

SUSTAINABILITY STRATEGY

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Executive Summary

The Hypatia project aims to engage teenagers between 13-18 year old, with particular attention to girls, in STEM both in and out the school environment in a gender inclusive way and to address the attitudes of STEM education professionals towards more gender-inclusive practices. To reach this overarching goal, Hypatia brings together science centres and museums, schools, research institutions and industry with gender experts and teenagers themselves.

The sustainability strategy aims to ensure that the outcomes of the project remain widely used and available to all stakeholders. In this document, we describe our action plan, which will have two main goals: to increase the scope of the outcomes and to leverage the benefits of the created partnerships.

For this, we base our strategy on a strong communication plan and on the establishment of a network based in a community of interests. We will contact persons active in the field and committed institutions, which advocate for a more gender inclusive science education.

An important fact to consider is that Hypatia is taking over the EU Campaign “Science is a Girl Thing” and is redeveloping it. We will construct new partnerships based on the legacy of this European campaign.

The purpose of this document is to provide a comprehensive overview of the actions to be implemented. This strategy will help Hypatia move beyond its lifetime and to be acknowledged as an important stepping stone towards the establishment of a science and technology based society that combines innovation and equity.

1. Introduction to the Hypatia project

The Hypatia project is inspired by Hypatia, a mathematician, astronomer and philosopher, born in Greece, A.D 350-415. She said “Life is an unfoldment, and the further we travel the more truth we can comprehend. To understand the things that are at our door is the best preparation for understanding those that lie beyond”. The main objectives of Hypatia are:

- 1) To create specialised toolkit modules for schools, science centres, museums, research institutions and industry;
- 2) To organise activities engaging teenagers in STEM using Hypatia tools in order to engage them in a variety of future career opportunities in STEM in a way that is meaningful to them, both in and out of school environments;
- 3) To strengthen interactions among schools, science centres and museums, regional authorities, industries and research centres via the national Hubs;
- 4) To widely disseminate the Hypatia digital toolkit by engaging relevant networks and key stakeholders throughout the project.

In few words, we aim to **empower** different stakeholders, **promote** inclusive gender education, **engage** each community of actors, **collaborate** with them, **ensure** legacy of our actions and **create** new ways of promoting inclusion in science education. The dissemination plan and this campaign strategy are crucial to achieve all these goals.

Hypatia’ s strategy campaign will be led by Ecsite, involving the Consortium members and the Third Parties, in total 18 partners, of which 14 are Science Centres or Museums.

A Hub will be created in each participating Science Centre or Museum each leading one of these Hubs. The role of the Hub is to represent the project in each country, gather representatives of each stakeholder that will follow the project and validate the main results of it, together with a strong contribution in disseminating its results.

Hypatia project has taken stock of previous European projects’ outcomes, revisiting them and capitalising on what has already been achieved. We therefore are very conscious of the use that the resources generated by this project can have in the long run.

2. Sustainability Strategy: Description

This Sustainability Strategy is an integral and fundamental part of the overall project. It encompasses four levels: individual, interactional, institutional, and societal/cultural that were addressed by our theoretical framework (Deliverable 2.1) and aims to ensure that the outcomes of the project remain widely used and available. We have gone through the following steps, in order to reflect on our sustainability actions:

- a) Review the stated outcomes and consider the changes the project will produce. The outcomes will relate to what the stakeholders will be able to improve by using our toolkit. Communicating these benefits is essential.
- b) Next, one must consider the take-up and embedding in practice that is needed to achieve the desired change. What is necessary to encourage the take-up, use, and adoption of these outputs? How can they be made available and accepted? These questions lead us to think about access, preservation, maintenance and intellectual property.
- c) The last step is to think about sustainability scenarios, that help the outputs to live on after the project. We need to think about who might carry them forward, how, and the issues that will need to be addressed to make these outputs self-sustainable.

The consideration of these three steps leads us to the following reflections and conclusions:

Related to a) The fact that the project's outcomes include a toolkit, with modules, guidelines, methods, case studies, knowledge and recommendations to be used by our targeted groups – teachers, science centres & museums and industry & research institutions- is one aspect that enhances the sustainability of the project. These guidelines are the answer to a necessity of practical materials to conduct a non-biased and a gender inclusive education in formal and informal contexts. Therefore, they will be in use after the project finishes because the necessity won't be fulfilled in the timeframe of three years. We are basically promoting a cultural change that will take years to happen and our educational toolkit is a stepping-stone in achieving this shift. The use of the toolkit will be in essence the changes that we want to promote in science education, by fostering girls as well as boys into STEM.

