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Digital directions
Sustainability for digital libraries

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Abstract

Economic sustainability is a pressing concern for many digital library projects. One key to achieving economic sustainability is to make the digital library an integral part of its parent organisation. This can be done by having a sound product, launched at the right stage, and valued by users. Influential champions for the digital library are also required and librarians must be prepared to network and cultivate useful contacts. Funding sources can include sponsorship, in-kind support, fee charging and the ultimate aim, integration.

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Introduction

Sustainability has become a buzzword in the field of new library projects and developments. Like many buzzwords, it has a number of aspects and can be used to refer to a wide variety of concepts. As McArthur *et al.* (2003) say, in the digital library context, "sustainability is a broad term, referring to everything from technical issues about the digital preservation of materials, to the social questions surrounding the long-term accessibility of resources to the public at large".

In the past, sustainability was something which could be addressed towards the end of a digital library project but it is in fact an integral part of any project's development. The days are gone when the only concern was how to obtain initial funds: business plans for continuation once the grant has ended are now expected. However, sustainability does not just concern new projects. The concept tends to feature more prominently when talking about digital libraries rather than about physical ones, but physical libraries have to deal with it too. Traditional libraries may not regularly have to justify their existence but most, these days, need to fight to maintain their budgets. Those who do not have to battle for their core funding every year should reflect on how they reached this privileged position. The answer will probably include: by being essential, by becoming a given, or an integral, uncuttable part of the organisation. This is the status to which digital libraries must aspire.

The question arises so frequently in the digital library world because digital initiatives, as Zorich (2003) points out, tend to be introduced as special projects. In many cases, insufficient thought has been given at the outset as to how they will turn into long-term developments. And at times of economic pressure, when even the core is questioned, anything else is vulnerable. The key to sustainability, therefore, is to reach a position where the digital library is no longer regarded as an add-on, but as part of this integral core. The main focus here will be on economic aspects of sustainability, but preservation is of course an important area, which will be touched on briefly first.

Preservation

Preservation and guaranteed maintenance of digital materials is much discussed (see especially

Yakel (2001)). Whereas the preservation of printed materials harbours several specific and well-known problems, these issues differ from those encountered with digital materials, where there exist many technical issues, ultimately solvable by technical means but with few standard solutions available, as yet.

The situation is described as being "at an interesting juncture" by M. Smith *et al.* (2003). He sets out the complexities involved, making a useful separation into the concepts of "'bit preservation' where a digital file is carefully preserved exactly as it was created without the slightest change, and [...] 'functional preservation', where the digital file is kept useable as technology formats, media, and paradigms evolve".

Alemneh *et al.* (2002) point out that the complication of preserving digital resources is that "in order to ensure long-term access to digital resources, we need to preserve all the software, hardware, and operating systems on which the software ran". But on a practical and planning level, as M. Smith *et al.* (2003) say, as yet, "we have very little information about actual production strategies, costs, user reaction to information loss, or how much technical metadata is needed to support all of this".

The pragmatic approach to this issue is to keep aware of developments and the work being undertaken by such groups as the Digital Libraries Federation (www.diglib.org/**)** and the Council on Library and Information Resources, CLIR (www.clir.org). It is not something that small organisations can solve alone.

Economic sustainability

Economic sustainability is a softer, more political area than preservation, and consequently solutions are less tangible and concrete. Abby Smith (2003) in a useful presentation, sums the position up as "the hardest part of sustainability – how to pay for it all".

There are no easy answers, which is one reason why in the past so many digital library projects have bloomed briefly and then withered. Funders are always under pressure. For instance, the Joint Information Systems Committee (JISC), a major source of funding for digital library projects in UK higher education, is project funded and has no revenue budget of its own. One view is that at this juncture, more money should be spent on sustaining services and less on initiating projects, but in most cases it is best to start from the premise that external funding obtained to establish a project will rarely be an appropriate source to provide ongoing, unlimited funding for its continuation.

The product
The starting point for your campaign towards sustainability has to be a product that is valuable, and not just to you and your colleagues. As Abby Smith (2003) puts it, "ask not what wonderful things you can do for others, ask what others want from you. In other words, institutions should plan to make an enterprise user-focused, not collection-focused".

Beware of the attractions of the technology-driven project: just because something can be done, does not mean it should be. Similarly, there is also the understandable danger of being driven by funding available rather than by quantified demand for a sustainable project. This does not mean that projects must always follow rather than lead, but if risks are being taken, this must be after a conscious decision.

Issues of scope and coverage are particularly important in the early stages. This relates to the question of when to go live with a service. Developers will, of course, be focused on the need for a newly launched service to be glitch-free, and extensive piloting and testing of technical aspects will be necessary to ensure users are not distracted from the product's value due to dead hyperlinks or orphan pages.

But the quantity and quality of content also matters at this point. You may know how much more material is waiting to go through the tedious inputting process but users will not. Overselling a site that has great potential, but is sparsely populated with information when it is launched, will not impress the busy practitioner. If the information that interests them is tantalisingly hinted at by links to "coming soon" pages, their imagination will not be captured. There is a real danger that users, and hence potential supporters, will not return if the service does not live up to their first expectations.

Finding champions
It is a rare digital library project that is so high profile and so intrinsically valuable that the host institution is forced to find funds for continuation. One route towards bucking the "withering" trend is to ensure strong branding, linking a successful product with the institution. Most projects require rallying support through conscious efforts to gain champions beyond the immediate circles and this is where strong, ideally charismatic, project leadership is important.

