# ENGAGE

## SEVENTH FRAMEWORK PROGRAMME

**DELIVERABLE D6.12:**

**Annual report on Transform   Programme Implementation**

Project Acronym: ENGAGE

**Project Name:**  Equipping the Next Generation for Active Engagement in Science

**Call:**     SCIENCE IN SOCIETY [2013.3.2.2.1-1]

**Project Type:**          Coordination and support actions

Grant Agreement No.:     612269

**Project Start Date:**      1st January 2014

Project Duration:      36-Months

Due date of Deliverable:   Month XX

Actual Submission Date:   30/01/2017

**Task Leader:**          Matteo Merzagora and Vanessa Mignan (TRA)

**Report Author(s):**       Matteo Merzagora, Claire Potier, Vanessa Mignan (TRA)

Report Collaborator(s):    Tony Sherborne, Andy Bullough

Dissemination Level:      PU

## THE ENGAGE CONSORTIUM

| | |
|---|---|
| Centre for Science Education – Sheffield Hallam University (Coordinator) | UK |
| Knowledge Media Institute – The Open University | UK |
| Institute of Applied and Computational Mathematics, Foundation for Research and Technology | Greece |
| Innovation in Learning Institute | Germany |
| eXact learning Solutions | Italy |
| Traces | France |
| Valahia University Targoviste | Romania |
| Weizmann Institute | Israel |
| Universitat de Barcelona | Spain |
| Vestfold University College | Norway |
| Biotechnology & society department, Delft University of Technology | Netherlands |
| School of High Pedagogy of Freiburg | Switzerland |
| Lithuanian University of Educational Sciences | Lithuania |
| Department of  Education, University of Nicosia | Cyprus |

## DOCUMENT HISTORY

| Version | Date | Comment | Modifications made by |
|---------|------|---------|----------------------|
| 1 | | First Draft shared with coordinator | Vanessa Mignan and Matteo Merzagora |
| | | | |
| | | | |
| | | | |

## CONTENTS

# 1 EXECUTIVE SUMMARY

D6.12, "**Annual report on Transform  Programme Implementation**" provides an overview of the final scheme for the Transform phase of the ENGAGE projects, the process for monitoring progress toward objectives, and the actual implementation of the project at December 2016. It is strongly linked to D6.11, were the basic strategic axes of the Transform phase were outlined, and to the D5.10, which provides somehow parallel information for the Adapt stage.

In Chapter 2 of this document, we recall briefly the key characteristic of Transforms: from the original definition provided in the DoW, through several discussions taking into account evaluation of the Adopt and Adapt phases, down to the final Transform scheme agreed during the consortium meeting in Sinaia in June 2016. The revised calendar of transform activities is also reported in this section.

Chapter 3 provides some more detailed insight in the nature of Global and Local transform project. The need for such a distinctions emerged following evaluation of previous stage, and was aimed at recognizing the original nature of Transform – in which projects should be teacher-led – and the need of clear examples to be followed, on order for the teachers not to feel lost in a rather new field such as RRI teaching.   Through a series of meetings and discussion, the consortium came to the agreement of developing centrally two projects, informed by the ENGAGE pedagogy of the Adopt and Adapt phase. This will in part be used by teachers "as such" or adapted, or used as inspirational examples to develop open, fully teacher-led projects. Specific requirements were set on the number and nature of local projects to be developed in each country. These are reported in Chapter 4. In order to further support partners in accompanying teachers in local projects, a gallery of "transform like projects", already under development or tested in each country, was shared within the consortium, leading to peer-learning and motivation among partners.

Chapter 4 is devoted to the process of monitoring. 3 main tools are currently in use: a quantitative monitoring tool, that each partner is updating, as new teachers are involved in developing new projects; a one-2-one meeting scheme led by WP6 leader, to support partners and monitor their progress individually; an evaluation form, to be filled in by partners at completion of each new teacher-led, local project.

In Chapter 5, we report the main advancement concerning the online or face2face workshops/MOOCS that are currently taking place in the different countries.

Chapter 6 is a synthetic, operational description of all aspects needed to implement the Transform phase. This is a summary that was presented, corrected and agreed during the June 2016 consortium meeting. It represent the operational guideline to be used by partners in combination with D6.11 and several PPT discussed during online and F2F meetings.

Two Appendixes complete this document.

