

*Use of information and communication  
technology and tools in the  
internacionalization department of a higher  
education institution*

*F. Fedele, M. Feituri,  
L. Galassi, I. Mascitti, R. Porzio*

## **Resumen**

El uso de nuevas herramientas tecnológicas (TICS) es necesario a fin de que una Oficina de Proyectos internacionales trabaje de una manera más eficiente. Las TICS pueden usarse para apoyar la presentación de una propuesta (sitios para seguir los próximos llamados, herramientas para crear redes de trabajo) así como para el gerenciamiento del proyecto en sí (herramientas para gerenciar el proyecto, para desarrollar reuniones virtuales, para facilitar el trabajo virtual en equipos). Asimismo, las TICS favorecen la investigación (brindan acceso a información pública y especializada) y el entrenamiento (eLearning). Las comunicaciones internas y externas se ven mejoradas por las herramientas de comunicación sincrónicas y asincrónicas. La evaluación de las actividades se beneficia a través de las encuestas en línea, y la administración financiera de un proyecto se facilita con los sistemas contables. Las TICs están cambiando completamente la forma en que los proyectos internacionales se llevan adelante, haciendo posible y habituales realidades que antes eran inimaginables (por ejemplo, las reuniones virtuales). Este trabajo brinda una mirada a todos los posibles usos de las TICS en un Proyecto Internacional, y hace sugerencias sobre las herramientas a usar, basadas en la experiencia de los autores.

Palabras clave: TICs, Información y comunicación tecnológica, herramientas tecnológicas, internacionalización universitaria, Internacionalización de educación superior.

## **Abstract**

The use of ICT tools is necessary in order to make the International Project Office work in a more efficient way. ICT can be used to support proposal preparation

(websites for monitoring calls, tools for networking) as well as to support project management (project management tools, support for virtual meetings and support for the virtual team working).

In the same way ICT supports Research (access to public information and to specialised information) and Training (eLearning). Internal and external communication are supported by synchronous or asynchronous communication tools. Evaluation activities benefit from online surveys and the Financial administration of a project is supported by dedicated accounting systems. ICT is completely changing the way that international projects are run, making things that were previously impossible (like virtual meetings) the normality. This paper provides an overview of all the possible uses of ICT in an International Project Office, giving suggestions of the actual tools to be used, based on the authors experience.

Keywords: ICT, Information and Communication Technology, IT Tools, University Internationalization/University Internationalisation, Internationalization of Higher Education.

## **Introduction**

Managing an international project is often a difficult task, as it involves different people working towards a shared objective and on a common set of activities. The project team is normally spread over different countries, under different working hours, often belonging to different types of organizations and sometimes with a very diverse cultural background. All this makes those projects a real challenge, but luckily technology can help overcome some of the issues faced.

In most Higher Education Institutions (HEI) information and communication technologies (ICT) are widely used – so rather than promoting their benefits we will concentrate here on how they can make the work in an international project more efficient and effective. We will give suggestions as to which tool to use in the different activities which can be foreseen in an international project.

This paper distills the experience of the authors years of work in the field, and as been especially influenced by their joint work in the International Projects Office of the Università degli Studi “Guglielmo Marconi” of Rome, Italy. A lot of information has also been derived from work done in other projects partially funded by the European Commission, and especially the guide [1 – Survival Kit for Managing Multilateral Projects in the Lifelong Learning Programme].

### ICT for specific project activities

All projects, regardless of their topic and approach, can benefit from using ICT. Until a few years ago, the use of ICT in projects was limited almost exclusively to the use of email and static websites. The situation has now changed and a wide range of options are available to project teams. These tools are easy to get and their use does not require special technical training, anyone with basic computer skills can use them successfully. Moreover, all these tools exist in both commercial and free, open source versions, some of them are also available in multiple languages.

The following table 1 presents a summary of the types of tools available and their relation to the main activities of an international project.

Table 1: International Project Office activities and ICT tools used

Nr	Project activity	Functions of ICT	Types of tools
1	Proposal preparation Call monitoring Proposal writing Setting-up a partnership	Source of information Communication	Specialised websites which monitor calls, European Commission Research Programmes websites Databases with contacts, organisation websites, search engines Forums, networking platforms Websites (general and specialised), search engines, databases, statistical/economical data sources

Nr	Project activity	Functions of ICT	Types of tools
2	Project management  Planning activities and work time Project meetings	Task organisation Time management Joint access to documents Team support Visual and audio support to presentations Online broadcasts	Project management software Project virtual work space Virtual support systems Timesheet system Shared calendars and meeting planning tools Slides presentation software Video/audio playing software Online broadcast platforms
3	Research	Access to public information Access to specialised information Inquiry support	Websites (general and specialised) Search engines, databases Online questionnaires, software for the management of online questionnaires, data processing software
4	Training	Course development and delivery	Learning object development systems, virtual learning environments, learning management systems, TV streaming solutions

