary school students in order to support proficiency in core academic STEM subjects - Physics, Geometry, Mathematics, and Technology, creativity development and deeper learning skills through music activities.

Benefit from original and innovative educational technologies

The iMuSciCA project addresses contemporary requirements in education and learning for new STEAM pedagogical methodologies and innovative educational technology tools by supporting active, discovery-based, personalized learning, by providing students and teachers with opportunities for collaboration, co-creation and collective knowledge building.

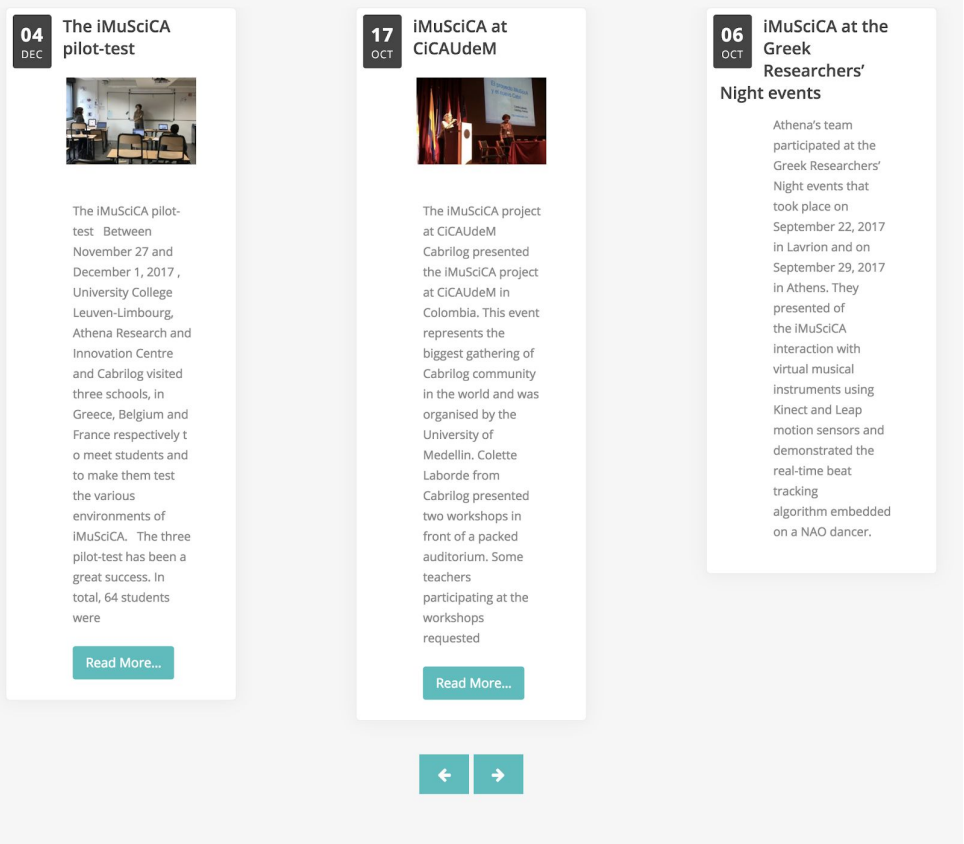
Our Latest Blog Post

22 FEB **iMuSciCA workbench real-time beat tracking algorithm demonstrated @mindtlab**

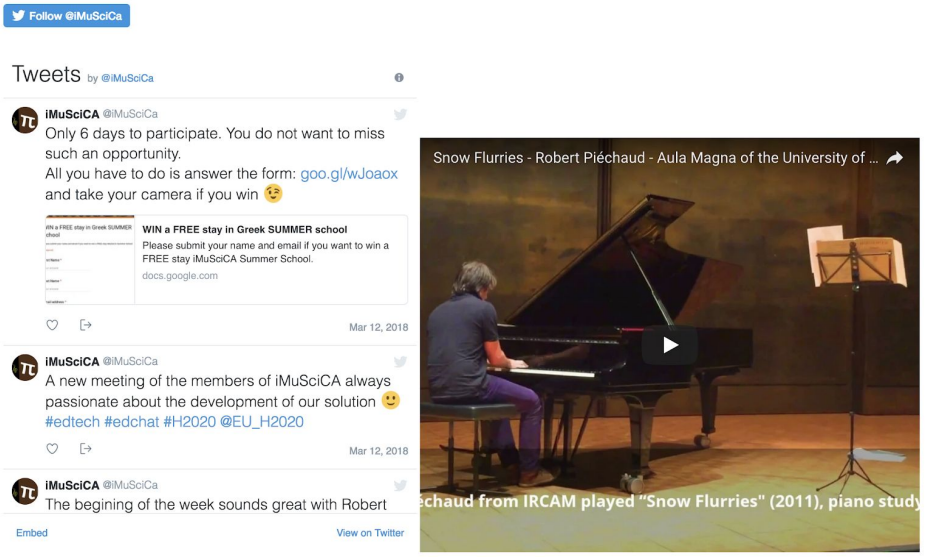
Athena's team participated at mind the lab event that took place on February 3, 2017, at the Doukissis Plakentias metro station. They presented of the iMuSciCA workbench real-time beat tracking algorithm embedded on a NAO dancer. (photos, videos) The algorithm was submitted to the IEEE Signal Processing Cup 2017 (video) performed in the top-third

15 NOV **iMuSciCA project presented at the Open Schools for Open Societies Conference 2016**

The iMuSciCA project presented at opening session of the Open Schools for Open Societies Conference 2016 on 4 November 2016 in Athens, Greece. The Open Schools for Open Societies Conference 2016 is organised by Ellinogermaniki Agogi, EDEN, and the Greek Institute for Education Policy.


04 DEC
The iMuSciCA pilot-test
The iMuSciCA pilot-test Between November 27 and December 1, 2017 , University College Leuven-Limbourg, Athena Research and Innovation Centre and Cabrilog visited three schools, in Greece, Belgium and France respectively t o meet students and to make them test the various environments of iMuSciCA. The three pilot-test has been a great success. In total, 64 students were
Read More...
17 OCT
iMuSciCA at CiCAUdeM
The iMuSciCA project at CiCAUdeM Cabrilog presented the iMuSciCA project at CiCAUdeM in Colombia. This event represents the biggest gathering of Cabrilog community in the world and was organised by the University of Medellin. Colette Laborde from Cabrilog presented two workshops in front of a packed auditorium. Some teachers participating at the workshops requested
Read More...
06 OCT
iMuSciCA at the Greek Researchers' Night events
Athena's team participated at the Greek Researchers' Night events that took place on September 22, 2017 in Lavrion and on September 29, 2017 in Athens. They presented of the iMuSciCA interaction with virtual musical instruments using Kinect and Leap motion sensors and demonstrated the real-time beat tracking algorithm embedded on a NAO dancer.