Appendix 1 contains the final draft of the evaluation form for case studies, developed by the internal evaluator and adapted to partners and Transform need in a specific workshop during the June 2016 meeting. This form will be filled as local transform projects are completed.

Appendix 2 includes the gallery of "transform like projects" that partners shared in order to contribute to a mutual learning, and a common definition of Transform RRI teaching.


Overall, the progress of the ENGAGE project confirmed the overall scheme originally designed. Several discussions allowed a clarification of the nature of "RRI teaching". Such definition need to take into account both the general definition and features of RRI provided by EU projects such as RRI Tools, and the practical needs of science teachers on the field, known from the literature, from direct experiences of the partners, and from the results of the Adopt and Adapt phase of the ENGAGE project. This process involved several intense discussions, not always consensual, but always characterized by a constructive attitude. They led to what can be considered a very interesting compromise: although no radical innovations were introduced, Transform materials – also thanks to the paved way of Adopt and Adapt – appear to be an excellent way for teacher to develop autonomously RRI inspired teaching, while feeling secure in fulfilling the requirements they are asked in their working environment.

The relevance and crucial importance of contact with real world situations represent the most critical issue, that will probably need to be further explored in future project in an Open schooling perspective. In fact, ENGAGE experience, in particular for the Transform phase, might represent a very valid input for Open schooling oriented projects that will be launched in the forthcoming years.

In fact, it clearly emerged from ENGAGE discussions that promoting the direct interactions with the keyplayers identified for Transform – Researchers, Informal science education institutions, and the media – represent a big step out of the comfort zone of institutions developing teachers' professional development schemes. Also, the use by teachers of information sources at their natural status (such as article found on the Internet, not pre-treated by educational experts), is perceived as risky by some, while as an essential, non-negotiable aspect of RRI teaching by others. These discussions are essential in order to better understand the pathways leading to mainstreaming RRI in science education curricula, in order to avoid on one side a simple cosmetics of old-style IBSE, and on the other side innovative project that fail to disseminate outside a small circle of motivated teachers. At the current state of advancement, ENGAGE provides solid materials, interesting training formats, and a community of engaged teachers that will help validate and/or improve several approaches and nuances in RRI teaching acceptable for the current educational systems.

## 2    OVERVIEW OF TRANSFORM

### 2.1    Original requirements

According to the DoW, the main objectives of the TRANSFORM phase are:

- to propel a proportion of teachers from the ADAPT stage to reach the 'transformational' stage through experiences such as **co-creation of resources**, **training other teachers** or mentoring.
- to encourage deeper, sustained reflection about teacher practice and the nature of **science**, its applications and implications, and its **importance for students' futures** and **society**.
- To equip these teachers as the **'go to person'** in a science department, who can support colleagues in developing their own RRI practice.

**Quantitative targets**

From a quantitative perspective, the following targets have been defined:

| | YEAR 1 | | | YEAR 2 | | | | | YEAR 3 | | | | | | | |
| | ADOPT | | | ADOPT | | | ADAPT | | ADOPT | | | ADAPT | | TRANSFORM | | |
| **Partner** | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 4 |
| **FAU** | 700 | 25 | 30 | 700 | 25 | 30 | 400 | 25 | 1400 | 25 | 30 | 400 | 25 | 80 | 25 | 25 |
| **SHU** | 650 | 25 | 30 | 650 | 25 | 30 | 300 | 25 | 1300 | 25 | 30 | 300 | 25 | 60 | 25 | 25 |
| **TRA** | 600 | 25 | 30 | 600 | 25 | 30 | 300 | 25 | 1200 | 25 | 30 | 300 | 25 | 60 | 25 | 25 |
| **UB** | 450 | 20 | 25 | 450 | 20 | 25 | 230 | 20 | 900 | 20 | 25 | 230 | 20 | 60 | 20 | 20 |
| **VUT** | 200 | 20 | 20 | 200 | 20 | 20 | 100 | 20 | 400 | 20 | 20 | 100 | 20 | 20 | 20 | 20 |
| **FOR** | 100 | 15 | 20 | 110 | 15 | 20 | 60 | 15 | 220 | 15 | 20 | 60 | 15 | 20 | 15 | 15 |
| **WZ** | 80 | 15 | 15 | 80 | 15 | 15 | 40 | 15 | 160 | 15 | 15 | 40 | 15 | 20 | 15 | 15 |
| **HIV** | 50 | 15 | 15 | 50 | 15 | 15 | 30 | 15 | 100 | 15 | 15 | 30 | 15 | 15 | 10 | 10 |
| **DICS** | 40 | 10 | 10 | 40 | 10 | 10 | 20 | 10 | 80 | 10 | 10 | 20 | 10 | 10 | 5 | 5 |
| **LEU** | 40 | 10 | 10 | 40 | 10 | 10 | 20 | 10 | 80 | 10 | 10 | 20 | 10 | 10 | 5 | 5 |
| **UNI** | 20 | 10 | 10 | 20 | 10 | 10 | 10 | 10 | 40 | 10 | 10 | 10 | 10 | 10 | 5 | 5 |

