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JISC Final Report

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1 Project Summary

East Midlands Knowledge Network (EMKN) is an online resource which is at risk, due to the demise of regional development agencies, the imminent closure of the company upon whose server it sits and the closure of the East Midlands Universities Association (EMUA), who created the resource. However the information held on within the site (technologies, business services and facilities within EMUA's institutions is valuable, particularly as face-to-face Business Link (BL) services are being axed and the government has indicated that the channel for publicly-funded business advice (information, advice and guidance) will be on-line. The site contains an image ("Tube Map") that links to various parts of the site showing various service, this was felt especially important to keep.

Therefore this project looked at options on how to use free hosting sites as a way of protecting a valuable resource in an economical and sustainable way, using the EMKN as a case study. A blog (http://websitesustainability.blogspot.com/) of the progress, activities and issues was kept.

2 Main Body of Report

2.1 Project Outputs and Outcomes

Output / Outcome Type *(e.g. report, publication, software, knowledge built)*	**Brief Description and URLs (where applicable)**
Blog	An on-going blog of the project, issues and problems, but with some thoughts about web sustainability. http://websitesustainability.blogspot.com/
Google Sites partial version	The initial developed site used to look at the feasibility of using a Google site to rescues at risk https://sites.google.com/site/emknorg/
Dropbox version	An alternative solution http://dl.dropbox.com/u/25018391/index.html
Sustainability site version	An alternative solution http://www.web-sustainablity.net/emkn/
Mobile version	http://mobile.web-sustainablity.net/site/emkn/index.html
Amazon version	An alternative solution http://s3-eu-west-1.amazonaws.com/www.sustainability.net/emkn/index.html

2.2 How did you go about achieving your outputs / outcomes?

The overall approach has been to:

- Rescue the site, and also to use publicly available methods of storing the site.
- Move the site to a number of free hosting options to investigate their suitability.
- Set up a Blog to comment on the progress, issues that arose and web sustainability in general on a Blog that is publicly available.
- Add free and freely available web tracking to the sites and blog to measure their usage.
- Apply search engine optimisation to the sites
- Use survey software to gather feedback on the sites.

A copy of the site was captured. The software selected for this job is the free software WinHTTrack Website Copier (http://www.httrack.com/). It is easy to install and use. Back-up copies were kept in several places just in case. More details can be found at click here.

DropBox was selected as a way of storing the site, just in case the site is lost during the move to alternative hosting methods . You can transfer the static HTML content straight in a public folder in DropBox so it is still publicly available. For more details click here on moving a site to DropBox and for some of the issues click here.

On all the sites and the blog Google Analytics, which is free for anyone to install on their sites, was added. This enables tracking of usage providing information about which pages are being looked at. Google provides guidance on setting this up.

Four web-hosting options were investigated..

- Option 1:A Google Sites (www.google.com/sites/overview.html) was been selected as the alternative platform for several reasons:
    - It is a freely available resource, allowing this approach to be replicated with other at risk resources.
    - It allows changes for individual pages or the entire site remotely by subscription
    - It integrates with a number of Google-based tools (such as Analytics, Webmaster tools, YouTube, Google Docs and Picasa).
- Option 2: Stick with the DropBox solutions it provides a free hosting option that is publically accessible.
- Option 3: Use a site such as www.sustainablity.net which allows the production a mobile version mobile version of the site as well, but you are reliant and someone accepting the site and maintaining it.
- Option 4: Amazon Web Services again free hosting with some data backup.

Looked at Search Engine Optimisation

- Image maps versus flash. For more detailsclick here.
- Keywords - six keywords
- Description: A short summary description of the page not the site.
- Title: Made up of two parts. First "East Midlands Knowledge Network:" and the second part made up of the University name and either the company or specialist service.

Let the search engines know where the sites are. Some suggestions can be found from this blog at including usingSitemaps.

Getting feedback a free online survey tool was Survey Tool (EsurveyPro). An example of the questions can be found in Appendix A and some of the results in appendix B Emails and social network tools were used to distributed the survey;.

2.3 What did you learn?

With Google Sites as each page essentially needs to be produced individually (producing templates of portions of the site helps, but each page does need to be produced individually), for a site with a large number of pages this is extremely time consuming. A further problem with Google Sites for this project is CSS can't easily be transferred, though to a large extent HTML can, the formatting of the site has to be redone. For this site with around 500 pages Google Sites, with the site needing to look as close as possible to the original is not the most appropriate solution, but other techniques investigated are more suitable. Google Sites is an appropriate solution if the number of pages is small, the formatting of the pages is not too complicated and it is a new web site.