Follow us


Follow @iMuSciCa
Tweets by @iMuSciCa
iMuSciCA @iMuSciCa
Only 6 days to participate. You do not want to miss such an opportunity.
All you have to do is answer the form: goo.gl/wJoaox and take your camera if you win
WIN a FREE stay in Greek SUMMER school
Please submit your name and email if you want to win a FREE stay iMuSciCA Summer School.
docs.google.com
Mar 12, 2018
iMuSciCA @iMuSciCa
A new meeting of the members of iMuSciCA always passionate about the development of our solution
#edtech #edchat #H2020 @EU_H2020
Mar 12, 2018
iMuSciCA @iMuSciCa
The begining of the week sounds great with Robert
Embed
View on Twitter
Snow Flurries - Robert Piéchaud - Aula Magna of the University of ...
chaud from IRCAM played "Snow Flurries" (2011), piano study


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 731861.
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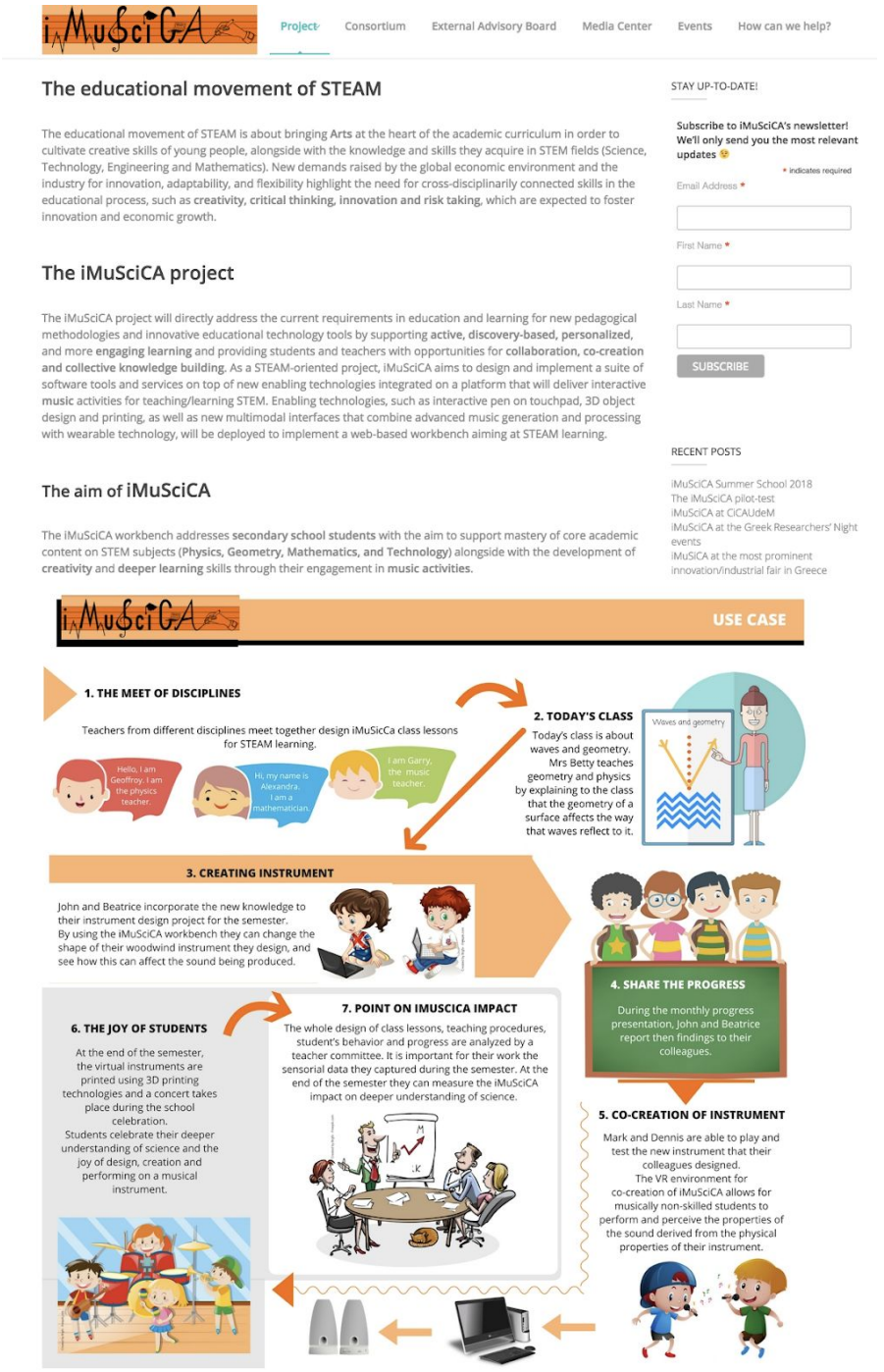
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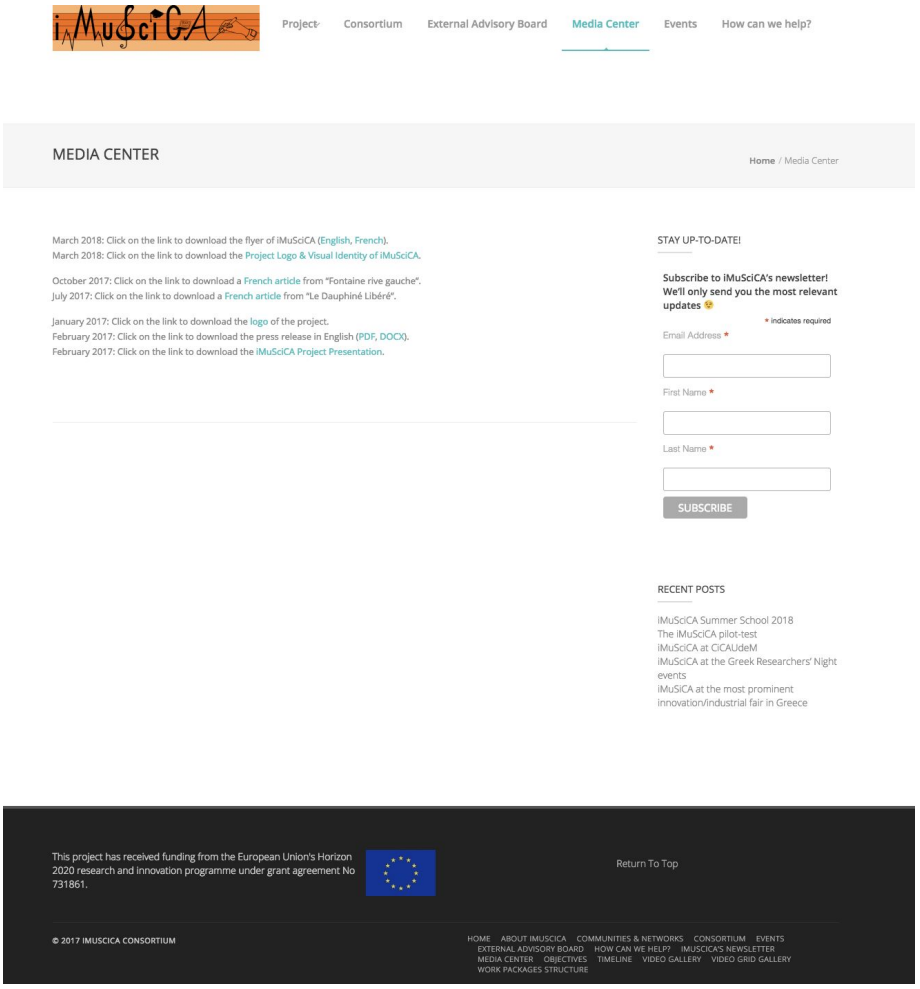
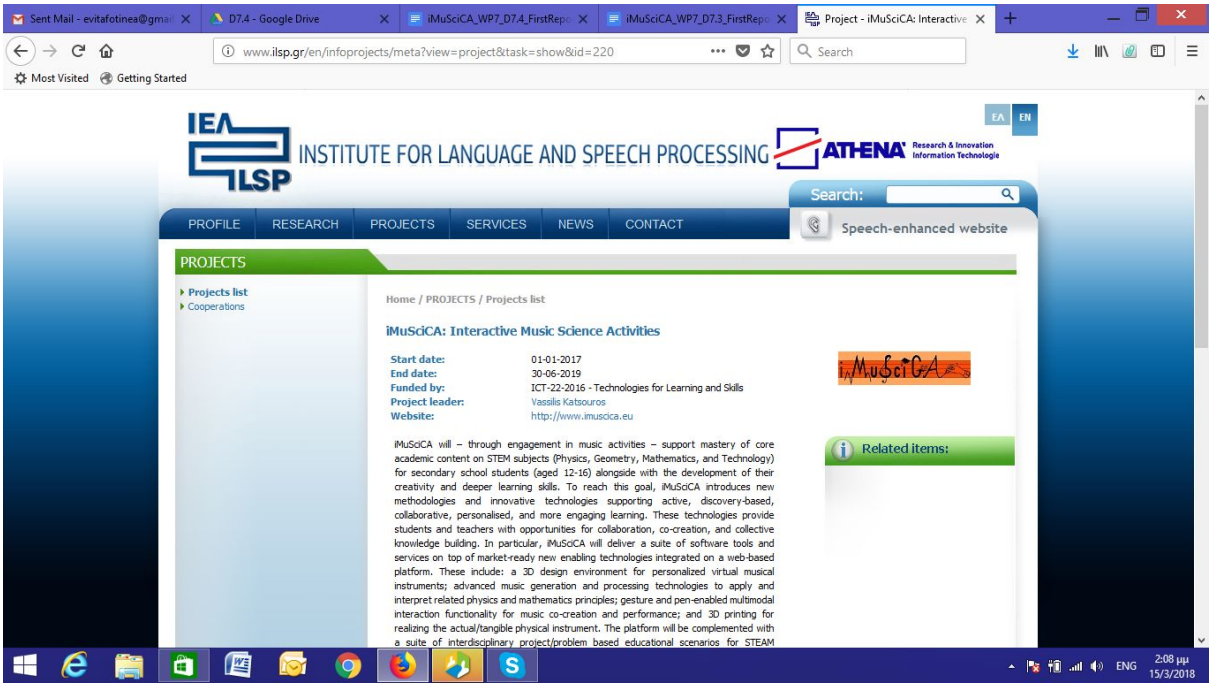
How can we help?
The educational movement of STEAM
The educational movement of STEAM is about bringing Arts at the heart of the academic curriculum in order to cultivate creative skills of young people, alongside with the knowledge and skills they acquire in STEM fields (Science, Technology, Engineering and Mathematics). New demands raised by the global economic environment and the industry for innovation, adaptability, and flexibility highlight the need for cross-disciplinarily connected skills in the educational process, such as creativity, critical thinking, innovation and risk taking, which are expected to foster innovation and economic growth.
The iMuSciCA project
The iMuSciCA project will directly address the current requirements in education and learning for new pedagogical methodologies and innovative educational technology tools by supporting active, discovery-based, personalized, and more engaging learning and providing students and teachers with opportunities for collaboration, co-creation and collective knowledge building. As a STEAM-oriented project, iMuSciCA aims to design and implement a suite of software tools and services on top of new enabling technologies integrated on a platform that will deliver interactive music activities for teaching/learning STEM. Enabling technologies, such as interactive pen on touchpad, 3D object design and printing, as well as new multimodal interfaces that combine advanced music generation and processing with wearable technology, will be deployed to implement a web-based workbench aiming at STEAM learning.