Key: 1 = Materials usage (new teachers/year) 2= Online course participation (teachers per year), 3= Workshop attendance (teachers per year), 4 = Mentoring in community

It is estimated that 10% teachers in the ADAPT will propel to TRANSFORM and that at least 25% of teachers using the TRANSFORM ENGAGE programme will have made a significant positive shift in at least 4 of the 5 'dimensions of RRI teaching' model. As stated in D6.11, the TRANSFORM phase can be considered appealing also for teachers that have a good knowledge of IBSE principles and are engaged in teaching contemporary

science and the social implications of scientific advancement, even if they did not go through the first two steps of ENGAGE. The participation of these teachers will in any case be encouraged, as they would contribute to the ENGAGE general objectives.

**Qualitative targets**

The TRANSFORM phase represent a shift in teacher professional self-image for RRI teaching to be part of their repertoire. They have become experienced having gone through the Adopt and Adapt programme, and have started to engage in a Transform Project (Materials) or online course. They will play the role of mentor in the ENGAGE community, guiding more novice teachers who are working on the earlier stages. They are becoming 'expert RRI teachers'.
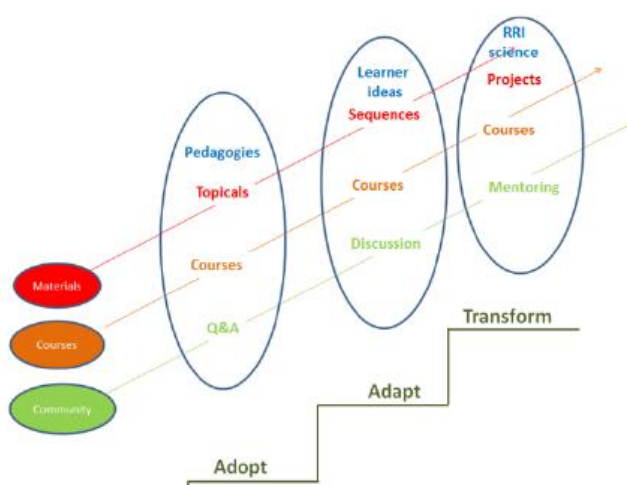


## 2.2     Summary of TRANSFORM features

The main features of Transform have been detailed in D6.11, starting from the original planning and adapting them as a consequences of lesson learned in the Adopt and Adapt phases.

These features has been reviewed and agreed in a consortium meeting in Romania (2-4 June 2016). We will summarize here the results of these agreements.

### 2.2.1     RRI Teaching

A key feature of Transform is pushing RRI teaching at the very core of the materials, courses and community.

Key characteristics of RRI teaching has been defined as follows.

* present science in relation to its social, economical and ethical consequences in a wider social context ;

- focus on current, cutting edge research in order to understand the relevance of science in contemporary world, but also as a way to motivate students for learning school science ;

- create links with other key actors such as researchers, informal science education institutions such as science centres and science festivals, the media, the innovation and creative sectors, the industrial sector.

**2.2.2 Transform phase**

Based on D6.11 and the above definition of RRI teaching, the transform phase of the Engage project can be characterized by:

- Involvement of relevant stakeholders in the process (mainly scientists, media, and informal science education institutions)

- Focus on an open-ended, project based pedagogy

- Engagement of 'experts' teachers. Teachers become authors of their projects.

