ITEC - WP 11

D11.5.1. – EXPLOITATION PLAN

"This document has been created in the context of the ITEC project. All information is provided "as is" and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability. The document reflects solely the views of its authors. The European Commission is not liable for any use that may be made of the information contained therein."

CONTRACT NO	257566
DATE	30/8/2011
ABSTRACT	First version of a strategy and plan for exploiting iTEC project results
AUTHOR, COMPANY	Jim Ayre, European Schoolnet
REVIEWERS	Will Ellis, EUN; David Massart, EUN: Leo Højsholt-Poulsen, UNI-C; Luis Anido Rifón, UVIGO, Jan Hylén, HLG
WORKPACKAGE	WP 11
CONFIDENTIALITY LEVEL[1]	*PU*
FILING CODE	ITEC-D11.5.1_ V1.DOC
RELATED ITEMS	

DOCUMENT HISTORY

Version	Date	Reason of change	Status	Distribution
V1	30/08/2011	1st draft	Official	EUN

[1] PU = Public
PP = Restricted to other programme participants (including the EC services);
RE = Restricted to a group specified by the Consortium (including the EC services);
CO = Confidential, only for members of the Consortium (including the EC services).
INN - Internal only, only the members of the consortium (excluding the EC services)

Executive summary

This is the first of four versions of the iTEC Exploitation Plan, a public deliverable that aims to provide a strategy for sustaining iTEC results after the end of the project, including: mechanisms for developing and validating future classroom designs/scenarios; further development/deployment of iTEC tools and services related to these; and continuation of iTEC training and support services. The first version of the deliverable:

- Provides the structure for the final version of the Exploitation Plan that will be submitted in month 48;
- Briefly highlights (section 2) a number of iTEC results where the potential for exploitation by project partners and Associate Partners will be explored in detail in later versions of D11.5;
- Focuses on some of the early elements of the iTEC exploitation strategy that are being put in place at a 'central' level.

In Year 1, work package 11 that is leading the exploitation activities has been active in raising awareness of the project among all relevant stakeholders and putting in place a project web site and the main elements of a Communications' Plan. A key part of the exploitation strategy has been to secure the active involvement of Associate Partners (section 6.2) and, in year 1, two MoE, one regional educational authority and three major ICT vendors have been formally accepted as Associate Partners. Discussions are also well advanced with almost a dozen other public and private stakeholders that have expressed an interest in being actively involved in the project.

The project has also succeeded in identifying and bringing together members of the High-Level Group of decision shapers (section 6.3) that will advise and provide recommendations on how project results can be mainstreamed and taken to scale.

While most results have yet to be delivered and evaluated, it is already clear from the response to the early project dissemination activities that iTEC has the potential to become a "Living Lab', a permanent, multi-stakeholder platform that enables MoEs, regional education authorities and ICT vendors to rethink teaching and learning in 21st century classrooms.

Project partners have also identified a number of other potentially exploitable results related to scenario development/validation and services related to the deployment of iTEC tools. As evaluation data is analysed from the initial piloting and feedback is obtained from the first demonstrations of iTEC technology, these will be explored in future versions of the deliverable.

In addition, steps have already been taken by European Schoolnet to put in place new 'central' mechanisms or *channels* that can support the emerging iTEC exploitation strategy. These include: a Future Classroom Lab, a reconfigurable learning space within which ITEC scenarios can be demonstrated; and CPD courses related to iTEC that can be delivered face-to-face in the Future Classroom Lab and that can also be integrated in national CPD strategies.

The project recognises, however, that 'central' exploitation actions are inevitably limited in scope. In order for iTEC to really have the impact foreseen in the Description of Work, the focus in WP11 during the remainder of the project will increasingly be on helping project partners to develop their own exploitation strategies and to support them as they work to mainstream project results with the support of recommendations that emerge from the iTEC High-Level Group.

Section 7 in later versions of this deliverable will be extremely important. The vital requirement in the general exploitation strategy is that individual partners (particularly MoE and the schools involved in the pilots) must increasingly become the key drivers of exploitation actions in order for iTEC to have a significant impact on the educational reform process in each participating country.

Table of Contents

1 INTRODUCTION

1.1 PURPOSE OF THIS DELIVERABLE

This is the first version of the iTEC Exploitation Plan, a public deliverable that aims to provide a strategy for sustaining iTEC results after the end of the project, including: mechanisms for developing and validating future classroom designs/scenarios; further development/deployment of iTEC tools and services related to these; and continuation of iTEC training and support services. The first version of the deliverable:

- Provides the structure for the final version of the Exploitation Plan that will be submitted in month 48;
- Highlights a number of iTEC results whose potential for exploitation by project partners and Associate Partners will be explored in detail in later versions of D11.5;
- Focuses on some of the early elements of the iTEC exploitation strategy that are being put in place at a 'central' level.

The initial version of the Exploitation Plan has been produced at the end of the first year of the project and will then be updated annually with version four of the deliverable being produced in month 48.

As iTEC scenarios for future classroom teaching and learning activities are validated in the project, the later versions of the Exploitation Plan will increasingly report on the exploitation plans of individual project partners and actions being taken at national level to ensure that iTEC results are mainstreamed and taken to scale. The deliverable will also make clear how the project exploitation strategy is being developed in response to recommendations for how iTEC scenarios can be taken to scale from the High-Level Group of decision shapers that contributes to iTEC mainstreaming activities in work package 11.

