Manual of good practices for creative applications allowing reuse of cultural resources City Quest



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1. EXECUTIVE SUMMARY

This manual is a result of the AthenaPlus (Access to cultural heritage networks for Europeana) project funded under the European Commission ICT Policy Support Programme part of the Competitiveness and Innovation Framework Programme.

Five creative applications have been developed in the framework of the AthenaPlus project. Among them are:

- MOVIO the software for virtual exhibitions creation;
- City Quest the software that supports tourists in discovering city attractions but not only.
- **School Trip** has been created to support teachers and students in planning visits to a number of places.
- **GIS in eCultureMap** become the more and more used software which helps to locate quickly the places on a map.
- **Urban Explore** is a tool which gives opportunities to present stories related to a number of places users wish to discover.

All of the applications have been tested by the project partners, who also conducted a number of workshops involving vary communities in order to help the developers to find the bugs, improve functionality and to customize the applications according to the needs.

Each application has been translated to the partners languages to avoid problems with understanding English version of the software during the testing phase.

In this part we present **City Quest** – the software that supports tourists in discovering city attractions.

Communities involved into the testing are also presented in the manual, and communities to which the presented applications are particularly addressed are pointed out.

However the main goal of this manual is to present and promote creative applications and support the users with an instruction how to implement the software in the cultural domains.

In this paragraph also additional literature, and addresses of help-desks are listed.

Finally there is attached an instruction of fair use of the applications offered to the communities for free.

2. THE ATHENAPLUS CREATIVE APPLICATIONS - CITY QUEST



CityQuest is a software prepared by the AthenaPlus partner PACKED vzw, based in Belgium. It allows to create a quest online, and publish it in a mobile applications. City quests are more and more popular way of learning. It allows the players to discover monuments and attractions and learn history in smaller or bigger cities in an attractive way. It is based on hints and media and includes the QR code. City Quest can be an excellent support to school students by making their education more exciting when discovering places and facts they learnt at school. City Quest can be also used as an excellent tool supporting popular urban games.

3. THE USE OF CREATIVE APPLICATIONS: A STEP BY STEP MANUAL

In this part of the Manual the user can find a condense instruction of how to proceed with the applications to get success. Those interested in using any of the creative applications should start with making decision about hardware and software selection. When this choice has been made one can follow with an implementation guidance. In this part each application is described in a special paragraph where detailed, step by step instructions are given

a. Software and hardware requirements

In order to be able to create your own quest you have to either use the server provided by PACKED (http://cityquest.be) or set up your own server, which requires Internet-connected computer able to use the following software:

- PHP capable web server (ie. Apache, Ngix)
- PHP 5.3.3
- SYMFONY 2.5 framework or newer with the latest Composer
- MySQL database

After successful server deployment CityQest scenarios can be created on any device capable of displaying HTTP web pages. CityQuest scenarios can be played on Android or Apple mobile devices (tablets are recommended). The proper mobile application can be

obtained directly from Google Play/Apple Store or can be compiled from provided source code.

b. Creating your project step by step

In this paragraph we present instructions on implementation of City Quest.

Instruction begins with information on how to start. Then the particular functions are presented, and finally an advice where to find further information and support are given.

A quest is a journey towards a goal, serves as a plot device and as a symbol. As one of the early known examples of a quest can be seen Homer's Odysseus, whom the gods have condemned to wander and suffer for many years until Athena persuades the Olympians to allow him to return home. In the AthenaPlus project the city quests offer players to discover wonders of the selected cities. Sometimes they relate to famous historical episodes, sometimes they help to learn about famous people presence in particular places, sometimes they allow us to discover the monuments. There are many options to use the City Quest which can be treated as a type of urban, or more general location-based game that become more an more popular, especially when supported by the ICT. City Quest application has been prepared in the framework of AthenaPlus project by Packed vzw.

Getting started

Detail instruction to the City Quest application is available on the website at the address: http://wiki.athenaplus.eu/index.php/CityQuest#CityQuest manual pages
Before creating a CityQuest, especially the first one, there are a few things to consider and decide about.

