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Work plan recommendations

Support to e-Governance initiatives based on Free/Open Source Software at the local level in FYR Macedonia

Skopje, July 2006

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Executive summary

The recommendations provided in this document are a collaborative effort of a community of people working with Free/Libre Open Source Software (FLOSS) in Republic of Macedonia. Their opinions and ideas are channeled here and melded with information about practices and activities done elsewhere in hope that they will be useful and helpful for the success of the project.

We have compiled a set of practices and guidelines inspired by FLOSS into this comprehensive project recommendation. Implementing them would be a good start and an excellent example for the local municipal governing bodies to open to the public, to promote good governance and improve the experience and perception that citizens and businesses have for local public administration.

Our recommendations follow the structure of the project document and offer insight on each phase of the project and while some of practices we support might be a bit unorthodox we strongly believe, based on practical experience, that this approach will bring success and sustainability.

We hope that our work will be a useful contribution and that it can be used as a reference to the project document in order to provide a better understanding of the world of FLOSS.

1. Introduction

1.1. The issue at hand

Good governance and FLOSS seem to be the new concept as far as use of ICT in government or establishing e-government is concerned. This project aims to make extensive use of them both.

We at Free Software Macedonia want to make sure that (at least) three key points are kept in mind at all time:

1. E-governance is about delivering on-line services to business or citizens. Mere computerization of government or use of back-end applications only, does not qualify as e-government.

2. Good e-governance is a strong possibility when using FLOSS, as it allows a lot of strategic, economic and social benefits.

3. Any FLOSS related activities strongly rely on the support of the local or international community of FLOSS users, developers and advocates. Sidestepping the community in any way would probably slim down the success and sustainability of the project.

Having these in mind, first we suggest that the motto of this project be:

 "Give a man a fish, he'll eat for a day. Teach him how to fish, he'll eat for life."

We believe that the only way this project will bring long term benefits to Macedonian citizens is by strong citizen driven demand for services that will push the local government towards constant improvement of services based on FLOSS. We also believe that the only way the local government will be able to keep the technological pace is to make sure that the staff responsible for

ICT related issues takes early and active participation in the local and/or international FLOSS community.

1.2. The role of Free Software Macedonia

Since the project proposes a lot of FLOSS related activities, the role and participation of Free Software Macedonia is one of the key success factors. The reason for this is simple: we are the only organization in Macedonia that has extensive knowledge and hands-on experience with FLOSS applications and their capabilities, licensing issues related to FLOSS, as well as the social and ethical values that FLOSS is based on; We are the only organization that "eats its own dog food" - we really use the software we promote in our day to day activities, at home and at work; We are the principal organization responsible for the localization of all major FLOSS products into Macedonian; Finally, we love what we do.

This is why we feel that there are number of activities that would require our immediate involvement. This document presents our view on those activities, as presented in the work plan of the project document, and provides proposals for their implementation.

2. Overview of activities

The project work plan has the activities divided into four major groups:

1. Assessment of the municipal potential and development of adequate FOSS applications adapted to the local context;

2. Capacity building, training and competency development for the municipal employees with the new environment;

3. Implementation of FOSS based open e-governance solutions in pilot municipalities;

4. Increasing awareness and knowledge about FOSS benefits on a local and national level.

The first group includes selection of FOSS tools to be implemented and adaptation of FOSS tools to local needs. These are the two activities where we feel that our contribution is necessary. However, we can provide an expert opinion on other activities as well: the selection of municipalities and the needs assessment for application requirements might be crucial for the future direction of the project. For one, we suggest that in the selection process the community factor should be added to the already stated criteria – municipalities where local FLOSS groups exist would be better candidates. The planed budget for this group of activities has an entry on equipment. We believe that equipment spending should be down to minimum. Less spending can often mean good governance, and municipalities should learn that in the FLOSS world many task can be done with existing hardware. We think that only the necessary replacement and upgrade parts for the current ICT infrastructure should be purchased. The remaining funds should be redirected to training, education and support of the ICT staff. By simply purchasing additional hardware, there is a general feeling that the key principle of local capacity building would be avoided, as the only beneficiaries are the international hardware vendors outside and their partners and resellers in Macedonia.

The second group is all about training and capacity building. Our knowledge and expertise in FLOSS and past experience in training easily enables us to hold traditional courses. However we feel that this is the perfect place to follow the motto stated above. It is more important for the ICT staff to learn the ways of the FLOSS world, than to learn some point-and-click tasks that in any way are done in similar fashion on most software platforms. The members of the ICT Foundations are ICT literate people and adjusting to the new environment should be an easy task for them. While formal training might be presented in some kind of a short crash course, we think that most of the activities should be FLOSS community-style – events such as install festivals, training courses and workshops that will allow hands-on experience and

immediate dissemination and sharing of knowledge. We should note that there are traditional courses for certain GNU/Linux distributions in Macedonia provided by local companies. The fee for these usually is between 60 000 and 100 000 MKD per person.