- Focus on RRI issues: role of media, ethics, socio-scientific issues, socially relevant impacts of research, the nature of science in society, etc

The general scheme of Transform below summarizes these aspects:
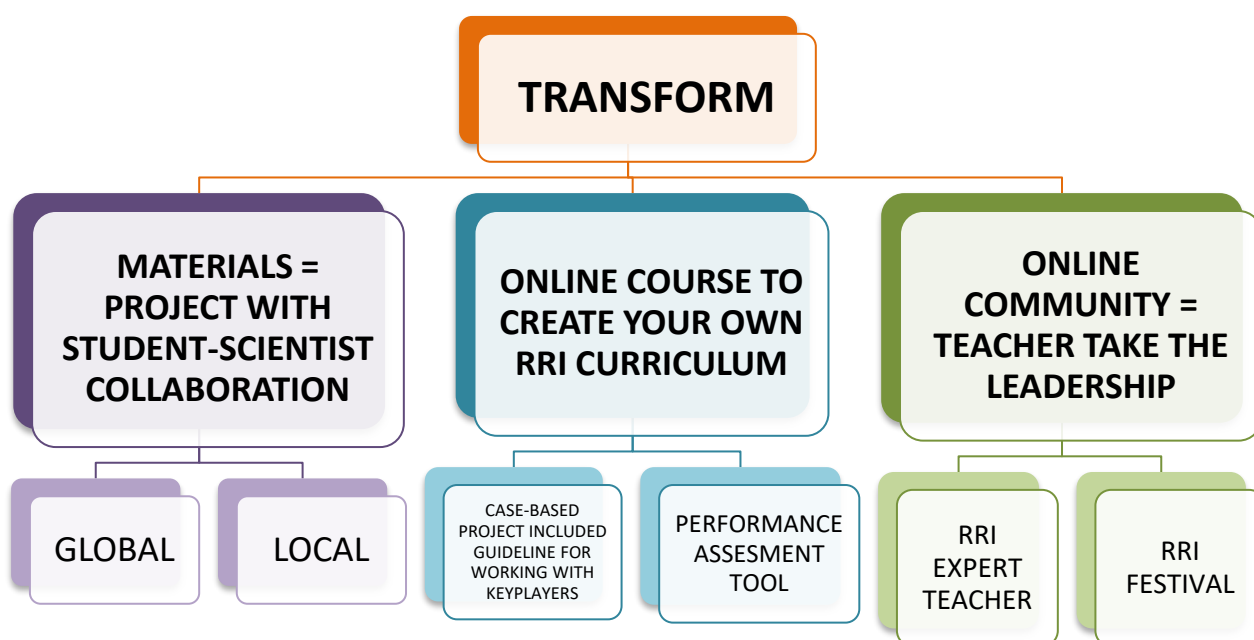
### 2.2.3 Global and local materials (projects)

In terms of the Materials, a distinction has been made between local and global projects. In fact, it has been acknowledged and agreed that a combination between a centrally led framework, and open, fully teacher-led projects would fit best the Engage general strategy.

Following this, 2 main Global projects materials have been developed centrally, namely "Exterminate" and "Ecophone". These can either be used directly by Transform teachers, or serve as examples to scaffold the local, teacher led projects.

The characteristics of local projects have been defined and agreed as follows.

- Local Transform projects are "Teacher led projects involving scientists/media/museums... (that is, they involve direct contacts with real life situations/actors)".
- Local Transform projects can be :
    - inspired by global transform project
    - based on existing Adapt or Adopt materials
    - fully original RRI teaching projects developed by Transform teachers
- Local Transform projects are monitored, documented and disseminated by the Engage partnership
- Local Transform project can be suggested by the local Engage partner, or proposed by expert teachers.

The role of the Engage partners with respect to local Transform project has been defined as follows:

- Support teachers in developing their projects (this can range from a simple phone-call at the beginning and a the end of the project, up to a continuous collaboration all along the project implementation, …)
- Support teachers in contacting and interacting with scientists, media, informal science education institutions, etc.
- Support teachers in becoming community leaders
- Ensure the project documentation

### 2.2.4 Local projects: minimum requirements

The redefinition of local transform project led to the necessity of defining minimum requirements. That is, each partner should implement a minimum number of local projects, representing a subset of the overall Transform targets. These have been agreed in the consortium meeting as follows.

| Partner | TRANSFORM | | |
|---|---|---|---|
| | 1 | 2 | 4 |
| FAU | 80 | 25 | 25 |
| SHU | 60 | 25 | 25 |
| TRA | 60 | 25 | 25 |
| UB | 60 | 20 | 20 |
| VUT | 20 | 20 | 20 |
| FOR | 20 | 15 | 15 |
| WZ | 20 | 15 | 15 |
| HIV | 15 | 10 | 10 |
| DICS | 10 | 5 | 5 |
| LEU | 10 | 5 | 5 |
| UNI | 10 | 5 | 5 |

3 local projects minimum

2 local projects minimum

1 local project minimum

Key: 1 = Materials usage (new teachers/year 2= Online course participation (teachers per year), 3= Workshop attendance (teachers per year), 4 = Mentoring in community

These figures represent a minimum. However, a higher number of original, teacher led and Engage inspired projects is strongly encouraged.