Related to b) the toolkit will be accessible on a website, which will be still available after the end of the project. The WP Leader, Ecsite, will be hosting the website and keeping it after the project. The information and news will be updated on a regular basis and there is no specific website maintenance needed. Ecsite has kept hosting sites after their lifetime as a project. As an example, the project Playdecide and FUND website are still available and when people develop new content, they can still be uploaded.

Materials produced in the project will be licensed under Creative Commons in order to enable their free distribution to anyone interested to read them and use them. Hypatia will provide the opportunity for the material to be shared, used and built upon. The project outcomes will be disseminated as broadly as possible and available on the project's website.

Related to c) regarding the sustainability scenarios, to enhance the usability of the toolkit in the future we are planning to establish solid and fruitful cooperative relations along the way with actors and institution further listed in this document. These relations are meant to be work partnerships that will build upon the results of Hypatia project for the future. It means that we can think together how to wider spread the use of the toolkit, how we can contribute to make the toolkit bigger, and explore funding together. It is a key issue to make sure that these partnerships forged during the project continue to be active in the coming years, making use of the existing and new funding channels in order to support or create new collaborations with science centres and museums, as they will keep their role hubs for gender inclusion in STEM at a national level.

A deeper look to the main outcomes, which will be sustained after the project lifetime, is presented in the following pages. We will assure they are extensively shared and available in as many repositories as possible:

2.1 Toolkit for educators

The toolkit will be a digital tool that will be hosted in the Hypatia project website, providing a significant resource centre for educators. Once tested, the English version of the modules will be uploaded to the Scientix portal. We have already contacted the Scientix team, and we will organise the collaborative work with them in the coming months. Currently, this website is a reference for educators but has a much reduced number of resources around gender and STEM (4 tools). Our toolkit will be an excellent addition, allowing target audiences to access it, learn from them, adapt them to their

own needs and even build on them. This portal has an “On demand” translation service. This constitutes an excellent “jointventure” for us, as the accesibility can be supported in all of the EU languages.

2.2 Guidelines for institutions

One of the key elements of the toolkit produced by Hypatia is that in addition to the activities that educators can implement, it contains guidance and suggestions for schools, museums, research institutions and industry on how to become more gender inclusive in the way they communicate STEM on an institutional level. This material will be overseen by gender experts at the University of Copenhagen and validated by the project’s Gender Panel. So we will have a guideline for gender inclusive actions at an institutional level.

2.3 Hubs

The Hubs coordinated by the science centres and museums and consisting of representatives of each stakeholder will be the key mechanism in the development and implementation of Hypatia activities at a local level. Special attention is given to youngsters and to making the link between schools, museums, industries and research institutions. Hubs will ensure a good dissemination process by acting cooperatively at national level. And this is the basis for a sustainable project. Hubs will be working on establishing partnerships, so that the knowledge and the impact generated by the activities will remain after the project. By consolidating the Hubs creation and bringing together different stakeholders we are also moving towards one of our main goals: to address the different levels that were identified by the UCHP partner: Societal, institutional, organisational, and individual (Deliverable 2.1). Besides this, our project developed a guideline to foster the Hubs creation (Deliverable 3.2). This document contains a series of recommendations to make the most of this space for acting and reflecting at a local level. An important approach, which is detailed in this deliverable, is to spread the importance of the project within the museum team and advocate them. By achieving this task, we are taking a big step towards sustainability: Ownership will be fostered. It is by this means that people will get familiar to the tools, and would experience their benefits.

2.4 Programme of activities

Partnerships forged during the project life span are going to be built to remain active after the end of the project. How? We are aiming to reinforce the dissemination of the project outcomes by agreeing on common activities. All the activities organised under Hypatia's working plan – events and seminars, for e.g.- will be shared and disseminated with the Scientix community, Edmodo and Genportal, among others. We will encourage online collaboration by sharing resources and by constantly seeking for funding opportunities that could be turned into new proposals, in order to augment the project's impact.

2.5 Events: ESW

The European Stakeholders Workshop (ESW) will be a key space for reflecting about the usability of the tools addressing industry and research institutions. This event will be taking place in Brussels, in June 2016 and it's a milestone for this sustainability plan, as it will show us the stakes to be considered in reaching our goals with these target groups.

3. Sustainability Strategy: Action plan

Our action plan will be based on a twofold action. First step will be to identify social communities that will help promoting the project as well as disseminate the outcomes and their use both in the consortium (15 partners) and outside it: funders, scientific community engaged in promoting STEM careers, formal and informal education communities, online resources available for educators, other EU projects related to science communication/RRI/health and other relevant sources.

Once the potential communities are mapped, Ecsite firstly and partners secondly will contact them to raise awareness of the project and as a second step will try to involve them. We will rely on our national hubs to complete the list which at this stage is mainly a map of international actors.

