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building bridges to digital content

ITHAKA S+R

Revenue, Recession, Reliance: Revisiting the SCA/Ithaka S+R Case Studies in Sustainability

How twelve digital content projects fared during the economic crisis

Nancy L. Maron & Matthew Loy

This document includes all 12 Case Study updates + the Framework Toolkit

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Foreword

The JISC led-Strategic Content Alliance (SCA) has long championed the importance of sustainable digital content development to enhance knowledge and understanding globally. This report represents the latest in a series of evidence-based research reports that explore emergent internet business models and their application across a range of organisations in the United Kingdom and overseas. It is the result of an ongoing collaboration between the SCA and Ithaka S+R, two organisations that are committed to addressing some of the most challenging issues of our time.

Since 2008, this collaboration has yielded several reports that go well beyond the usual 'business know how' advice and guidance readily available elsewhere by taking into account the real issues affecting our education, research and cultural heritage organisations as they transition from traditional to digital methods of delivery during turbulent economic times.

Over the last year, our colleagues at Ithaka S+R have revisited the twelve case studies first published in 2009 to assess the impact of the global financial crisis and to see how the projects have fared. The results provide us with a rich, varied and compelling picture of how digital content projects are facing up to challenges and opportunities over the two-year period since 2009. The case study updates provide realistic insights into how hard decisions are being taken to adapt to reduced funding, but also offer some evidence of the emergence of a new breed of digital entrepreneurship in education, research and cultural heritage organisations.

We hope that this report and the others that comprise this research programme provide you with unique insights into the experiences of others as they adopt and adapt a range of sustainability strategies. We are grateful to the authors of this report, the project leaders who agreed to share their knowledge and understanding and you, the reader, for taking the time to learn from others.

The SCA will continue to work to develop practical advice and guidance in the years ahead to support the efforts of project leaders, policy makers, and funders of digital resources by supporting further research into new questions that may arise. We welcome your observations and comments on this report via the SCA blog at **http://sca.jiscinvolve.org**.

Stuart Dempster
Director, Strategic Content Alliance

BBC, **British Library**, **JISC**, and **Wellcome Trust** working together to fully realise the potential of digital content for all users. **www.jisc.ac.uk/contentalliance**

Executive Summary

Universities, libraries and cultural heritage institutions are creating a vast array of digital resources – virtual collections, databases and other online content – driven by the goals of sharing their holdings more broadly, furthering education and research opportunities, engaging with the public and extending their influence beyond their physical space. The institutions may fund the creation of these resources themselves or receive financial support from public and private funders who understand the substantial investment required. But once the resources are built, how sturdy are the structures in place to support them?

In 2009, the JISC-led Strategic Content Alliance commissioned Ithaka S+R to investigate the sustainability strategies of twelve digital content projects in the higher education and cultural heritage sectors, located in the United States, the United Kingdom, France, Germany and Egypt, to see how their leaders were developing cost-management and revenue strategies to foster long-term growth for ongoing digital projects.[1]

Two years and one economic crisis later, Ithaka S+R, with the generous support of the JISC-led Strategic Content Alliance, conducted a new round of research and interviews with the leaders of the twelve projects that were the focus of our original case studies. Our goal was to see how their sustainability models had held up, where weaknesses might be starting to show, and what new strategies project leaders were adopting in response. How had budget cuts and other factors affected the projects? What had project leaders learned about making their resources valuable to users? Where did the resources – financial or non-financial – come from to make continued growth and innovation possible? And how could these lessons be useful to others?

The research is documented in updates to the original twelve case studies. The final report, *Revenue, Recession, Reliance: Revisiting the SCA / Ithaka Case Studies in Sustainability*, provides a summary and analysis of findings across all twelve projects profiled.

Key Findings

While the set of twelve projects is not meant to be statistically representative of all digital-content projects in the academic and cultural heritage sectors, there are illustrative themes visible across the case study updates:

In 2011, host institution support plays an ever-greater role in supporting digital resource projects. Support from a host university or institution – whether in the form of cash or in-kind contributions – was a core factor for the not-for-profit projects we studied during the original round of research in 2009. Two years on, we saw evidence of 'gap' support: host institutions helping in an ad hoc way to cover costs when a project's revenue goals were not met through planned activities. It is clear that many projects are more dependent than ever on their institutional host. Whether or not this is a good arrangement, or one that projects leaders can rely upon, remains to be seen.