The third group of activities is about providing e-governance solutions. Some of the activities listed in this group can be easily taken by the ICT Foundations staff. Training for the municipal employees is one of them. The activities here can be expanded to schools, as they already have FLOSS in their computer labs. We can hold some basic lectures and workshops there as well, but the ICT Foundations staff could provide long-term support, hopefully in cooperation with the local community. As for the e-governance solutions, we think that in cooperation and support from ZELS the project should focus on providing a single solution, a local government one-stop-shop, similar to the one provided by the central government, on a national level. This would allow easy access to all local government services to all citizens and businesses and eliminate practical problems such as keeping track of different local government web sites. Also it will make a clear distinction between the services provided by the local government and other web presentations that municipalities may implement (by using FLOSS), like portals or informational web sites.

The fourth group of activities includes awareness and promotional activities. These will probably have a big role in shaping public opinion and better understanding of FLOSS. With our limited experience in organizing promotional and awareness events on a large scale, we hope that more experienced organizations such as UNDP itself will take care of most of the logistics. However, our presence here is required as the information and training materials should use proper terminology and avoid ambiguities. Having in mind that even the mainstream media sometimes have problems grasping the major points when it comes to software, licensing and similar issues, precise wording should be the first priority in these public relation activities. We also, would like to insure that the materials that might be handed out on these events or presentations to the public are prepared in

FLOSS – there is no better way to promote tools of any kind than using the very same tools we endorse.

The project should also set measurable overall targets that ought to be achieved. Example: 80% of ICT Foundation staff will know what FLOSS is and what the benefits from using it are; 25% of all employees in the municipalities will be FLOSS literate; All servers will run GNU/Linux; All web pages will be standards compliant, according to the W3C Consortium.

3. Work plan recommendations

3.1. Selection and adaptation of FLOSS to local needs

The existence of too many choices is often noted as one of the problems when starting to use FLOSS. To avoid any such problems, users should make an inventory of the tasks they need to preform by using a computer, prior to the selection process. Users should know what each piece of software is actually doing and why do they need such a tool, not what is its name or vendor. This will make much easier for the project staff to select the proper tools.

On the project side, the selection process should focus on two things:

1. Making sure that the applications taken into account are actually FLOSS. There are many applications that are said to be free, but they might not be FLOSS. Licensing check should be applied in accordance with Free Software Foundation's Free Software license list[1];

2. If there is more than one suitable application for a given task, the maturity and the activity of the project, as well as its local user base and ongoing or planned localization/adaptation process must be taken into account.

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1 *http://www.gnu.org/licenses/licenses.html*

The adaptation of the selected applications should be done in coordination with local teams – if such teams exist for the given application. If the adaptation/localization of an application is to be started from scratch, proper activities must be undertaken to insure the sustainability of the project. The start-up of new localization projects can be an easy task for the existing community. It also can be a great opportunity for other people to join in, especially some of the ICT Foundations staff.

3.2. Capacity building, training and competency development

As with all new tools, achieving a certain level of knowledge and understanding is required. However, we believe that FLOSS is not just a new tool. To have a long term success with the use of FLOSS in local government the responsible staff should do more than just learn how the new software works. That is why we think that a traditional training approach is not suitable for the project. After all, providing full and extensive training is not one of the project goals. Still, if standard training cannot be avoided, we can prepare a short curriculum for the ICT Foundations staff that will cover most of the basics on running FLOSS, developing applications and building web sites that are standards based as well as using Open Standards for documents. The lectures can be carried out by members of Free Software Macedonia who have teaching experience and hold certificates such as RHCE[2].

However, we strongly believe that capacity building and competency development should be done in the spirit and in the ways of FLOSS community. Events such as install festivals and workshops will provide useful and practical knowledge. These events introduce FLOSS in a working environment and bring an incentive for following a problem solving approach, as well as provide practical challenges for ICT Foundations staff who are IT professionals. They can also be a good guide on non-computer skills that are needed for successful coping with challenges, problems or tasks that users or

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2   *Red Hat Certified Engineer*

administrators are facing when using FLOSS. On the long run, knowledge of where to search for answers, how to ask questions and how to work with the community will be much more useful than distribution and version tied training. Also, capacity building and competency development should include lectures and/or workshops on non-technical issues related to FLOSS, such as the basic philosophy behind FLOSS, copyright and licensing issues, ethics etc.

We believe that the training of ICT Foundation staff should be done in parallel with the activities of assessment, selection and developing of the solutions for e-governance. With the proposed time management, we can use the extra time to train and educate the ICT staff on how to use, configure and deploy FLOSS in the municipalities ICT infrastructure, so that the transition from proprietary to FLOSS would pass seamlessly when the actual migration begins.

We propose that the training of the ICT staff personal should commence as soon as the selection process for the participating municipalities ends. This way when the newly developed applications are finished the ICT staff will be trained and ready to begin implementation and specific training for the user's of the applications in question.

