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Equipping the Next Generation for Active Engagement in Science

SEVENTH FRAMEWORK PROGRAMME

DELIVERABLE D5.9: Adapt Dissemination & Networking Plan

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 18
Actual Submission Date:	Month 18
Task Leader:	Mario Barajas (UB)
Report Author(s):	Silvia Alcaraz-Domínguez & Mario Barajas (UB)
Report Collaborator(s):	Tony Sherborne (SHU), Fotini Chaimala (FORTH), Sonia Hertzner (FAU), Vanessa Mignan (TRACES), Laura Monica Gorghiu (VUT), Emil Edin (WZ), Yael Swartz (WZ), Elin Aschim (HIV), Harald Bjar (HIV), Ignacio Monge (HEP), Dalius Dapkus (LEU), Maria Evagorou (UNIC)
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	30/04/2015	First Draft shared with coordinator	Mario Barajas & Silvia Alcaraz-Domínguez
2	11/05/2015	Second Draft and templates for localised dissemination plans shared with partners implementing ADAPT	Mario Barajas & Silvia Alcaraz-Domínguez
3	26/06/2015	Submitted for Review	Mario Barajas & Silvia Alcaraz-Domínguez
4	29/06/2015	Final report submitted	Pat Morton

CONTENTS

EXECUTIVE SUMMARY

The goal of the present document, i.e. *D5.9 Adapt Dissemination and Networking Plan* is to coordinate the activities from 11 countries which are delivering the ADAPT stage of the ENGAGE programme. According to the three-step transformation model, this stage lays between ADOPT and TRANSFORM. In other words, ADAPT is a transitional stage, in which teachers make a deeper introduction of RRI in their practice than in ADOPT.

The overall dissemination and networking strategy has been planned by UB, on the basis of the overall approach to dissemination stated in *D7.13 Project dissemination plan with branding materials.* It includes input from all partners implementing ADAPT, who have filled in the templates for localised dissemination plans provided by UB.

More specifically, section 1 provides an overview of ADAPT stage of the ENGAGE programme in terms of goals, targets and strategies. In section 2 we describe in detail the five actions for planning the ADAPT dissemination. All these actions are synthesized in the template for partners to design their localised dissemination plans. Such template is presented in section 3. As a result of analysing the input provided by partners with these templates, we synthesize the main opportunities and threats for ADAPT dissemination in section 4. Section 5 provides advice for partners in the process of implementing their dissemination plans. Finally, section 6 outlines the strategy for monitoring the achievement of the targets during the implementation of ADAPT.

1. OVERVIEW OF ADAPT
1.1. Goals and targets

As stated in *D2.1 RRI guidelines with exemplars for learning materials and teacher training*, ADAPT belongs to deployment phase of ENGAGE. This phase constitutes the rollout of the programme, in which the three stages of teacher professional development (namely ADOPT, ADAPT and TRANSFORM) are implemented.

Each stage corresponds to a Work Package. ADAPT corresponds to WP5, and it is led by Universitat de Barcelona (UB). Eleven partners who are running the engage CPD are contributing to WP5:

- SHU
- FORTH
- FAU
- TRACES

- VUT
- WEIZMANN
- UB
- HiVe

- HEP-PH FR
- LIETUVOS EDUKOLOGIJO
- UNic

The objectives of ADAPT are:

- To deliver in each partner country the ADAPT stage of the ENGAGE programme
- To support teachers to make a transition of their practice towards RRI based teaching
- To motivate a proportion of teachers propel from the ADAPT stage to reach the TRANSFORM stage in the progressive staircase of involvement
- To test the model and its impact in year 2, which will be reiterated in subsequent years, and as the basis of subsequent stages (TRANSFORM)

Quantitative targets
From a quantitative perspective, the following targets have been defined for year 2:

Partner	Materials usage (new teachers / year)	Online course participation (teachers / year)
FAU	400	25
SHU	300	25
TRA	300	25
UB	230	20
VUT	100	20
FOR	60	15
WZ	40	15
HIV	30	15
HEP	20	10
LEU	20	10
UNI	10	10

It is estimated that 25% teachers in the ADOPT stage propel to ADAPT. Similarly, 25% from ADAPT should propel to TRANSFORM.

Qualitative targets

Qualitative targets refer to the learning outcomes of ADAPT. This stage builds teachers' skills to use RRI in the classroom with less prescriptive support than in the stage below, i.e. ADOPT. Whereas teachers in ADOPT use ENGAGE materials to practice already taught content, those in ADAPT can start to teach science in an RRI-based way. The learning outcomes or skills of ADAPT are:

1. Teachers will learn practical strategies to explain concepts relating to RRI, such as evidence and ethics.
2. Teachers will learn ways to take into account students' ideas: existing conceptions relating to RRI
3. Teachers will be able to PREPARE effective lessons with ENGAGE materials
4. Teachers will identify challenges and SHARE strategies for students to talk and debate with Online Teacher's community
   Teachers will be able to assess and COMPARE students' progress

5. Teachers will move to a higher level of expertise as reflective practitioners.

It is assumed that teachers who achieve the aforementioned learning goals will have begun a transition with significant change in their beliefs, knowledge, or classroom practice.

1.2. ADAPT Strategies

In order to achieve the ADAPT quantitative and qualitative targets, 3 strategies will be used: a) materials, b) online courses and c) community.
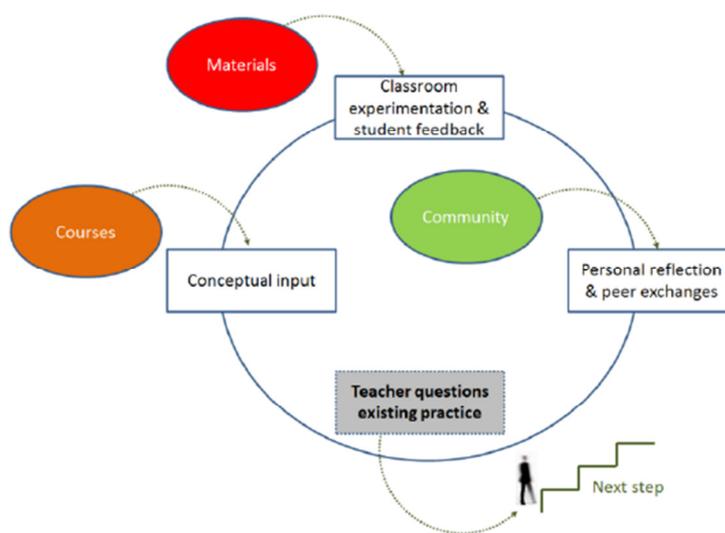

Figure 1: The 3 strategies of ADAPT (materials, courses and community)

Below we describe the specificities of each strategy for the ADAPT stage.

Materials

The materials for the ADAPT are developed by SHU and include a series of lessons. They are longer than those in ADOPT, thus enabling to teach new science content and skills. Teachers will access the materials from the ENGAGE national portals (i.e. Knowledge Hub). The key features of the materials for this stage are (see DoW):

- Scenarios: start by engaging students in a realistic scenario. For instance, animal testing for science.
- Learner ideas: usually, learners tend to consider only their own ideas. Instead, ADAPT materials will make students defend, for example, ideas from others.
- Longer and more flexible: they enable deeper practice of inquiry than topicals (from ADOPT) since they last for about 2 lessons and they are structured around a big idea. They enable teaching complete topics, whereas topicals from ADOPT enable to apply an already taught idea. They afford greater flexibility while providing a lot of guidance to the teacher and minimise preparation time.
- Templates: at an internal level, templates will enable releasing materials shortly after the news story constituting the context of the material comes out.

The following calendar has been established for the development of the ADAPT materials for year 2 of the project:

- End of M19 (July 2015): materials 1 and 2 ready for translation
- Beginning of M21 (September 2015): SHU starts production of ADAPT materials
- Mid M21 (September 2015): Publicising and disseminating ADAPT materials 1 and 2 through teacher associations and social networks (pilot). Partners will disseminate the two materials and deliver a brief report to UB following a template which will include:
    a. Pilot material dissemination channels used
    b. Number of downloads of the materials, estimate number of people reached
    c. Summary of comments received
-

UB will summarise the results of the pilot dissemination and share it with the consortium. This will enable to make the necessary adjustments in the materials and in their dissemination strategy.

Online courses

Five partners led by the Open University (OU) develop the content of the online course for ADAPT. As opposed to ADOPT, partners are not requested to carry out face-to-face workshops for ADAPT. The online courses focus on the toolkit that will enable teachers to teach science content in an RRI way. The tools are:

- Problem-solving lesson tool
    - Processes and skills
    - Thinking guides
- Conversations tool
    - Teach an argumentation framework - to scaffold students towards competence
    - Develop student communication skills - how to facilitate a well-ordered discussion
    - Model an open stance - how to handle controversy

The following calendar has been set for ADAPT online courses (year 2):

- M18 - M22 (June - October 2015): implementation of ADOPT online course in the United Kingdom. Partners localise, translate and advertise their online courses for ADOPT
- M12-M23 (October-November 2015): partners implement ADAPT online course
- End of M23 (November 2015): deadline to report to UB on ADAPT online course implementation

Community

The main goal of the community strategy in the ADAPT stage is to stimulate teachers who have used the materials from this phase to reflect on why and how they work. Teachers can also ask questions or engage in discussions about different aspects of the materials. These forums will be facilitated by expert teachers, who will give novice teachers confidence by answering their questions or concerns. In order to make this possible, the Knowledge Hub will be updated with the following features:

- Discussion forums linked to each material. Expert RRI teachers facilitate these forums, thus providing guidance and advice to novice teachers.
- Teachers have a profile. The profile will include basic data, such as name, school, interests and an optional picture. It will also show statistics such as number of comments made, number of materials downloaded, etc. The profile will also show teachers' progress along the ENGAGE programme (ADOPT, ADAPT and TRANSFORM). Information about the recommended requirements to join each stage will be included as well.
- Possibility to like the materials and the comments