The subject, the audience and the place

The fundamental issue is the story to be presented the subject of the quest. It's important to decide at the beginning for whom it is created. This might affect the ideas on which values to give, the items to look for, tone in the texts, length of the walk. A good CityQuest is also highly linked with the possibilities of the place (city, village, ...) in which it will take place. It's advised to check the paths in the territory to learn if it is included nice pedestrian paths, and place worth to point out. It is important to design appropriate walking distance for the audience or to design the distance longer distance letting the audience to use their own cars or public transport. These decisions should be taken at the very beginning.

Familiarisation with the possibilities of City Quest

The best way to learn about the City Quest is participation in one of the national trainings. These should be possible to find out by checking the Contact Points pages. If it is not possible the solution can be learning directly from the CityQuest manual: http://wiki.athenaplus.eu/index.php/CityQuest#CityQuest manual pages

CityQuest is a very straightforward tool. The online interface gathers all steps required to create the quest, in one single webpage.

Gathering the content

When the decision about the Quest is taken it's time for gathering the content that will be featured in it. Descriptive texts, cryptic hints, images etc. need to be collected, edited or written, and checked in terms of possible copyrights. It is important to remember that the content necessary for publication in the mobile app may be subject to copyright restrictions. If so the rights have to be cleared and/or the appropriate attribution mentioned or other credit information.

Testing in the field

A crucial element of the Quest success is the testing phase. It is important to go out and play the Quest by its creators. It is advised to take on another person who is not familiar with the subject of the Quest, in order to see whether he/she understands the cryptic descriptions used to target the object to be found. Perhaps some items turn out to be too difficult, others too straightforward. Other media clues might be better suited; the walking distance between two items might be too short or too long. These are aspects of the Quest that can only be tested by experiencing it.

Regular checks and information for the community

One of the key elements in the CityQuest are the QR codes that provide more information on the place, subject, object that is discovered by the player, and allow to proof that searched point has been really discovered. But it is not possible to simply start gluing codes on every building encountered. It must be checked with the owner(s) of the locations that it's allowed, and to make sure that adhering a QR code to an object or location will not damage anything. When all is organized it's important to make regular checks of the codes' condition: are they still in place? Are they still readable? Do they need some touch-up? In order to engage the town inhabitants a bit of context information may be added to the codes that are posted. To the dotted square the institution's logo, and name, a brief description of what the codes are for can be added.

Online interface

Access to the CityQuest online interface can be obtained via http://cityquest.be



First time it is possible to register as a new user, the next login takes place as a returning user. There are a number of reasons why CityQuest is account-based:

- (A) The section with the list of items on which it is possible to work in the back-end;
- (B) The section with the index of the structure of the pages;
- (C) The section to create and edit the page contents and the ontology structure.

Registering as a new user

The new CityQuest users are required to create an account and register by clicking the white button 'Register now' on the homepage. After clicking it, the page will automatically scroll down until the part is shown where the user is asked to fill in the registration details: Full name, E-mail address, Password and Password confirmation.

After entering requested details, a user should click the 'Sign up' button.



The registration procedure is now finalised and the registered user is redirected to the homepage of the online interface, where s/he can <u>Create a new Quest</u>. The user account details will appear in the top right corner (see next section in this manual).

Login as registered user

If a user already has a CityQuest account, s/he can sign in to access the City Quests by clicking the 'Sign In' button in the top right corner. From there the user is redirected to the screen where s/he has to submit the username and password, then click the 'Login' button. In case of the forgotten password, it is possible to retrieve a new one by clicking the button. If login was successful, the user is redirected to the CityQuest homescreen where s/he can Create a new Quest or - depending on the progress - Manage existing Quests.

Managing the account

After clicking on the username in the top right corner, a menu unfolds.

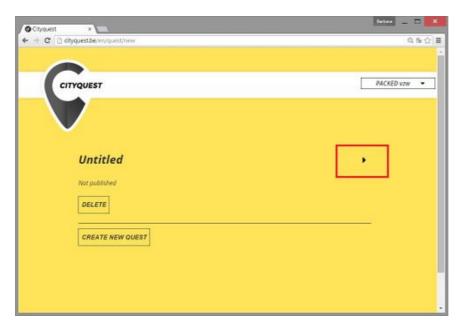


The entries are following:

- **show all quests**: this directs the user to the overview of all quests created under this account:
- **profile**: a page where it is possible to change the current password by entering and confirming a new one (click 'Update') depicted in the screen below;
- log out.