1.2 PURPOSE AND SCOPE OF THE TASK

Deliverable 11.5.1 is an output of iTEC task 11.3 on Mainstreaming iTEC Scenarios and Results. In the first year of this four-year project, the vast majority of results have yet to come on stream. At the time of writing and as planned, for example, iTEC has not yet completed the first of five project cycles. In August 2011, prototyping of the first group of iTEC scenarios has been carried out and preparations are being made to launch the first large-scale piloting of scenarios in September 2011 but, in line with the DoW timetable, the evaluation results from the first project cycle will not be available until February 2012.

Similarly, it is too early to talk meaningfully about having exploitable results from the technology work packages in iTEC. Work in WPs 7-10 is proceeding largely as planned. However, the first demonstrations of iTEC technology/tools to all project partners will only take place during the project General Assembly meeting on 15 September 2011. The project, therefore, needs to reach some other milestones before the technology can start to be actively used by national coordinators and schools in the pilots and it is possible to start considering in detail what opportunities and challenges may present themselves in an exploitation phase.

Nevertheless, while it may appear early to be attempting to address exploitation issues, the project has already been able to put in place some key elements related to the development of a long-term exploitation strategy and plan.

1.3 RELATIONSHIP WITH OTHER TASKS/DELIVERABLES

As it develops over four versions, the Exploitation Plan will particularly draw on:

- Evaluation data and findings from WP5 related to each completed project cycle (Task 5.4)
- Findings from running the training and support services for national technical coordinators in WP6 (Tasks 6.2 – 6.7) and for teachers in WP4 (tasks 4.5 and 4.5)
- The technology evaluation report in WP8 (deliverable D8.3 in Month 36) and the impact of iTEC on the standardisation process (deliverable D8.4 in Month 48)
- Deliverable 9.4 which will suggest actions for continued sustainability of the iTEC directory on a technical level after completion of the project (Month 46)
- Evaluation of the semantic modelling process in WP10 (Task 10.2.4, Month10-48)
- Evaluation Interim Reports 1-3 (deliverables D5.2 in M11, D5.3 in M23, D5.4 in M35) and Evaluation Plan (deliverable D5.5 in M46)
- A report from a peer learning workshop on what triggers and keeps reform processes in ICT in education alive (part of deliverable D11.3 in M24)
- Findings from the Evaluation conference in M42 (contained within deliverable D11.4 in M48)
- Recommendations related to mainstreaming iTEC results in the First and Final Reports from the iTEC High-Level Group (deliverables D11.3 in M24, D11.4 in M48)

1.4 STRUCTURE OF THE DOCUMENT

As the project develops, each version of the iTEC Exploitation Plan will contain increasing levels of detail under the following section headings:

1. Introduction.
2. Description of the iTEC exploitable results: a description of iTEC results that have been validated in the school pilots and which the project believes can be mainstreamed and taken to scale (to be elaborated in the second and subsequent versions of the deliverable as the main project results come on stream).
3. Target audiences for iTEC results; the key stakeholders involved in the take up of iTEC results (to include more detailed profiles of potential stakeholders in later versions of the deliverable).
4. The iTEC Value Proposition: a discussion of how ITEC results represent either a unique value or added value to the different target audiences (will start to be elaborated in the second version of the deliverable).
5. IPR Issues: how the project is dealing with any IPR issues related to the exploitation of project results (to be elaborated more specifically in versions 3 and 4 of the deliverable).
6. **(Initial) Strategies and Main Channels for Mainstreaming iTEC results** (**this is the main focus in the first version of the deliverable and will be further elaborated in versions 2-4**).
7. Exploitation of iTEC results by project partners: strategies and plans being made by individual project partners to exploit iTEC results beyond the end of the project (in versions 3 and 4 of the deliverable).
8. The Economic Model for sustaining iTEC results after the end of the project (this will particularly be developed in versions 3 and 4 of the deliverable).

1.5 IMPACTS OF THE DELIVERABLE

1.5.1 iTEC PROJECT

1.5.1.1 Impact on iTEC Milestones

This deliverable was produced at the end of August 2011 in line with the timetable for D11.5.1 set in the project Description of Work.

Further, more detailed iterations of the Exploitation Plan will be provided in M24 and M36 as project results progressively become available and a final version of the deliverable (D11.5.4) will be produced at the end of the project in M48.

The deliverable complements the iTEC communication and dissemination activities and contributes to milestone 33 in month 12, which is concerned with raising public and stakeholder awareness of iTEC.

1.5.1.2 Impact on iTEC 'Risk Analysis'

The first version of this deliverable has no impact on the risks that are currently discernable in the project. Later versions of this document will report on how the project is dealing with: risks related to low, initial take-up of iTEC results; the risk that the project may not have a long-term, sustainable impact on schools.

1.5.2 ETHICAL ISSUES

The project does not foresee any ethical issues that need to be addressed by the Exploitation Plan.

1.5.3 IPR ISSUES

In this first version of the Exploitation Plan, when the majority of project results have yet to come on stream, it is too early in the project to determine whether IPR issues will need to be addressed related to the exploitation of iTEC results. Section 5 of the deliverable will address any IPR issues if/when these emerge.

2 ITEC EXPLOITABLE RESULTS

2.1 ITEC AS A LIVING LAB

As anticipated in the project Description of Work, in the first year of the four-year iTEC project the majority of project results have neither come on stream nor been evaluated yet in the large-scale school pilots. It is, therefore, too early to anticipate how the educational community (practitioners, policy makers, educational ICT vendors etc.) will react to the eventual project outcomes and how project results can be mainstreamed and exploited after the end of the project in August 2014.