1.3. ADAPT deployment

ADAPT starts on the second year of the project, and it lasts until the end of the third year. What follows is a calendar for ADAPT year 2:

- M13 (January 2015): Starting to plan ADAPT materials, Knowledge Hub, dissemination and implementation
- M18 (June 2015): UB submits D5.9 ADAPT dissemination & networking plan
- M17-M23 (July- November 2015): eleven partners deliver the ADAPT stage of ENGAGE Continuing Professional Development
- M24 (December 2015): UB submits *D5.10 Annual report on adapters programme implementation*

2. STRATEGY FOR ADAPT DISSEMINATION AND NETWORKING PLAN

As explained in previous sections, three strategies have been established to achieve the goals of ADAPT, namely a) materials, b) courses and c) community. Moreover, it is expected that 25% teachers from ADOPT join ADAPT, while other teachers can join this stage directly. At the level of dissemination, we could define the following goals:

- New teachers using the ADAPT materials by year
- Enrolment and completion of online courses

- Reflection on why and how the ADAPT materials work
- Substantial interaction among teachers in the community

These goals are both quantitative and qualitative, and include different things to be disseminated. For these reasons, the dissemination plan must clearly state how to maximise the resources available to achieve the goals. Nevertheless, it must be flexible because it must be implemented in 11 different countries with different approaches to teacher continuing professional development.

For all these reasons, the main principles for the dissemination strategy have been **clarity** and **localisation**. These principles inform the sequence of actions that have been followed. The sequence goes from the overall dissemination strategy to the particular activities planned in each country. Figure 1 below summarises these actions.

Action 1

Understand the overall dissemination strategy

Action 2

Adjust the dissemination strategy

Action 3

Define clear messages

Action 4

Recruit experts

Action 5

Plan the localised dissemination & networking activities
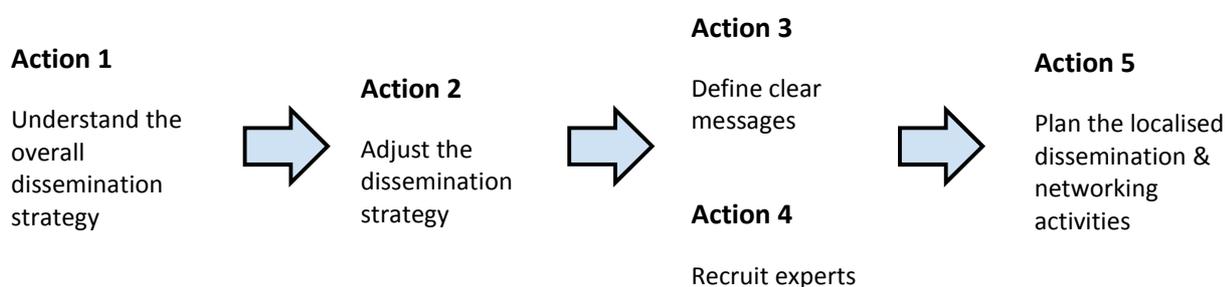
Figure 1: Actions leading to ADAPT localised dissemination plans

- **Action 1**: providing partners with an overview of the ADAPT overall dissemination strategy, in order to achieve a common understanding among the consortium
- **Action 2:** adjust the dissemination strategy to the characteristics of each country. Partners reflect on the characteristics of their national context which can contribute to the success of ADAPT implementation, both in general terms and for each particular strategy (materials, courses and community).
- **Action 3:** guide partners in defining clear messages to invite participants to join ADAPT. On the basis of the adjustments made to the overall dissemination strategy, partners clarify the characteristics of the beneficiaries of ADAPT and the communication channels most used by these beneficiaries. Then, they write messages that could be sent to each audience, based on their needs.

- **Action 4:** in parallel to action 3, partners recruit experts that will give advice for localising the materials, facilitating the course and managing the community.
- **Action 5:** plan the ADAPT dissemination activities. The previous actions enable to plan concrete dissemination activities in different formats and channels. This plan provides an overview and enables monitoring.

All these actions are explained in the following subsections.

2.1. ACTION 1: Understand the overall dissemination strategy

The first action for disseminating ADAPT aims to achieve a common understanding of this stage, i.e. which are the ADAPT targets, goals and strategies. It is necessary that all partners understand how the ADAPT phase contributes to a change in teacher practice towards a greater command of RRI-based science teaching. To that goal, partners can refer to sections "Overview of ADAPT" and the introduction to section "Strategy for ADAPT dissemination plan" of the present deliverable.

2.2. ACTION 2: Adjust the dissemination strategy to national contexts

This action aims to help partners to identify opportunities for the ADAPT stage considering the characteristics of each country. Localising ADAPT should contribute to its success, since it will address more directly the needs of the beneficiaries. For example, embedding the programme in existing channels for teacher Continuing Professional Development (CPD) can increase participants' motivation to enrol and to complete it.

Partners implementing ADAPT have answered the following questions, regarding teachers' motivation towards joining this stage:

- *Why would teachers in your country want to follow ADAPT after having participated in ADOPT?*
- *What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

Since each of the ADAPT strategies has its own particularities, in addition to these general questions, specific ones have been formulated on the materials, the online courses and the community.

Regarding the materials, partners have reflected on how they can help teachers to meet the goals of the national curriculum. Partners have answered to the following question:

- *How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

As for the online courses, each partner has answered to the following questions:

- *Why is it convenient for them to follow an online course, as opposed to a face-to-face course?*
- *To what extent are teachers in your country used to online training?*
- *Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity?*
- *Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

The following questions have been formulated regarding the community strategy:

- *What are the most popular online communities of practice for teachers in your country?*
- *Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions…)?*

2.3. ACTION 3: Define clear messages

Considering the high quantitative targets of ADAPT, online marketing is considered as an effective strategy. Newsletters, blog posts, twitter, social networks enable to reach a great number of people who can take actions such as registering on the site or downloading the materials in a very short time and with little effort. However, these messages are just a small part of all the information that teachers have access to every day. For this reason, it is essential to deliver the right message to the right audience.

Building on this principle, action 3 proposes a process in which partners come up with exemplar messages to send to their key audiences inviting them to join ADAPT, which will highlight exactly the key points of ADAPT that best meet their needs for Continuing Professional Development.

Clarify key audiences
The first step is to clarify the key audience of ADAPT. Partners may refer to D4.7, which states the audiences of ENGAGE (science teachers, school principals, etc.) and choose one or more which they will target.

Identify dissemination channels
Once the audiences are clear, partners reflect on the communication channels used by each audience to learn about new teaching methods, find courses, or stay updated about developments in education. Partners can find their own channels (for instance, a newsletter from the Ministry of Education for all schools). To that goal, it can be useful to check the most used channels as stated in Deliverable 1.2:

- National teacher associations and networks, with advertisement /posts
- Publication in science education magazines
- Posts on social networking sites
- Presentations at national or regional science teacher events.

Including messages about ADAPT in newsletters from other organisations which already have access to teachers may increase the efficiency of the campaigns because they multiply the recipients of the message. These dissemination channels can be used to collect user feedback such as requesting to fill in a questionnaire.

Make explicit the relevance of ADAPT to key audiences
The next step to deliver the right message to the right audience is to make visible which learning goals of ADAPT address the needs of the audiences identified. Partners can refer to deliverable 1.2 or to the qualitative targets stated in section 1 of the present document, where they will find the learning outcomes from ADAPT. Then, they can reflect which of these learning outcomes address better the needs of each audience, and why. As an example, if the key audience is "Science teachers from secondary school", a learning outcome from ADAPT very relevant in Spain can be "Learn practical strategies to explain concepts

relating to RRI" because Spanish teachers are very interested in learning about teaching methods to achieve curricular goals.

Write example messages

Finally, on the basis of the learning outcomes most relevant for each audience, partners write an example message to invite to join ADAPT that could be sent to this audience. UB has provided a table for partners in whom they can write the results of the steps in action 3 (see below).

Key audience 1:		
Most used dissemination channels by this audience:		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
One learning outcome is most relevant to this audience	Provide a reason	Provide an example message inviting to join ADAPT that will inspire your communication with this audience.
Another learning outcome very relevant to this audience	…	…
(Add more rows if needed)		

The name of the audience (for example, secondary school science teachers) can be written in the first row. The second row is devoted to the most used dissemination channel/s by this audience (for example, online teacher portals). Below, it includes three columns. On the left, partners introduce the ADAPT learning outcomes which best address the needs of this audience, and provide a reason in the column in the middle. The right column is used to write an example message to be sent to invite this audience to ADAPT. All tables filled in by country are available in the appendix.

2.4. ACTION 4: Recruit expert RRI teachers and online course / community facilitators

As part of their localised dissemination plans, partners implementing ADAPT must recruit experts to obtain advice on the materials, facilitate courses and manage the community.

It is necessary to recruit at least one **consultant / advisor on the ADAPT materials,** i.e. an experienced developer of curricular content who can help to adapt or improve the materials according to the needs of their target audience.

A great number of the participants from ADAPT will need support in the process of changing their teaching practice. Normally, teachers appreciate support from other teachers who are more experienced. For this reason, it is crucial that partners involve **expert RRI teachers** who mentor novice ones. Following the coaching/mentoring model for Continuing Professional Development, the most important skill that expert teachers must have is well-developed interpersonal communication skills (Kennedy, 2005).

Online course facilitators must follow training to ensure that they understand and can assist teachers in using the ADAPT toolkit. The best way to train course facilitators is that they follow the pilot course as learners before. This will enable them to put themselves on the feet of teachers who will take the course, thus becoming familiar with the structure, communication channels, deadlines and assessment strategies. As a result of being learners in this ADAPT pilot phase, future course facilitators will also provide feedback for improving the course.