Creating a new Quest

To create a new Quest, user has to click on 'Create new Quest' on a login or registration screen, and then s/he is directed to the following screen:

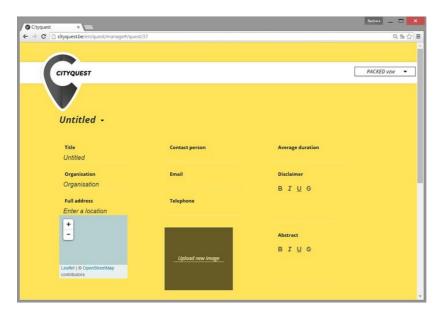


To start editing this new Quest s/he has to click the arrow to the right. The next window is the full Quest editing screen. Basically all actions to create the Quest are happening on the same webpage. The page can be divided into four sections:

- General information on the Quest
- Publication status of the Quest
- The items that are to be found in this Quest
- A map that indicates to the player the route from the final item to the organising institution (or point of departure/end)

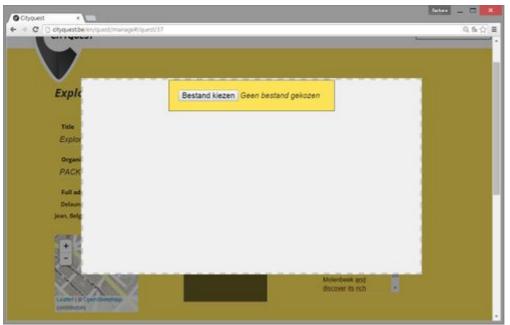
General information on the Quest

The top section of the screen allows the user to fill the meta-information on his Quest.



It is possible to type underneath the fields that are marked in **bold**. It is necessary to insert the following information:

- Title: a title of the Quest. Examples: Explore Tallinn, Hidden treasures of Rijeka.
- Abstract: short description of what the Quest is about. It appears below the title in the app (in the example above, the abstract is the grey line under the title 'Explore Malderen'.
- **Organisation**: the name of the institution that has created or is organising this CityQuest.
- **Full address**: it is expected that the address of the abovementioned organisation will also be the start and end point of the Quest, in case e.g. tablets are sent out for loan by Quest players. The address entered here will be automatically copied to the 'Map' section to act as end point of the Quest. Should one want to have another location as end point, than this can be easily changed in the 'Map' section. Upon entering the address, a location search will be performed in the OpenStreetMap below the text. If the address is correct just confirmation is needed, if it is not, one can click the 'Reset' button that will have appeared and insert a new address.
- **Contact person**: the name of the person who may be responsible for this Quest. If a player would encounter some kind of problem, this would be the person to ask for when e.g. calling the institution. It could be someone from the ticket desk,
- e-mail: appropriate e-mailaddress
- **Telephone**: the telephone number of the person who may be responsible for this Quest. If a player would encounter some kind of problem, this would be the number to call for problem solving. cf. Name of Contact Person above.
- **Upload new image**: after clicking the dark square space, the following pop up window will appear:



The language of the text to be displayed may vary according to the language settings of the browser

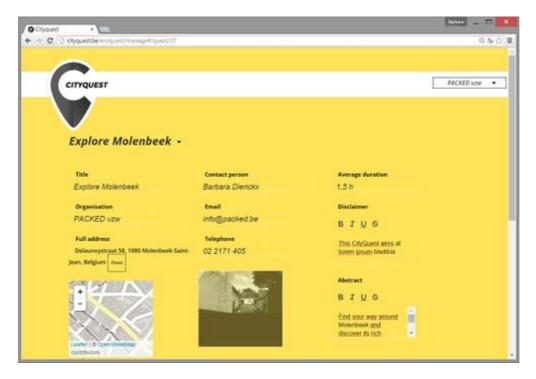
The pop-up will display 'Choose file' and 'No file chosen'. Click 'Choose File' to upload an image from a directory (computer, shared folder, ...). The minimum size of the image should be 600x300 for optimal rendering (!). When the image is selected, it is displayed in the image container as shown on the next screen.