While most results have yet to be delivered and evaluated, however, it is already clear from the response to the early project dissemination activities that **iTEC has the potential to become a permanent platform for key stakeholders to rethink teaching and learning in 21st century classrooms**. The promotion of iTEC as a 'Living Lab' or 'Ideas Lab' has particularly resonated with policy makers (at both national and regional levels) and major ICT vendors who perceive that new multi-stakeholder mechanisms are needed in order to properly explore how ICT can impact on learning in and out of school.

Already in the first year of the project, three major ICT companies, two Ministries of Education and a large regional educational authority have become iTEC Associate Partners and discussions are well advanced with almost a dozen other public and private stakeholders that have expressed an interest in being actively involved in the project (see section 6.2).

2.2 ITEC TECHNOLOGY

In terms of the iTEC technical developments, the initial signs are that the project vision (see Appendix 1) is well aligned with the roadmaps of a number of major ICT companies. For example, recent discussions with one of the leading VLE providers in Europe has underscored that learning platform vendors are also working on new solutions that involve integration of widgets or widget like components to allow practitioners and learners to more easily integrate an increased variety of tools, content and information to meet their educational and learning requirements.

One of the main contributions of iTEC, therefore, will be the demonstration of the validity and the promotion of the concept of the "shell" as a container for the integration of learning tools, content and other resources. As part of the exploitation work, the project will closely monitor technical developments in the K-12, ICT market. At the end of the project, it is anticipated that the concept of the iTEC shell and the open protocols it is based on (e.g. W3C Widget, IMS LTI) will be adopted by other e-learning players and that the iTEC tools and widgets regarded as the most relevant will get enough traction in order to be maintained as commercial or open source software.

Where iTEC tools and services fit into the educational ICT market in 2004 remains to be seen but the current indications are that a number of iTEC results have the potential to be exploited beyond the end of the project.

2.3 POTENTIALLY EXPLOITABLE RESULTS

iTEC partners anticipate a number of potentially exploitable results. As evaluation data is analysed from the initial piloting and feedback is obtained from the first demonstrations of iTEC technology, the project will particularly explore in future versions of this deliverable:

- Whether a self-sustainable mechanism can be put in place (e.g. funded by MoE, regional educational authorities and ICT vendors) to maintain the ongoing development and testing of scenarios for future classroom designs (possibly linked to the new Future Classroom Lab initiative – see section 6.4).
- How it is possible to maintain and extend training and support activities (both online and face-to-face) at pan-European and national/regional levels related to iTEC technologies and the implementation of iTEC scenarios.

- The potential for the shells provided as working prototypes by project partners to be maintained longer term as a commercial software-as-a-service. This would include ongoing support for software maintenance and development of key functionalities that increase efficient and effective deployment These services could potentially be provided under a number of commercial models and provide access to a building network of other back end services provided by others as part of a growing SOA community. This could include existing services such as the LRE and, for example, further iterations of the SDE or services of a similar nature if proven to be of value through iTEC as envisaged.
- The opportunity to establish a validation service for shells. iTEC shells will make resources such as people, content, tools and events available for an efficient and effective technology-enhanced learning environment. At the same time, they could potentially serve as an authentication and authorization as well as a trusted electronic infrastructure for school data with a focus on learner performance. The project will examine the possibility of establishing an iTEC Validation Service (in collaboration with standards' bodies and MoEs) which would ensure that a third-party shell is secure and provides the necessary interfaces for deploying it.
- Possible commercialisation of the Composer/SDE/back-end set of tools involving a pay-per-scenario model (on payment of a fee users could add their resources to the back-end, access educational scenarios stored there and create a Learning Activity and Resource Guide).
- To what extent the iTEC Application/Widget Store can be extended and maintained by the deployment of an educational app store containing both open source and commercial resources produced by individual authors, publishers and other stakeholders. In exploring this idea, the project will liaise with other relevant Commission-funded initiatives (e.g. ROLE project[2]) and closely monitor wider market developments[3].

[2] http://www.role-widgetstore.eu/content/about
[3] Charles Severance, "Toward Developing an Education App Store," *Computer*, vol. 44, no. 8, pp. 107-109, Aug. 2011, doi:10.1109/MC.2011.256, http://www.computer.org/portal/web/csdl/doi/10.1109/MC.2011.256

3 KEY TARGET AUDIENCES FOR ITEC RESULTS

The iTEC Communication Plan is focusing dissemination activities and providing targeted messages for three key groups:

1. ICT in education policy makers
    - European Schoolnet members (30 Ministries of Education)
    - Regional/municipal educational authorities in Europe
    - Training bodies
    - Companies

2. ICT in education practitioners
    - Professional associations
    - Head Teachers
    - ICT Advisers
    - Teachers

3. ICT vendors and suppliers (including SMEs)
    - ICT technology and tools' providers
    - Publishers and content developers
    - Trade associations (vendor bodies and educational publisher associations)

In later versions of the deliverable, the iTEC exploitation strategy will look at how the various project results are being exploited and taken up by each of these stakeholder groups as the project develops and the potential for long-term impact after the end of the project.

This section will also examine how iTEC results are being exploited by other EC-funded projects and global initiatives and will reference work by individual partners to ensure take-up of specific project outputs by, for example, relevant standards' organisations or the wider technology-enhanced learning research community.