### 2.2.5 Guidelines for stakeholder engagement

A key feature of the Transform stage is the engagement of relevant stakeholders. The stakeholder identification, stakeholder analysis and key guidelines for engagement of each stakeholder were introduced in D6.11, and reviewed in the June 2016 project meeting.

### 2.2.6 Follow-up and monitoring

Transform implementation is monitored through a shared spreadsheet filled in continuously on-line by each partner. The monitoring followed the same procedure set-up by WP leaders of the Adopt and Adapt phases. State of the art of the monitoring at December 2016 is reported in the following sessions.

In order to support partners in the implementation of the Transform phase, one-to-one remote meetings were organised with all partners (except one, for purely practical reasons) by the WP coordinator TRACES, followed by a continuous monitoring.

## 2.3 TRANSFORM calendar

A revised calendar was adopted in the Consortium meeting in Sinaia (Romania) in June 2016, and was included in a revised version of D6.11. It allowed to adapt to the delays in the completion of other WP tasks, and to specific needs of adaptation to school calendar emerged from partners during revisions sessions of the global Engage calendar.

In the table below, the "Execution timeline" column present the timeline agreed in June 2016. Actual date of completion or state of advancement is reported in column "Status".

| Subtask | Execution timeline | Status |
|---------|-------------------|--------|
| *Local dissemination strategies* | August 2015 | Completed |
| *Identification and development of key transform features* | September-October 2015 | Completed |
| *Revision and agreement among partners of transform characteristics* | Israel consortium meeting, October 2015 | Completed |
| *Definition of "global" and "local" transform features* | October – December 2015 | Completed |
| *Realisation of "global transform materials" (SHU)* | December - June 2016 | Completed |
| *Collection of examples and good practices of "transform like" projects and experiences among partners* | December - June 2016 (examples available on line at April 2016; presented in FM on-line meeting in May 2016, discussed in Romania consortium meeting) | Completed |
| *Identification and agreement on MQT and minimal requirement for Transform activities* | June 2016, Romania consortium meeting | Completed |
| *Translation and localisation EXTERMINATE* | End of July 2016 | *Completed (September 2016)* |
| *Translation and localisation ECO PHONE* | End of August 2016 | Completed *(October 2016)* |
| *List of actual contact and actions undertaken following the local Transform dissemination strategy.* | End of July 2016 | Ongoing for all partners, progress is good |
| *Documents explaining Transform projects to be used by partner and teachers (TRACES)* | End of July 2016 | *Completed Auugust 2016* |
| *Materials for teachers (TRACES +* | End of September 2016 | *Ongoing* |

h t t p : / /  E n g a g i n g S c i e n c e . e u

| | | |
|---|---|---|
| *SHU)* | | |
| *Website ready to display local projects* | September 2016 | *Completed* |
| *Development and implementation of TRANSFORM projects* | September – January 2016 | *Ongoing* |
| *Monitoring and reporting of TRANSFORM local projects* | September – January 2016 | *Started for some partners* |
| *Showcasing of TRANSFORM project* | September 2016 – March 2017 | *Started for some partners (highly dependent on partners local activities)* |

# 3 Global and Local projects

## 3.1 The global projects

Two global projects were developed centrally by SHU, namely "Exterminate" and "Ecophone". They showed a very good reception among teachers. They complete the set of ENGAGE materials, following Adopt materials (simple, one-lesson, ready to use materials) and Adapt materials (adaptable to longer schemes). They constitute at the same time materials usable "as such", and example of Transform type projects, that can inspire teachers in transforming Adopt and Adapt materials, or in developing original RRI teaching schemes.

The general pedagogical principles were included in D6.11.

The finished materials are available on the ENGAGE website and have been translated and localized in all partners languages and countries.

## 3.2 The local projects

### 3.2.1 Transform like, inspirational project gallery

A gallery of exemplar local project was built collecting best examples from each partner. This gallery is shared on-line, and was presented both at a remote FM meeting and at the June project meeting. It represents a reference base, that local partner can use to inspire their own activities, or even offer them as examples for the involved transform teachers.