The aim of iMuSciCA
The iMuSciCA workbench addresses secondary school students with the aim to support mastery of core academic content on STEM subjects (Physics, Geometry, Mathematics, and Technology) alongside with the development of creativity and deeper learning skills through their engagement in music activities.
STAY UP-TO-DATE!
Subscribe to iMuSciCA's newsletter! We'll only send you the most relevant updates
* indicates required
Email Address *
First Name *
Last Name *
SUBSCRIBE
RECENT POSTS
iMuSciCA Summer School 2018
The iMuSciCA pilot-test
iMuSciCA at CICAUdeM
iMuSciCA at the Greek Researchers' Night events
iMuSiCA at the most prominent innovation/industrial fair in Greece
USE CASE
1. THE MEET OF DISCIPLINES
Teachers from different disciplines meet together design iMuSicCa class lessons for STEAM learning.
Hello, I am Geoffroy. I am the physics teacher.
Hi, my name is Alexandra. I am a mathematician.
I am Garry, the music teacher.
2. TODAY'S CLASS
Today's class is about waves and geometry. Mrs Betty teaches geometry and physics by explaining to the class that the geometry of a surface affects the way that waves reflect to it.
Waves and geometry
3. CREATING INSTRUMENT
John and Beatrice incorporate the new knowledge to their instrument design project for the semester. By using the iMuSciCA workbench they can change the shape of their woodwind instrument they design, and see how this can affect the sound being produced.
4. SHARE THE PROGRESS
During the monthly progress presentation, John and Beatrice report then findings to their colleagues.
5. CO-CREATION OF INSTRUMENT
Mark and Dennis are able to play and test the new instrument that their colleagues designed. The VR environment for co-creation of iMuSciCA allows for musically non-skilled students to perform and perceive the properties of the sound derived from the physical properties of their instrument.
6. THE JOY OF STUDENTS
At the end of the semester, the virtual instruments are printed using 3D printing technologies and a concert takes place during the school celebration. Students celebrate their deeper understanding of science and the joy of design, creation and performing on a musical instrument.
7. POINT ON IMUSCICA IMPACT
The whole design of class lessons, teaching procedures, student's behavior and progress are analyzed by a teacher committee. It is important for their work the sensorial data they captured during the semester. At the end of the semester they can measure the iMuSciCA impact on deeper understanding of science.