4 THE ITEC VALUE PROPOSITION

This section will start to be elaborated in the second version of the deliverable and will include a discussion of how emerging ITEC results represent an added value to the different target audiences identified in section 3.

5 IPR ISSUES

The Consortium Agreement identifies ownership or IP rights in relation to any foreseen results from the project, together with mechanisms to deal with IPR claims that arise during the project in respect of unforeseen results. It is the intention, however, that the project will favour open source modalities for the exploitation of major project results and that the exercise of IP restrictions over access to any project results will be at a minimum.

Any issues related to IPR will be addressed in future versions of the Exploitation Plan as it becomes clearer what project results the Consortium or individual partners wish to exploit either collectively or individually.

In this first version of the Exploitation Plan, when the vast majority of project results have yet to come on stream, it is too early in the project to determine whether IPR issues will need to be addressed related to the exploitation of iTEC results. This issue will be closely monitored and reported on in future versions of the deliverable.

6 (INITIAL) STRATEGIES AND CHANNELS FOR MAINSTREAMING ITEC RESULTS

6.1 INTRODUCTION

As iTEC results start to emerge, there may be some exploitation strategies that can be adopted by all project partners at national level as well as some 'central' or pan-European exploitation actions in which many members of the Consortium can participate. However, it is not viable to think that there can one 'model' exploitation plan for scaling up and mainstreaming the innovation in classroom practice that will take place in the school pilots. In order to maximise the project's impact, exploitation activities, particularly by the 14 Ministries of Education in iTEC, will need to be customised and adapted to 'local' conditions and ICT strategies, including national teacher education and CPD programmes. This is a key point to understand when reading this first version of the iTEC Exploitation Plan.

In the first twelve months, the main focus in work package 11 has been on: raising awareness of the project among all relevant stakeholders; putting in place a project web site and the main elements of a Communications' Plan (an internal project deliverable); bringing on board a number of iTEC Associate Partners; identifying and bringing together members of the High-Level Group of decision shapers that will advise and provide recommendations on how project results can be mainstreamed and taken to scale. Finally, steps have been taken by European Schoolnet to put in place new 'central' mechanisms such as a Future Classroom Lab and CPD courses that will be important elements or *channels* for the pan-European iTEC exploitation.

However, 'central' exploitation actions are inevitably limited in scope. In order for iTEC to really have the impact foreseen in the Description of Work, the focus in WP11 during the remainder of the project must increasingly be on helping project partners to develop their own exploitation strategies and to support them as they work to mainstream project results. Hence, section 7 in later versions of this deliverable will be extremely important. The vital requirement in the general exploitation strategy is that individual partners (and the schools involved in the pilots) must increasingly become the key drivers of exploitation actions in order for iTEC to have a significant impact on the educational reform process in each participating country.

As the large-scale piloting is about to start in September 2011, an important issue for the Ministries of Education will be to assess the full costs associated with the validation methodology being adopted in the project and determine with this or an alternative validation protocol can be maintained after the end of the project funding.

6.2 ITEC ASSOCIATE PARTNERS

Working with Associate Partners is an important part of the general project exploitation strategy. The iTEC DoW (Task 11.2) outlines how the project aims to recruit Associate Partners as a way of extending the reach of the project and embedding project results. As part of this work, the project has developed a Charter for Associate partners as a public deliverable (D11.1) explaining how both large and small stakeholders can have an active involvement in the project, as well as an Associate Partner FAQ and application form.

Given the level of interest from both large and small organisations in the first year of the project, iTEC has actually needed to create two categories of organisations that will contribute to dissemination and exploitation activities – iTEC Community Members and iTEC Associate Partners.

The main difference between iTEC Associate Partners and Community Members is that the former are required to demonstrate that they have both the commitment and resources in order to sustain a more active involvement in the project. For example, iTEC particularly seeks to attract Associate Partners that wish to have a more active involvement by:

- **Participating in the iTEC validation in schools**

An iTEC Associate Partner may wish to provide a group of innovative schools that it is currently working with, in order to test some of the iTEC scenarios and benefit from the results of the project.

- **Testing hardware, software, content or services that support iTEC scenarios.**
  It is anticipated that some iTEC scenarios will provide ICT vendors with opportunities to demonstrate and test existing (or about to be released) hardware, software, content or services that support designs for the future classroom.

Community Members who register on the iTEC web site receive regular updates and newsletters on the project and will be invited to contribute to the scenario development process and participate in workshops and webinars. While this group of stakeholders will certainly be important in terms of disseminating project results, WP11 believes that maximum impact can be achieved by focusing more on those organisations (MoE, regional authorities, ICT vendors etc.) that are prepared to commit more fully to working with the iTEC Consortium.

Already in the first year of the project, the Associate Partner strategy has exceeded expectations. Major ICT companies such as Acer, Microsoft and RM have become iTEC Associate Partners and interest in having an active involvement in the project has also been expressed by Apple, Cisco, DYMO/Mimio, eInstruction, Intel and PolyVision. Discussions with these companies are continuing.

Two Ministries of Education (represented by Centre for International Services in the Czech Republic and Finnish National Board of Education/the Network of Finnish Teacher Training Schools) have become iTEC Associate Partners and will participate in the school piloting, as will the Gothenburg Region Association of Local Authorities in Sweden. A second Swedish regional authority is also expected to become an Associate Partner before the end of 2011 and several large regional authorities in other countries are also exploring how they can be more closely involved in iTEC.

