



M3.16 Established user support services to keep the open source network community alive and vibrant

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Partner: RBINS
Reporters: Dimitris Koureas, Isabella Van de Velde, Thierry Backeljau & Laurence Livermore



INTRODUCTION

Free-to-use information services and e-infrastructures aim to provide a stable, accessible and reliable environment for their communities. The majority of European e-infrastructures are initially designed, developed and implemented under externally funded projects over a defined time period, hence post-project sustainability is often a major concern.

As the goal of conceiving and implementing an e-infrastructure or a biodiversity information system is to create a long-term resource, development and maintenance should always go hand-in-hand. A computational tool must be reliable across time, it must be maintained.

Scratchpads, ViBRANT's central hub where services are linked together, are an open source virtual research environment for biodiversity, allowing anyone to create, to share and to manage data online. Since its launch in 2007, a logarithmic growth in both the number of sites and the number of registered, active users has been observed.¹

Scratchpads are built to facilitate the development of online communities through a single, integrated and open access environment and allow for handling biodiversity related data from the collection and generation stage to the online curation, analysis and publication.

Scratchpads show how a globally distributed network of people, with diverse backgrounds, undertake efforts to sustain a vivid and responsive community. By enabling the end user communities to actively participate in further development of the platform and to contribute in providing support, an open and dynamic collaborative online environment is created, aimed at maintaining the e-infrastructure.

The following paragraphs explain how the investment in structuring the necessary support mechanisms, the development of a network of Ambassadors and the assessment of the needs of the targeted audience are arguably major factors leading to a successful open source network community.

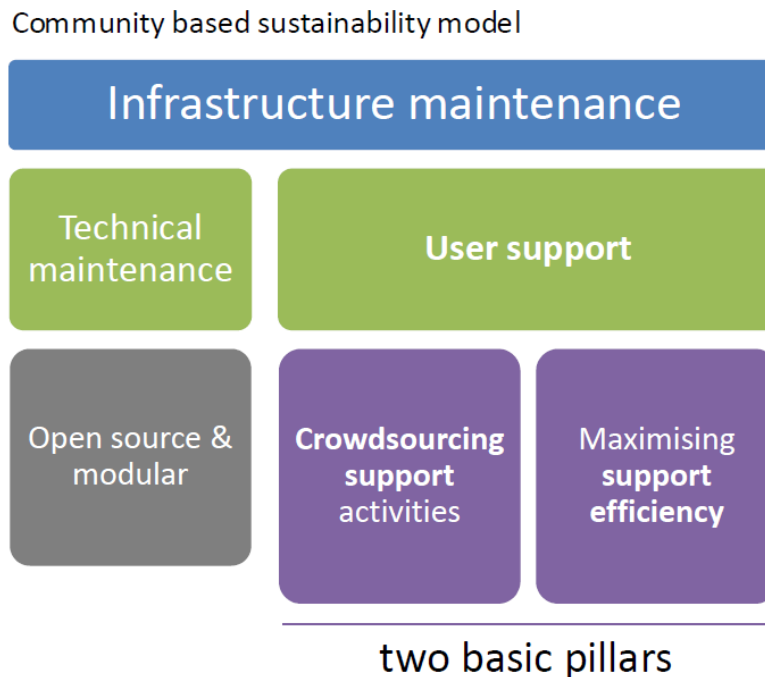
SUPPORT AND OUTREACH STRUCTURES IN SCRATCHPADS

In order to facilitate the use of Scratchpads among users, support is provided through multiple channels and a diverse set of tools have been implemented:

- [training](#) on-site and online is provided to help current and prospective Scratchpads users to develop site building skills and to guide them through major Scratchpads features;
- through [Redmine](#), an open source project management system, the support team tracks all bug reports, feature requests and support queries posted by the users;
- documentation is provided through a [Help Wiki](#);
- answers to the most frequently asked questions about Scratchpads are found in [FAQ](#);
- to experiment with Scratchpads features the [Sandbox](#) can be used;
- extensive testing can be done on a [training site](#);
- and an extensive worldwide [network of Ambassadors](#) has been established to support local Scratchpads communities.