A quick option is to use the public folder of a DropBox account a URL can be created and if the content is not going to change and yet you want it still publicly accessible,; this is a reasonable option. It is free (if you have a free account) and publicly accessible but it does have some drawbacks:

- The URL produced is a little cryptic - it doesn't really bear a direct relationship with the site's name or content. So is a poor option in terms of Search Engine Optimisation point of view.
- It is difficult to add some common web analysis tools. Google Analytics is easy you, but tools such as Google Webmaster tools are much more difficult to work with.
- It is only really useful for static content.
- As with all the free options there is the concern that it is only an option will the service running is available.

Overall though this is a reasonable quick route for hosting content that is unlikely to change and if the DropBox account and a new email address to set up the account are specifically set up for the project, then transferring ownership or sharing access is uncomplicated it just means giving the email and password to the other person.

Amazon cloud route is an alternative, there are still some of the drawbacks common to the Dropbox route, namely:

- The URL produced is a still a little cryptic - it doesn't really bear a direct relationship with the site's name or content. So is a poor option in terms of Search Engine Optimisation. Saying that it is a little better than the Dropbox option as you can include a site name within the URL.
- As with all the free options there is the concern that it is only an option will the service running
- You also can though add to the site tools not available to the DropBox options such as Google and Bing Webmaster tools.

Overall though this is a good hosting option that is unlikely to be lost due to the backing of Amazon. Directly transferring the site is problematic not from technical stand-point but administratively. A credit card is need when setting the initial account, those details would need to be changed early in the transfer process. Amazon is appropriate for both new and previously developed material is being migrated. More details on setting this up can be found at either http://websitesustainability.blogspot.com/2011/07/initial-work-with-amazons-web-service.html or in Dan Frost's article in .Net magazine (Frost, 2011a, Frost, 2011b).

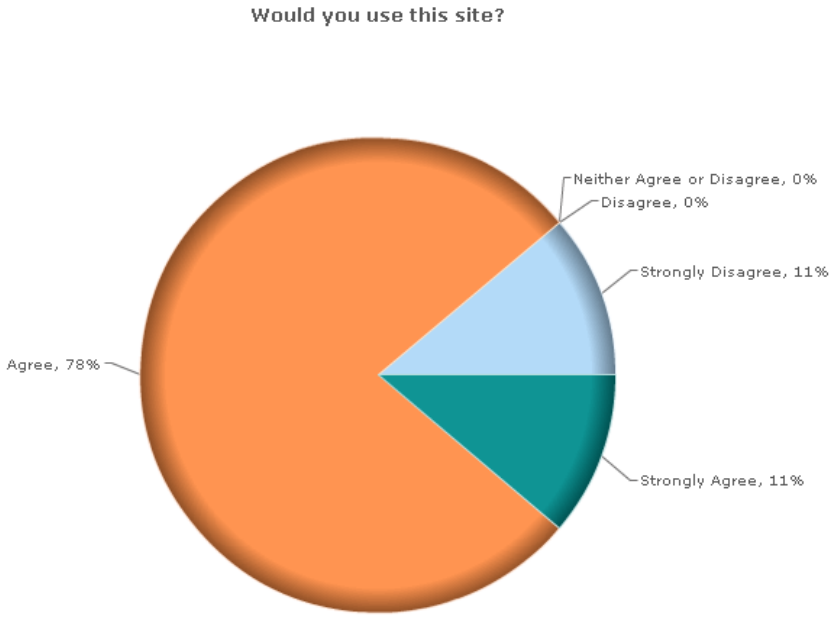
Both Amazon and DropBox are appropriate for new and old sites.

An alternative that was investigated was adding the content on to another site such as www.sustainabilty.net but this is reliant on the person owning the site being willing to add it to their site. There are other problems with approach it is not easy to transfer control of the site through this route. The advantages though can included the site being more accessible to mobile devices which is a service being offered by a lot of the paid-hosting services.

For this type of activity, it is unlikely to come as little surprise that static website are easier to transfer, especially if you don't have direct access to the files on the original sites server. Tools such as WinHTTrack Website Copier (http://www.httrack.com/) extract the HTML returned from the server which could be a problem for PHP based sites, the copying tools would extract it as HTML and for some the hosting sites option using more dynamic technologies is a little problematic without a re-building of the site, the case in point being Google Sites.

Feedback from users was collected using http://www.esurveyspro.com/ but was distributed using emails extract from email address on the site but also through LinkedIn contacts. Though the email address and IP address were not collected, the email route was investigated first, but when the call went out on LinkedIn, the response rate increased, suggesting using social networking sites can be an effective dissemination method.