Nr	Project activity	Functions of ICT	Types of tools
5	Internal communication Team collaboration	Synchronous or asynchronous communication, collaborative work Translation	Project virtual spaces, wikis, discussion boards, forum, chat, instant messaging, VOIP software, audio and video conferencing software Project web site private area Translation software
6	External communication Dissemination	Display and communicate information  Community building Networking	Project public websites, email, electronic newsletters, RSS feeds, virtual communities, virtual worlds, social networking websites, podcasts, web radio/TV, online journals, virtual conferences, webinars
7	Evaluation	Get feedback from users, data on website use	Online feedback forms, survey systems Website access statistics tools
8	Financial administration	Store financial data Support financial reporting Time management	Dedicated accounting system Online timesheet system

Besides these tools, international projects might need other types of ICT support for the delivery of their specific expected outputs, such as statistical data processing software, graphical design software and video editing software – this latter needs are not addressed here as they go behind the scope of this paper.

## **Access to internet**

Access to the Internet is nowadays a given, but this may not be true in all offices. Most of the IT tools used in international projects rely on the use of the internet as a connection channel, and some of those applications do not work without internet access. Therefore a good and fast access to the Internet is a tool that can not be missing in an International Project Office.

### **1. Ict for proposal preparation**

The use of ICT in International Project Offices starts with the preparation of a project proposal to be submitted for funding to one of the existing funding agencies or to the University Board.

#### **1.1. Call monitoring**

All International Project Office need to monitor the issuing by the different funding agencies of calls for proposals – while each specific Research Programmes website is the place to go looking for specific info on a call there are also specialised websites which monitor all research/funding calls.

##### Suggested tools

Development and Cooperation – Europeaid – Call search facility: returns the Forecast and Open calls published by the European Union DG for Development and Cooperation outside of Europe during the last ten days (<http://ec.europa.eu/europeaid/cgi/frame12.pl/> ).

CORDIS: access to all calls published under the 7<sup>th</sup> Framework Programme, the largest funding programme for research (<http://cordis.europa.eu/fp7/dc/index.cfm>).

WelcomEurope: WelcomeEurope is a commercial service that monitors 450 European Programmes for which a summary sheet is provided plus alerts on calls as they are issued (<http://www.welcomeurope.com/> ).

#### **1.2. Proposal writing**

There are a number of reasons for using ICT when writing a proposal – for example it is always necessary to provide both a picture of the state of the art and

an evaluation of what can be the economic impact of the research proposed. In all these cases access to research websites (both general and specialised), search engines, economic databases, statistical/economical data sources is a must.

On the other hand it is useful to have a place where to store the proposal ideas that are either created in the International Project Office or that are submitted to it by other parts of the University. Ideas inserted in this archive can later be searched for when a call that can fund them is issued.

#### Suggested tools

Access to websites: In general access to websites is always necessary when writing proposals

SARA (Sistema di gestione degli ARchivi dell'Area - Proposal idea archive): in USGM we have developed a specific internal ICT tool that stores a number of informations useful in running the International Project Office – this tool also offers facilities for archiving proposal ideas, with the added bonus of being able to link them in a structured way to the open calls archive. Even without having such a sophisticated tool a database where information can be stored is a very good solution.

### **1.3. Setting-up a partnership**

One of the most complex activities carried out by the International Project Office is the creation of the right partnership for a project proposal: this requires selecting the right partners for all the foreseen activities. A continuous networking activity which in turn feeds into a databases with contacts is a necessity, as well as access to organisation websites, search engines, forums, and networking platforms.

#### Suggested tools

LinkedIn: LinkedIn is one of the many existing free networking service and social website, and the one that has become the market leader in the business field. Definitely a good place to start networking (<http://www.linkedin.com>).

SARA (Sistema di gestione degli ARchivi dell'Area - Contacts archive): the tool we have developed in USGM has a specific area for archiving contact information and tagging those contacts with their research interests and know-how, to always allow for search and matching of partnership necessities – as always an alternative is a simple database or contact list where information can be stored.

## 2. Ict for project management

ICT can greatly benefit Project Management activities, which would otherwise be next to impossible. Below we have briefly outlined the possible uses when managing an international project.

### 2.1. Project management and Planning activities and work time

The classical project management activities of a typical international project, lasting typically 24 months or more, involving usually 50 or more resources, definitely require a dedicated software to support the Project Manager in his/her daily activities and in order to provide periodical project progress updates to the partners as well as to the funding agency. This tool can either be a stand-alone tool installed on the PM computer, but is nowadays mostly a web application used and updated by all those involved in the project. A number of possible tools exist, ranging from Microsoft Project Office to specialised ad-hoc solutions.