¹<http://scratchpads.eu/explore>

In a community based open source and modular model such as Scratchpads, crowdsourcing support activities and maximising the efficiency of the existing support structures can be considered as the two basic pillars that underpin a successful co-learning support schema. Obviously, technical maintenance of the e-infrastructure is of equal importance.



Source: Livermore L. & Koureas D. (2013)
Nurturing a community based sustainability model - Support and outreach structures in Scratchpads.
[Biodiversity Informatics Horizons 2013 Conference, Rome](#)²

CROWDSOURCING USER SUPPORT ACTIVITIES

Ambassadors programme

The [ambassadors programme](#) can be considered as the cornerstone to our efforts. Ambassadors are experienced Scratchpads users that share the same enthusiasm and vision. Over the last years we have attracted 20 ambassadors spread across all continents, except Antarctica.

Most of them maintain more than one Scratchpad and have been actively participating in the common culture of Scratchpads before they applied. The Ambassadors have preferential access to the development team and are first to be told about upgrades and other leading-edge developments.

Their contribution towards a post-funding sustainability model is arguably crucial as they:

- give talks about Scratchpads;
- arrange for or give training courses;
- act as focal point of local Scratchpad expertise;
- promote the use of Scratchpads in their community;

²http://conference.lifewatch.unisalento.it/ConferenceContents/BIH2013_Presentations/Thursday%20PM/Koureas_050913PM.pdf

- provide support to new local Scratchpad user communities;
- provide support to local users in languages other than English.

Detailed information on their achievements can be found in the report M3.15 Ambassadors network is fully operational.³

Their active involvement is also obvious by the fact that in 2013 they organised local training courses for their respective communities. Training was run in Ukraine, Malaysia and Cameroon.

Training on-site and on-line

Training courses raise awareness and of course promote the platform to different communities. They also play an important role in training users that eventually become trainers for their research group members of small communities.

On-site training is aimed at addressing different communities in different countries. During the ViBRANT project 35 on-site training courses were run in Europe, Africa, Asia and America attracting 438 participants.

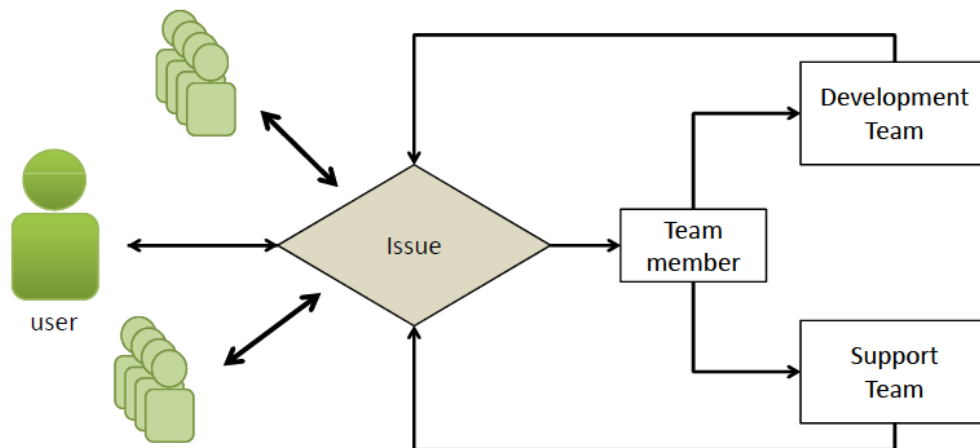
In 2013, 3 online training courses were organised. Online courses have a global reach and are low-cost compared to on-site training. The platform used is Google hangouts and the number of participants is kept to a maximum of 8. Fifteen participants from 10 countries joined the online training (Australia, Asia, Africa, Europe).

MAXIMISING SUPPORT EFFICIENCY

Project management – Issues queue

Straight-forward workflow

Co-learning environment



Source: Livermore L. & Koureas D. (2013)

Nurturing a community based sustainability model - Support and outreach structures in Scratchpads.

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³http://vbrant.eu/sites/vbrant.eu/files/M3.15_Ambassadors_network_%20is_fully_operational.pdf

Redmine: an open source project management system

In the front of maximising the support structures efficiency, the first step was to use an open source integrated project management system. Through this dedicated issues queue platform the support team is able to track all bug reports, feature requests and support queries through a single environment.