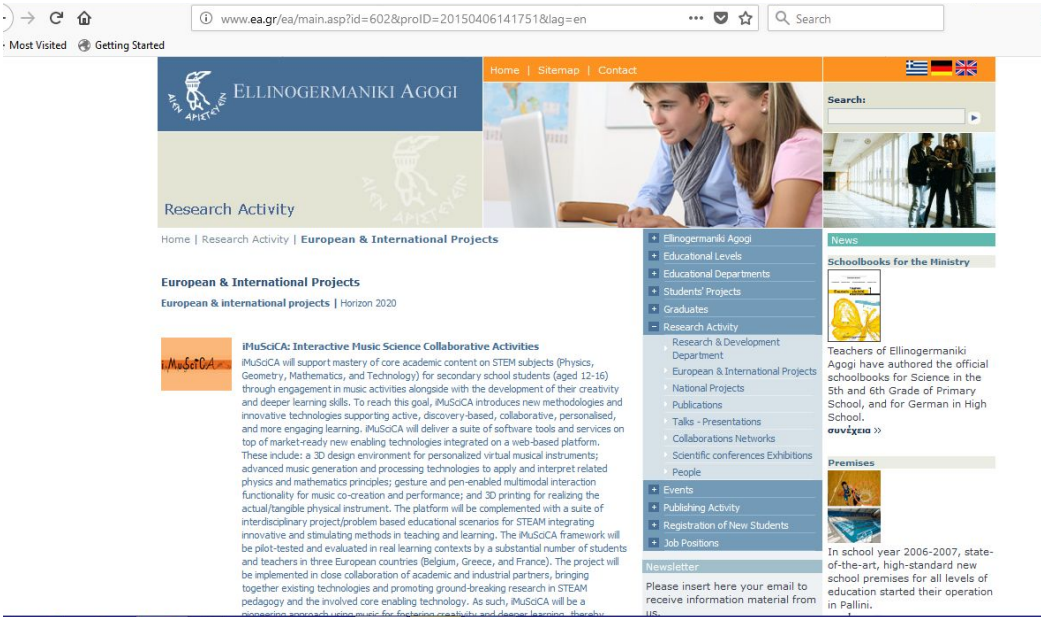


The web site improves the image of the project by drafting quality content and thereby distinguishes iMuSciCA project from a potential competition; it disseminates the project and its updates, thus making the site dynamic; it promotes the expertise of the consortium in the field of digital education by the quality of its content; it is interlinked to the social networks since article is broadcasted on the social networks of the project and also on the social networks of the partners; it finally allows to engage the community around the project and to generate traffic to the website (thus increasing its referencing).

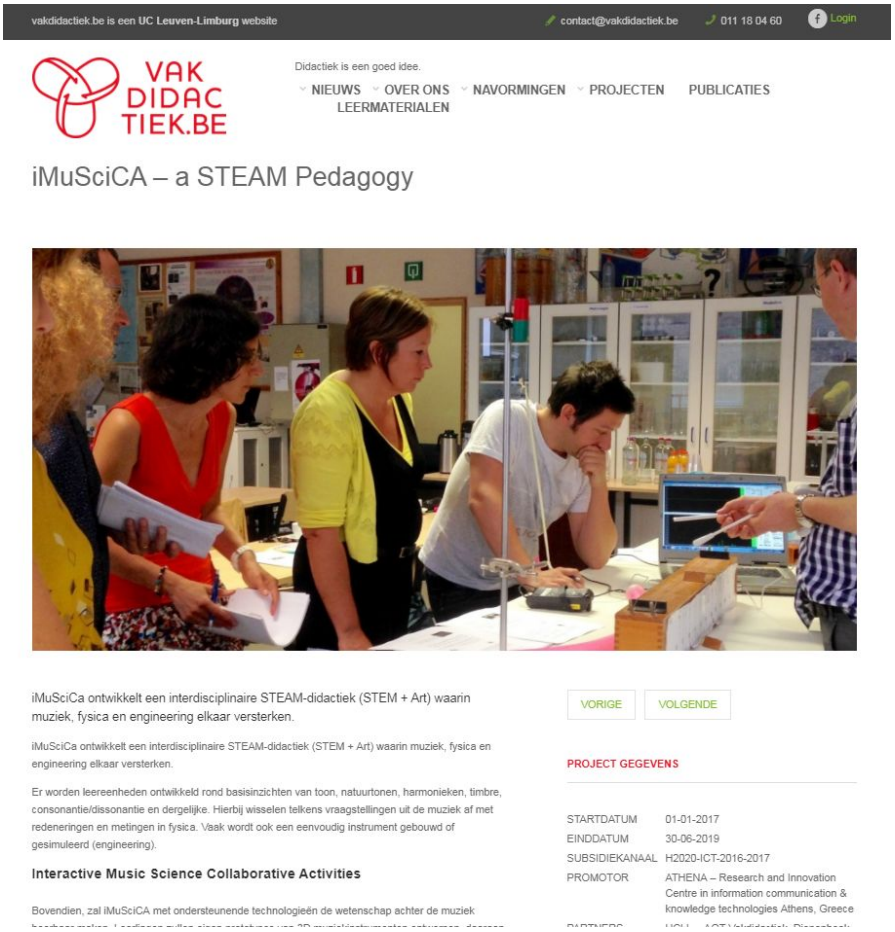
2.2.1. Customised sites & reference to partner sites

Project partners have also disseminated iMuSciCA through the organisations websites.





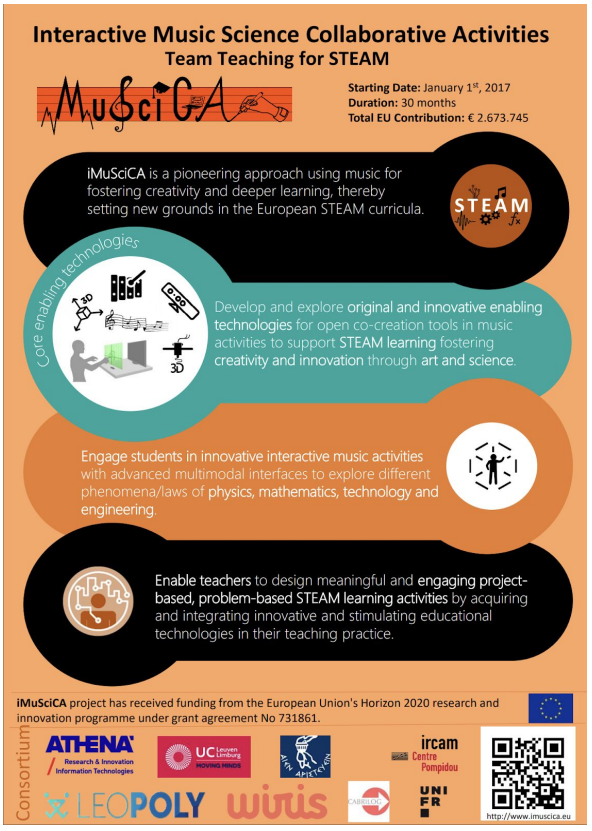
UCLL also created an iMuSciCA webpage on their platform 'Vakdidactiek.be' that teachers visit in search for professionel development: http://www.vakdidactiek.be/iMuSciCA_a_STEAM_Pedagogy