In Years 2-4 the project will continue to extend the number of Associate Partners to include a wider group of ICT vendors and MoE. There will also be a particular focus on large regional educational authorities which European Schoolnet will increasingly target as part of its new Future Classroom Lab initiative (see section 6.4 below). The increasing involvement of iTEC Associate Partners will enable the project to ensure that the iTEC technical outputs and approaches are adopted by ICT providers and mainstreamed. By developing closer relationships between ICT providers and national/regional authorities, the project will also help create a coherent and ‘joined up’ vision for the development and application of technologies in schools.

6.3 ITEC HIGH-LEVEL GROUP

The project recognises that scaling up designs for the future classroom requires more than large-scale demonstrations of scenarios that successfully engage teachers and learners. Ways must be found so that project results are brought to the attention of key policy makers and civil servants taking decisions on national strategies and funding related to the implementation of ICT in education. And more than this, project results must also be aligned with the political and economic realities that are impacting on how ICT contributes to the educational reform process in each country.

The scale of the challenge that the project faces here is considerable, particularly as a number of national agencies dealing with ICT in education have either disappeared entirely since the project commenced (e.g. Becta in the UK) or are currently subject in several countries to audit, review or merger with other national agencies.

The approach adopted for raising awareness, disseminating results and creating impact in iTEC will build upon the experience already gained by European Schoolnet (EUN) in a number of large-scale projects and will leverage existing channels for dissemination of project results including the

EUN Steering Committee (that includes senior representatives of 30 MoE) and EUN conferences and special events.

The formation of a High-Level Group (HLG) of decision shapers (Task11.3) is a new instrument that will help iTEC to exploit and mainstream project results. In order to form this group, European Schoolnet initially wrote to its 30 supporting Ministries of Education asking them to propose a senior person (both pedagogical experts as well as ICT experts) that have a solid background and experience as decision shapers / makers with regard to ICT policy development and deployment in education and who, in a personal capacity (not representing the nominating country), can provide strategic advice to the project.

From this process, the project has currently identified a panel of 10 experts that includes two former Ministers of Education and other individuals who have either current or former experience as: a special adviser to a Minister of Education; Head of a national ICT agency; Head of a national ICT infrastructure and equipment team; Deputy Director General in a Ministry of Education; Research Fellow in a national Policy Research Unit. Members of the HLG are[4]:

Eduardo Marçal Grilo (Chair), Portugal
Jan Hylén (General Secretary), Sweden
Toine Maes, the Netherlands
Eva Maria Engelsberger, Austria
Emanuele Fidora, Italy
Øystein Johannessen, Norway
Bálint Magyar, Hungary
Alain Séré, France
Kamil Sijko, Poland
Antreas S. Trakoshis, Cyprus

As part of the iTEC Exploitation Plan, the intention is for the HLG to become a permanent body within the framework of European Schoolnet after the end of iTEC in order to help sustain the positive achievements of the project and act as an important source of knowledge and information on the educational reform process.

A planning meeting with the Chair and General Secretary of the HLG was held in March 2011 during which the remit for the group was discussed. It was agreed that the HLG would:

1. Help identify which technology supported learning and teaching scenarios are likely to succeed in a range of countries and provide feedback regarding their potential scalability and adoption within the context of any educational reform processes.
2. Contribute to the decision-making criteria that will be needed in order to decide what scenarios are taken forward for large-scale testing.
3. Provide input into decisions on how the scenarios might be evaluated.
4. Evaluate the success of the iTEC scenarios in supporting effective approaches to learning and teaching (collaboration, individualisation, creativity, expressiveness) and identify those with maximum potential to have a transformative effect on the design of the future classroom.
5. Consider the findings and recommendations of the project evaluation, including barriers to, and enablers of change, and involving an analysis of the underlying change processes required to obtain large-scale adoption of the positive outputs of iTEC in classroom design.

[4] Short profiles of HLG members are at :
http://itec.eun.org/c/document_library/get_file?p_l_id=10307&folderId=15051&name=DLFE-1606.pdf

6. Help disseminate project results and ensure that iTEC scenarios and work in the large-scale pilots contribute to educational reform in schools at both national and European levels through input into a mainstreaming strategy.
7. Deliver conclusions and an iTEC policy 'declaration' through a policy makers' evaluation conference in month 42.
8. Use iTEC findings to help inform European Commission research programmes.

At the first meeting of the HLG on 1 May-1 June 2011 and in line with the DoW, the major focus was to provide feedback on the iTEC Evaluation Plan (deliverable D5.1) and how the project could develop criteria for selecting which scenarios should be taken forward for prototyping and large-scale piloting. The HLG highlighted a number of issues as being important in terms of the final exploitation of project results and, in particular, suggested that:

- iTEC scenarios need to be tested with teachers with average levels of ICT competence in each country as well as with more advanced and confident practitioners.
- It is important that the project is clear to what extent it is trying to support and help teachers to do their job more effectively and/or whether it is also engaged in trying to change current practice, as this issue is likely to have a serious impact on the extent to which iTEC scenarios can be mainstreamed within the lifetime of the project.
- In Year 2 and 3 of the project, it would be useful to look again at schools that implemented the initial scenarios to see if these scenarios are still in use or have been further implemented.
- The HLG would like to explore with MMU, the WP5 leader, if there are possibilities within iTEC to measure the impact of the scenarios on pupils' learning.