The efficiency of using a system like that has been previously documented for Scratchpads in the paper 'Who learns from whom? Supporting users and developers of a major biodiversity e-infrastructure'.⁵ The workflow facilitates fast processing time, provides the necessary metrics for performance monitoring and also enables users to act in a co-learning open environment.

Help Wiki: a wiki based documentation site

In Scratchpads instead of the traditional documentation solution, all help material is organised through a mediawiki site. Support team members, as well as users, can contribute to the wiki improving the quality of the information in a collaborative environment. Currently (November 2013), the site holds around 100 help articles organised in different content categories. Screencasts are also provided to facilitate the self-training process.

Consistent theming is important to maximise the efficiency of the tool. Pages that are outdated due to programmatic changes in Scratchpads are marked as such until they get updated. Related pages are also provided to help people browse through the content.

The wiki based documentation site is arguably contributing towards sustaining an efficient documentation resource, as new features, bug fixes and constant changes can be reflected to the documentation with a minimum of effort.

UNDERSTANDING AND RESPONDING TO USER NEEDS

Users are at the core of ViBRANT's development approach. Getting to know the specific training and support needs of the Scratchpads users and of potential users is important. Sociological studies feedback into service and development priorities.

To get a better view of user needs and to improve the further development of Scratchpads, a user survey was distributed to all Scratchpads maintainers in 2011. Training has also been evaluated by a feedback training form, available online on the Scratchpads website. The results are discussed in detail in the report D3.2 Service delivery and evaluation.⁶ Recommendations for software development, support services, project management and future user studies have been formulated in M3.13 Recommendations to modify products.⁷

Interviews with users, ex-users and non-users inform about usability and adoption issues related to the use of Scratchpads but also about strategies to approach potential new user communities.

⁴ http://conference.lifewatch.unisalento.it/ConferenceContents/BIH2013_Presentations/Thursday%20PM/Koureas_050913PM.pdf

⁵ Brake I. et al. ZooKeys 150 (2011): 177-192. <http://dx.doi.org/10.3897/zookeys.150.2191>

⁶ http://vbrant.eu/sites/vbrant.eu/files/D3.2_291112-corr-280113.pdf

⁷ <http://vbrant.eu/sites/vbrant.eu/files/M313%20def.pdf>

A MEASURE FOR SUCCESS: HOW MUCH ARE THE SUPPORT SERVICES USED?

Training on-site & on-line (ViBRANT's lifetime 1 Dec 2010- 1 Dec 2013)

38 training sessions – 453 participants

audience: worldwide

Redmine issues platform

1,200 issues/year

61% are processed within a day

81% within a week ⁸

Help wiki

133,095 views (March 2012 -October 2013)

More metrics are found on the Help Wiki special statistics page. ⁹

CONCLUSIONS

Scratchpads post-project sustainability

It has been proven that investment in structuring the necessary support mechanisms, development of an Ambassadors network and assessment of the user base needs, nurture a community based model and keep the open source network community alive. By enabling the end user communities to actively participate in further development of the platform and to contribute in providing support, an open and dynamic collaborative online environment is created, aimed at maintaining the e-infrastructure.

Concerning financial sustainability, Scratchpads have been incorporated into the Natural History Museum's (NHM London) digital strategy, as indicated by the Museum's Strategic Plan and as such are now supported by tenured staff. Whilst not guaranteeing future enhancement of the Scratchpads, it does guarantee access to the Sites with current levels of functionality for the foreseeable future. Scratchpads financial sustainability has been outlined in the report D 2.3 Financial sustainability. Report on options for the ViBRANT financial sustainability model including selection of preferred model and accompanying Service Level Agreements (SLA's). ¹⁰

⁸ Brake I. et al. *ZooKeys* 150 (2011): 177-192. <http://dx.doi.org/10.3897/zookeys.150.2191>

⁹ <http://help.scratchpads.eu/w/Special:Statistics>

¹⁰ http://vbrant.eu/sites/vbrant.eu/files/D2.3_Sustainability.pdf