This strategy is complemented with the actions of the Dissemination Plan & Campaign Strategy that can be found on the Deliverable 6.1.

In the following pages we describe the mapping actions and the approach we are going to implement.

3.1 Mapping

Here we present a description of the different communities of interest that we will address and involve to create partnerships in order to assure a good lifespan of the project's results.

a) Funders

During the life of the project and in order to secure its sustainability, a list of international funding opportunities, both public but also private will be prepared and contacted by Ecsite. Private funders that are already involved in programs that promote STEM careers among young people will be mapped. We will also encourage our national Hubs to check funding opportunities within their territories to help develop the life of the outcomes of the beyond the 3 year life span.

b) Researchers and Research Institutions

A considerable number of female and male researchers will be contacted to inform them about the project, to involve them in communication activities and to ask them support for the dissemination of the toolkit. The head of these institutions will also be tackled.

Responsible Research and Innovation, or RRI, is the new approach that embraces societal needs and new ways of conducting research and innovation. One of the established policy agendas is Gender, as an essential issue for European science and innovation. We will communicate about Hypatia to the community of projects addressing RRI, to assure they are aware of the potential uses of the toolkit in the context of research and innovation.

Ecsite will initiate the contact with the NCP network (National Contact Points) to inform them about our outcomes and to think together how can we push the impact of the toolkit even further.

c) Journalists and media committed persons

We will connect with different media persons in order to invite them to be part of this project and its dissemination, focusing in the necessity of having new for Europe's cutting-edge development.

d) Education communities

To involve Scientix and the Gender Portal is part of our project's tasks. Together with these strong education communities we plan to get on board the Edmodo community and we will encourage and support each hub to do the same in their own countries.

The following lists are non-exhaustive and are an ongoing project. They will be enriched with the addition of new actors during the life of the project

Deliverable 6.2

Formal and informal education community

This list contains some of the more relevant networks that gather educators at an international level.

Name	Role	Organisation	Contact
Vlyve Byrne	President	European Association of Head Teachers	CliveByrne@NAPD.ie
Fred Verboon	Director	European Association of Head Teachers	Fredverboon@gmail.com
Ari pokka	President	President of International Confederation of Principals	ari.pokka@jao.fi
Mr Ulf Lundin.	Executive Director	European Schoolnet	info@eun.org
Ms. Annika Elias	President	Confédération Européenne des Cadres	info@cec-managers.org
Mr Silvano Marseglia	President	European Association of Teachers (AEDE)	simarse@tin.it
Martin Rømer		ESTUCE (European Trade Union Committee for Education)	martin.romer@csee-etu.org
Rasmus Aberg	Secretary General	OBESSU (Organising Bureau of European School Student Unions)	rasmus@obessu.org
David Lopez	President	EUCIS (European Civil Society Platform) - life long learning	info@eucis-III.eu
Peter Hodgson	President	European Forum of Technical and Vocational Education and Training, EfVET	president@efvet.org and
Professor Angela McFarlane	Executive Director	The college for teachers	004420 7911 5536

Scientific Community

Name	Role	Organsaiton	contact
Dr Jon Urch	Public Engagement and Outreach Co-ordinator	Women in Science festival (Uni of Dundee)	j.urch@dundee.ac.uk
Helen Wollaston	Chief Executive	Women in Science and Engineering (Take into account WISE yound women's board)	info@wisecampaign.org.uk
Linda D. Hallman, CAE	CEO	American Association of University Women	connect@aauw.org
		Women in Science L'Oreal	
Yelle Inverso	Coordinator	FORWARD (Focus on Reaching Women for Academics, Research and Development)	forward.office@gallaudet.edu.
Dr. Rachelle Heller	Professor	FORWARD (Focus on Reaching Women for Academics, Research and Development)	sheller@gwu.edu
Dr. Catherine Mavripilis	Professor	FORWARD (Focus on Reaching Women for Academics, Research and Development)	catherine.mavripilis@uottawa.ca
Tonya Blowers	Programme coordinator	The Organization for Women in Science for the Developing World	info@owsd.net
Dr. Elizabeth Pollitzer	Managing director	PORTIA	info@portiaweb.org.uk
Dr. Elizabeth Pollitzer	Chair	Gender Summits	team@gender-summit.com
Janet Bandows Koster	Executive Director	Association for women in science	koster@awis.org
Brigitte Mühlenbruch	President	European Platform of women scientists	contact@epws.org
Claudine Hermann	Vice-President	European Platform of women scientists	contact@epws.org
Prof. Dr. Christof Wolf	President	Center of Excellence Women and Science	christof.wolf@gesis.org
David Ruebain	CEO	Equality Challenge Unit	David.Ruebain@ecu.ac.uk
Sarah Dickinson	Manager	Athena Swan Charter at Equality Challenge Unit	sarah.dickinson@ecu.ac.uk
Dr. Nathalie Pettorelli	Founder	Soapbox Science	soapboxscience@gmail.com