In parallel, it is necessary to moderate **online community forums**, linked to each ADAPT material, thus providing guidance and advice. We can outline the following characteristics of such facilitators:

1. They are in the TRANSFORM stage, i.e. master 2 of the 5 dimensions of RRI teaching (Ratcliffe & Grace, 2003)
2. They are knowledgeable about the toolkit of examples, explanations, anecdotes and activities (must have implemented RRI scenarios in the classroom), as stated in DoW.
3. They have good communication and ICT skills
4. They are available and responsive
5. They have experience in encouraging, motivating and recognising teachers' progress and effort to develop their skills

Based on the points above, the following tasks have been defined for online community facilitators:

- Post regularly on the discussion forums linked to each material in the Knowledge Hub
- Monitor teachers' progression, both novices and advanced
- Upgrade teachers' membership to ADAPT
- Motivate teachers to post in the forums
- Encourage teacher reflection and engagement
- Ensure link to MOOC contents
- Summarise discussions and post to the Knowledge Hub

At a practical level, partners have been asked to state name, e-mail of experts and mark in which of the ADAPT strategies s/he will collaborate. Each partner has filled in the table below:

Full name	e-mail	Materials	Courses	Community

The list of experts recruited is available in the appendix, by country.

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2.5. ACTION 5: Plan localised dissemination & networking activities

All the previous actions should help partners to plan specific ADAPT dissemination and networking activities. To that goal, they use a template including the status of the activity (planned or done), the date, the title, the tools used for disseminating it (website, social networks, etc.), the strategy that has been disseminated (new materials, online course, community) and the estimated number of people reached, as well as their level of involvement. The template is online and UB has access to it. See example below:

Status (done/ planned)	Date	Title	Tools used (URLs of web sites, blogs or other means)	What? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement

Partners have filled in two tables, i.e. a table for actions whose goal is to motivate participants to move from ADOPT to ADAPT, and another table for activities which aim to motivate participants to join ADAPT directly.

3. GUIDE FOR LOCALISED DISSEMINATION PLANS

The actions described in the previous section can be summarised in a template for localised dissemination plan, which has been created by UB and that each partner has filled in regarding the following aspects:

1. Embedding activities in your national context	General	Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?
	Materials	How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?
	Courses	Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?
	Community	What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?
2. Key audiences and their needs	Please fill in one table for each ADAPT target audience in your country (add more tables if needed). First, state the most used dissemination channels by this audience. Then, select ADAPT learning outcomes which are most relevant to this audience, with a reason. Then, write an example message encouraging joining the ENGAGE ADAPT phase of CPD that you can use to disseminate ADAPT activities to each audience. (see action 3)	
3. Experts	Please state name, reasons and e-mail of at least 2 experts for ADAPT and mark with a cross the strategies s/he will be involved in. (see action 4)	
4. Planned dissemination activities	Use the following template to plan and keep track of your ADAPT dissemination and networking activities (add more rows if necessary) (see action 5)	

To help partners design their localised dissemination plans, UB has set a folder in Google Drive within WP5 shared with all partners called "ADAPT Localised implementation and dissemination plans". The URL of this folder   is https://drive.google.com/folderview?id=0B6d9d5DfdzdFfjd0bmt1dnFyMmR6dDAtcnZ5SlVxY1EzcG5rLXRtVkt WQUtKNnczQUtNTEk&usp=sharing. In this folder UB has created a document for each country implementing ADAPT, which contains the questions stated above and space to add the information required. The localised dissemination plan for Spain was available on that folder for partners to use it as an example.

4. SYNTHESIS OF LOCALISED DISSEMINATION PLANS

As a result of filling in the localised dissemination templates, partners have elaborated their localised dissemination plans for ADAPT. This section constitutes a summary of main outcomes from the localised dissemination plans collected. It is divided in two parts, namely opportunities and threats.

4.1. Opportunities

At a general level, i.e. for the whole ADAPT phase, two main opportunities have been found:

- **Teachers want to use RRI to teach science in a deeper and more flexible way**
  - Teachers will want to follow ADAPT to access more materials and use ENGAGE to teach skills and content (*United Kingdom*).
  - Teachers are asking for materials that allow teaching complete topics and more practical strategies to deal with ethical issues in the classroom, for example argumentation (*Greece*)
  - It will embed RRI and IBSE more deeply in their practice and reinforce their confidence. (*France*)
  - Teachers prefer to adapt materials to their style and class, they don't like using what is ready (*Germany*)
  - Some are really interested in Science and Society Issues (SSI) and truly wish to expand their toolbox (*Israel*)
  - Teachers are very interested in how to use ENGAGE educational materials in the classroom (*Lithuania*)
  - Teachers that will participate in ADAPT are looking for support to improve their teaching from outside the system (*Cyprus*)
- **Participating in CPD programmes contributes to teachers' promotion**
  - Regulations demand that all in-service teachers participate in CPD programmes oriented in the domain they are teaching and get 90 credits in a period of five years (*Romania*)
  - Some teachers perhaps will be interested in the reward (credit points, certification) that comes with participating in the course (*Israel*)
  - Teachers in Spain obtain promotion points for finishing continuing CPD activities. The longer the activity, the more points they obtain (*Spain*)
  - In science, a large proportion of teachers need to complete formal training to be allowed to keep on teaching (*Norway*)

In particular, some features of the ADAPT **materials** have been found to be strongly linked to the following teachers' needs:

- **Promote a new approach to students' scientific competency:**
  - Teaching the 'scientific enquiry' (Working Scientifically) requirement in 11-14 and 14-16 National Curriculum (*United Kingdom*)
  - RRI concepts are used in some cases in teaching - especially in the subject of Ethics and Religion - but not in the context of the STEM subjects. This is NEW! (*Germany*)
  - Support teachers internal need to motivate students and to introduce interesting lessons (*Israel*)

- **Enable competency-based teaching**
  - Useful for project-work, which is part of the curriculum requiring teachers help students engage in a topic of their interest, in a transdisciplinary way (*Greece*)
  - The ENGAGE ADAPT materials may be perceived by teachers as a tool facilitating the practice of project-based learning with their students, since they include several lessons in which students practise competencies from subjects other than science (*Spain*)
  - The ENGAGE ADAPT materials may be perceived by teachers as a way to ensure competency-based learning (*Lithuania*)

Regarding the **online courses**, partners have pointed to the following success factors:

- **Convenient for teachers, efficient for the consortium**
  - More attractive than getting permission to leave school for a Workshop (*United Kingdom*)
  - Flexibility in learning in terms of time and space (*Greece*)
  - Reach more people and avoid organisation and availability problem (*France*)
  - Participation in online training is the decision of the teacher, the schoolmaster doesn't need to approve it (*Germany*)
  - Online course does not oblige them to travel, can be done in the evening or any time of their choice (*Israel*)
  - Online summer and winter schools for teachers are common in Spain, both at a regional and at a national level (*Spain*)
  - There are no temporal limits (*Switzerland*)
  - CPD programs will have all advantages of online or computer-based learning: reduces travel time and travel cost; allows easy access to a computer, mobile, tablet and Internet connection; allows flexibility to join discussions (*Lithuania*)
- **Teachers' skills which will help them to progress in the online course**
  - We have experience with web conferences and online support for teachers trying out new strategies in school (*United Kingdom*)
  - Ability to manage tasks and time (*Greece*)
  - Science teachers are really used to develop their own teaching materials and to use external resources (*France*)
  - Designing, running and reviewing a lesson plan is a typical assignment within teacher CPD in Spain, both face-to-face and online (*Spain*)
  - Teachers are, in principle, trained to reflect on their lessons. This is a well-known content of the teacher preparation plan (*Switzerland*)
  - Science teachers in Lithuania have enough competence to use computer technology (*Lithuania*)

Finally, partners have reflected on the existing online **communities** of practice for teachers in their countries. Then, they have identified the success factors of such communities, which can be considered as inspiration for managing the ENGAGE community:

- Valid, interesting and reliable materials, discussions around issues/challenges of both novice and experienced teachers. (*Greece*)

- Build confidence for teacher, be available and flexible, working on their motivation, promote pair interactions (*France*)
- Find educational resources uploaded by others, discus about the educational problems: discussion about educational documents; educational innovation; the planning in the education; the content of education (*Lithuania*)
- Wide offer of educational materials, uploaded by other teachers. Experts who answer teachers' questions about the materials (*Spain*)

4.2. Threats

Nevertheless, the analysis of localised dissemination plans revealed some threats, which refer to the materials, the online courses and the community strategies. Below we list them, and we provide possible solutions, on the basis of other partners' strategies or suggestions by UB:

- Online course demand a lot of self-commitment and endurance (*France*) → Emphasize in the advertisement that the course will help teachers to prepare students with the higher level understanding they need for good grades in external examinations (*United Kingdom*); run the training under the Cyprus Pedagogical Institute in order to make it official (*Cyprus*); acreditate the course at a national level (*Romania*)
- Teachers are not used to online courses (*Greece, France*), strictly online courses are generally not popular (*Norway*) → The best solution is to offer a course in a blended-learning format (*Romania*)
- There should be a clear link between the ADAPT materials and the national curriculum content, in order to help teachers to teach science through RRI (*United Kingdom, Greece, Spain, Switzerland*) → Materials developers must be very clear about the RRI skills that each material fosters (*United Kingdom*), Partners can make a stronger link in the localisation phase of each material (*Israel*), In the process of translation of materials, examine how the topic meets with the general curriculum approved by the Ministry of Education (*Lithuania*)
- Online communities of learning are not popular (*Cyprus*) → Have face to face meetings as they feel in that way that they share their problems and concerns and belong in a community (*Cyprus*)

5. IMPLEMENTING LOCALISED DISSEMINATION PLANS

The dissemination activities that partners carry out for ADAPT, according to their localised dissemination plans, pursue two main goals. The first goal is to motivate participants to download the ADAPT materials, enrol in the online courses or participate in the community. The second goal is, once they have joined this stage, keep teachers active in it. Below we provide strategies which may help partners to achieve these goals.