The proposed projects are included in the Appendix 1.

Cyprus: involving geneticists to discuss with teachers the "making decision" materials.

France: "in the brain of a teenager", a project leading students to develop and test original experimental protocols to answer a question about their own brain.

Romania: application of ENGAGE material scheme to a topic "nanomaterials – the future of the human evolution », in collaboration with local scientists.

Israel : "chemistry & our life" – A collaboration between scientists, industry (ICL), and media.

UK-Brasil : a project on GM decision in Brasil, involving 1,473 learners, 86 teachers and 36 scientists and experts

Spain : a citizen science project led by students, following the Big bag ban materials and using the "Sea observers portal"

Greece : Transform like materials developped as assignement during CPD workshop in Teacher training institute of ASPAITE Patra.

Most of the partner countries have started the development of local transform projects. The state of advancement is reported in the section below.

# 4   Monitoring Transform

The transform activities are monitored through 3 main actions:

- An online spread-sheet, filled in by partners, analogous to the one used for Adopt and Adapt phases
- One-to-one conversations led by WP leader Traces with each individual partner
- An evaluation form following the completion of the activities

One-to-one support sessions have been suggested by the external evaluator and the coordinator, and proved to be very important for supporting the transform phase. They took place in November and December 2016, and will continue throughout the final phases of the project.

The evaluation forms (case studies) were developed by the evaluator, and adapted in order to serve as a monitoring instrument for the local projects implementations. The results will be available in the final phases of the project and will be essential to inform the legacy of the Engage project.

In the following, we report the state of advancement of local and global transform projects.

## 4.1   Global projects implementation

The following tables show the state of the art of the Transform implementation at beginning of December 2016. These date are constantly evolving. No comparison is possible among countries at this stage, as the implementation of global transform projects is highly dependent on communication campaign, MOOCs, workshops, that occurs at different times in different countries.

### 4.1.1   Exterminate

| Country | EXTERMINATE | | | |
|---|---|---|---|---|
| | Status | Number of download | Number of comments | Numbers of like |
| Germany | Translated and Localised | 16 | 0 | 0 |
| UK | Translated and localised | 699 | 1 | 3 |
| France | Published | 132 | 0 | 3 |
| Spain | Published | 137 | 1 | |
| Romania | Published | 287 | 9 | 2 |
| Greece | Translated and localised | *To be published end November* | | |

| Israel | tranlated and localized | | | |
|---|---|---|---|---|
| Norway | Published | 75 | 1 | |
| Switzerland | Published | | | |
| Lithuania | Translated and localised | 178 | 20 | 1 |
| Cyprus | Published | 0 (published November 15th) | 0 | 0 |

### 4.1.2 Ecophone

| Country | ECOPHONE | | | |
|---|---|---|---|---|
| | Status | Number of download | Number of comments | Numbers of like |
| Germany | Translated and Localised | 9 | 0 | 0 |
| UK | Translated and localised | 498 | 2 | 2 |
| France | Published | 235 | 1 | 1 |
| Spain | Published | | | |
| Romania | Published | 362 | 10 | 1 |
| Greece | Translated and localised | Will be puplished on 23rd Nov | | |
| Israel | tranlated and localized | | | |
| Norway | Published | 72 | | |
| Switzerland | | | | |
| Lithuania | Translated and localised | 137 | 11 | 0 |
| Cyprus | Published | 0 | 0 | 0 |

## 4.2 Local projects

The following table summarizes at December 2016 the local materials being produced by partners.

| Country | Topic + dilemma | Status | N. of download | N. of comments | N. of like |
|---|---|---|---|---|---|
| Germany | | Work in progress | | | |
| UK | A project version of Man or machine - with the support of an engineer. AND a collaboration on Exterminate with schools in Brazil. | Work in progress | | | |
| France | Feed the world : do we change our nutrution habit in order to save the planet ? | Published and disseminated | 220 | 0 | 2 |
| Spain | EXO planets | Work in progress | To be published on the last week of January | | |
| Romania | | Work in progress | | | |
| Greece | 1. Vaccines (Should vaccination be obligatory to children or should parnets have a choice?) 2. electonic cigaretes (For or against recent law in Greece that does not allow the use of e-cigarettes in-doors in public places?) | Work in progress | | | |
| Israel | | Work in progress | | | |
| Norway | | Work in progress | | | |
| Switzerland | Legal time restrictions for video games? or topic to be worked out during the online course. | Work in progress | | | |
| Lithuania | Firefighter: is it safe to use e-textyle for the production of firefighters' clothes? | Published and disseminated | 170 | 23 | 0 |

| Cyprus | Using blood tests to identify genetic abnormalities to embryos | Work in progress |
| --- | --- | --- |