Earned revenue, though often a valuable part of a project's sustainability strategy, was rarely sufficient to support the ongoing direct costs of the projects we studied. Even where innovative revenue models were in place, often they were not covering the entire cost of the resource. While having multiple revenue streams was often helpful, in some cases 'diversity' in revenue sources could be a liability, if the work needed to develop them ended up detracting from the main goals of the organisation.

1   Nancy L. Maron, Kirby Smith, and Matthew Loy, *Sustaining Digital Resources: An On-the-Ground View of Projects Today* (New York: Ithaka S+R, 2009), **www. ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/report/SCA_Ithaka_SustainingDigitalResources_Report.pdf**. Commissioned by the JISC-led Strategic Content Alliance.

Identifying reliable external sources of revenue requires ongoing experimentation and iteration. The projects that have had some success with generating earned revenue have engaged in an ongoing process of testing and experimentation, identifying revenue models and target audiences that seem to be close fits for the project's needs, and building on those if they show early signs of success.

The projects that were conceived with a mandate to generate revenue seemed more successful at this than those mission-based projects that attempted to generate revenue as a secondary measure. The projects generating enough revenue to cover their costs – a for-profit publisher and two commercial trading ventures at cultural heritage organisations – were those whose main intention was to do just that. Projects started with external grants, often at academic institutions, had a more difficult time than projects created by large cultural organisations specifically to generate revenue.

Whether a project is 'mission-first' or places a premium on generating revenue, aligning the goals of the project and the mission of its host is important. We observed several examples of projects taking steps to more closely address the institutional mission of their hosts. In the case where we observed that project and institutional expectations seemed to be misaligned, the unit was eventually restructured in order to remedy this.

Staying small is fine, if the resource is filling a well-defined niche. We observed some projects that had developed stable models based on support from a small but devoted core of supporters; for these projects, growth may not be an option, or it may not be considered desirable by project stakeholders.

'Small at any cost' is not the answer. In a difficult climate, many organisations have been forced to adjust to steep budget reductions, and these have been felt by embedded projects like those in our cohort. Still, simple across-the-board cost cutting at projects can end up depriving new, promising projects of the capital investments they require in order to grow. Short-term savings can, in this way, hinder future growth.

As projects continue to be buffeted by difficult environmental changes – budget cuts chief among them – having committed leaders and project teams who can set and pursue clearly articulated goals and adapt to changing circumstances seems more important than ever. Those who are successful are able to identify and quantify both the financial and non-financial resources needed to continue to develop their projects, and they continue to assess progress toward their goals along the way. They understand and cultivate their audiences and other stakeholders who value what the resources provide. Whether they succeed in generating a great deal of revenue or have developed a well-articulated system of volunteer labour and contributions, their strength is in their ability to clearly identify the sources of support and to insure their reliability.

As projects continue to rely on support from their host institutions, the relationship between project and host must be constantly negotiated, defined, and nurtured. So for now, these project teams forge ahead, shaping and refining their goals and nudging their projects ever closer to the mission goals of the institutions that harbour them. Those with a deep and evolving understanding of their users and the changing world around them are poised for continued growth, success, even sustainability. Those without the inclination or ability to change course as needed, and to communicate the importance of the project to all those who have a stake in its success, will find rough waters ahead.

Ithaka Case Studies in Sustainability – 2011 Updates

We revisited each of the original twelve case-study projects in order to learn what had changed and how each project's sustainability plan had evolved. The cases we studied include scholar-led initiatives, library and museum projects, and publishing projects with a diverse range of revenue models:

- **Southampton Library Digitisation Unit** (formerly **BOPCRIS**), Hartley Library, University of Southampton (U.K.). A university library-based digitisation centre that has shifted its focus from providing services to external clients to serving its host institution.

- **Department of Digital Humanities** (formerly the **Centre for Computing in the Humanities**), King's College London (U.K.). A degree-granting academic department supporting research projects in the digital humanities that has faced challenges due to recent changes in the U.K. funding system.

- **DigiZeitschriften**, Göttingen State and University Library (Germany). An archive of German-language scholarly journals supported by a library partnership model and institutional subscriptions that cover its costs, but that may have challenges ahead.

- **eBird**, Cornell Lab of Ornithology, Cornell University (U.S.). A web-based database of birding observations that has thrived by serving both amateur bird-watchers and academic researchers.

- **Electronic Enlightenment**, Bodleian Library, University of Oxford (U.K.). An online collection of edited correspondence (early seventeenth century to mid-nineteenth century) that illustrates the benefits and challenges of outsourcing key functions.

- **Hindawi Publishing Corporation** (Egypt). A for-profit publishing company that has grown by using an open-access contributor-pays business model.