5.1. Motivating participants to join ADAPT

Helping teachers to progress from ADOPT to ADAPT

As stated earlier, it is expected that 25% of the teachers in ADOPT will make use of the ADAPT strategies. This sets the need to identify ADOPT teachers who are candidates to propel to ADAPT, and to invite them to join the next stage.

We define positive indicators of development, which can help to identify ADOPT participants who are likely to move to ADAPT. Expert RRI teachers or course facilitators could look for these indicators and take actions. The actions will mainly consist of e-mail messages, since these teachers are already registered as users on the ENGAGE Knowledge Hub.

Table below outlines quantitative indicators and associated actions, i.e. ways to upsell ADAPT. Partners can obtain this data from their ADOPT National portals (Knowledge Hub), from the online courses or from the workshops. For instance, if a teacher publishes a high number of comments on ADOPT materials (topicals), the facilitator should respond to the comments pointing to related ADAPT materials.

Indicators		Ways to upsell ADAPT
Quantitative (Knowledge Hub, online course, workshop data)	High number of comments on topicals	Respond to his/her comments pointing to related ADAPT materials
	High number of downloads of topicals	Send information about ADAPT materials available for downloading
	Online course completion, good marks in assignments, peer reviewing assignments	Send a message acknowledging course completion, issue a certificate, send personal invitation to ADAPT online course
	High number of face-to-face workshops attended	Send information about ADAPT materials and online courses

Another source to obtain quantitative indicators is the survey to collect user feedback from WP8 Evaluation. In particular, the answers to some items of the questionnaire about the materials can help partners to identify the most active ADOPT teachers which are candidates to move to ADAPT. For instance, if item #12 of the questionnaire reveals that the ADOPT materials are too easy for his/her students, the facilitator can suggest that he/she downloads the ADAPT materials, which are more comprehensive and flexible.

Indicators		Ways to upsell ADAPT
Quantitative (Q1 from WP8)	Item #3: High number of topicals used	Invite to download and implement related ADAPT materials
	Item #12: States that ADOPT activities are too easy for his/her students	Suggest to download ADAPT materials (more comprehensive and flexible)
	Item #15: ADOPT materials enriched the way s/he teaches science	Invite to keep enriching it even more with ADAPT materials

Even if from a quantitative perspective, the indicators above constitute a source of valuable information, the most valuable indicators are of a qualitative nature. Below we provide one table for each source of data, as it was done earlier for the quantitative indicators. As an example, if the comments on the ADOPT materials show that the teacher has reflected critically about the ADOPT materials, we can encourage him/her to learn more by using the ADAPT materials.

Indicators		Ways to upsell ADAPT
Qualitative (Knowledge Hub, online course, workshop data)	Comments on materials, forum posts, workshop participation showing critical reflection about ADOPT materials[1]	Provide improvement suggestions and tips, encourage to learn more by using ADAPT materials
	Advice provided to other teachers	State how s/he can get advice by more experienced teachers if s/he joins ADAPT
	Reports on using ADOPT CPD tools beyond the topicals	Inform about ADAPT CPD tools

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[1] The following comment published in the UK site can be used as a reference: *"I used the Solar Roadways activity with GCSE group working on AQA A Core Science. I used it to develop students writing and in particular, being able to write balanced arguments using evidence. Because it has been so well designed and there is real data to look at, students found the activity engaging and it helped them to develop evaluation skills and extended writing using persuasive language and evidence. I think the Engage activities are an excellent resource and one that can be used with KS3 and KS4".*

	Indicators	Ways to upsell ADAPT
Qualitative (Q1 from WP8)	Item #2: Using inquiry-based teaching in a purposeful manner	Provide support linked to ADAPT materials
	Item #10: S/he thinks that topicals are too short, restrictive or guided	Suggest to download materials, which are longer, more open, and flexible
	Item #16: Shows skills in using discussion to achieve curricular goals	Invite to build on these skills with new techniques for your classroom
	Item #17: Shows proficiency on these techniques	Take advantage of your experience to enhance student learning

Inviting to join ADAPT directly

Whereas it is crucial to encourage teachers to move from ADOPT to ADAPT, teachers with previous experience in RRI teaching may join ADOPT directly. The following indicators can be used to identify these teachers:

- Administrators of blogs where they share teaching experiences that showing their experience in carrying out dilemmas and group discussions with their students
- Winners of science education / educational innovation prizes
- Authors of articles in magazines or journals related to introducing RRI skills or socio-scientific issues in the classroom
- Authors of learning materials, which are built on similar principles as those from ADOPT (dilemma and group discussion).

However, it is important that teachers joining ADAPT are aware of the requirements. For teachers who join ADAPT directly, i.e. without having participated in ADOPT, a **checklist** has been designed.

The checklist aims to raise teachers' awareness of the progression that ENGAGE promotes, as well as to help to reflect on whether they meet the requirements for ADAPT. The checklist will be implemented in the Knowledge Hub. In brackets, it includes examples of evidence that can help teachers decide whether they meet the criteria:

- I have practised at least one of the ENGAGE materials with students (I have collected student sheets filled in, I've made an entry in my teacher diary about the session, I have published a comment on a material in the website)
- I have used them systematically to apply science content or enquiry skills ,rather than just for engagement (I can explain why I like these materials and why they are good for my teaching, I know what students can learn with them

- I have participated in an ENGAGE face-to-face workshop and/or I have completed the ENGAGE ADOPT MOOC
- I am able to introduce a scientific dilemma in my classroom (I have implemented or designed a lesson plan using the dilemma tool, I can state the challenges with regards to practising it in the classroom)
- I am able to organise and manage a group discussion which helps my students to learn science (I have implemented or designed a lesson plan using the group discussion tool, I can state the challenges with regards to practising it in the classroom)

5.2. Keeping participants engaged in ADAPT

Once teachers have joined ADAPT, it is crucial to keep them interested in downloading materials, taking the courses and interacting in the community. For this reason, a set of positive and negative indicators have been defined.

The following two tables show positive indicators of teacher development and ways of supporting these. For instance, if a teacher publishes many comments to the ADAPT materials, partners can ask him/her to be interviewed and -with his/her consent- publish the interview in the community. In this way s/he will feel that his/her commitment is appreciated and that it can be useful for other teachers.

	Positive indicators	Ways of supporting these
Quanti-tative	Number of comments on materials	Ask to interview him/her to be posted in the Knowledge Hub, encourage him/her to send ideas for materials, invite him/her to follow the online course.
	Number of downloads of materials	Send a personal message offering help to implement the materials in the classroom or to get advice from experts
	Level of online course participation as in handing in assignments, forum posts, participation in webinars...	Highlight his/her contributions on the news page of the online course, ask to interview him/her and post it on the Knowledge Hub.

Comments and online course assignments are also sources of qualitative information, which can help to detect those teachers that are best candidates to move from ADOPT to ADAPT (see table below).

	Positive indicators	Ways of supporting these
Qualitative	Comments about the materials, showing that they have used them in the classroom	Provide tips or improvement suggestions, inform about ADAPT online courses, encourage to mentor ADOPT teachers
	Satisfactory results of ADAPT online course assignments	Send an email with the next steps to follow on the course, highlight the progress s/he made and what is left

However, it is also possible that teachers lose interest in ADAPT along the implementation. For this reason, it is worth identifying negative indicators of development, i.e. signs that will help to detect a decrease in teachers' interest towards ENGAGE ADAPT stage. Below we provide the negative indicators and suggestions to tackle them. For instance, if teachers unsubscribe from the Knowledge Hub, partners are encouraged to reflect on the reasons to unsubscribe and correct, if possible, their strategy.

	Negative indicators	Ways of tackling these
Quantitative	Unsubscribe from the Knowledge Hub	Check for reasons to unsubscribe: too many marketing campaigns? Low quality of the contents or the messages?
	Low number of downloads	Highlight the most downloaded materials and encourage to download them
	Drop-out from online course	Send personal message encouraging to finish
	Lack of interaction in the community	Encourage teachers to comment (useful to get advice from experts for your classroom practice)

In the event that teachers show a negative attitude towards any of the ADAPT strategies, we provide ways to tackling them in table below.

Negative indicators		Ways of tackling these
Qualitative	Expresses criticism about ADAPT materials, MOOCs or community	Acknowledge his/her statements, encourage to provide improvement suggestions, highlight the link to the curriculum and the relevance of the ADAPT learning outcomes for teacher CPD in your country according to your localised dissemination plan
	Shows misunderstandings about ADAPT goals	Think whether s/he would be more interested in ADOPT or TRANSFORM and invite him/her to join
	Reports negative student reactions or results	Invite to join online course, encourage to ask other teachers for advice with comments on the materials

6. MONITORING GUIDELINES

In order to check partners' progression towards the goals, monitoring strategies have been defined. The main monitoring strategy is the table with planned dissemination activities. UB has access to this table and will frequently check for updates. Moreover, partners will deliver a monthly report including the following indicators:

Quantitative:

- Materials: number of ADAPT users, number of downloads by user and by material
- Online course: course flyer downloads, early registration numbers, completion rates
- Community: trends in number of visitors, time on the site

Qualitative:

- Materials: positive comments
- Online courses: post-course evaluation forms, quality of the outcomes
- Community: content of forum posts

The report will also include successful actions, i.e. those which have led to substantial increase of the registered users on the website, the comments on the materials, etc. Best practices will be spared by UB with the consortium and in this way, partners can learn from others.