The group also began to explore what factors are likely to trigger a discussion on the need for educational reform in Ministries of Education. It was suggested here that there might be a need for iTEC scenarios to more directly address issues that represent pressing educational problems in several countries. The HLG also asked if the project could carry out in each country where there is an iTEC pilot a more systematic mapping of the stakeholders involved in the decision-making/shaping process (senior and middle-tier civil servants, policy analysts, teacher unions, educational press etc). These issues will be addressed in more detail prior to and during the second HLG meeting in 2012 when concrete results from the first two project cycles can also be presented and reviewed.

6.4 THE EUROPEAN SCHOOLNET FUTURE CLASSROOM LAB

The iTEC Communication Plan is focusing dissemination activities and providing targeted messages for different groups, including policy makers at national/regional level, practitioners, and ICT vendors / suppliers. A key part of the project dissemination strategy will be to find ways to make iTEC scenarios and technology *visible* to different stakeholders via the use of short videos of classroom practice and to encourage stakeholder participation in both online webinars and face-to-face events.

As indicated in section 2, however, it is clear from the response to the early project dissemination activities that iTEC has the potential to become a more permanent 'Living Lab' or 'Ideas' Lab', a platform that enables key stakeholders to rethink teaching and learning in 21st century classrooms. In order to fully exploit emerging iTEC results, therefore, European Schoolnet is already putting in place a new Future Classroom Lab (FCL) that will allow it to showcase iTEC teaching and learning scenarios and provide training and continuing professional development related to these both during and after the end of the project. The aim is that this new facility will be equipped and ready for a series of high profile launch events starting in December 2011.

The Future Classroom Lab will consist of a room designed as an interactive classroom to illustrate how a traditional classroom setting can use technology to enhance interactivity and student

participation, plus a large reconfigurable open space equipped with the latest technology. This will be divided into with five different learning 'zones' that can support a variety of activities. In particular, the Future Classroom Lab will be used as an environment to:

- Stimulate discussions and illustrate practice related to a range of current and prospective innovative teaching and learning scenarios that can be mainstreamed and taken to scale.
- Provide hands-on training facilities for teachers, Head Teachers and ICT Advisers.
- Act as a venue for meetings, workshops and events for Ministries of Education, regional education authorities and commercial partners.
- Provide a platform where policy makers, practitioners and ICT suppliers can come together in order to rethink how teaching and learning can take place in 21st century classrooms and other learning spaces.

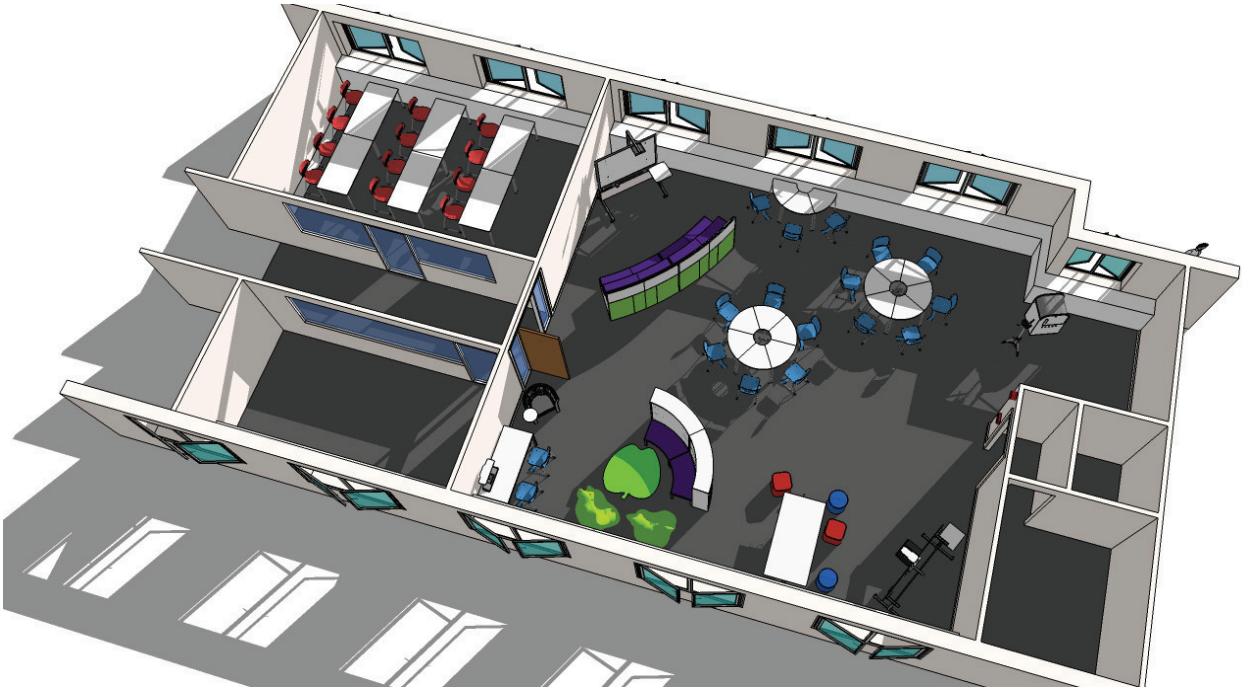

Figure 1: Floor Plan of the Future Classroom Lab

The Future Classroom Lab will not only add value to the 14 Ministries of Education that are already participating in iTEC but will also allow the results of the iTEC project to be more easily presented to the other 16 Ministries supporting European Schoolnet and make it possible to work more closely with regional and municipal educational authorities that are increasingly interested in exploiting the results of EUN projects and initiatives.