2.3. Flyers and brochures

2.3.1. Flyers / Posters

A project flyer/poster available in English at
http://www.imuscica.eu/wp-content/uploads/2018/03/one-page-flyer-en.pdf
And in French at
http://www.imuscica.eu/wp-content/uploads/2018/03/flyer-fr.pdf



2.3.2. Press Releases

Press releases at every project milestone or relevant event customized for the audience addressed are planned.
A project sample press releases in English are available at
http://www.imuscica.eu/wp-content/uploads/2017/02/iMuSciCA_Press_Release_EN_v1.0.pdf

iMuSciCA - Interactive Music Science Collaborative Activities

Team Teaching for STEAM Education

Starting Date: January 1st, 2017
Duration: 30 months
Total EU Contribution: € 2.673.745,00
Project Number: 731861

Consortium: Athena Research and Innovation Center, Greece
University College Leuven-Limburg, Belgium
Ellinogermaniki Agogi, Greece
IRCAM, France
Leopoly, Hungary
Cabrilog, France
Wiris, Spain
University of Fribourg, Switzerland

iMuSciCA is a Research and Innovation Action funded under the European Union's Horizon 2020 Programme.

The **iMuSciCA** project addresses contemporary requirements in education and learning for new STEAM pedagogical methodologies and innovative educational technology tools by supporting **active, discovery-based, personalized**, and more **engaging learning** and providing students and teachers with opportunities for **collaboration, co-creation** and **collective knowledge building**.

The **iMuSciCA** workbench addresses **secondary school students** with the aim to support mastery of core academic content on STEM subjects (**Physics, Geometry, Mathematics**, and **Technology**) alongside with the development of **creativity** and **deeper learning** skills through the students' engagement in **music activities**.

iMuSciCA focuses on the following objectives:

2.3.3. Press Kit

An iMuSciCA standard press kit including customized information material for the stakeholders and the general public has been created.

iMuSciCA

EDITORIALS

Everyone wants to understand the world and asks questions about it. It starts when you look to the landscape, it starts when you are little.

Math and Science are the key to the understanding the world, leading to a big adventure.
There is a lot of beauty in Math and Science but people do not usually know it. As if these subjects should be dry and annoying. But they are not, they are captivating for those who can see their beauty. Now the question is: Who can see it? Do people know there is a lot of Art in Science and there is a lot of Science in Art?

STEAM education shows how related Math, Science and Art are.
With iMuSciCA we want to go deeper by using the Music.

Because Music is one of a few special form of Art connected with Time, expanding beyond Time. And Time is also a very important part of dimension of physics and maths.
They are deeply connected. iMuSciCA is going to use modern tools to give the key to explore the world and to develop the skills students must acquired for their future.

Renaat Frans
Lecturer of Physics and Teacher Education of Physics at University College Leuven-Limburg

As a musician, I played music all my life. I understand Science and Maths are related to who I am: they explain who I am and I can't communicate it without them. They are a mean of communicating like Art, like Music.

But Science, Math and Art are too untied in education. That is why **we need to develop the possibility of expanding education with the Arts.**
This is the next step in education and a true challenge for the whole Europe.

STEAM education which includes Art is not just a way of thinking. Indeed, it is the first step to a long road that ends to an education that responds to the challenges of today's and tomorrow's world. We need to take this step. iMuSciCA will achieve this step.

With iMuSciCA, we try to develop an environment in which virtual instruments, virtual objects, mathematics, geometry and music concept coexist. Many activities can be done, new things can be created. It's challenging every day.
We strongly believe iMuSciCA is the solution for preparing our future.

Petros Stergiopoulosn
Music teacher and concert artist (Conservatory of Athens, Diploma in Flute Performance)

3

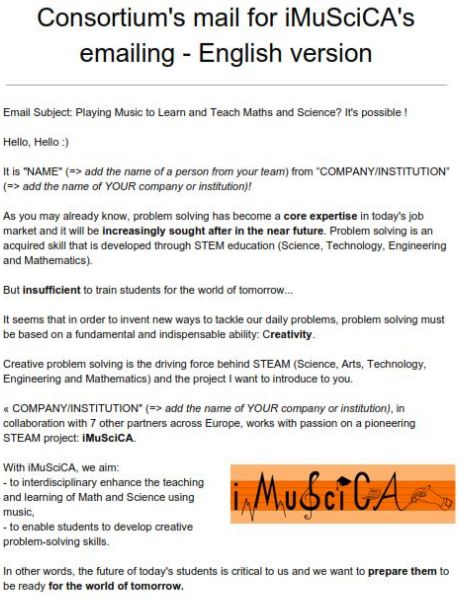
PLAYING MUSIC, A SMARTER WAY TO LEARN MATH AND SCIENCE

2.3.4. NewsLetters

The first iMuSciCA's newsletter was sent on October 2017 to the most qualified contacts of the partners. The partners used the attract of their contacts with STEAM solutions (namely teachers, instructors, etc.) to make them signing up for the iMuSciCA's newsletter.

The newsletter is fed in different ways:
- by sending emails to qualified contacts of partners
- through face-to-face interaction at trade shows and conferences
- on the website of imuscica where the subscription to the newsletter is also included.

The first newsletter is available in English at
http://www.imuscica.eu/wp-content/uploads/2018/03/newsletter-en.png
And in French at
http://www.imuscica.eu/wp-content/uploads/2018/03/newsletter-fr.png, while constomised translation are produced in almost all the mother languages of the project partner countries.



Consortium's mail for iMuSciCA's emailing - English version

Email Subject: Playing Music to Learn and Teach Maths and Science? It's possible !

Hello, Hello :)

It is "NAME" (=> *add the name of a person from your team*) from "COMPANY/INSTITUTION" (=> *add the name of YOUR company or institution)!*

As you may already know, problem solving has become a **core expertise** in today's job market and it will be **increasingly sought after in the near future**. Problem solving is an acquired skill that is developed through STEM education (Science, Technology, Engineering and Mathematics).

But **insufficient** to train students for the world of tomorrow...

It seems that in order to invent new ways to tackle our daily problems, problem solving must be based on a fundamental and indispensable ability: **Creativity**.

Creative problem solving is the driving force behind STEAM (Science, Arts, Technology, Engineering and Mathematics) and the project I want to introduce to you.

« COMPANY/INSTITUTION" (=> *add the name of YOUR company or institution)*, in collaboration with 7 other partners across Europe, works with passion on a pioneering STEAM project: **iMuSciCA**.