Monthly reports will be reviewed by UB, which will provide feedback to partners according to the following:

- "A": the targets are being met
- "B": the targets are not being met. UB will monitor with a greater frequency the progress in this country and it will ask for proposals for corrective measures.
- "C": no data available or the partner has not provided a report

Individual communication with countries in state "B" and "C" will enable to assist partners in achieving their goals, as well as ensure better understanding of the obstacles hindering goal achievement. Reports to the Project co-ordinator and Steering Board will ensure corrective action is taken.

7. REFERENCES

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APPENDIX: LOCALISED DISSEMINATION PLANS BY COUNTRY

United Kingdom

ACTION 2: Adjust the dissemination strategy to your national context
- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

Teachers will want to follow ADAPT to access more materials and use ENGAGE to teach skills and content. Since we are planning to integrate assessment into the materials (UK only localisation) that will be a draw. Teachers at this stage won't be aware it's a CPD programme too, but next year we hope the Courses will attract those who are excited by the materials and want to learn more.

- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

As above, for teaching the 'scientific enquiry' (Working Scientifically) requirement in 11-14 and 14-16 National Curriculum.

- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

Some teachers, comfortable with technology/social media will find this easier/more attractive than getting permission to leave school for a Workshop. There is not much history of an online course approach, but we have do have experience with web conferences and online support for teachers trying out new strategies in school. In our advertising, we will emphasise the benefits of a) learning how to teach socio-scientific issues effectively, and b) prepare students with the higher level understanding they need for good grades in external examinations.

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

Teachers use a) TES forum (community of national publication), b) subject associations (institute of physics/chemistry), c) school network communities, d) blogs and e) twitter. The successful strategies allow teachers to easily share tips, ideas and resources, find expertise and make contacts, and create high profile for their own work.

ACTION 3: Define clear messages

Key audience 1: Heads of science		
Most used dissemination channels by this audience: Presentations at national or regional science teacher events.		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
Teachers will identify challenges and SHARE strategies for students to talk and debate with Online Teacher's community Teachers will be able to assess and COMPARE students' progress	pupil progress at an individual level important to UK teachers	find out more about our student friendly progress tools

Key audience 2: Pre/in-service teachers and trainers		
Most used dissemination channels by this audience: Posts on social networking sites		
ADAPT learning outcomes most	**Reason**	**Example message**

relevant to this audience		
Teachers will learn practical strategies to explain concepts relating to RRI, such as evidence and ethics.	Student teachers will want to cover a bit more than in their courses so that they are equipped with new teaching and learning strategies	Add hot flavour to your teaching and learning through Engage

Key audience 3: The Science Community		
Most used dissemination channels by this audience:		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
Teachers will move to a higher level of expertise as reflective practitioners		Try Engage real science quandries for learning

ACTION 4: Recruit experts

Full name	**Why is s/he an expert RRI teacher?**
Jon, Bradford, Mill Hill County High School	Write and user of our WIKID curriculum
Lucy Austin, Ormiston Victory Academy	Write and user of our WIKID curriculum
Jenny Crabb, The Billericay School	Teacher observed teaching WIKID curriculum
Nandia Nell, The Lammas School	Teacher presented at WIKID summit
Lucy Rimmington, Urmston Grammar School	Teacher presented at WIKID summit
Richard Waller, Comberton Village Community College	Long term user/writer for upd8

ACTION 5: Plan dissemination and networking activities

A) In order to motivate teachers to propel from ADOPT to ADAPT

Status (done/ planned)	Date	Activity title	Tools used (URLs of websites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
In progress	ongoing from June 2015	dissemination	F2F seminars and conferences, website/s and brochure, newsletter	All	Wide access to Teachers across England via Subject Association, Professional Development portals and curriculum resource.

B) In order to engage new users in ADAPT

Status (done/ planned)	Date	Activity title	Tools used (URLs of web sites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
Planned	from June 2015	dissemination and networking	emails, newsletter, website, articles, through CPD courses	all	As above

Greece

ACTION 2: Adjust the dissemination strategy to your national context
- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

Feedback from teachers participated in ADOPT in Greece indicate that there is critical mass that need more than "a ready to use 1 lesson material" (as in ADOPT). They are asking for materials that allow teaching complete topics and more practical strategies to deal with ethical issues in the classroom (for example argumentation).

- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

Sequences can be useful for project-work (part of the curriculum requiring teachers help students engage in a topic of their interest, in a transdisciplinary way)

- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

Online courses have been started to become more and more popular in Greece, as they allow flexibility in learning (time and space). However there are teachers who prefer face to face to online training as it allows more personal interaction (feedback from ADOPT workshop participants when asked). Possible skills: ability to manage tasks and time within their schedule which is already very pressing. Strategies: Clear message on what it is there for them in terms of: personal development, challenges they face in teaching, new curriculum obligations

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

Very popular online community for science teachers is http://ylikonet.gr/. The core of the community is expert teachers who upload materials and proceed to constructive dialogue with members. Part of the success can be attributed to the fact that materials are reliable, valid and of interest to many teachers and that discussions are around issues/challenges of both novice and experienced teachers.

ACTION 3: Define clear messages

Key audience 1: Secondary science teachers		
Most used dissemination channels by this audience: Online teacher portals, online repositories of educational resources		
ADAPT learning outcomes most relevant to this audience	Reason	Example message
Teachers will learn practical strategies to explain concepts relating to RRI, such as evidence and ethics.	teachers need practical strategies along with ready to use materials	Learn and practice argumentation strategies
Teachers will be able to PREPARE effective lessons with ENGAGE materials	teachers would like to prepare their own lessons with the help of materials	Practice preparing interesting lessons

Key audience 2: Pre/in-service teachers and trainers		
Most used dissemination channels by this audience: Website of the university, social networks		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
Teachers will be able to assess and	assessment strategies in RRI	Get support from experts on

| COMPARE students' progress | issues are missing | assessment strategies on RRI issues |
| ENGAGE materials (sequences) | innovative resources are always welcome | Try our open resources which bring big ideas to classrooms |

ACTION 4: Recruit experts

Full name	Why is s/he an expert RRI teacher?
Maria Kalathaki	Science advisor, biologist, very active in supporting teachers in project work in SSI
Giannis Karadamoglou	Science teacher, Experimental school, very active and reflective in innovation in learning and teaching, experienced in IBL and connecting SSI to everyday teaching and leaning

ACTION 5: Plan dissemination and networking activities

A) In order to motivate teachers to propel from ADOPT to ADAPT

Status (done/ planned)	Date	Activity title	Tools used (URLs of websites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
Done	16/05/15	dissemination	F2F, website and brochure	All	around 30, high level of involvement

B) In order to engage new users in ADAPT

Status (done/ planned)	Date	Activity title	Tools used (URLs of web sites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
Planned	beginning of June 15	dissemination and networking	emails	all	around 50 teachers that we added in our emailing list

Germany

ACTION 2: Adjust the dissemination strategy to your national context
- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

In Germany the process of getting teachers involved started from a very low level. RRI concepts are used in some cases in teaching - especially in the subject of Ethics and Religion - but not in the context of the STEM subjects. This is NEW! Teachers starting getting interested, but they use only little parts of the materials. The ADAPT stage might be even more interesting for them- since German teachers do prefer to adapt materials to their style and class, they don't like using what is ready.
- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

In Germany we have 16*3 different curriculums (= 16 Regions each with three different types of schools having their own curriculum). We cannot develop things that can be used straight away, but we can promote the adoption of the materials. The final decision is taken by the teachers themselves.
- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

In Germany teachers training takes place on so-called Teacher Academies. Each region has its own and teachers go there for e.g. one week and everything is payed for them. The schoolmaster approves this type of Face-To-Face training. Other training is very difficult to be approved when the teachers need to take one day off. The participation in online training is the decision of the teacher; the schoolmaster doesn't need to approve it.

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

The most popular community is teachers online. We are already working with them! Since April a series on ENGAGE is being published. Every week on of the activities is presented and teachers can download immediately from the Lerhrer-Online website. Downloads are always between 200-400 per week. Teachers trust this community. But they are very difficult to get involved in new communities, so the strategy is to get ENGAGE well-known; in a second step show the added-value and in a third step get some teachers as contributors to ENGAGE.

ACTION 3: Define clear messages

Key audience 1: Pre/in-service teachers		
Most used dissemination channels by this audience: Online information portals / print magazines		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
Teachers will be able to PREPARE effective lessons with ENGAGE materials	They look for inspiration not for guidance	"Interesting in using new ideas of bringing together news and teaching"
Teachers will move to a higher level of expertise as reflective practitioner	interrelating theory and real world	"Linking theory and practice"

Key audience 2: Trainers		
Most used dissemination channels by this audience: print magazines, official news bulletin		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
Teachers will learn practical strategies to explain concepts relating to RRI, such as evidence and ethics.	New ways of promoting students involvement in the teaching activity	"new ideas for the classroom!

Key audience 3: Scientific community		
Most used dissemination channels by this audience: Paper journals and Online Information channels		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
Teachers will learn ways to take into account students' ideas: existing conceptions relating to RRI		"New and attractive classroom teaching activities"

ACTION 4: Recruit experts
Not clear yet, will be added later. RRI is not a concept used in Germany; people come from related fields such as ethics.