While the FCL facility will be a key part of the iTEC exploitation strategy, it is important to recognise that this is not being funded by the project. From the outset, the FCL is being established as a separate initiative by European Schoolnet and its supporting Ministries that will be run as a self-sustainable facility as part of a wider EUN business strategy.

At the time of writing this deliverable, work is well advanced on the design and branding of the FCL space and the initial installation of furniture and equipment will be carried out at the end of September 2011. EUN is working closely on the development of the FCL with RM, a large educational ICT integration company in the UK that has established the REAL (Rethinking Education and Learning)[5] centre at its headquarters in the UK. Companies that have also

[5] http://www.rm.com/Generic.asp?cref=GP1775452

expressed an interest in helping European Schoolnet to develop the Future Classroom Lab include: Acer, Apple, Cisco, Dymo/Mimio, eInstruction, Intel, Microsoft, Planet PC, PolyVision, Promethean, SMART Technologies.

In line with European Schoolnet's ethical charter for industry partnerships, all ICT vendors participating in the FCL will be treated equally and in a transparent manner. Each company will be asked to make a financial contribution toward the operational costs of the centre and to commit to a two-year agreement with European Schoolnet under which they will be expected to provide and regularly refresh all necessary equipment (hardware, software) at their own expense.

iTEC and the Future Classroom Lab
Based on the results of how designs for the future classroom have been validated in >1,000 schools across Europe, European Schoolnet will particularly use the FCL to demonstrate and showcase how new teaching and learning approaches can be successfully deployed. Policy makers will particularly be able to explore what training/support strategies and level of investment is required in order that scenarios can be mainstreamed and taken to scale at national and regional levels.

As well as providing a space where policy makers can rethink their ICT strategies, the Future Classroom Lab will provide teachers, head teachers and ICT advisers with training and continuing professional development opportunities (see section 6.5 below). Within the FCL, practitioners will be able to learn how to implement future classroom designs and be provided with in-depth, face-to-face courses on a range of topics related to the effective use of ICT in schools.

It is interesting that some Ministries are also starting to develop facilities similar to the Future Classroom Lab. Norway, for example, has recently set up a demonstration centre in Tromso where teachers and pupils can experiment with new ways of teaching and learning. RM has also exported the REAL concept to both the USA and Australia and is interested in working with European Ministries of Education that wish to set up similar facilities.

Whether the FCL concept becomes more widespread remains to be seen. Future versions of this deliverable will report on how iTEC results are being mainstreamed via this new, multi-stakeholder facility.

6.5 THE CPD*LAB* PROJECT

Successful exploitation of iTEC results will require a strategy that is both: top down - providing guidelines and recommendations to policy makers and ICT vendors via the activities of the iTEC High-Level Group; and bottom up – disseminating and mainstreaming examples of future classroom scenarios that engage practitioners and encourage them to experiment with new approaches to teaching and learning.

While the iTEC dissemination strategy aims to reach as wide an audience of practitioners as possible, however, widespread take-up of iTEC results will require the project to find new ways to provide ongoing training and support beyond the end of the project. With this in mind, the European Schoolnet CPD*Lab* project will make an important contribution to the iTEC exploitation strategy. This new, two-year project, supported by the Commission's Lifelong Learning Programme, will commence in October 2011. Its aim is to improve the quality of ICT-related Continuing Professional Development available to teachers, school leaders and other school staff and help schools become effective learning environments by offering a portfolio of training courses directly related to the needs of teachers in the future classroom.

In particular, the project will specifically design, test and disseminate three, five-day CPD courses that support:

- Innovative pedagogical use of Interactive Whiteboard technologies in secondary schools.
- Improved safety policies in secondary schools, addressing issues such as cyber bullying, use of social networks, responsible use of mobile and Internet technologies etc.
- Implementation of teaching and learning activities for the future classroom based on scenarios that have been developed and evaluated in iTEC.

As part of the dissemination and exploitation activities of this project, a shorter course for policy makers will also be designed based on these topics.

Each five-day course developed in the project will be delivered in the new Future Classroom Lab. The courses for practitioners will be published in the Comenius In-Service Training Database and actively promoted through Comenius National Agencies and MoE dissemination channels so that teachers, teacher trainers and non-teaching staff from across Europe can apply for a Comenius grant in order to cover the costs of travel, subsistence and course fees.

In addition, the project will devise specific dissemination actions for members of the Association for Teacher Education in Europe (ATEE) and will seek to work with the ATEE to see how specific modules from CPD*Lab* courses could be embedded in initial teacher education courses. The presence of a teacher education institution in the project will also help CPD*Lab* devise a realistic strategy for addressing this constituency.

iTEC and CPD*Lab*

The CPD*Lab* project has been consciously designed to leverage, consolidate and help sustain the work that will be carried out in work package 4 in iTEC related to the professional development of teachers (Task 4.5). Training provided to teachers in how to set up an iTEC shell and use the main iTEC tools/services (Task 6.5) will also inform the development of the CPD*Lab* courses, as will the three versions of the iTEC environments' manual (D6.4).

Support and CPD being provided to national coordinators and teachers in iTEC is primarily carried out using online tools. This is partly a consequence of the project travel budget being significantly reduced during the contract negotiation process. The CPD*Lab* project will make it possible to develop a suite of iTEC modules and training materials that can be delivered face-to-face within a reconfigurable physical space that contains all the technology that is needed in order to deliver any iTEC scenario. These face-to-face courses can also be localised and adapted for use at national and local level by iTEC Ministries and other partners.