With iMuSciCA, we aim:
- to interdisciplinary enhance the teaching and learning of Math and Science using music,
- to enable students to develop creative problem-solving skills.

In other words, the future of today's students is critical to us and we want to **prepare them** to be ready **for the world of tomorrow.**

Should you share or work on similar project ideas, iMuSciCA project may be of interest to you. Should you wish to be updated on the project progress, click below to subscribe to the project newsletter.

Subscribe to iMuSciCA's newsletter

Thank you very much for your support.

We will only send you the most relevant updates related to iMuSciCA. For example, what pupils and teachers thought about iMuSciCA during the pilot testing that we will be initiated at the end of the year in Belgium, Greece and France.
I promise, **no spam**.

Keep on STEAMing,

P.S .: To learn more about iMuSciCA, please visit our website: www.imuscica.eu
P.S.2.: Follow us on Twitter: @iMuSciCa

The second newsletter will:

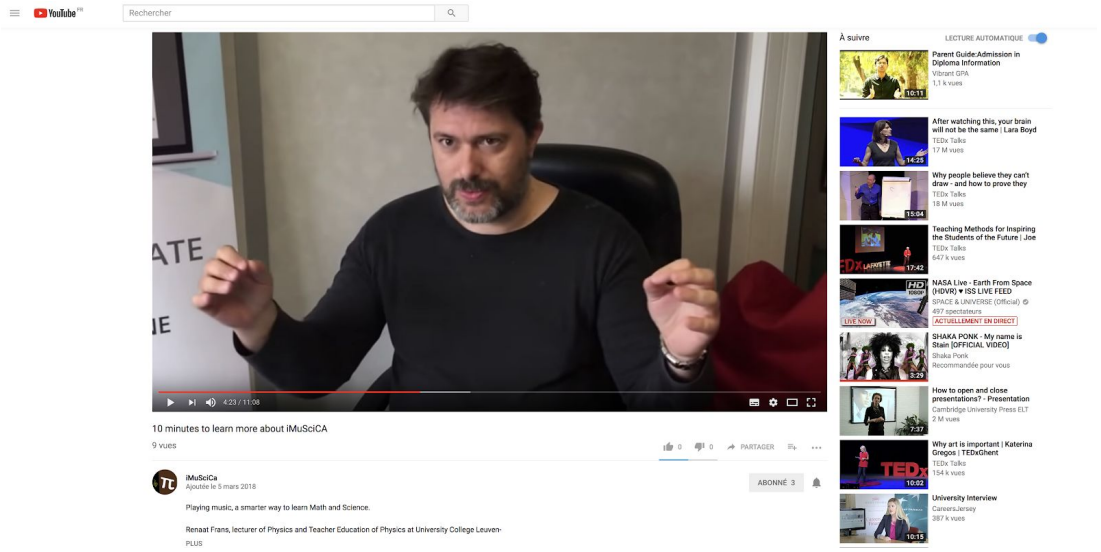
- give a human perspective of the iMuSciCA solution by focusing on the people behind the development of the project in order to readers to follow the iMuSciCA adventure (the newsletter will include photos of the consortium and videos, e.g. an already available Youtube video, in which two iMuSciCA members explain the project)
- Refer to mention the most significant exhibitions and conferences iMuSciCA partners visited or exhibited (e.g: the BETT Show 2018)
- announce future events (e.g. the iMuSciCA Summer School in July 2018).

2.4. Social Media

These social networks aim to increase users' interest and promote their engagement. The objectives of these social media channels are to grow iMuSciCA's recognition and to encourage users to have interactions with the consortium.
Twitter and YouTube accounts are linked between them and also linked to the iMuSciCA's website: YouTube channel allows publishing videos which would be used on some Twitter publications and would automatically appear on the iMuSciCA's website.

2.4.1. YouTube channel

iMuSciCA YouTube channel is disseminating video and presentations and is available at
https://www.youtube.com/channel/UChnK0jj4Qy2M3Wo188GoWuA



2.4.2. Twitter account

iMuSciCA Twitter account is used for disseminating events and activities and is accessible by https://twitter.com/iMuSciCa?lang=en.

2.5. iMuSciCA visibility in numbers

Last but not least, we briefly report herewith on iMuSciCA dissemination stigma (figures accounting cumulatively from the project commencement date up until now).

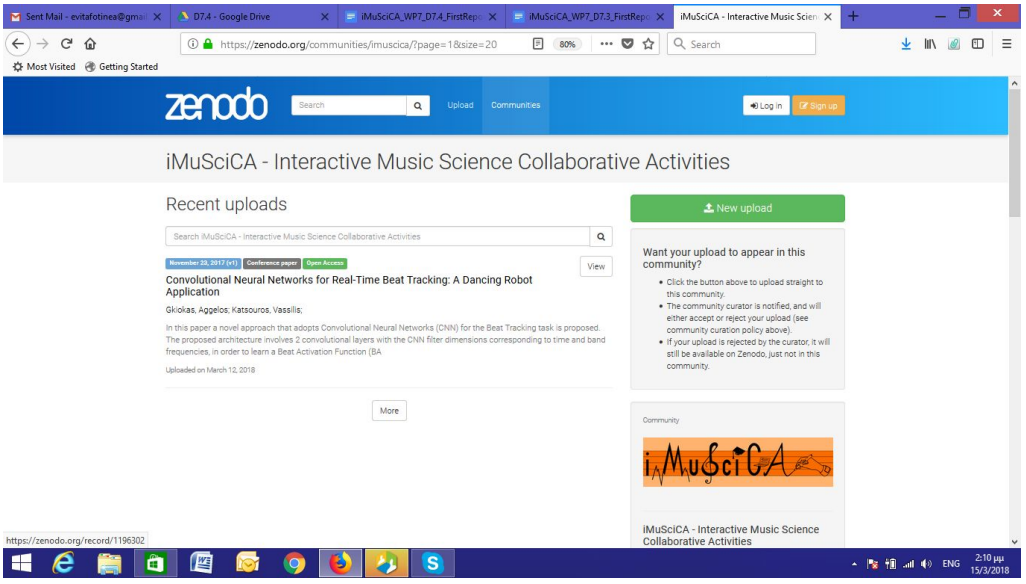
- Website (since February 22, 2017)
  number of unique visitors : 1093
  number of visits: 1865
  bounce rate : 54,69%
- Newsletter
  number of subscribers : 92
- Twitter account (since March 24, 2017)
  number of followers : 84
  number of tweets : 102
  number of impression (number of times a tweet has been seen) : 47856
  number of participation (number of reaction, comment, share) : 368
  profile visit (number of times a user has visited the profile page) : 1616

3. Dissemination Activities

3.1. Activities targeting the Scientific Community

3.1.1. Presence in Scientific Repositories

iMuSciCA has formed a community in the Zenodo research data repository, the latter being launched in 2013, available at https://zenodo.org/communities/imuscica/?page=1&size=20



3.1.2. Participation in Scientific Conferences

- Participation to the 1st Music Hackathon Bulgaria (http://music-hackathons.org/1st-music-hackathon-bg), in Sofia, 28-29 January 2017 by ATHENA.
- Participation and talk on STEAM Pedagogy at the Girep conference on Physics Education at Dublin City University, 04/07/2017 by UCLL.
- ATHENA presented the work on "Convolutional Neural Networks for Real-Time Beat Tracking: A Dancing Robot Application" at ISMIR 2017, in 23-27 October 2017, in Suzhou, China.