Running an international project also means having an international team of project contributors distributed amongst different countries who will need to share a common project virtual work space and use other virtual systems to work together on the project.

While the collaboration features of most office productivity tools can be used to make teamwork easier, having the possibility to work on shared documents is an even better solution – all the team members can then access the latest version of the document, read, modify and updated them.

The team will also need a shared, possibly web-based timesheet system to record each person's activities with the needed level of details required by many funding agencies.

#### Suggested tools

Microsoft Project: for a long time the classical tool for managing projects ([www.microsoft.com/project/](http://www.microsoft.com/project/)) or its open source alternative dotProject (<http://www.dotproject.net>).

Wrike: is one of many commercial web-based project management tools ([www.wrike.com/](http://www.wrike.com/)).

Basecamp: a web-based project information sharing tool (<http://basecamp.com/>), like activeCollab (<http://www.activecollab.com>) or one of their open source alternative ProjectPier (<http://www.projectpier.org/>).

PAM: USGM's purpose built project administration and management tool (see description in chapter 8).

TimesheetNG: a shared web-based system for recording project activities in full detail ([www.timesheetNG.org/](http://www.timesheetNG.org/)).



Google Docs: thru this web application Google allows a group of people to not only share documents (word, excel, powerpoint documents as well as other formats) but also to directly and jointly edit them ([docs.google.com/](https://docs.google.com/)).

## 2.2. Project meetings and Virtual meetings

Face-to-face project meetings represent important moments in the life of an international project. They provide opportunities for reviewing and assessing the work done, planning the next activities, make joint decisions to improve effectiveness and also stimulate team-building and personal interaction. However, it is common and understandable that, after each meeting, the level of interaction and the team performance will decrease. If ICT support is provided, by using, for example, a common virtual workspace, but also by organising virtual meetings, the interaction and the co-operation between team members can be maintained in between the face to face meetings.

Virtual meetings can serve several purposes in an international project:

- Assessment of progress with the implementation of planned activities plus detailed planning and distribution of tasks among team members (this was usually done only during face-to-face meetings)
- Review of draft products in a joint discussion, within the whole partnership, or by subgroups (this was usually done by collecting feedback formulated independently from each team member involved)
- Collaborative work, joint development of elements of the envisaged project outputs. In the absence of virtual meetings the outputs could only be explained during face-to-face meetings and then developed independently, piece by piece, by various partners, while one would receive the task of putting together and harmonising all the contributions

Of course, a balance needs to be achieved. Face-to-face meetings are still important, but virtual meetings make it easier for smaller sub-groups to work together regularly.

A virtual meeting can only be successful if all participants have access to the required infrastructure, are in a place where they are not disturbed and they do not disturb others, and all have at least a basic level of familiarity with the tools. It might be necessary to have a short training session just on the use of the tool with the whole group, before any virtual meeting. This first meeting can have as topic the tool or a presentation of the tool followed by presentations of team members of partner organisations, so that opportunities for practice are also provided.

An alternative is also that two (or several) team members work in parallel on specific outputs of the project, while being connected via a virtual communication tool. This way, whenever is needed, they can have a brief chat or voice call to clar-

ify specific elements and continue work separately.

ICT tools now also allow for the real-time broadcasting of a face-to-face or of a virtual meeting. In this case, besides the actual participants, there will be an audience, able to follow what is being discussed and usually address written questions to the moderator. This is also useful if some team members could not travel to a face-to-face meeting but are able to follow it from distance.

#### Suggested tools

Doodle: it helps scheduling meetings and other appointments. Doodle is simple, quick, free and requires no registration. Simply set up a poll, send a link to all participants, watch progress online, and finally choose the most suitable date ([www.doodle.com/](http://www.doodle.com/)).

AgreeDate: another free web tool for scheduling meetings and other appointments ([www.agreedate.com/](http://www.agreedate.com/)).

World Clock Meeting Planner: need to make a call to someone far away? Need to arrange a videoconference, telephone- or net-based meeting with several people spread around the globe? This utility should help you find a convenient time, so that no one has to be up during the middle of the night (<http://www.timeanddate.com/worldclock/meeting.html>).

Skype: software application that allows users to make voice calls, chats, file transfer and video conferencing over the Internet. Calls to other users within the Skype service are free, while calls to both traditional landline telephones and mobile phone can be made for a fee.