ACTION 5: Plan dissemination & networking activities

A) In order to motivate teachers to propel from ADOPT to ADAPT					
Status (done/ planne	**Date**	**Activity title**	**Tools used (URLs of web sites, blogs or other means)**	**Strategy disseminated? Materials / CoP**	**Estimated number of people reached and level of involvement**

d)				/ **MOOC (select)**	
Done / and will continue	starting on the 2.April 2015 and since then weekly	Series about ENGAGE Lehrer-online community (teachers online community)	http://www.lehrer-online.de/ambrosia-invasion.php?sid=48437882751795616143393839383550	Articles and Materials	The newsletter has 500.000 Recipients. About 1700-2000 opened the ENGAGE information and between 200-500 downloaded the materials
Done / and will continue	Since the 1. of May	ENGAGE FOLDER in the teachers-online website	http://www.lehrer-online.de/engage.php?sid=4843788275179561614339383938 3630	Articles	The portal is the best-known information portal for German teachers
Done / and will continue	since the 15th of May	Publication in all German education portals (each region has its own)	http://www.bildungsserver.de/db/mlesen.html?Id=55705	Articles	The education portals are used by nearly every teacher in Germany (700.000)
Done / and will continue	3/1/2015	Article in the Bavarian Newsletter for teachers	http://www.zum.de/portal/blog/karl-kirst/engage-oer	Articles	The organisation for Learning Materials and Media usage distributes a Newsletter for all Teachers in Bavaria

B) In order to engage new users in ADAPT

Status (done/ planned)	Date	Activity title	Tools used (URLs of web sites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
work in progress	6/1/2015	Collaboration with the teacher training centre of the Dresden University	Meeting	Meeting / Collaboration towards ENGAGE Work Shops and MOOC	20-30
work in progress	5/1/2015	Collaboration with the teacher training centre of the FAU	Meeting	Meeting / Collaboration towards ENGAGE Work Shops and MOOC	20-31
work in progress	6/1/2015		Meeting	Meeting / Collaboration towards ENGAGE Work Shops and MOOC	200

France

ACTION 2: Adjust the dissemination strategy to your national context
- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

Teachers would want to follow ADAPT after having participated in ADOPT because they find relevance in ADAPT resources and want to develop deeper link between their traditional courses and RRI. It will embed RRI and IBSE more deeply in their practice and reinforce their confidence.

- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

I assume, in the same way that ADOPT. It's difficult to say with no example of sequence.

- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

I am not sure that an online course is "convenient" but we can reach more people and avoid organisation and availability problem. But online course demand a lot of self-commitment and endurance. Online training is more and more used in France but teachers are not used to them as most of the population. The French National Education develops its own online course and wants teacher to use more and more digital material. French science teacher are really used to develop their own teaching material and to use external resources. We will organise F2F presentation, emails and social networks (twitter and Facebook) to enrol them.

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

There is not a popular online community of practice for teachers in France. There is a public platform in construction but it's still underused for the moment. However for primary school there is the "Main à la pate" portal. Their strategy is really link to direct workshop with scientists in classes. Strategies to manage the community (role of the facilitators, type of interactions...): build confidence for teacher, be available and flexible, working on their motivation, promote pair interactions.

ACTION 3: Define clear messages

Key audience 1: Pre/in-service teachers and trainers		
Most used dissemination channels by this audience: Mailing, F2F meeting		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
Teachers will learn practical strategies to explain concepts relating to RRI, such as evidence and ethics.		In few steps you will be able to embed in your practices RRI!
Teachers will be able to PREPARE effective lessons with ENGAGE materials		It can be easy to link social issues of science to hard knowledge when you got help from ENGAGE
Teachers will move to a higher level of expertise as reflective practitioners.		Take part in the reflexion on how to teach the next generation of aware citizens!

ACTION 4: Recruit experts

Full name	**Why is s/he an expert RRI teacher?**
Carole Fabas ?(tbc)	digital learning, critical thinking
Melody Faury ?(tbc)	teacher training, resources for teacher, link with scientist

ACTION 5: Plan dissemination & networking activities

A) In order to motivate teachers to propel from ADOPT to ADAPT					
Status (done/ planned)	**Date**	**Activity title**	**Tools used (URLs of web sites, blogs or other means)**	**Strategy disseminated? Materials / CoP / MOOC (select)**	**Estimated number of people reached and level of involvement**
Planned	Early June 2015 (if we have sequence ready			mailing	20
Planned	End of June	Engage		F2F	30

Status (done/ planned)	Date	Activity title	Tools used (URLs of web sites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
	2015	workshop			
To planned	End of September 2015	Engage workshop		F2F	30
To planned	Early September 2015			mailing	100

B) In order to engage new users in ADAPT -

Status (done/ planned)	Date	Activity title	Tools used (URLs of web sites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
Planned	End of May			mailing	20
Planned	End of June	Engage workshop		teacher association, social network	30
To planned	Early September			mailing + postal mail to schools	500

We will advertise Adopt and Adapt together

Romania

ACTION 2: Adjust the dissemination strategy to your national context

- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

The Romanian regulations demand that all in-service teachers have to participate in CPD programmes oriented in the domain they are teaching and get 90 credits in a period of five years. Due to this reason they need to participate to accredited CPD programs in order to obtain the needed credits and to be allowed to keep on teaching.

- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

In general the Romanian curriculum is very rigid - there are fewer possibilities to introduce different materials in formal educational activities. However, in some cases, teachers are allowed to have some classes at their disposal. More, non-formal educational activities could be organized in a special week (each April) and this occasion represents a good opportunity to implement ADAPT materials.

- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

In our case, due to the national regulations for accrediting a CPD programme the best solution is to offer a course in a blended-learning format. In order to acreditate the course a maximum 1/3 proportion of hours can be on-line and the rest has to be developed in face-to-face format. Probably, in order to convince the teachers to participate to the ADAPT course we will have to acreditate the course to the national level. This means that in function of the national regulations we will have to adapt the content of the course and put it in accordance with national requests.

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

At the moment there are several online communities still active, formed in the frame of some national projects dedicated to Science teachers. The best solution is to contact the county facilitators / Science inspectors who can help us to attract other interested Science teachers to follow new CPD programs/activities.

ACTION 3: Define clear messages

Key audience 1: Secondary education Science (Chemistry, Physics and Biology) teachers

Most used dissemination channels by this audience: Presentations at national or regional science teacher events, Mailing, Face-to-face meetings

ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
#1. Learn practical strategies to explain concepts relating to RRI	Teachers are interested to learn new teaching methods in order to get more interest and motivation from their students	Learn how to develop your capacities for including RRI in Science teaching
#3. ENGAGE materials (sequences)	Such kind of materials develop the teaching competencies in Science education	Use the ENGAGE materials and let your students learn to think and act responsible.

ACTION 4: Recruit experts

Full name	**Why is s/he an expert RRI teacher?**
Anghel Mihaela	She is an experienced Biology teacher at secondary school level. She was involved in the ADOPT phase and she participated in recent past years to few CPD programmes that promoted new teaching methodologies (IBSE and RRI). She is open to try new teaching strategies in order to increase their students' motivation.
State Gabriel	He is an experienced Physics teacher at secondary school level. He was involved in the ADOPT phase being interested in promoting new teaching methodologies like IBSE and RRI in Science lessons.

ACTION 5: Plan dissemination and networking activities

Status (done/ planned)	**Date**	**Activity title**	**Tools used (URLs of web sites, blogs or other means)**	**Strategy disseminated? Materials / CoP / MOOC (select)**	**Estimated number of people reached and level of involvement**
Planned	June 2015 (if we have "ADAPT" materials ready)			mailing	20
Planned	End of June 2015	Engage workshop		F2F	20
To planned	September 2015	Presentation of ADAPT stage to "ADOPTERS" teachers		F2F	20
To planned	September 2015			mailing	100

Israel

ACTION 2: Adjust the dissemination strategy to your national context
- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

Some are really interested in SSI and truly wish to expand their tool box. Some perhaps will be interested in the reward (credit points, certification) that comes with participating in the course.

- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

It depends very much on the materials themselves, Right now - RRI is not an obligatory issue, nor specific skills, and the scientific curriculum is heavily supported by textbooks, websites, and teachers guidance. I think it will mainly support teachers' internal need to motivate students and to introduce interesting lessons

- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

Online course does not oblige them to travel, can be done in the evening or any time of their choice. Online training is gradually becoming more popular. Our strategy: publish the courses in websites of ENGAGE in Hebrew, the department website and the national centres for science teachers' websites. Send mails about the courses to teachers on our mailing list, according to criteria decided by partners.

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

A successful strategy here is a blend of online course with one day of face to face meeting at the beginning or end of course which enable the participants to know each other more personally, and if it is in the end - to present their learning products. A critical factor is the facilitator skills.

ACTION 3: Define clear messages

Key audience 1: Heads of department/Principals	
Most used dissemination channels by this audience: National teacher associations and networks, with advertisement /posts	
ADAPT learning outcomes most relevant to this audience	**Reason**
Teachers will be able to PREPARE effective lessons with ENGAGE materials	Principles are interested in the big picture and that is the benefit of something new to the whole system. Making educational procedures more effective is part of such kind of benefits.

Key audience 2: Pre/in-service teachers and trainers
Most used dissemination channels by this audience: National teacher associations and networks, with advertisement /posts, Presentations at national or regional science teacher events
ADAPT learning outcomes most relevant to this audience
Teachers will learn ways to take into account students' ideas: existing conceptions relating to RRI
Teachers will be able to assess and COMPARE students' progress
Teachers will identify challenges and SHARE strategies for students to talk and debate with Online Teacher's community

Key audience 3: Scientific community
Most used dissemination channels by this audience: Publication in science education magazines, Posts on social networking sites
ADAPT learning outcomes most relevant to this audience
Teachers will learn practical strategies to explain concepts relating to RRI, such as evidence and ethics.