- UCLL contributed to Panel on inquiry learning in STEM-practices, Final conference EU FP7 Project Ark of Inquiry, UNESCO HQ Paris, France, 20-21/11/2017.

3.1.3. Publications

Journal papers / Book Chapters

- Vassilis Katsouros, Evita Fotinea, Renaat Frans, Erica Andreotti, Petros Stergiopoulos, Thomas Fischer, Manolis Chaniotakis, Robert Piechaud, Zoltan Karpati, Pierre Laborde, Daniel Martín-Albo, Fotini Simistira, and Marcus Liwicki, "iMuSciCA: Interactive Music Science Collaborative Activities for STEAM learning", in *Designing for the User Experience in Learning Systems*, Evangelos Kapros and Maria Koutsombogera (Eds.), Springer Series on Human-Computer (submitted and under review).

International Conferences

- Kosmas Kritsis, Aggelos Gkiokas, Maximos Kaliakatsos-Papakostas, Robert Piechaud, Quentin Lamerand, Carlos Acosta, and Vassilis Katsouros, "A web-based 3D environment for gestural interaction with virtual music instruments as a STEAM education tool" in the New Interfaces for Musical Expression 2018 (NIME 2018), 3-7 June 2018, Blacksburg, Virginia, USA (forthcoming).
- Renaat Frans and Erica Andreotti, "Polyphonic STE(A)M and the role of physics" in *GIREP-ICPE-EPEC 2017 Proceedings* (under review).
- Roman Schindler, Manuel Bouillon, Réjean Plamondon and Andreas Fischer, "Extension of the Sigma Log-Normal Model to Three Dimensions", in proceedings of the International Conference on Pattern Recognition and Artificial Intelligence (ICPRAI), 2018 (to appear).
- Manuel Bouillon, Fotini Simistira, Rolf Ingold, Marcus Liwicki, "DrAwME: Drawing Canvas for Music Creation - A New Tool for Inquiry Learning", in proceedings of the 4th International Conference on Learning and Teaching (ICLT), 2018 (to appear).
- Aggelos Gkiokas and Vassilis Katsouros, "Convolutional Neural Networks for Real-Time Beat Tracking: A Dancing Robot Application", in proceeding of ISMIR 2017, Pgs. 286-293, 23-27 October 2017, Suzhu, China.

National Conferences

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3.1.4. Talks

- Talk and project presentation to the educational/scientific community by ATHENA: 4 November 2016 in Athens, iMuSciCA project presented at the Open Schools for Open Societies Conference 2016 (prior to the project commencement date) organized by EA.
- Talk on 'Polyphonic STE(A)M' by Renaat Frans [UCLL] at the Girep conference on Physics Education at Dublin City University (04/07/2017)
- iMuSciCA is being presented in 15th Sound and Music Computing Conference (http://smc2018.cut.ac.cy/index.html) next summer (4-7 July 2018) by ATHENA, upon invitation by the member of iMuSciCA External Experts Advisory Board Dr. Anastasia Georgaki.
- Research Seminar by Aggelos Gkiokas and Kosmas Kritsis on "Music Technology for STEAM Education", on 8 March 2018, at Universitat Pompeu Fabra, Barcelona, Spain (https://www.upf.edu/web/mtg/news/-/asset_publisher/WM181VyAQipW/content/id/167592599#.WsR6-ExuKAg).

- Talk on 'How interdisciplinarity between music and science can foster problem solving and creativity' by Renaat Frans and Jeroen Vanesser [UCLL] at 26th European Association for Music in Schools (EAS) Conference 14 - 17 March 2018 Jelgava / Riga, Latvia.

3.2. Activities targeting the Educational Community

3.2.1. Presence in Repositories

- iMuSciCA is going to be presented (submitted on 13 March 2018) in the ScientIX (http://www.scientix.eu/projects) online community that promotes and supports a Europe-wide collaboration among STEM (science, technology, engineering and maths) teachers, education researchers, policymakers and other STEM education professionals.

3.2.2. Other Dissemination Activities

Dissemination along with communication activities of the project have also taken place through material distribution, project presentations, talks and project demonstrations to several events targeting the Educational Community, through participation in shows of educational technology profiling, actions directly targeting the teachers as well as specific activities targeting the professional development of teachers adopting STEAM. We briefly mention here the events, since project dissemination took place. For more information on communication and outreach activities in these events, see also D7.4-First Report on Communication and Outreach Activities.

Educational Technology Industry

- iMuSciCA was presented by CABRI to BETT 2018, 25-27 January 2018, https://www.bettshow.com/whats-on/bett-show-2018-highlights

CABRI's booth at the Bett Show

- iMuSciCA has been presented by CABRI in the biggest gathering of Cabrilog's community (CiCAudeM), 11-13 October 2017, Colombia. The event was organized by the University of Medellin.

Teacher Communities

- Teachers' workshop by EA (http://openschool2017.ea.gr/?q=node/135) on Teaching science and mathematics through music, in the framework of Open Schools for Open Societies Conference 2017, at EA, Athens, Greece, on 21 October 2017. Project dissemination by ATHENA and EA

- UCLL presented iMuSciCA to teachers and teacher educators at the 'STEM-studiedag' for teachers organized by the KU Leuven Association (BE).
- UCLL organised an 'iMuSciCA teacher day' in the Teacher Education Department of UCLL in Diepenbeek (20/06/2017)

- Teachers' training on 14th of December 2017 and on 6th of February 2018 (in Diepenbeek) by UCLL.
- UCLL updated the website where iMuSciCA is presented as a STEAM pedagogy for the Flemish teachers http://www.vakdidactiek.be/iMuSciCA_a_STEAM_Pedagogy

- EA designed and published the iMuSciCA Summer School 2018 portal (http://imuscica.ea.gr/)
- EA organized and participated at the Open School for Open Societies EDEN conference 2017 (http://openschool2017.ea.gr/).

3.3. Activities targeting the Industry

- 10-19 September 2017 in Greece, iMuSciCA has been presented in the 82th Thessaloniki International Fair – HELEXPO (TIF) by ATHENA. This is the most prominent innovation/industrial fair that takes place in Greece and the biggest event of its kind in the Balkan area, with emphasis on innovation in all production sectors. The event attracts a huge number of visitors from the academia, the industry and the general public.