Adobe Connect: an enterprise web conference software with many functionalities such as a video chat, an online poll, an area for discussion notes, a chat, digital whiteboards, a file repository, a sharing area to share documents, presentations and its own desktop. Meetings can be recorded. ([www.adobe.com/it/products/adobeconnect.html](http://www.adobe.com/it/products/adobeconnect.html))

Webex: similar features of Adobe connect ([www.webex.com](http://www.webex.com))

Livestream: Broadcast and live stream your own channel for events, performances, virtual conferences and webinars. (<http://www.livestream.com/>)

### 3. Ict for research

The research it's an important milestone in the project life for two reasons: it allows to compare and identify the state of the art and it allows to go into more depth on some topics related to the project. To explore this information, it's important to collect all the possible data, and the new media and ICT help us on this.

### 3.1. Access to public information

The initial step to make a research it's to collect a first base of data. With the World Wide Web now it's possible to make search in a easy way. Generally there is two ways to search data into the Web:

- through search engine: websites that permit to find information on the web (article, images, video,...);
- through online database: websites that provide archives on particularly topic or category.

The first way is to make a research using a search engine like Google or a thematic search engine like NEXTBio for medicine. There is also search engines called "metasearch engine" that allow you to send the same request over hundred of search engines in the web and get back the summary of all the results.

The second way is for a more specific search. It is possible to query thematic databases finding information on specific topics.

#### Suggested tools

List of search engines by category:

[http://en.wikipedia.org/wiki/List\\_of\\_search\\_engines](http://en.wikipedia.org/wiki/List_of_search_engines)

List of online databases: [http://en.wikipedia.org/wiki/List\\_of\\_online\\_databases](http://en.wikipedia.org/wiki/List_of_online_databases)

### 3.2. Access to specialized information

Usually after the first collection of information, it's recommendable to focus the research on the specific topics needed. In the WWW there is many websites that have specialized information concerning specific fields:

- sustainable development;
- climate change, energy and transport;
- research and innovation;
- information society;
- agriculture and rural development;

There are also websites where it's possible to search publication (paper or digital) concerning the following areas:

- Activities of the European Union
- Law and justice
- External relations
- Trade - Competition
- Economy - Finance
- Social
- Information - Education - Culture - Sport
- Agriculture - Forestry - Fisheries

- Industry - Enterprise - Services
- Energy
- Transport Environment - Ecology
- Scientific and technical research
- Statistics

#### Suggested tools

Institute for Prospective Technological Studies: the Institute's main activities relate to providing strategic support for the conception and development of EU policies (<http://ipts.jrc.ec.europa.eu/activities/index.cfm>)

European Commission CORDIS: the gateway to European research and development (<http://cordis.europa.eu>).

CORDIS Library: this service is the central entry point for all documents and publications on European research and innovation activities (<http://cordis.europa.eu/library/>).

EUBookshop: A library of all the EU publications (<http://bookshop.europa.eu/is-bin/INTERSHOP.enfinity/WFS/EU-Bookshop-Site>).

### **3.3. Inquiry support**

In order to collect more information directly from the stakeholders the WWW offers many tools. You can start from adding a simple “poll” on your website to use a complex web survey service.

Specific software allow to analyze data previously collected online such as Microsoft Excel, but there is more specific and professional software like SPSS that permit you to:

- make data mining(extracting patterns from large data sets);
- predictive analysis (analyzing current and historical facts to make predictions about future);
- decision support systems.

#### Suggested tools

SurveyMonkey: provides free and paid online questionnaires and surveys, allowing to view results graphically and in real time (<http://www.surveymonkey.com>).

SPSS: Specific software specialized in data mining, customer relationship management, business intelligence and data analysis (<http://www.spss.com/>).

### **4. Ict for training**

The project development is one of the main activities in the department of

Internationalization to higher education institution. Often the project target group needs to be trained, and experience has shown that distance education is the best solution in this type of project, in terms of accomplishments and achievements.

In fact, E-Learning allows:

- Cut of travelling costs to reach the learning place and time saving
- Immediate availability of the learning materials (anywhere and anytime).
- Students can learn at their own pace , with increase of self confidence
- Consistency of the learning material quality
- Variety of delivery methods
- Immediate feedbacks and scores.
- Easy and not expensive updating of learning materials.

In case of adult education, e-learning is very suitable because adults are autonomous and self-directed, they need to find a training solution able to combine their work and life with the training activity, they are goal-oriented, relevancy-oriented and practical, focusing on the aspects of a lesson most useful to them in their work.

The ICT instrument at the base of e-learning is the Learning Management System, it is a software for delivering, tracking and managing training. Many LMS are WEB based to allow the concept of "anywhere and anytime" access to learning materials.