D'Alessandro (1998), analysing reasons for the continuing success of the University of Iowa's Virtual Hospital project, noted that "the founders

were entrepreneurs who understood the structure and politics of the institution and applied multiple talents and energies to engender collaboration among faculty authors".

Ideal champions are those in the position to act as powerful advocates in the realm of budget holders. Many in the library and information world are not instinctively drawn to public relations, networking and marketing, but they are techniques that can be learned, like any others.

One of the tactics recommended at a two-day JISC workshop on sustainability in October 2003 was "schmoozing", which can be defined as "to converse casually, especially in order to gain an advantage or make a social connection". On a basic level, have a couple of lines at the ready in case you meet someone influential in the lift or the coffee queue, and make sure you have a business card. It does help, of course, if you know who the influential people are so it is important to do your homework before attending conferences and meetings.

Cross-sectoral approaches can be productive. Links between different types of education, between university and public libraries, or with business or local enterprise organisations will require hard work but may provide access to different funding sources. Despite official pleas for cooperation between institutions in the same sector, these institutions will find themselves on other occasions competing with one another for funding or students. At times it may be politically easier to cooperate outside your own sector than within it. Unofficial alliances can also be valuable.

Funding sources: the options

A useful categorisation of the types of funding available for sustaining digital libraries is available in the survey of "digital cultural heritage initiatives" carried out under the auspices of CLIR in 2002 (Zorich, 2003). The study covered 33 digital cultural heritage initiatives and five funders, and included a confidential telephone survey which was necessary as finance and sustainability information are often not available on Websites. Sustainability options are categorised into: subscription fees, charges for online courses, sponsorship/endowments, and integration. Combinations of any of the four may be appropriate.

Charging for access will be an option if charges would apply for similar physical information. Charges may also be acceptable for added-value services where basic services are free. If charges are deemed appropriate there are two approaches: charge from the start or allow free access initially, then charge once the users have been "hooked". The availability of so much free information on the

Web does create a barrier to payment by individuals who have to be convinced of the value of the particular information you are providing. If the payment will come from institutions rather than individuals, it is important to consider the position of budget holders.

For many, payment for a new service will mean something else will have to be stopped. When dealing with academic libraries, the situation is further complicated by the existence of a wide variety of budget control systems ranging from fully devolved to fully centralised, so it can be difficult to target your marketing.

Sponsorship and in-kind support can take many forms and creativity may be required to overcome institutional antipathy to and restrictions on advertising. Campbell (2000) gives examples of varied sources of sponsorship for Australian subject gateways ranging from endorsement through free publicity to solid financial support. In-kind contributions are often overlooked. As Zorich (2003) points out this can lead to problems if the contribution is withdrawn and also means that organisations "cannot effectively use this support as evidence when funders seek tangible proof of outside financial commitments to a project".

Integration is the ultimate goal for many digital library project leaders. But it is hard to integrate a project once its funding has run out. It is also hard to plan for such integration from the outset but this must be the main approach. The formal business plan required by many funders should not be regarded as one more bureaucratic hurdle but the passport to a successful, sustainable digital library.

References

Alemneh, D.G., Hastings, S.K. and Hartman, C.N. (2002), "A metadata approach to preservation of digital resources: the University of North Texas libraries' experience", *First Monday*, Vol. 7 No. 8, available at: www.firstmonday.org/issues/issue7_8/alemneh/index.html (accessed 8 April 2004).

Campbell, D. (2000), "Australian subject gateways: political and strategic issues", *Online Information Review*, Vol. 24 No. 1, pp. 73-7.

D'Alessandro, M.P., Galvin, J.R., Erkonen, W.E., Choi, T.A., Lacey, D.L. and Colbert, S.I. (1998), "The virtual hospital: experiences in creating and sustaining a digital library", *Bulletin of the Medical Library Association*, Vol. 86 No. 4, pp. 553-63, available at: www.pubmedcentral.nih.gov/picrender.fcgi?action=stream&blobtype=pdf&artid=226451 (accessed 8 April 2004).

McArthur, D.J., Giersch, S. and Burrows, H. (2003), "Sustainability issues for the NSDL", *Proceedings of the 2003 Joint Conference on Digital Libraries (JCDL'03), May 27-31, 2003, Houston, TX, p. 395*, available at: http://csdl.computer.org/comp/proceedings/jcdl/2003/1939/00/19390395.pdf (accessed 8 April 2004).

Smith, A. (2003), "Issues in sustainability: creating value for online users", *First Monday*, Vol. 8 No. 5, available at: www.firstmonday.dk/issues/issue8_5/smith/ (accessed 8 April 2004).

Smith, M. *et al.* (2003), "D-Space: an open source dynamic digital repository", *D-Lib*, Vol. 9 No. 1, available at: www.dlib.org/dlib/january03/smith/01smith.html (accessed 8 April 2004).

Yakel, E. (2001), "Digital preservation", *Annual Review of Information Science & Technology*, Vol. 35 No. 2, pp. 337-78.

Zorich, D.M. (2003), *A Survey of Digital Cultural Heritage Initiatives and Their Sustainability Concerns*, Council on Library and Information Resources, Washington, DC, available at: www.clir.org/pubs/abstract/pub118abst.html (accessed 8 April 2004).