The questionnaire included questions about the navigation of the site in general and the Tube Map carried out to see overall do the users like the site and what changes would they look for. The aim being to provide some information for later developments of the site, but refining the site is not the focus of this work. For the sustainability of the site questions about are people actually interested in the site? There is some evidence that they are.



In the survey for the site http://www.web-sustainablity.net/emkn/ 78% of the responders (N=15) said they would use the site.

Quotes from responders
"I do use the Tube Map, as it has some excellent information, links and contacts etc Would be open to seeing this retained and or further updated and developed so that it can be a really interactive tool."
"Site contains lots of useful info that I was not aware was available"

One responder said "Perhaps a search box on this page that users could use to quickly locate the item on the map would complement the site" Search boxes were added to the sites in response to this comment in a sustainable way (see http://websitesustainability.blogspot.com/2011/07/adding-search-to-site.html for more details).

2.4 Immediate Impact

The main benefit is to the wider community is that options for the making sites mores sustainable have been considered.

For the stakeholders an 'at-risk' site has been protect and available for when the site has to be removed from the current paid hosting option.

2.5 Future Impact

Some of this has been disseminated on a posting on a University of Northampton blog of 'expert opinion' (http://blogs.northampton.ac.uk/expertsatnorthampton/2011/09/27/web-sustainability-its-gone/) aimed at disseminating ideas from the university to the wider community.

Tracking of the sites usage through and the blogs usage will continue, through Google Analytics in all case but where possible though appropriate web tools.

3 Conclusions

Google Sites based solution are appropriate if there are a small number of pages within the site, where you have some flexibility of the design of the site (especially if the site it is not reliant on CSS) and the pages are essentially static pages. If your site does match any one of these, it is best to look at alternatives, such as dropbox and amazon S3. Otherwise Google Sites is a good option, especially as it has the backing of major company.

As with all sites (or perhaps even more so due to these sites not necessarily having support, but still useful), following good Search Engine Optimisation (SEO) principles are important. The site, we hope, is going to be use by others but the resources behind the site are likely to minimal. Following good SEO principles at least gives the site an improved chance of being picked up by the search engines. One possible advantage of the Google Sites approach is URL produced as standard is a little easier to interpret than some of the other techniques, which could have some benefits from a Search engine optimisation perspective.

4 Recommendations

The area of sustainability of websites should be an important consideration for any funding that involves public money, both during the life-time of the project and after it. Especially when government funded agencies are being rationalised finding ways to keep the sites going even if they are not updated further, they still provide a 'snap-shot' of the resources at a particular point in time. This project looked at possible sustainability options and has the following recommendations:

- A sustainable web solution should be considered for funded projects. There are a number of free options.
- Google Sites is an appropriate solution if the number of pages is small, the formatting of the pages is not too complicated and it is a new web site.
- Amazon is appropriate for both new and previously developed material is being migrated.
- Dropbox is as in the Amazon solution appropriate for new and previously developed sites and is appropriate if only basic tracking tools such as Google analytics are needed.
- Sustainable web solutions proposed are good as a back-up or archiving solution; but also can be used as the main site if the domain name is redirected to the new site.

5 Implications for the future

- First another site (or more accurately part of a site) whose contents are likely to lost in a restructuring of an organisation might possibly be 'rescued' using one of the methods discussed.
- Amazon S3 approach is under investigation.
- A paper based on this work is under-development.

The blog will be maintained by the project manager as long-term personal project, it is hosted on Blogger so is free. The site www. web-sustainablity.net will be maintained as a personal site.

6 References

Frost D (2011a) “The web dev’s intro to the cloud (part 1) “ *.Net* summer 2011 pp 100-102
Frost D (2011b) “The web dev’s intro to the cloud (part 1) “ .[online] URL: *http://www.netmagazine.com/features/web-dev-s-intro-cloud-part-1* [Accessed on: 29/9/2011]

Appendices

Appendix A: Example of the Survey carried out using www.esurveypro.com

East Midlands Knowledge Network Site
Answers marked with a * are required.

1. About you

1. Which of the following best reflects your occupation?
- [ ] Student
- [x] Educator
- [ ] Manager
- [ ] Business Advisor
- [ ] Owner
- [ ] Consultant
- [ ] Other

Quit Next

Powered by eSurveysPro.com

East Midlands Knowledge Network Site
Answers marked with a * are required.

2. Site Navigation

Please copy this into your browser https://sites.google.com/site/emknorg/ and try the site for yourself. This is a site under construction so please bear with me.

2. I found the navigation easy

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
☐	☐	☐	☐	☐

3. I found it easy to find what I was look for.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
○	○	○	○	○

4. The layout is right for me.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
○	○	○	○	○

5. Please add any comments or suggestions you feel appropriate on the navigation.

Quit Back Next

Powered by eSurveysPro.com

East Midlands Knowledge Network Site
Answers marked with a * are required.