An LMS is used to access learning materials (interactive and multimedia), view announcements (such as reminders), perform online tasks (such as submitting an assignment), give prompt feedbacks, evaluation of learning performance and moreover to encourage an active learning. In fact an e-learning platform assures the combination of theory and practice, hosts various tools to support both interactivity (e.g. self-assessment quizzes) and interaction (social software).

Nowadays, an LMS is at the base for management of e-learning courses and materials usable through different kinds of devices, we have web based platform, mobile learning platform and TV-learning platform.

The use of different instruments (desktop or laptop devices, smartphones and television) allows the promotion of different learning styles (e.g. visual, auditory) able to satisfy different approaches or ways of learning. From a didactic point of view a continuity is ensured among the different learning objects through the inclusion of cross references. For example, while listening to an audio lesson via computer the user is informed about a movie on the same subject available through TV.

The last frontier in e-learning world is V-learning, e-learning in Virtual Worlds. Virtual Worlds are used as an innovative teaching tool that motivates and engages pupils and at the same time enhances their learning by incorporating a collabora-

tive learning, a learning through reflection and a learning by doing approach.

A V-learning platform provides an opportunity for both teachers and students to benefit from ICT skill development, social learning opportunities and a resource to help revive the traditional classroom environment, adding value to the learning process. V-learning actually promotes learning-by-doing that stimulates different learning styles and increases the level of student engagement in different subject matters through technology, integrating textbooks, discussion groups and labs.

Another instrument for e-learning is the ebook, which is a text and image-based publication in digital form produced on, published by, and readable on multi-purpose devices such as laptops and PDAs or on dedicated digital devices named “ebook reader” such as Amazon Kindle, Sony PRS, Onyx Boox, Samsung E60 and iPad.

#### Suggested tools

LMS: there are various tools available as LMS, the best choice is using open source software such as Claroline (<http://www.claroline.net/>) or Moodle (<http://moodle.org/>) for the following reasons:

no fees for installation on a WEB server

multi platform and source code freely available

Improved and updated by thousands of developers all over the world

comprehensive on-line documentation and official forum

Available in different languages.

Authoring tools: authoring tools are a suitable solution because they allows teachers to develop learning objects by themselves. The following are suggested:

Articulate Studio(<http://www.articulate.com/products/studio.php>),

Adobe eLearning Suite2 (<http://www.adobe.com/products/elearningsuite/>).

Ebook reader softwares: a large number of free ebook reader softwares are available, for example: Microsoft Reader, Adobe Digital Editions, Kindle

Apps, Sony Reader Library, Barnes and Noble Nook Apps.(

<http://www.microsoft.com/reader/it/default.aspx>,

<http://www.adobe.com/products/digitaleditions/>,

[http://www.amazon.com/gp/feature.html/ref=kcp\\_pc\\_mkt\\_lnd?docId=1000426311](http://www.amazon.com/gp/feature.html/ref=kcp_pc_mkt_lnd?docId=1000426311)).

V-learning platforms: SLOODLE (Simulation Linked Object Oriented Dynamic Learning Environment) is an Open Source project which integrates the multi-user virtual environment of Second Life with the Moodle learning-management system. Sloodle provides a range of tools for supporting learning and teaching to the immersive virtual world; tools which are fully inte-

grated with a tried and tested web-based learning management system used by hundreds of thousands of educators and students worldwide.

(<http://www.sloodle.org>)

M-Learning platform: the MOMO (Mobile Moodle) project is an Add-On to the popular Moodle Learning Management System. It brings the ability to implement mobile learning scenarios with Moodle as a backend.

(<http://www.mobileclassroom.at/>).

## 5. Ict for internal communication

As demonstrated above, communication and collaboration are essential functions of ICT in a International project. Virtual teams have four general options to organise communication and collaboration. They are displayed in the following Table 2, with examples of technologies for each category.

Table 2: Communication tools

	Same time Synchronous communication	Different time Asynchronous communication
Same place Co-located communication	Slides presentation software (during face-toface meeting)	Forum, Wiki, Message board, file-sharing system
Different place Distance communication	Virtual meeting or conference (using text, audio or audiovisual)	Email

There are a range of tools intended for communication in virtual teams. They are usually called groupware. Groupware can be defined as software, systems, and services for computer supported cooperative work. All of these platforms focus on three main functions, essential for the work of a project team relying, at least in part, on ICT support:

- Communication: exchanging messages between team members
- Collaboration: sharing and co-editing documents and other project files
- Co-ordination. distributing and tracking given project tasks.

The leader of a virtual team should be able to anticipate and find prompt and appropriate responses to two main types of challenges: technology-related challenges and time-related challenges.