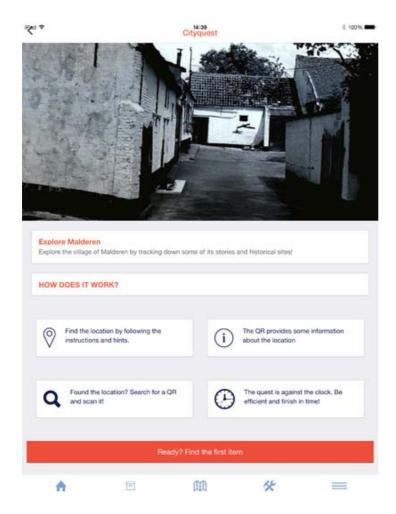
In the bottom left corner a plus and minus sign are displayed. Clicking these will (un)zoom the image. It is also possible to grab the image by clicking and holding with a mouse, and moving it around in the image container. The space within the inner white dotted line will be the eventual cut out of the image, and only that part will be displayed in the app.



After zooming and positioning click the 'Crop' button in the lower right corner. This will cut the image. Eventually, the newly cut image is than displayed in the image container that is part of the general description of the Quest (see below).



This will be the image that also appears on the start screen of the CityQuest app. In this example:



- Average duration: indicated an average duration of this Quest. There is no format guide, so any kind of time notation system is allowed. The time indication is useful for the players selecting the quest according to the available time.
- **Disclaimer**: the disclaimer field can be used to add any kind of information on the Quest useful for the visitors that does not fit anywhere else.

Managing the existing Quest

One or more Quests require constant management. The user experiences collected through feedback from the Quest players will allow to update the Quest according to the players needs. It may require replacement or adaption of some perhaps hard to find items, changing the order to allow for a nicer walking tour, etc. In order to know whether a certain Quest is still up to date, is in the process of evaluation it's possible to alter its Publication status so that others may know if it's ok to hand these Quest keys out to visitors.

Publication status

There are fields to determine the publication status of the Quest and manage the QR codes. In details it is described in the manual on How to manage your Quests
There are 3 different options of the Quest status:

- Editing Quest: shows that it is still in the process of editing (i.e. adding new items, changing order, etc.)
- Quest in review: waiting for the confirmation of a team member before Quest' publication

• Quest ready: shows that this Quest and its key are ready to be given to interested players.

When you click the 'Publish' button, a letter code key is generated. This code is what you enter into the app so that your Quest and its content can be loaded onto the mobile device.

Adding the items to be found

Among the items possible to be added to the Quest are the following:

- Title
- Full description
- Cryptic description
- Add new hint
- Delete item
- Media

Building an item

The Quest will work or fail largely depending on the quality of description of the items to be found. The cryptic description, hint texts and selected media are therefore very important.

- **Title**: A very short clue about what the player needs to find. In the case where a castle in a park needs to be found, the title of the item could be 'something green', or 'green garden'. When typing the title in the back end, it will automatically appear and replace the 'New item' dummy text.
- **Full description**: the full description is what the players see when they have found the item and scanned its accompanying QR-code. Then the full informative text about an item its history, why it is part of the Quest, its importance to the city and/or institution collection, its stories, etc. A simple text editor is also included in this field.
- Cryptic description: the cryptic description is what the player will see when he first looks at the Item to be found-page in the app. The description gives a clue on what it is the player should find, but is not telling it too straightforward. For example, in the given screen the players should find a statue that was erected in remembrance of the end of a fight between two village clans. The cryptic description of what to find, could be 'The marble closing point of a never ending quarrel'.
- Add media: adding a piece of media to the item to be found is another way of giving
 a clue on what to find. Adding media here works in the same way as adding a picture
 to the general part of the Quest (see here). When you click on arrow right next to
 'Media', the upload/select media screen opens again.