3.4. Activities targeting the General Public

Two newspaper articles dealing with iMuSciCA have been produced by CABRI :

- on a local magazine "Fontaine-Rive Gauche" produced in 12,000 copies (July),

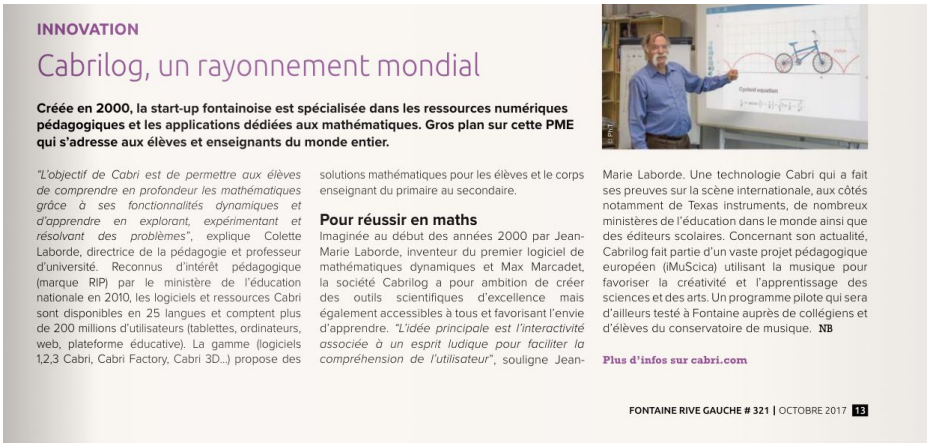
FONTAINE

Apprendre les sciences par la musique : Cabrilog recherche des élèves cobayes

→ La société Cabrilog continue à travailler sur des projets innovants. Depuis le 1er janvier, elle participe à un ambitieux projet européen nommé iMuSciCA. Celui-ci propose une approche interdisciplinaire et innovante par la musique pour l'apprentissage en sciences, technologies, arts et mathématiques. Des technologies originales vont permettre de créer des outils accessibles à tous, afin d'encourager la créativité et l'innovation dans l'enseignement scientifique. « Nous recherchons actuellement des classes de troisième ou de seconde qui s'engageraient dans des activités interactives pour explorer divers phénomènes physiques, mathématiques et technologiques au moyen d'interfaces multimodales avancées », confie Pierre Laborde, manager chez Cabrilog. « Les enseignants vont disposer de moyens qui permettent de concevoir des activités interdisciplinaires et d'intégrer les technologies dans leur pratique. »

> Pour candidater au projet iMuSciCA, contactez Cabrilog au 122, avenue du Vercors à Fontaine. Téléphone : 04 76 43 97 00. www.cabri.com

- on the regional daily press "Le Dauphiné Libéré" produced in 40 000 copies (October).



INNOVATION

Cabrilog, un rayonnement mondial

Créée en 2000, la start-up fontainoise est spécialisée dans les ressources numériques pédagogiques et les applications dédiées aux mathématiques. Gros plan sur cette PME qui s'adresse aux élèves et enseignants du monde entier.

"L'objectif de Cabri est de permettre aux élèves de comprendre en profondeur les mathématiques grâce à ses fonctionnalités dynamiques et d'apprendre en explorant, expérimentant et résolvant des problèmes", explique Colette Laborde, directrice de la pédagogie et professeur d'université. Reconnus d'intérêt pédagogique (marque RIP) par le ministère de l'éducation nationale en 2010, les logiciels et ressources Cabri sont disponibles en 25 langues et comptent plus de 200 millions d'utilisateurs (tablettes, ordinateurs, web, plateforme éducative). La gamme (logiciels 1,2,3 Cabri, Cabri Factory, Cabri 3D...) propose des solutions mathématiques pour les élèves et le corps enseignant du primaire au secondaire.

Pour réussir en maths

Imaginée au début des années 2000 par Jean-Marie Laborde, inventeur du premier logiciel de mathématiques dynamiques et Max Marcadet, la société Cabrilog a pour ambition de créer des outils scientifiques d'excellence mais également accessibles à tous et favorisant l'envie d'apprendre. *"L'idée principale est l'interactivité associée à un esprit ludique pour faciliter la compréhension de l'utilisateur"*, souligne Jean-Marie Laborde. Une technologie Cabri qui a fait ses preuves sur la scène internationale, aux côtés notamment de Texas instruments, de nombreux ministères de l'éducation dans le monde ainsi que des éditeurs scolaires. Concernant son actualité, Cabrilog fait partie d'un vaste projet pédagogique européen (iMuScica) utilisant la musique pour favoriser la créativité et l'apprentissage des sciences et des arts. Un programme pilote qui sera d'ailleurs testé à Fontaine auprès de collégiens et d'élèves du conservatoire de musique. NB

Plus d'infos sur cabri.com

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The other dissemination activities involve the presentation of the project results in an interactive way to the general public and they are described in D7.4-First Report on Communication and Outreach Activities (Section 2.2.3).

3.5. Activities for the Policy Makers

Specific actions have been designed in order to disseminate the project on policy makers in specific countries.

- The iMuSciCA project was presented at opening session of the Open Schools for Open Societies Conference 2016 on 4 November 2016 in Athens, Greece. The Open Schools for Open Societies Conference 2016 is organised by EA, EDEN, and the Greek Institute for Education Policy.
- For Greece, ATHENA and EA has sought permission from the Greek Institute for Education Policy to announce the project in All Greek schools and invite them to participate. Access has been granted and an official Circular disseminated the project, along with its announcement on the site of the Greek Ministry of Education (November 2017).
- The group Vakdidactiek of the UCLL is leader of the large Flemish Learning Network on STEM Education, under commission of the Flemish Ministry of Education, with which the group has direct contacts. iMuSciCA has been presented during events organized in the frame of this Flemish Network on STEM Education and a selection of the related material have been included in the examples of STEM activities on the website of the network.

3.6. Activities for Informal Learning Centres

The project considers as stakeholders also informal learning centres, including libraries, cultural institutions, museums and science centres.

- In Greece there have been discussions between ATHENA with the Onassis Cultural Centre (http://www.sgt.gr/eng/SPG1/?). It has been agreed and planned towards the end of 2018 to run iMuSciCA interactive workshops at their premises

3.7. Concertation Activities

Concertation Activities with other ECT funded projects have already taken place by the participation of consortium members in related events and the presence of the project co-ordinator in the Advisory Board of the project HubIT.

- Presentation by ATHENA and CABRI in the concentration action: Luxembourg, 27 March 2017, iMuSciCA at the participatory meeting of all H2020 projects in the field of Digital Learning managed by unit G3 Learning, Multilingualism & Accessibility, DG CONNECT.
- [ATHENA] 8 November 2017 in Budapest, HubIT First Advisory Board Workshop (http://www.hubit-project.eu/en/events/hubit/advisory-board-workshop--/) presented aspects on Rensonsible Research and Innovation (RRI) from experiences of involving schools, teachers and students in activities of the iMuSciCA project.