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Dr. Seirian Summer	Founder	Soapbox Science	soapboxscience@gmail.com
Virginija Langbakk	Director	European Institute for gender equality	+370 5 215 7444
Professor Charlene Africa	deputy dean (Gender and Equity)	Uni of the Western Cape	cafrica@uwc.ac.za
Eva Fabry	Director	European Centre for Women and Technology	info@ecwt.eu
Margarita Artal	Secretary General	European Association for women in Science. Engineering and Technology (Witec)	secretariat@witec-eu.net
Rosine Hage-Moussa	President	Society for Canadian Women in Science and Technology	resourcecentre@scwist.ca
Prof. Meena Rajiv Chandawarkar	Vice Chancellor	Karnataka State Women's University	meena_r_c@yahoo.com
Donna Milgram	CEO	National Institute for women in Trades, Technology and Science	(510) 749-0200 phone
Anne Pepin	Project Coordinator	Gender Net Era Net	anne.pepin@cnrs-dir.fr

Deliverable 6.2

List of online resources

Name	Website	Remarks
Scientix	http://www.scientix.eu/web/guest	No remarks
Edumodo	http://www.edumodo.org	No remarks
Learning Resource exchange for Schools	http://lreforschools.eun.org/web/guest	Belongs to European Schoolnet
Science in schools	http://www.scienceinschool.org/about-EIROforum	No remarks
Ingenious (European Schoolnet)	http://www.ingenious-science.eu/web/guest/home	Belongs to European Schoolnet
Inspiring education Science	http://inspiring-science-education.net/	European Union's ICT Policy Support Programme as part of the Competitiveness and Innovation Framework Programme.
STEM learning	https://www.stem.org.uk/	No remarks
Future Morph	https://www.futuremorph.org	No remarks
STEM First	http://www.stemfirst.com/resources/	Contains links to private companies resources

Other relevant sources

Name	Website
EU Prize for Women Innovators	http://ec.europa.eu/research/innovation-union/index_en.cfm?section=women-innovators
European Union Contest for Young Scientists (EUCYS) 20162	http://ec.europa.eu/research/eucys/index_en.cfm
Google science fair	https://www.google-sciencefair.com/en/
Intel Science talent search	https://student.societyforscience.org/apply-intel-science-talent-search?pid=262
Teen tech awards	http://www.teentech.com/
BT Young Scientist & technology exhibition and awards	www.btyoungscientist.com/
Big Bang (Engineering UK)	https://www.thebigbangfair.co.uk/
Lego Education	http://education.lego.com/nl-be/?showlanguageselector=true
Ada Awards	http://adaawards.com/
Digital girl award	http://digitalgirlaward.com/
Greenlight for girls	http://greenlightforgirls.org/
Your Life	http://yourlife.org.uk/
Sci-Tech Challenge	http://www.scitech.ja-ye.org/

3.2 Approach

Once the first mapping has been completed, Ecsite will start contacting the first round of organisations and individuals that have already been identified. Then we will approach the online resources, to inform them about the outcomes of the project and to seek their engagement in the project. Finally other relevant sources will be informed about the project. At last and towards the end of the project, together with the European Stakeholders Workshop, we will be inviting potential funders to get involved in the project (especially foundations of corporations).

On the other hand, Ecsite will promote the toolkit among its 350 partners. Gender is an important issue for our members and we will promote the publication of articles on our Spokes magazine. Ecsite’s annual conference host each time several presentations gender-related. As a network committed to informal science education in science centres and museums, we will continue fostering this thematic in our conferences.

As an overview, these coming activities for 2016 are related to this Sustainability plan: a

	Responsible	Month	Connected with
European mapping of key actors	Ecsite	7 Mar2016	-----
Website and EE campaign begins	Ecsite	7 Mar2016	Dissemination plan
Mapping of local actors	Partners, Third Parties, Ecsite	8 Apr2016	Connected with dissemination plan
Toolkit’s module on line	Ecsite	14 Sep2016	-----
European Stakeholders Workshop	Ecsite	11 Jun2016	-----

The activities for the coming years in terms of sustainability will be added at the end of 2016.

4. Final reflections

As mentioned in the introduction, this Sustainability Plan is conceived as a first guiding document to start building up a solid ground from where we assure the usability of the toolkit and all the project outcomes. It will be reviewed every 6 months, so we can have an updated document that includes the new results, partnerships and possible agreements done on the way.

In that sense, it is a work-in-progress document, which is also a core characteristic of a good sustainability plan.