3. 'Tube Map'

EMUA have developed a graphical navigation. Please could you follow the link by please copying this into your browser https://sites.google.com/site/emknorg/home/map and answer the following questions.

6. I found the navigation easy

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

7. I found it easy to find what I was look for.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

8. The layout is right for me.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

9. Please add any comments or suggestions you feel appropriate on the navigation.

Quit Back Next

Powered by eSurveysPro.com

East Midlands Knowledge Network Site
Answers marked with a * are required.

4. Would you use this site?

10. Would you use this site?

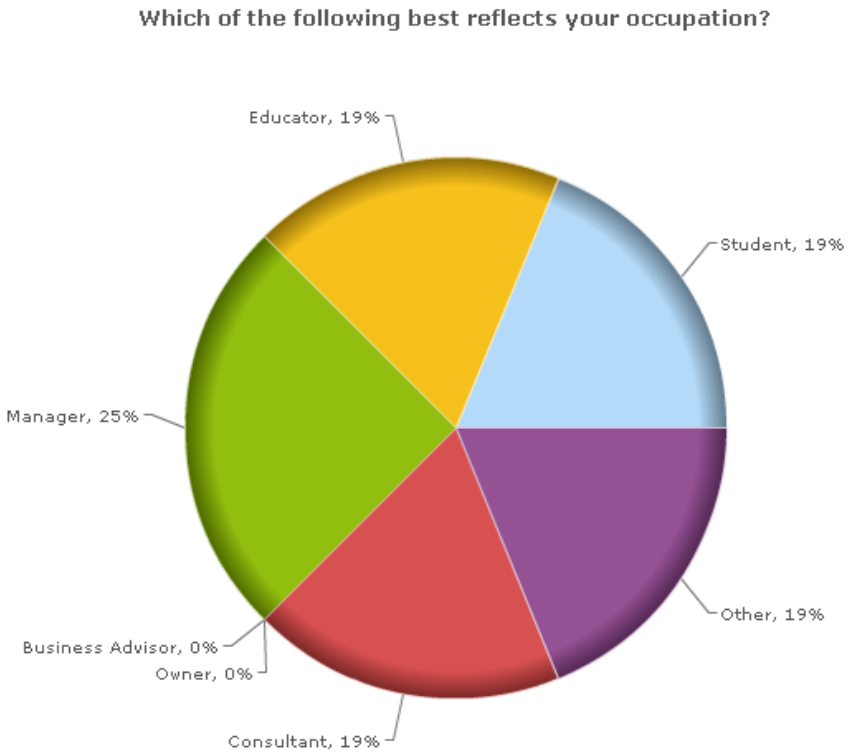
- Strongly Disagree
- Disagree
- Neither Agree or Disagree
- Agree
- Strongly Agree

11. Please add any comments.

Quit Back Finished

Powered by eSurveysPro.com

Appendix B



For the Site in general

2. I found the navigation easy	% of Respondents
Strongly Disagree	0.00%
Disagree	0.00%
Neither Agree or Disagree	0.00%
Agree	80.00%
Strongly Agree	20.00%

3. I found it easy to find what I was look for.	% of Respondents
Strongly Disagree	0.00%
Disagree	0.00%
Neither Agree or Disagree	10.00%
Agree	60.00%
Strongly Agree	30.00%

4. The layout is right for me.	% of Respondents
Strongly Disagree	0.00%
Disagree	0.00%
Neither Agree or Disagree	10.00%
Agree	60.00%
Strongly Agree	30.00%

Tube Map

6. I found the navigation easy	% of Respondents
Strongly Disagree	0.00%
Disagree	0.00%
Neither Agree or Disagree	30.00%
Agree	40.00%
Strongly Agree	30.00%

7. I found it easy to find what I was look for.	% of Respondents
Strongly Disagree	0.00%
Disagree	11.11%
Neither Agree or Disagree	22.22%
Agree	33.33%
Strongly Agree	33.33%

8. The layout is right for me.	% of Respondents
Strongly Disagree	0.00%
Disagree	22.22%
Neither Agree or Disagree	33.33%
Agree	22.22%
Strongly Agree	22.22%

Use of the site

Page 4. Would you use this site?

10. Would you use this site?	% of Respondents
Strongly Disagree	11.11%
Disagree	0.00%
Neither Agree or Disagree	0.00%
Agree	77.78%
Strongly Agree	11.11%

11. Please add any comments.

1. I can see how it could be useful. One minor comment on the layout. The tube map image link on the home page and the Google custom search box are both offset to the right in Firefox 5.
2. Site contains lots of useful info that I was not aware was available