The challenges related to technology may concern purely technical aspects, such as the compatibility between software and various operating systems, limitations generated by security measures in some networks (and for this qualified technical support might be needed), or may be related to lack of skills on the side of the users (in this case a balance must be found between choosing easy to use tools and providing additional training and support for some team members).

The challenges related to time can be broken down into the aspects of motivation, priorities, participation, team time, and flexibility which have related impacts. If a team member has low motivation this will impact on participation and on his/her flexibility to be available for team meetings and to meet team priorities. The converse is also true. If a team member has low flexibility to manage time and to be available for meetings, this will impact on participation and motivation. Early identification and intervention is crucial for supporting low and non participating team members.

#### Suggested tools

##### Groupware

EGroupware Enterprise Collaboration: multi-user, web-based groupware suite. Currently available modules include: email, address book, calendar, infolog (notes, to-do's, phone calls), content management, wiki, project management, tracker, timesheet, knowledge base ([www.egroupware.org](http://www.egroupware.org)).

Tiki Wiki CMS Groupware: Powerful multilingual Wiki/CMS/Groupware to build & manage your Wiki, Files/Image Galleries, CMS, Blog, Tracker/Forms, Forums, Directory, Polls, Surveys, Quizzes, Newsletters, Calendars, FAQs, Spreadsheets, Maps, Workflow, etc. ([tiki.org](http://tiki.org)).

Simple Groupware: Simple Groupware is a complete open source enterprise application offering email, calendaring, contacts, tasks, document management with WebDAV, synchronization with cell phones and Outlook over SyncML, full-text search and many more ([www.simple-groupware.de](http://www.simple-groupware.de)).



## Audio and video conferencing software

See section 2.2

## 6. Ict for external communication

The main purpose of an external communication strategy is to increase the visibility of the activities and achieved results - with the latest technologies and especially with the new media a new range of tools are available, let's see some examples:

Project public websites, online journals, virtual communities: this products are fundamental to promote the project and disseminate the products among stakeholders. With this kind of websites it is possible to manage contents, manage documents, implement image and multimedia galleries, use forums and chat, create project calendars, insert blogging and micro blogging software, implement data collection and reporting tools and subscribe services.

Email, electronic newsletters, RSS feeds: electronic ways to contact and keep informed the stakeholders.

Virtual worlds, social networking websites: An immersive way to promote interaction with the stakeholders, using in the first case a virtual environment and in the second a website. In each case the aim is to create interactions between people according to their interests or activities.

Web radio/TV, podcasts: some web services allow an easy set up of an own radio or TV channel in order to disseminate multimedia materials.

Virtual conferences, webinars: allow to set up a real time collaborative space where the project presenters can meet virtually the stakeholders in order to get an immediate feedback.

### Suggested tools

Joomla!: "Joomla!" is a free, open source Content Management System for publishing content on the world wide web and intranets. It's a modular CMS (Content Management System) i.e. many functionalities can be added only if required. (<http://www.joomla.org> and <http://extension.joomla.org> to add functionalities).

DOC Man (Joomla Plugin): DOCman is a document management system for Joomla. With this component users can easily upload and manage files across multiple categories (<http://www.joomlatools.eu/products/docman/free-version.html>).

Facebook: the most common and used social networking service. Allows to create interactions between people according with their interests or activities

(<http://www.facebook.com>).

Youtube: YouTube is a place to discover, watch, upload and share videos (<http://www.youtube.com>).

Livestream: broadcast and live stream your own channel for events, performances, virtual conferences and webinars. (<http://www.livestream.com/>).

Second Life: Second Life is a 3D virtual world where users can socialize, connect and create using free voice and text chat. (<http://secondlife.com/>).

OpenSim: OpenSimulator is an open source multi-platform, multi-user 3D application server. Similar to Second Life, but free (<http://opensimulator.org/>).

## 7. Ict for evaluation

ICT supports also the internal and external evaluation making online feedback forms and survey systems possible. Some of those ICT tools allow to analyze the results of the survey, otherwise it is possible to use specific statistical tools. To analyze website access in order to understand how much interest the project is attracting there are specific access statistics tools.

Suggested tools

SurveyMonkey: provides free and paid online questionnaires and surveys, allowing to view results graphically and in real time (<http://www.surveymonkey.com>).

QuestionPro: is another provider of free and paid online questionnaires and surveys, (<http://www.questionpro.com>) as is SurveyGizmo (<http://www.surveygizmo.com>).

GoogleAnalytics: web analytics solution that gives you rich insights into your website traffic and marketing effectiveness, easy-to-use features let you see and analyse your traffic data, allowing to strengthen marketing initiatives and create better dissemination activities (<http://www.google.com/analytics/>).