Adding hints

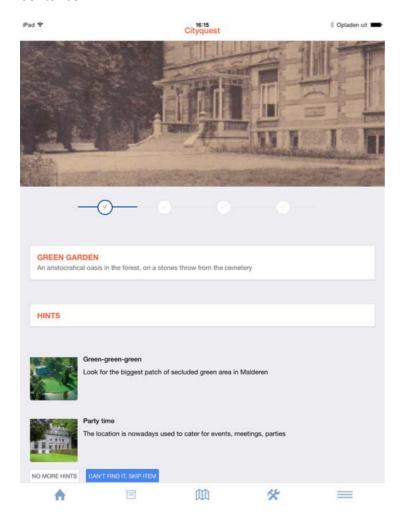
It is very likely that the players will not be able to guess or find the item that they need to track down by simply having one clue of information. This is why there is also the possibility to add more hints to an item. These are little bits of information + a picture, slowly revealing more info on the item to be found. Hints can be added by clicking the 'Add new hint' button.

- Hint title: similar to the title of the item, a brief keyword-like title.
- Hint description: an informative clue that helps the players to find the item.
- New image: upload a new image that will help the players find the item.

After creation of a new hint, a button 'Add new hint' will appear under it. Up to three hints per item can be created that allows step by step to release more information

Example in app

In the example below, we see an item with a title (Green garden) and a cryptic description (An aristocratic oasis in the forest, on a stones thrown from the cemetery). The players have not found it immediately and have thus pushed the 'I need a hint' button - twice even: two hints have been displayed. Each hint has a media asset, a title and a hint description sentence.

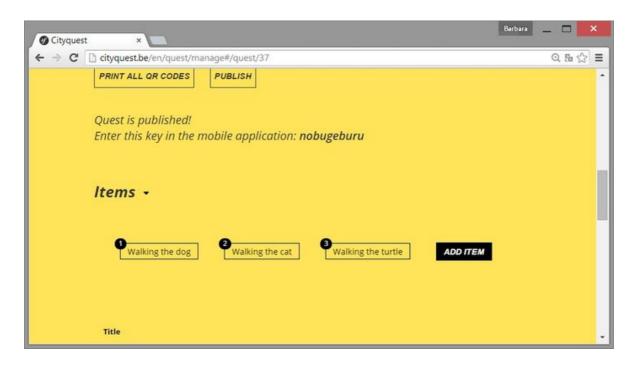


Creating the map

The order in which the items will be presented, is a key aspect of the Quest. The first item to be found will lead to the following one, and so on until the last item is reached. When this final item is found, the time that players have to invest in getting back to the Quest's point of departure/end should be kept to a minimum. This is where the Map feature comes in. The Map in the application will show the way from the last item to be found, back to the institution (or another point of choice).

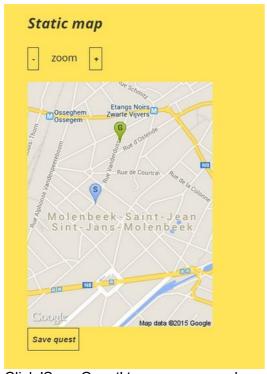
If the end point of the Quest doesn't feet to the needs it's possible to change the order of the items by simply moving them via click-and-hold as below:

Order 1: dog - cat - turtleOrder 2: turtle - dog - cat



The map automatically takes the location of the institution also as end point of the Quest. If it is necessary to change this, click the Reset button underneath the address string. The field will be empty again, and it is possible to enter a new address as end point of the Quest. The 'Location last item' is still empty. Type the address of the location, and an autocomplete modus will map the point in OpenStreetMap. Once these two addresses are present - of last item and of final end location, a map is generated under the heading 'Static map'.

Currently, the map is useless for display in the app as the level of detail in zoom is too little. The + and - buttons above the map should be used to bring the map to a sufficient level of detail, so that the itinerary from the last item to be found to the final location can be followed. See example below (more zoom used):

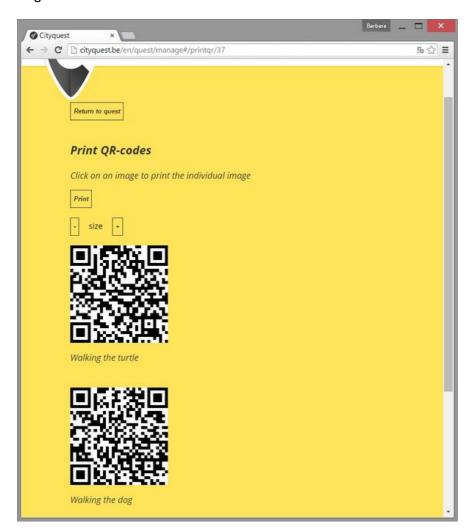


Click 'Save Quest' to save your work.