Last but not least, the ICT Foundation staff and/or municipalities officials should learn the difference between FLOSS and software that is available free of charge. Every institution should be aware that while most of the problems can be solved in-house with the help from the local or international community, sometimes it is more efficient to hire local companies or individuals, that are specialists on the particular problem, who will provide support or services for a fee. This fee based approach insures a high level quality of service and it stimulates development, advancement and growth of local ICT companies, while avoiding single vendor lock-in.

3.3. Implementation of e-governance solutions based on FLOSS

Most of the activities listed under section 3 are straight forward. At that point

the project hopefully will be moving on the right track. Activities that require expertise in FLOSS can be provided by the local community. The ICT Foundation staff hopefully will be deeply involved as well. The key point here is the actual implementation of e-governance solutions based on FLOSS and Open Standards.

This is where the project should go further than similar projects conducted in the region (example Bulgaria) - simply duplicating the work done elsewhere would be underachieving. The project should recommend implementation of a real e-governance solution (government to businesses, government to citizens). The current trend of building separate web pages for municipalities should be avoided, or relocated downwards on the priority list. Also, while municipalities might state their need for certain back-office applications, project officials should explain that e-governance is about providing e-services to the outside world.

From a citizen point of view, we think that a single place for local government e-services is the way to go. Local government provides a know set of services, regulated by law. Citizens shouldn't keep track of different individual web sites to access the same services in different municipalities. The web based e-governance solution will be based on FLOSS and will follow Open Standards. If its implementation is requested through a public tender, the documentation should include precise information on these two crucial points. There are many FLOSS tools that can be used as a backbone for building this e-service and the project should recommend using and expanding on existing code-base instead of starting from scratch.

For municipalities' web sites that will present other (non-service related) information, FLOSS solutions could be introduced as well. Standards compliant (example viewable in any browser) solutions should be recommended. Documents made available there should also follow Open Standards.

In order for the developed system to be open and free the following key principles should be applied.

- Inter-Operable – allowing, through the use of Open Standards, the exchange, reuse, interchangeability and interpretation of data across diverse architectures;

- User-Centric – fulfilling the user requirements over perceived hardware or software constraints;

- Collaborative – permitting governments, industry, and other stakeholders to create, grow and reform communities of interested parties that can leverage strengths, solve common problems, innovate and build upon existing efforts;

- Sustainable – maintaining balance and resiliency while addressing organizational, technical, financial and legal issues in a manner that allows an ecosystem to thrive and evolve;

- Flexible – adapting seamlessly and quickly to new information, technologies, protocols and relationships while integrating them as warranted into market-making and government processes.

There is a complementary relationship between FLOSS and Open Standards. Open Standards implemented through FLOSS, promote the standard, which finally leads to its adoption and use.

Open standards are created by standards-setting organizations including consortia like the Internet Engineering Task Force (IETF), World Wide Web Consortium (W3C), and the Organization for the Advancement of Structured Information Standards (OASIS), and formal standards bodies such as the International Organization for Standardization (ISO).

Applications that conform to standards are usually independent of operating system platform, and can be used by anyone. Documents created using the OASIS Open document format (ODF) can be edited and modified using different applications that are available at the moment for the user, that do not require you to purchase special proprietary software that works only with proprietary document formats. Information stored in documents and saved in proprietary document formats, introduces vendor lock-in and dependency on

proprietary formats controlled solely by one company. If the vendor changes the specification of the format or the software that is used for accessing, creating and editing of these documents , then the information stored in that document is rendered useless.

3.4. Spreading awareness and knowledge about FLOSS

The final piece of the puzzle is informing the public of the past (and hopefully future) activities. Use of FLOSS in all these activities should be preferred. Presentations and information materials should be prepared with FLOSS. Documents and other materials that will be shared with the public should be available under a Free Documentation License.

The ignorance or the fight for more readers by the media should be taken into account. We don't want for example to see the media reporting on FLOSS as some anti-Microsoft or anti-copyright issue. Precise terminology should be used. Information materials intended for the media might be considered, a media-kit for FLOSS and open standards is really a very good starting point to help and alleviate this potential curl pit.

Community building activities should also be considered. Workshops and, lectures for young people (example primary or high school students) could prove useful on the long run, and are seen by Free Software Macedonia as an excellent starting point, having in mind that young people are the most valuable target group.

Promotion of the new local government e-services will be crucial for the sustainability of the project. In the end, the new e-services should be used by citizens. Cooperation with projects who promote decentralization and the role of the municipalities might be considered. Training for IT illiterate people for the use of the e-services could be on the priority list as well.

Resources

1. United Nations Development Programme, Support to e-Governance initiatives based on Free/Open Source Software at the local level in FYR Macedonia Project Document;
2. Berkman Center for Internet & Society at Harvard Law School, Roadmap for Open ICT Ecosystem;
3. Kenneth Wong, Free/Open Source Software Government Policy;
4. The Internet.