AWStats: free website log analysis tool (<http://awstats.sourceforge.net/>)

## 8. Ict for project administration

One of the biggest challenges of managing a project is the financial management – funding agencies require detailed accounting reports that often require quite an effort to produce. In the same way having an always up-to-date financial situation of a project is a very helpful tool when managing the project. While most of the time this kind of accounting is done on Excel a dedicated accounting system

is definitely a plus – even more if it is accessible thru the web and allows international partners to add their own accounting data as well as see their financial situation in the project.

Another need in any project is a timesheet system – often this are implemented thru a paper system or maybe some Excel files; an online timesheet system which allows all project participants to input their activities thru the web and feeds in very well to a dedicated project accounting system, complementing financial information with operational informations.

#### Suggested tools

PAM: Project Administrative and Management (PAM) system is USGM's purpose built project administration and management tool. It supports from the planning of activities to the reporting of activities (incorporating a timesheet system), from the staff person's daily cost to the total of staff cost, from the project other expenses to the full project budget.

TimesheetNG: a shared web-based system for recording project activities in full detail ([www.timesheetNG.org/](http://www.timesheetNG.org/)).

## **9. Selecting tools**

Almost every organisation has its own tools and virtual culture, whether stated explicitly, or implicit. Work in an international project implies a number of shared choices, one of them being the ICT tools to be used for the various project activities. Some of these choices are easy, such as the ones referring to the common format of the documents (of course, it is recommended to choose a format accessible to all partners, regardless of the operating system, type or version of software they are using). Other choices such as the definition of the tools for communication and co-operation are sometimes more difficult to make. Box 3 illustrates examples of how two International projects have managed the use of ICT for these purposes.

For any choice, there will be advantages and disadvantages. Each team has to make the choice based on its specific situation, priorities and resources. There are various criteria to be taken into account, including:

- accessibility of the tools and their availability in the working language of the project;
- familiarity of team members with specific tools;
- the actual needs of the project and the tasks planned;
- the resources planned in the budget for ICT support.

Some years ago such a decision would have been strongly affected by factors like the access to high-speed internet connections, the availability of specific hardware or software, or the computer skills of team members. Today these are no longer relevant as everyone involved in a international project can and should have high-speed internet access, most tools are available in all major operating systems, many of them are free or have free versions, and their use is only dependent on basic computer skills which can be taken for granted with most project actors. However, the attitude towards technology and familiarity with some tools are still important influencing factors.

When looking at the costs for a tool, partners should consider not only the cost to pay for having access to that tool (if any), but also the costs related to the setting-up and use of the tool, as well as for training team members on using that tool. The analysis of the benefits provided by the choice of a specific tool should take into account the added value brought by the tool for the accomplishment of the planned tasks, not necessarily on a short-term level, but throughout the whole project life (and, if appropriate, even beyond it), but also two other types of benefits:

how can the tool contribute to building a positive team climate, allow for a democratic and effective management, and favour the balanced use of the competences of all team members?

if the tool is new for some team members, will learning its use be seen as a benefit at a personal level?

Sometimes, it is worth investing more resources (funding, staff, time, administrative procedures, etc.) in a more complex set of tools. This might be the case if the choice will bring significant benefits for the project over a long time as well as positive impact for project management, team co-operation, project visibility and if that will be acknowledged as a positive learning experience by team members. On the contrary, it does not pay off to invest in a sophisticated set of tools (even if the budget allows for it) to deliver tasks that can be accomplished very well with simpler, but free and easy to access tools. It is useful to request advice from computer experts but the discussion should always start from what the International project team needs to do and not from what technology has to offer, otherwise there is a risk of choosing too many tools or tools that look interesting but in fact are not suitable for the actual work of the project.

Ownership of the tools being used might also be a sensitive issue. If a partner is paying a licence to have access to specific tools that can be made available to all team members, or if there are hosting costs, this should be properly evaluated and taken into account in the project costs. If new tools are being produced or adapted for a project, the ownership of these tools after the end of the project should also be discussed and agreed within the partnership.

## Keeping up with the evolution of technology

ICT offers a rich potential for enhancing the quality and the efficiency of international project work, whilst also supporting closer and more intense interaction among team members. It therefore represents an opportunity not to be missed by any project. However, these benefits come only if appropriate tools are selected, based on an open process taking into account the specific needs of the project, the tools available, and the preferences of team members.