Obtaining the QR codes

The QR codes are important part of the CityQuest app.The cryptic information about the items guides the player to a location, where a QR code can be found. After scanning the code with the QR code reader that is built into the app, the player will see the detailed item description - the background story giving more info about this item. This means that for each item created in the Quest, a QR code is generated. This process happens automatically. On the general back-end screen, there is a button that says 'Print all QR codes' for this particular Quest.

Click on leads to a screen that allows to print all pertaining QR codes (the title of the item is always listed below the code to avoid confusion), or print them individually so that they may be fitted to the best size. By clicking the + and - buttons it's possible to either make the codes larger or smaller.



QR codes in the open space

One of the key elements in the CityQuest are the QR codes that provide more information on the place, subject, object that is discovered by the player. These codes will be visible throughout the town. It's necessary to make regular checks of their condition: are they still in

place? Are they still readable? Do they need some touch-up? In order to engage the town inhabitants you could add a bit of context information to the codes that are posted. Don't just paste the dotted square, but add your institution's logo, your name, a brief description of what the codes are for. Interested in playing this CityQuest yourself? Make sure you add contact information of your institution.



This QR code is part of a CityQuest organised by Heritage Cell XYZ Want to try it for yourself? Visit us at www.HeritageCellxyz.be



Make sure when applying the code that you are not creating a fundamental change to the object or the location. You might not be entitled to screw a metal plaque to the facade of a building. Some different ways to apply the codes:







4. HELP-DESK

If you would like to make a suggestion, report any problem or obtain additional information, you can address your questions to the developers with the following forms:

Cityquest	https://docs.google.com/a/i2cat.net/forms/d/1MoWvC0AQTaX84HQHO7n Vy wDun3OS6LLLa8NogpSsnM/viewform
	Vy wDun3OS6LLLa8NogpSsnM/viewform

Don't forget to add a contact email to your comment so that we can reach you!

5. FAIR USE AND BENEFICIARY OBLIGATIONS

Several of the creative applications prepared in the framework of the AthenaPlus project are available for free use as based on the open source. Therefore the interested institutions are welcome to use the created software just for a simply use for their needs or also for further development. In the case of development and improvement of the software they are obliged to offer access to this new release on the same conditions i.e. for free.

Each institution interested in the software use is expected to sign a short form of cooperation to let the developers know how good and popular their product has been. In a case of any bugs or disfunction such partnership agreement can also be used for communication and possible improvement.

6. ACKNOWLEDGMENTS

This manual is based on the creative applications developers instructions, and include materials from printed articles, leaflets, and the project blog. Apart Barbara Dierickx, the main author of instructions to this creative applications, we thank to the project coordinators Maria Teresa Natale, Rosella Caffo and Simonetta Buttò who inspired and managed the entire process.

APPENDIX 1. GUIDELINES FOR INVOLVING USERS IN THE DESIGN OF YOUR PILOT

Innovation is a very important asset for organisations. However, innovation driven only by technological push has a market risk. Companies may find themselves in a situation where they have a promising engineered innovation in their hands while users will ignore it, because it was designed and marketed out of the user experience. Hence, it is essential to reach out to external stakeholders, and organise actions in which we can hear their opinions and suggestions.

One proven and tested way to solve the gap between technology and society is to involve the prospective users into the process of developing these innovations. The involvement of users on innovation research ensures that the products and services have not only a "user touch" but also a user point of view and the user experiences included. Including users as participants, co-creators, co-designers, first usability evaluators and other roles on the innovation projects diminishes the risk of project failure and increases the probabilities of a successful technology.

To this end, the purpose of this document is to provide pilot partners with a set of recommendations to assist them in organizing sessions in which the external users' feedback, both professionals and prospective visitors, can be generated and collected.

Before the session...