## 5   MOOCS? Workshops?

| Country | Real MOOC or buffet ? | Number of registration | Number of participants | Number of completion |
|---|---|---|---|---|
| Germany | try for both | 14(we will have one MOOC for all phases) | | |
| UK | Buffetx | Content being produced | | |
| France | Both | 11 | | |
| Spain | Real MOOC | 35 | 35 | 12 |
| Romania | Real MOOC | 40 | 40 | |
| Greece | Real MOOC | will start on the 28th of Nov- more than 15 people ftom the adop and adopt mooc expressed interest | | |
| Israel | | | | |
| Norway | Buffet | 3 but still recruiting | 3 but still recruiting | |
| Switzerland | Both | 10 | 5 | |
| Lithuania | Real MOOC | 15 | 14 | 10 |
| Cyprus | both | | | |

h t t p : / /  E n g a g i n g S c i e n c e . e u

# 6 Transform implementation outline

The following paragraphs present a synthetic outline (a sort of "ENGAGE Transform on a shoestring") allowing a quick overview of transform implementation. This was presented in illustrated and interactive form to the WP6 partners, and serves as basis for the final stages of the project.

## 6.1 What is RRI teaching?

- present science in relation to its social, economical and ethical consequences in a wider social context ;

- focus on current, cutting edge research in order to understand the relevance of science in contemporary world, but also as a way to motivate students for learning school science ;

- create links with other key actors such as researchers, informal science education institutions such as science centres and science festivals, the media, the innovation and creative sectors, the industrial sector.

## 6.2 What are the main features of ENGAGE TRANSFORM?

- Involvement of relevant stakeholders in the process (mainly scientists, media, and informal science education institutions)

- Focus on an open-ended, project based pedagogy

- Engagement of 'experts' teachers. Teachers become authors of their projects.

- Focus on RRI issues: role of media, ethics, socio-scientific issues, socially relevant impacts of research, the nature of science in society, etc

## 6.3 What is the "stakeholder engagement" task?

**What is Stakeholder engagement?**

- Key stakeholders are: scientists, media, science centres (+ education, industry, etc)
- Before starting local projects, partners should build partnership/contacts ex-ante
- During local projects, partners should mobilise contacts on local teacher-led projects

Further details can be found in D6.11 (Chapter 3 and 4)

**How will it be monitored?**

- Partners should provide a list of activated contacts by July 2016, based on the local strategy previously developed and reported in the google drive questionnaires in August 2015 (http://tinyurl.com/jqop399)
- Monitoring of the interactions during the projects' execution: few questions are included in the monitoring tool for local Transform projects (see Appendix 2).

**Minimum requirements:**

- At least 5 institutions for each category contacted
- Implication of at least 1 category in each local project.

## 6.4    What are local and global transform projects?

- "Global" transform projects are materials on 2 topics, developed at Sheffield Hallam University. They provide teachers examples of a Transform project. Teachers can download them, be inspired by them to develop independent projects, or simply use them as "advanced" Adapt materials, following them entirely.

- "Local" transform project are initiated by teachers in collaboration with local partners. They can be based on Adopt or Adpat materials, thus representing an extension of them, or they can be completely new. Teachers and partners are free to develop any type of local project in terms of topic, structure, and pedagogy, as far as the key features set out in point 6.2 are fulfilled.