The past decade has witnessed huge changes in both the accessibility of various ICT tools and in what they have to offer. The new possibilities offered by the internet (Web 2.0), make it easy for anyone, not only to use the internet as a resource, but also to provide content, accessible online directly, without requiring specialised skills or training. This has started to be reflected in International education projects and will probably develop even more over the next few years. If during the first phase of internet development technical support was essential and the possibilities of ordinary users were very limited, with Web 2.0 the web is seen as an open platform and the users take the lead. Although a fuzzy and even controversial term, Web 2.0 is a good metaphor to illustrate the evolution in the use of the internet. Web 2.0 is also associated with the idea of democracy and participation: Anyone can now attract thousands of visitors to her/his blog or make it to the headlines of the mainstream media by posting a video onto YouTube. The wikis, made famous by Wikipedia, the encyclopaedia based on contributions by users, are also part of this new landscape. This offers new opportunities for international projects, from the increased ability to find partners, to exchanges with peers during implementation and wider dissemination of their products.

Another important trend is related to the use of the internet for communication. If now it is already easy to speak with colleagues and to see them, or to organise virtual meetings, we can expect that in the near future connectivity will be so high that team members will be able to be in contact with each other at any time and from wherever they are, even when travelling. Internet is now widely accessible by phone or other mobile devices, making it possible to check emails, receive notices about updates on a website, and even attend a virtual meeting. It is therefore difficult to give detailed instructions and recommendations in this dynamic environment, but the key ideas of a thoughtful selection of ICT tools, of the importance of virtual leadership skills and of the joint and transparent definition of rules about using ICT, are now unavoidable issues to be dealt with by any transnational International education project team.

## **Conclusion**

A modern International Project Office cannot perform its activities without using ICT. ICT acts as a multiplying or enabling factor for many of the activities performed. ICT allows performing activities that would otherwise not be possible, like for example virtual meetings or eLearning. The right choice of a set of ICT tools can greatly improve any international project, reduce costs and make project management better and more efficient.

Although ICT can greatly improve any international project we should never forget that these projects are made by people – they are still the main factor for the project success.

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Some of the tools described in this paper have been either developed completely or partially by the staff of the International Project Office. Those same staff have over time influenced the use of ICT tools in the office – the process is a continuously ongoing one and requires the constant involvement of all the staff of the office: we wish to thank them for the exceptional work they do!

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## **Short bio of the authors**

Francesco Fedele designs and coordinates financed projects, he is a Senior Manager for Università degli Studi “G. Marconi” in Italy where he is in charge of coordinating the European Projects. He has more than 25 years of experience in providing consultancy on IT technology and organization. After some years as a

software developer, system analyst and system designer, he has been Product Manager of a software design tool, Marketing Manager for a company developing IT applications for health-care, and then General Manager for a web development company. He managed a number of EU funded projects and grants under the ESPRIT, TAP, ACTS, IST, LLP, EUMEDIS, TEMPUS programmes. He has been involved in IT standards development (with a focus on the XML technology) and worked with CEN. He is fluent in Italian and English, speaks French and Spanish and has some knowledge of Polish and Serbo-Croatian.

Mikail Feituri has a master degree in electronic engineering from Università La Sapienza of Rome.

Actually, he is the technical coordinator of the international project department at Università Degli studi Guglielmo Marconi in Rome. Under this role, he is in charge of research on new methodology and technology in distance learning such as mobile learning and artificial intelligence applied to E-Learning. He is also responsible for the technical coordination from design to the final release of products or services specified under the project proposals.

He is author or co-author of several publications and participates as a presenter in many conferences, including: INTED, IADIS, EUCEN, EDEN, Online EDUCA, EARLY. He also is involved as a reviewer for the International Journal of Learning.

Luca Galassi graduated in Economy at University of Rome. He has experience as trainer for ICT networks. Designer and executive producer of learning objects and multimedia products for distance learning. Moreover she deals with management of EU and National Research projects in the field of on-line Education, ICT applied to training and education process, multimedia and distance learning.

Ilaria MASCITTI graduated in Psychology at University of Rome. As Assistant Professor in Faculty of Psychology Chair of Teaching and Learning Technologies she participated to research activities in the field of on-line education, on-line tutoring, collaborative learning; project carried out in the fields of e-learning, innovative technologies applied to learning and teaching, multimedia; carry out seminars. Currently she is Head of “International Projects” Office. She worked as project manager of many European projects in the fields of on-line education, ICT applied to education and training, multimedia didactic environments (Lifelong Learning Programme – 7FP – Cooperation Programmes – Interreg – Life+).

Raffaele Porzio graduated in Computer Science at University of Salerno. He

works at Università degli Studi Guglielmo Marconi since 2009 as a Project Developer of European and National Research Projects in the field of on-line Education. He has extensive experience as an instructional designer in e-learning platform development, Learning Object production and multimedia courseware. As researcher at CRIAI-Research Center in Computer Science and Industrial Automation he participated to research activities in ITC fields.