- **Inamédiapro** and **ina.fr**, L'Institut national de l'audiovisuel (France). Two divisions within the National Audiovisual Institute that illustrate a balance between mission-based goals and revenue generation.

- **The National Archive's Licensed Internet Associates Programme** (U.K.). An initiative that works with commercial partners to digitise The National Archive's holdings and to enhance the value of that content through careful selection and curation.

- **Middle School Portal 2: Math and Science Pathway**, The Ohio State University (U.S.). An online network of educational resources, services and tools for math and science teachers that has been part of the National Science Digital Library, and that faces an uncertain future as the end of its grant funding approaches.

- **Stanford Encyclopedia of Philosophy**, Stanford University (U.S.). An online open-access encyclopedia with user-contributed content that has launched a 'freemium' model to supplement payouts from its project endowment.

- **Thesaurus Linguae Graecae**, University of California, Irvine (U.S.). A digitised collection of ancient Greek texts, whose subscription model is strengthened by its efforts to broaden the audience for the resource.

- **V&A Images**, Victoria and Albert Museum (U.K.). The image-licensing unit at the Victoria and Albert Museum, which struggled to cover costs of its commercial activities while also providing free services to the larger organisation and to researchers.

Introduction:
Two Years of Turmoil

For major research universities and world-renowned cultural institutions, history may be measured in decades or even centuries. Two years, even two particularly challenging ones, are unlikely to make much difference to the longevity of a well-established institution. In the rapidly changing world of digital content and services, however, two years can seem like a lifetime. Facebook was started in a dorm room and grew to have over 30 million registered users just three years after launch.[1] Wikipedia began as an experiment in developing an open-source online encyclopedia in 2001, two years later boasted 100,000 articles, and within the following year had over one million.[2] On the other hand, MySpace, which ruled the social networking scene in 2006, two short years later was surpassed by Facebook and was already beginning its decline.[3]

For digital projects that exist within the higher education and cultural heritage sectors, the terrain may not be as volatile as it is in the commercial sector, but there are significant challenges nonetheless as new digital content projects develop, attempt to attract an audience and grow. After more than a decade of significant investment by universities and heritage organisations, as well as by the public and private funders who support digital resource development, project leaders still struggle with important and fundamental questions: What do digital resources require to be truly valuable to users? Which of these attributes are most valued, and what does it cost to support them? And finally, where do the resources – financial or non-financial – come from that will make them possible? Balancing the desire to achieve mission-based goals against the real-world need to pay salaries and other essential costs is a vital equation for those who wish to run successful digital enterprises in the not-for-profit sector.

The global financial crisis that began in 2008 and that continues to have an impact on all of us has not made the prospect of sustaining digital resources any easier.

The global financial crisis that began in 2008 and that continues to have an impact on all of us has not made the prospect of sustaining digital resources any easier. The weakening of national economies and a retrenchment of government spending have lessened the amount of funding available for research (with the partial exception of research funding in the sciences) and for higher education and cultural heritage institutions in general. Higher education systems, including universities and libraries, face greater challenges than they have in the past, with cuts of up to 40 percent projected over the next four years in the United Kingdom and deep cuts for both public and private universities in the United States.[4] Funders who have in the past supported much of the growth of digital resources for the higher education and cultural heritage sectors have suffered budget cuts or have seen their endowments diminish as well. In 2011 in the United States, for example, government appropriations decisions have resulted in substantial cuts to several major grant-making bodies, including the National Endowment for the Humanities (cut by $22 million, or a 13% reduction since 2010)[5] and the Institute for Museum and Library Services (cut by $23.3 million, or a 9.6% reduction since 2011).[6] Entire funding programmes have even been shuttered, including the National Science Digital Library (NSDL), a $16.5-million programme within the National Science Foundation. As funding streams dry up, the fate of projects, some of which have yet to find sure footing as ongoing resources, is uncertain at best. As one programme officer noted during a roundtable meeting that we conducted in 2011, looking forward, 'there will be even more unsustainable projects than there are sustainable ones.'