Versions 2-4 of the Exploitation Plan will provide more detail on how work carried out in iTEC is supporting the CPD*Lab* course development and how these courses are, in turn, contributing to the iTEC mainstreaming strategies of project partners.

7 EXPLOITATION OF RESULTS BY ITEC PARTNERS

In later versions of the deliverable, this will constitute a major section detailing strategies and plans being made by project partners to exploit iTEC results beyond the end of the project.

8 ECONOMIC MODEL FOR SUSTAINING ITEC RESULTS

It is too early in the project to propose a specific economic model for sustaining iTEC results after the end of the project. The project obviously first needs to decide *what* results have the potential to be exploited by which stakeholders before proposing *how* and at what cost these can be mainstreamed and sustained. Later versions of deliverable 11.5 (particularly versions 3 and 4) will explore and propose an economic model for sustaining iTEC results.

It is already envisaged, however, that a number of potential iTEC results can be mainstreamed at a pan-European level via the European Schoolnet Future Classroom Lab that is being launched at the end of 2011 (see section 6.4). This new initiative is not dependent on iTEC funding but is part of a wider European Schoolnet business development strategy. From day one, the FCL is being established as a self-sustainable facility in which both European Schoolnet and ICT vendors are working together to cover operational costs and a revenue stream is anticipated from running regular CPD courses for both practitioners and policy makers related to deployment of iTEC designs for the future classroom.

There may also be the potential to 'export' the complete FCL model to other countries/regions or specific services such as FCL courses and workshops. Later versions of deliverable 11.5 will explore these possibilities in more detail and increasingly examine how each Ministry of Education in iTEC proposes to support the mainstreaming strategy in each country.

Later versions of the deliverable will also report on the emerging economic model(s) for sustaining potential iTEC results that are highlighted in section 2.2.

9 CONCLUSIONS

In the first year of a four-year project, before the majority of results are due to be delivered and evaluated, it would be premature and largely speculative to produce detailed plans as to how potential iTEC outcomes can be mainstreamed and sustained beyond the end of the project.

However, the overall conclusion from the first year of project activities is that iTEC is seen by various stakeholders as a flagship project on the design of the future classroom and there is considerable interest in what iTEC is trying to achieve. The project is on track to produce exploitable results, not least of which is the possibility to create a permanent, multi-stakeholder platform where policy makers, ICT vendors, educational publishers and practitioners can work together in order to rethink how teaching and learning can evolve in the future classroom.

Feedback from a number of ICT vendors also confirms that the iTEC vision and technological approach to advancing the state-of-the art (section B1.2.1 of the DoW) remains in line with mainstream thinking in terms of how K-12 learning platforms and environments are likely to evolve over the next five years.

In the first 12 months of the project, WP11 has:

- Worked with project partners to identify an initial set of tools and services that have the potential to be exploited after the end of the project; these will be explored more fully once evaluation data from the initial pilots and early feedback on iTEC technology becomes available.
- Established the iTEC High-Level Group of decision shapers that will play a key role in helping to develop the mainstreaming and exploitation strategy over the remaining three years of the project.
- Developed working relationships with a group of active iTEC Associate Partners from both the public and private sectors.

During this early phase of the project, concrete steps have also been taken to put in place some potentially important channels that will support the exploitation of emerging iTEC results. In particular:

- European Schoolnet and its supporting Ministries and industry partners are implementing a new, self-sustainable Future Classroom Lab facility within which iTEC project results can be demonstrated and mainstreamed and which may also potentially serve as a platform for the ongoing development of future classroom designs after the end of the project.
- With additional support from the new CPD*Lab* project, it will be possible to build on iTEC online training activities in order to develop face-to-face courses for both practitioners and policy makers on how to exploit emerging iTEC technology and tools and successfully implement iTEC scenarios for teaching and learning.

APPENDIX 1: ITEC TECHNICAL VISION V1.2

The technical delivery programme will achieve the following vision:

"Learners and teachers will be able to access the information, tools and resources required to allow them to plan and participate in iTEC Educational Scenarios making use of the technologies and devices they currently have and providing them with additional resources and tools, including Widgets. In addition, they will have access to people and events that can support learning. These tools and resources will be accessed through a secure personal user interface called an "iTEC Shell" which will allow the learners, teachers and others involved in the learning process to integrate the range of tools and resources required to meet their educational and learning requirements.

Various shell technologies will be available to users and each shell will have access to the same selection of tools and resources made available through a collection of registries including an "iTEC Application Store" that allows users to find new Widgets and integrate them into their Shell. Individuals or organisations providing tools and resources, or giving access to information on learning events or people available to support learners online, will be able to register this information using a tool called the "iTEC Composer". The iTEC Composer will also:

- Allow Individuals or organizations to add certain tools to the iTEC Application Store.
- Enable local users, e.g. school teachers or ICT Coordinators, to identify which technologies they already have available to them, including devices and proprietary tools, so that the additional iTEC tools and resources made available are locally compatible.
- Make use of a service called the "Scenario Development Environment" which will provide tool and resource recommendations based upon iTEC Educational Scenarios and related to the tools and resources that are available locally and through iTEC registries."

The Technical Vision should be read with reference to the iTEC Glossary managed through WP10:

https://docs.google.com/document/d/1wIC0EU00rXKX6v3tq2T5wfxQALVZllhLA_N4BpS23bY/edit?hl=es&authkey=CPHJt-cK#