ACTION 4: Recruit experts

Full name	Why is s/he an expert RRI teacher?
Randa Asdi	participated in a f2f workshop, used engage in the classroom

Irena Stein	participated in a f2f workshop, used engage in the classroom
Simona Shulman	participated in a f2f workshop, used engage in the classroom
Randa Halaika	participated in a f2f workshop, used engage in the classroom
Neven Gondur	participated in a f2f workshop, used engage in the classroom
Ben Osher	participated in a f2f workshop, used engage in the classroom
Amani Tatur	Participated in an on-line course
Simon Danino	Participated in an on-line course
Samach Hager	Participated in an on-line course
Noga Reshef	Participated in an on-line course
Geva Merav	Participated in an on-line course
Nihal Naser	Participated in an on-line course
Ariel Gold	Participated in an on-line course
Gerdi Hada	Participated in an on-line course
Naama Kiel	Participated in an on-line course
Dafna Buhbut	Participated in an on-line course
Rotem Weizmann	Participated in an on-line course
Boaz Hada	Active teacher in PROFILE project
Sofia Lederman	Active teacher in PROFILE project

ACTION 5: Plan dissemination and networking activities

A) In order to motivate teachers to propel from ADOPT to ADAPT

Status (done/ planned)	Date	Activity title	Tools used (URLs of web sites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
planned	13-16 July 2015	f2f course			20
planned	October	f2f course			6
planned	October			MOOC	tbc?
planned	September	marketing		mails to all Adopt teachers	

b) In order to engage new users in ADAPT

Status (done/ planned)	Date	Activity title	Tools used (URLs of web sites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
planned	September	marketing		mails to all teachers in our mailing lists explaining the criteria to join adapt	

Spain

ACTION 2: Adjust the dissemination strategy to your national context
- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

Teachers in Spain obtain promotion points for finishing continuing CPD activities. The longer the activity, the more points they obtain. The great success of summer and winter schools, both face-to-face and virtual, for teachers in Spain constitutes an indicator that teachers are used to enrolling and completing training activities which last for more than 6 hours.

- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

In Spain, educational policies encourage teachers to practice project based-learning, as a way to shift from a content-based to a competency-based learning system. Within this framework, the ENGAGE ADAPT sequences may be perceived by teachers as a tool facilitating the practice of project-based learning with their students because they include several lessons which make students practise competencies from subjects other than science, such as communication in mother tongue, social and civic competency, technology, etc.

- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

Online summer and winter schools for teachers are common in Spain, both at a regional and at a national level. Although several of them focus on ICT tools for teaching, they also cover other topics. Planning a learning sequence and providing feedback to others is one of the most common assignments in Spanish online training for teachers. It is assumed that those who are used to undertaking online training will be familiar with the ENGAGE course dynamics.

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

In Spain a very popular teacher online community is Tiching (www.tiching.com). Teachers sign in to obtain a profile, where they upload or find educational resources uploaded by others, and organise them in libraries. This community relies strongly in experts who answer teachers' questions about the materials. Another strong point is that teachers can befriend other teachers, and join groups of interest such as "science education" or "ICT for primary education". Another popular community is Scientix (http://www.scientix.eu/), in which teachers can find science-related educational resources and events from European projects.

ACTION 3: Define clear messages

Key audience 1: Secondary education science teachers		
Most used dissemination channels by this audience: Online teacher portals, online repositories of educational resources, presentations at national or regional science teacher events, summer/winter schools		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
#1. Learn practical strategies to explain concepts relating to RRI	Teachers are very interested in learning about teaching methods to achieve curricular goals	RRI is already in the curriculum: learn how to deliver it to your students!
#3. ENGAGE materials (sequences)	They can be helpful to practise competency-based teaching, which is promoted in educational policy	Make your students practice both argumentation and science skills in a single project and change towards competency-based teaching
#4. Share strategies	The "connected teacher" in the 21st century	Learn to share your teaching strategies and become a connected teacher, learn from other

		teachers and build knowledge collaboratively

Key audience 2: Pre/in-service teachers and trainers
Most used dissemination channels by this audience: Online repositories of educational resources, website of the university, social networks, their professors, academic conferences

ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
#3. ENGAGE materials (sequences)	Good quality, innovative resources that can help them to push educational innovation	Try our Open Educational Resources which help you bring new ideas to education, and get support from ENGAGE expert teachers

ACTION 4: Recruit experts

Full name	**Why is s/he an expert RRI teacher?**
Jordi Domènech	He is a biologist currently teaching at secondary school level. He is the manager of a working group where teachers develop materials and reflect on science education, from a practical perspective. He has been a Scientix ambassador and he has been involved in other European projects on science education, IBSE and he has a strong interest and knowledge about RRI.

ACTION 5: Plan dissemination and networking activities
A) In order to motivate teachers to propel from ADOPT to ADAPT

Status (done/ planned)	**Date**	**Activity title**	**Tools used (URLs of web sites, blogs or other means)**	**Strategy disseminated? Materials / CoP / MOOC (select)**	**Estimated number of people reached and level of involvement**
Done	18/04/2015	Explaining ADAPT to a teacher who already knows RRI	Face-to-face meeting using the ENGAGE presentation and brochure	All	1 person. As a result of the meeting he signed in the ENGAGE website and expressed his will to download future ADAPT sequences and enrol in the online course
Done	9/3/2015	Explaining ADAPT at the end of an ADOPT workshop	Face-to-face workshop using the ENGAGE presentation and brochure	All	40 people. Some of them expressed interest in downloading sequences
Planned	5/1/2015	Publishing link to ADAPT materials in http://es.tiching.com/ teacher social network	ENGAGE description and link to materials	Materials	More than 28000 teachers

B) In order to engage new users in ADAPT

Status (done/ planned)	**Date**	**Activity title**	**Tools used (URLs of web sites, blogs or other means)**	**Strategy disseminated? Materials / CoP / MOOC (select)**	**Estimated number of people reached and level of involvement**

Status	Date	Activity	Tools used	Strategy	Estimated number of people
Done	16/04/2015	Scientix projects networking event	ENGAGE presentation and leaflet	All	12 participants of other European projects related to RRI. Representatives from these projects expressed their interest in finding synergies with ENGAGE.

Norway

ACTION 2: Adjust the dissemination strategy to your national context

- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

New national regulations demand that teachers in all main subjects have a formal education in the subjects they are teaching. In science, a large proportion of teachers need to complete formal training to be allowed to keep on teaching

- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

This will obviously depend on the materials. In general they should both be up-to-date with respect to societal debate and "science in the news" AND flexible since curriculum and general societal agenda varies between the partner countries

- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

As a general comment working online allows for great flexibility, and are fine e.g. if you are asking for concrete advice, hints, links etc. that may benefit your everyday teaching. However strictly online courses are generally not popular among Norwegian teachers and we should not expect large numbers of teachers to enlist individually. Therefore we will mainly address municipalities and schools to recruit groups of teachers and combine online work with F2F workshops etc.

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

The Norwegian Facebook page for natural science didactics is a popular teacher online community. Furthermore, another webpage, "naturfag.no", is the main internet page used by science teachers looking for teaching material.

ACTION 3: Define clear messages

Key audience 1: lower secondary school (age groups 13-16) teachers		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
* learn practical strategies in order to train the students' RRI skill	RRI skills are part of the national curriculum, but many teachers find this difficult or inefficient to implicate	
* learn how to use and adapt engage materials	Many teachers want to use more readymade teaching materials, but find it difficult to get the best out of it	

ACTION 4: Recruit experts
Not clear yet. This will be decided in September.

ACTION 5: Plan dissemination and networking activities

Status	Date	Activity	Tools used (URLs	Strategy	Estimated number of people

(done/ planned)		title	of web sites, blogs or other means)	disseminated? Materials / CoP / MOOC (select)	reached and level of involvement
work in progress	tbc		Face-to-face meeting using the ENGAGE presentation and brochure	All	1 person. As a result of the meeting he signed in the ENGAGE website and expressed his will to download future ADAPT sequences and enrol in the online course
planned	tbc		Face-to-face workshop using the ENGAGE presentation and brochure	All	40 people. Some of them expressed interest in downloading sequences
planned	tbc		ENGAGE description and link to materials	Materials	More than 28000 teachers

Switzerland

ACTION 2: Adjust the dissemination strategy to your national context
- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

Teachers want to stay involved in ENGAGE because they see the benefits of IBSE and RRI. In our CPD programme means are given to them to overcome difficulties to reach the kind of teaching/learning that we propose.

- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

We have already shown that ADAPT materials perfectly match the PER (plan d'études romand; programme for the French speaking Switzerland).

- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

The main benefit is that there are no temporal limits. Anyone can follow an online course if the person can't follow a F2F course. Teachers are not much used to online training yet. Teachers are, in principle, trained to reflect on their lessons. This is a well-known content of the teacher preparation plan. Regarding the strategies, it is fundamental to follow them day after day, to answer their questions promptly and inform them clearly of what is coming, what is required, etc.

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

Not very common yet. To my knowledge, here around the best known is the Educanet2 hub. Its success can be due to the fact that it is anchored to the public system. The most effective strategies may be to be positive, be open to all suggestions and receive criticisms in a positive way, to develop better and further the materials.

ACTION 3: Define clear messages

Key audience 1: In-service teachers and trainers		
Most used dissemination channels by this audience: Emailing		
ADAPT learning outcomes most relevant to this audience	Reason	Example message

Teachers will identify challenges and SHARE strategies for students to talk and debate with Online Teacher's community	Learning to share your experience with others is an interesting clue for CPD.	Participate in this course to join a community of practitioners and researchers in science education!
Teachers will be able to assess and COMPARE students' progress	There is an obvious need to assess students. Assessment is always demanded	Participate in this course to learn how to assess your students after teaching RRI issues!