Strategies to launch sessions with users

The main point for you to consider is to seek synergies with your own activities, so that you can add a "Get to know our project" session at some convenient point. Here's a set of things you can do:

End users

- Schools and high schools visiting your institution are a great opportunity. Before the
 visit, discuss with the teacher the possibility of using some time to present your
 project to the students and the teachers, and have them fill a feedback questionnaire
 afterwards.
- Organise a session to present your project at a local library or community center.
- If you have an open museum day (i.e. in Barcelona many museums have free entrance every Sunday after 3pm), you can consider setting up a small stand in a corner. This stand would have some promotional posters, a few computers in which the interested visitors can check out your creative project, and a staff member answering questions and making sure that each visitor who has accessed the creative project fills in a questionnaire.

Professionals

- For large institutions, you can organise a training session with the creative tools with participants from other departments.
- Organisations which have a budget to organise training workshops are strongly encouraged to administer the questionnaires and/or the interview guide to the workshop's participants, either as a paper form at the end of the session or via an online form a few days after.
- You can also organise a dedicated creative tools training session for the local professional associations (this is especially indicated for those organisations interested in the education and tourism sectors).

Tips for recruiting users

Here are a few tips to recruit users:

- Communicate with the prospective participants through your usual channels. If you
 have a monthly newsletter, announce that you will be holding a session to present
 your project. If you have a website or presence in social media, run a short
 newspiece on it.
- If you'll be offering some refreshments, do not fail to mention this fact in the recruitment communication: believe it or not, it does make a difference;)
- To manage the registration of participants, you can use a free event planning tool such as www.eventbrite.com
- In cases in which you recruit the participants individually (that is, not as part as an organisation such as a school or a professional association), you may expect as many as half of the registered participants to not show up.

During the session...

The realisation of a user involvement action integrates, generally, a six-step process:

- 1. Welcoming
- 2. Presenting the activity
- 3. Preparation for the activity
- 4. Core activity
- 5. Feedback collection
- 6. Thanking, rewarding and closing

The core activity of the session may be different depending on whether the participants are end users or professional users:

- In the case of sessions with professionals, the core activity will be a short training session, in which the workshop leader shows the promotional material available on the creative tool, goes over some examples of projects created with the tool (so that attendees learn about the possibilities of the tool), and gives some basic ideas on how to work with the backend.
- In sessions with end users, the core activity will be promotion and dissemination, in which the staff member running the event tries to get visitors to access the creative project and provide their feedback afterwards.

General principles for user involvement

During the preparation and coordination of user involvement actions, the project partners will keep in mind general principles such as:

- Users are helping you. They have no obligation to you or your research in spite of their potential interest in your technologies.
- Ask them if they would like to be involved in this research and commit them to give insights.
- Remember them that the research takes some time and effort both for them and you as a researcher.
- Remember that they are very generous to assist to your activities and to give you their time.
- Treat them very respectfully.
- Be patient with their ignorance of the technology that they are exploring.
- Facilitate their participation.
- Make the event a good experience to them.
- Thank them for everything.
- Share some photos with them as a souvenir of the activity to share with others (and the odds to come back next time will increase)

Tips for running sessions with users

- The main gold rules to be considered when preparing user involvement activities are:
- Activities have to be prepared in a positive and non-stressful mood for everybody, including the researchers.
- First at all, be sure that technology is really working and ready to be used for the users. Don't make users wait for technical preparations. When they arrive, everything should be ready to be tested or displayed. Respect their time.
- Don't forget items for registering data on the event (photo camera, notebooks, etc).
- Don't forget any printed questionnaire you consider necessary to use and enough copies and pen/pencils for each user.
- Foresee any additional material you'll need such as promotional material, markers, etc.
- It is much recommended to have an assistant researcher to help you making pictures; observing and interviewing the users as you'll do run the workshop.

After the session...

After the session, it's time to collect the feedback and report the event. Generating feedback on the participants' experience is what gives you the ability to adapt to their recommendations and make use of their suggestions.

Collecting the feedback

Several feedback collection tools, ready to use, were included in D6.1 of the AthenaPlus project, which you can access here. These comprise end user questionnaires, professional questionnaires, interview guides, etc.

Pilots are encouraged to adapt these to their contexts, for example by:

- Translating the questionnaires to their local language
- Adding, removing or rewording questions if needed
- Changing graphical elements (i.e. adding the pilot institution's logo)

An online version of the questionnaires can also be easily created with Google Forms, which sometimes helps in administering the questionnaire after the event and analysing the results.

APPENDIX 2. RECOMMENDED LITERATURE

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