## 6.5    What are the quantitative targets?

Partners can chose to promote global materials or local projects. However, a minimum number of local projects is required. On the contrary, partners can decide to fulfil the target set out in the DoW promoting only local projects. The required number of expert teachers developing, running and reporting Transform projects is indicated in the Table in section ???.  In summary:

FAU: 80 material usages, at least 3 local projects

SHU, TRA, UB: 60 material usages; at least 3 local projects

VUT, FOR, WZ: 20 material usages, at least 2 local projects

HIV: 15 material usages, at least 2 local projects

DICS, LEU, UNI: 10 material usages, at least 1 local project

## 6.6 How will local Transform projects be documented and monitored?

**Documenting and sharing**

- A gallery of projects in local language, in a free format, will be included in the local websites
- A summary project gallery, in English, will be hosted by the English website and linked to from the national languages. *(Format under discussion)*
- Best practices of interactions with media/scientists/museums are collected and shared in all website (*format under discussion*)

**Partners task:**

- Fill in the "Progress against target" on-line shared spreadsheet as activities occurs.
- Fill in the « case study » form after the activities. Some of the form entries will be used to fill in the Gallery of projects.
- Support teachers in sharing their projects locally (through teachers blogs, partners' institution website, etc. ) or globally (e.g., within Scientix).

**Minimum requirements:**

- 1 "Dury's form" per project filled no later than 2 weeks after completion
- All projects presented in website no later than 2 weeks after completion.

## 6.7 Local projects: summary

**Local projects are:**

- Teacher led projects involving scientists/media/museums... (direct contacts with real life situations/actors)
- Inspired by global transform project OR based on Adapt or Adopt materials OR original
- Monitored, documented and disseminated by Engage
- (Suggested by Engage partner, or proposed by expert teachers)

**Partners tasks:**

- Support teachers in developing their projects (from a simple phone-call, to a continuous collaboration,…)
- Support teachers in contacting and interacting with scientists, media, informal science education institutions, etc.
- Support teachers in becoming community leaders
- Ensure the project documentation

**Minimum requirements:**

- At least 1 local project for small countries, 2 local projects for medium countries, 3 local projects for big countries

**Teacher guidelines**

A 7 steps process to guide teachers was suggested by the Swiss partner:

1. Pick a subject

2. Problematize

3. Investigate

4. Collaborate with experts

5. Create your own lesson

6. Improve your material

7. Present your material at a festival

# 7  Appendixes

Appendix 1: Local transform project evaluation form

Appendix 2: Examples of "Transform like projects"

## 7.1 Appendix 1 – Local transform projects monitoring form

The monitoring tool for local Transform projects will be mutualized with the external evaluator's case study monitoring. The form will be filled in by partners based on teacher's feedback, or by teachers under partner's responsibility. The following grid has been discussed and validated at the Romania consortium meeting, and will serve both monitoring and evaluation purposes for transform activities.

**LOCAL TRANSFORM PROJECT REPORT (as of December 2016. Minor modification will be included before final use)**

| | |
|---|---|
| **Case Study Title** | |
| **Author(s)** | |
| **Section 1 – 250 words** | |
| **Summary**<br><br>(Brief outline of the project) | |
| **Background**<br><br>(Information on the learning audience, institution etc. which provides a context for the project) | |
| **Involved stakeholders**<br><br>(list of different stakeholders involved in this project) | |
| **Working with scientists and communicators**<br>(describe the type, aim and focus of the cooperation) | |
| **Teacher**<br><br>(define the teacher: male, female, years of experience, experiences other than teaching, education level, teaching | |

| | |
|---|---|
| subject, etc.) | |
| **Students**<br><br>(number of students, age, class, ..) | |
| **Challenge/Dilemma**<br><br>(The problem being addressed by the project) | |
| **Focus on RRI issues**<br><br>(role of media, ethics, socially relevant positive or negative impacts os scientific research, NOS, etc.) | |
| **Approach**<br><br>(A description of how the project sought to address the challenge) | |
| **Intended outcomes**<br><br>(The aim/s of the project) | |
| **Intended outputs /results**<br><br>(The products/results of the project) | |
| **Section 2 – 300 words** | |
| **Obstacles and issues**<br><br>(The difficulties encountered through the delivery of the project) | |
| **Actual outcomes** | |

| | |
|---|---|
| (Those original or additional aims met by the project) | |
| **Actual outputs**<br><br>(Those products – planned or additional - delivered by the project) | |
| **Section 3 – 200 words** | |
| **Lessons learned**<br><br>(List of key learning points from the project) | |
| **Recommendations** | |
| **Next steps**<br><br>(Brief description of the future of the project / related or potential initiatives) | |
| **Further information**<br><br>(Include any references, website, weblog, etc. and contact information for those involved in the project) | |

## 7.2 Appendix 2: examples of "Transform like" projects

We include in the following one example per each partner of "Transform like" or actual Transform projects already carried out by partners. This represents a base-set of examples shared among the consortium to stimulate and guide local transform projects.