ACTION 4: Recruit experts

Full name	Why is s/he an expert RRI teacher?
Gilles Blandenier?(tbc)	(responsibilities in CPD in Neuchâtel-Jura-Berne)
Catherine Chérix? (tbc)	
Corinne Müller? (tbc)	(experience in coordination of CPD)
Raphaël Schaer? (tbc)	(experience in coordination of CPD)
Estelle Blanquet? (tbc)	Doctor in sciences of education
Hyade Janzi? (tbc)	Good knowledge of "problématisation"

ACTION 5: Plan dissemination and networking activities

Status (done/planned)	Date	Activity title	Tools used (URLs of web sites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
planned	May '15	Newsletter 2		Materials/F2F/MOOC	55
planned	September '15	F2F Course		F2F	20
planned	September '15	online course		MOOC	10
planned	august '15	Newsletter 3		Materials/F2F/MOOC	70

Lithuania

ACTION 2: Adjust the dissemination strategy to your national context
- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

F2F seminars showed that teachers are very interested in the educational material of the project ENGAGE and they are interested how to use this educational material in classroom. Lithuanian science teachers have experience in the application of Inquiry Based Learning. Many teachers who participate in ENGAGE participated previously at the project S-TEAM. We applied M. Fordevi methodology of problem solving based learning at S-TEAM project. Five of the nine stages of this methodology were linked to problem solving. This experience will help teachers to deeper understand two ENGAGE tools: Productive Dilemma and Group Discussion. The inquiry experience also will help sciences teachers follow ADAPT after ADOPT stage. CPD Comprehensive Programs for Science Teachers of Lithuania will give a new experience for promotion of

qualification. Additionally, we will offer the training as part of the seminars that's the Lithuanian university of educational sciences is offering, making it more formal.

- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

In Lithuania the policies of education encourage teachers to practice project based-learning, as a way to shift towards competency-based learning. The ENGAGE ADAPT sequences may be perceived by teachers as a way to ensure competency-based learning. It means that ADAPT materials comply with educational policies in your country. In the process of translation of ENGAGE website material into Lithuanian language was examined how the topic meets with the general curriculum approved by the Ministry of Education of Lithuania.

- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

ENGAGE project allow including the new form of qualification improvement - CPD courses on-line. In Lithuania we usually practice F2F form of teacher qualification improvement. We think that the CPD programs will have all advantages of online or computer-based learning: reduces travel time and travel cost; allows easy access to a computer, mobile, tablet and Internet connection; allows flexibility to join discussions and so on. In Lithuania we use on-line training program MOODLE. It is often used for training at school or universities, but this program isn't popular in teacher qualification improvement field. A well-designed CPD program, the context based learning, active learning and teaching strategies will to motivate teachers to enrol and finish ADAPT online courses. The science teachers in Lithuania have enough of competence to use computer technology. The computer Literacy Standard describes the computer literacy of teachers.

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

In Lithuania The Garden of Youth (jaunimo sodas :https://sodas.ugdome.lt/diskusijos) is a very popular teacher online community. Teachers upload or where they find educational resources uploaded by others, discus about the educational problems. This forum includes several areas of discussion: discussion about educational documents; educational innovation; the planning in the education; the content of education. In our country there are more on-line communities: "Virtual Classroom Tour environment; Environment education for IT professionals; Community of management strategy.

ACTION 3: Define clear messages

Key audience 1: Pre/in-service teachers and trainers		
Most used dissemination channels by this audience:		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
Teachers will learn practical strategies to explain concepts relating to RRI, such as evidence and ethics.	The teachers knew not enough information about research-informed pedagogies, guided inquiry, explicit skills teaching	To help the teachers adapt the guided inquiry, explicit skills teaching in educational practice.
Teachers will be able to PREPARE effective lessons with ENGAGE materials	The teachers knew not enough information about research-informed pedagogies, guided inquiry, explicit skills teaching...	To help for the teachers adapt the research-informed pedagogies in educational practice. ...
Teachers will identify challenges and SHARE strategies for students to talk and debate with Online Teacher's community	The encouraging teachers to communicate in social networks in the professional topics.	To promote the teachers learn from other teachers and build knowledge about implication of RRI ideas in education collaboratively.
Key audience 2: Scientific community		

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Most used dissemination channels by this audience:		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
Teachers will be able to PREPARE effective lessons with ENGAGE materials	To encourage Lithuanian University of Educational Sciences Natural Sciences researchers to disseminate the results of teacher community	Presentations at national or regional science teacher events.

ACTION 4: Recruit experts

Full name	Why is s/he an expert RRI teacher?
Gintautas Burka	He works as a biology teacher at secondary school, is an active member of Biology Teachers' Association of Lithuania. He was involved in earlier projects related to IBSE. He used the ENGAGE materials at school with students and was involved in the seminars regarding the ENGAGE materials presentation and explanation for other science teachers.
Loreta Rasteniene	An experienced teacher of physics at secondary school having PhD degree in social sciences. Uses the ENGAGE materials and introduced them to other teachers

ACTION 5: Plan dissemination and networking activities
A) In order to motivate teachers to propel from ADOPT to ADAPT

Status (done/ planned)	Date	Activity title	Tools used (URLs of web sites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
Done	1/23/2015	Meeting with teachers	Face-to-face meeting about dilemma tool.	Face to face meeting. Explaining ADAPT to a teacher who already knows RRI, project website, dilemma tool.	91
Done	2015 04 01-02	Meeting with teachers	Face-to-face meeting about dilemma and discussion tool.	Face to face meeting. Explaining ADAPT to a teacher who already knows RRI, project website, discussion tool.	94
Done	1/30/2015	on-line post	Shared an article about Engage materials and website on an on-line Education Portal e-school (Emokykla) for teachers (http://www.emokymasis.com/tinklarascarontis/engage-projektas)	Materials	200
Done	1/30/2015	on-line post	Shared an article about Engage materials and website on an on-line Education Portal e-school (Emokykla) for teachers (http://www.emokymasis.com/tinklarascarontis/engage-projektas)	Materials	200
Planned	25/05/20	Conferen	F2F event	Materials, project	80

	15	ce of teachers associations		website, dilemma tool, introduction to ADAPT	
Planned	Autumn 2015	on-line courses	website	Materials	40

Cyprus

ACTION 2: Adjust the dissemination strategy to your national context
- *General: Why would teachers want to follow ADAPT after having participated in ADOPT? What are the benefits of participating in longer, more comprehensive CPD programmes for teachers in your country?*

The teachers that will participate in ADAPT are teachers that are looking for support to improve their teaching from outside the system. In Cyprus there is no compulsory in-service training so these teachers try to follow training whenever possible. Additionally, we will offer the training as part of the seminars that the Cyprus Pedagogical Institute is offering, making it more formal

- *Materials: How do ADAPT materials help teachers to reach the curriculum goals, and /or to comply with educational policies in your country?*

Some of the materials already developed can be used as part of the lessons already within the curriculum. The group of teachers that we are working with have decided that they want to develop their own materials, following the structure of Engage materials that will be "real" and useful for them.

- *Courses: Why is it convenient for them to follow an online course, as opposed to a face-to-face course? To what extent are teachers in your country used to online training? Which skills does a typical science teacher in your country has, which will help him/her implement a lesson plan and reflect on it in the framework of an online training activity? Which strategies are you thinking about to motivate teachers to enrol and finish ADAPT online courses?*

1. Online course is convenient because of time constraints, and because teachers do the training on their own time. However, the teachers want to have face to face meetings as well because as they told us they feel in that way that they share their problems and concerns and belong in a community. 2. The teachers in Cyprus are not used to online training. 3. All teachers have pedagogical training, and most of the teachers in our group have either a PhD or an MA in science education. Therefore not only do they have the basic pedagogy, but also an understanding of the literature in the area of science education. 4. Two main strategies: (a) to run the training under the Cyprus Pedagogical Institute in order to make it official, and (b) allow the teachers to design their own materials that make sense for them and the curriculum they are teaching.

- *Community: What are the most popular online communities of practice for teachers in your country? Identify the success strategies of these communities. What can be the most effective strategies to manage the community (role of the facilitators, type of interactions...)?*

Online communities of learning are not popular in Cyprus.

ACTION 3: Define clear messages

Key audience 1: in-service and pre-service science teachers		
Most used dissemination channels by this audience: Online teacher portals, online repositories of educational resources, presentations at national or regional science teacher events, summer/winter schools		
ADAPT learning outcomes most relevant to this audience	**Reason**	**Example message**
#1. Learn practical strategies to explain concepts relating to RRI	Most of the teachers are not familiar with RRI, even though this is part of the curriculum (called differently)	Learn how to make science relevant to your students' everyday life, and promote skills
#3. ENGAGE materials (sequences)	They can easily provide examples to teachers on how to connect everyday issues to their teaching, and promote skills at the same time	Engage your students in science

| #4. Share strategies | The teachers are asking for support and ideas from other teachers | Become a member of a community |

Key audience 2: Science principals (Ministry of Education)

ADAPT learning outcomes most relevant to this audience	Reason	Example message
#3. ENGAGE materials (sequences)	resources that can support teachers in their effort to implement the new changes in the curriculum. Activities are linked to the curriculum and are short	we will prepare examples with comments from teachers that have implemented the materials

ACTION 4: Recruit experts

Full name	Why is s/he an expert RRI teacher?
Chrystalla Lymbouridou	Has been working with RRI issues for more than 5 years in her class. Has a PhD on SSI
Dorita Demetriou	She is a biology teacher with expertise on teacher the nature of science. Has been working on other EU projects on inquiry and SSI and has an MA in Science Education.

ACTION 5: Plan dissemination and networking activities

Status (done/ planned)	Date	Activity title	Tools used (URLs of web sites, blogs or other means)	Strategy disseminated? Materials / CoP / MOOC (select)	Estimated number of people reached and level of involvement
Done	3/5/2015	Meeting with teachers	Face to face meeting, Project website, discussion tool	Materials and discussion tool	12
Done	13/05/2015	Meeting with teachers	Face to face meeting, Project website, discussion and dilemma tool	Materials and discussion and dilemma tool	7
Done	14/05/2015	Facebook post of teacher associations	Posted part of the Text neck activity on Physics teachers association Facebook	Materials	100
Done	15/05/2015	on-line newspaper post	shared an article about Engage materials and website on an on-line newspaper for teachers (paideia-news.com)	Materials	300