1   Sarah Phillips, 'A Brief History of Facebook', *The Guardian* (25 July 2007), **www.guardian.co.uk/technology/2007/jul/25/media.newmedia**.
2   'History of Wikipedia', **http://en.wikipedia.org/wiki/History_of_Wikipedia**
3   'Myspace', **http://en.wikipedia.org/wiki/Myspace**
4   'Universities alarmed by 40% cuts to teaching budgets,'' 20 October 2010, **www.guardian.co.uk/education/2010/oct/20/spending-review-university-teaching-cuts**. For further detail on the impact of the Spending Review on higher education, see **www.bis.gov.uk/news/topstories/2010/Oct/BIS-CSR**.
5   'Termination, Reductions, and Savings: Budget of the U.S. Government, Fiscal Year 2012', **www.whitehouse.gov/sites/default/files/omb/budget/fy2012/assets/trs.pdf**, p. 114.
6   Michael Kelley, 'Obama Proposes $20.3 Million Reduction in Library Funding', *Library Journal* (14 February 2011), **www.libraryjournal.com/lj/home/889254-264/obama_proposes_20.3_million_reduction.csp**.

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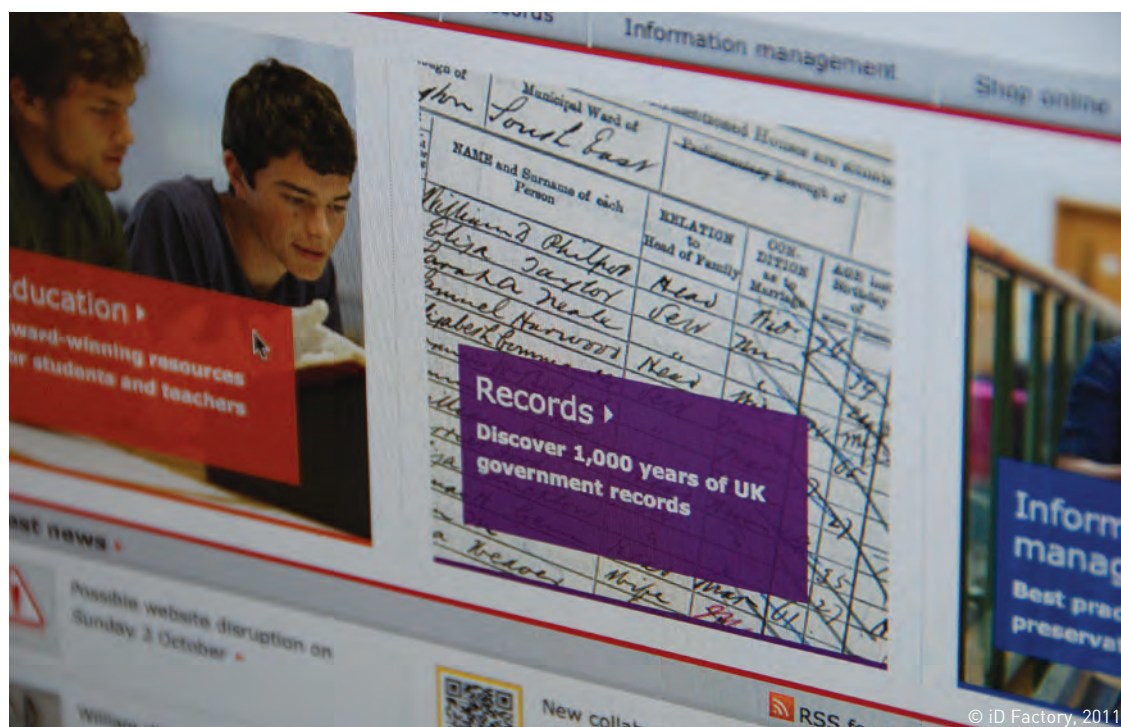
Which raises the question: Just what does it mean for a digital resource to be sustainable? For those projects that are intended to continue to develop beyond their initial creation, does it imply that the enterprise ought to become entirely self-sufficient? Does it mean that it has reliable sources of support to ensure continued service for an extended period of time? Assuming that funders and host institutions are likely to continue to play some role here, how should that role be defined?

We have heard some project leaders, funders and other observers refer to a project as 'sustainable' if a host institution has agreed to take on financial responsibility over the long term. Some funders talk openly about their perception that certain research universities are better placed than others to support digital resources, and others employ various strategies to secure host support early on as a means to improve the value-for-money equation from the funder's point of view.[7] But prod at their use of the word *support* a bit more, and it quickly reveals a great diversity of meanings. Do funder agreements with a grantee's institution really have much influence post-grant? Has the project team established a firm understanding with stakeholders at their host institution so that agreed-upon project costs are certain to be contributed by the host each year, and for an extended length of time? Or do project leaders look to the institution in a more ad hoc fashion, hoping it will help bridge the gap between revenues and costs in a difficult year?

Either way, having host support is good, but is just one piece of a larger puzzle for a digital enterprise hoping to continue to develop and deliver value to its users. What activities are required to foster the growth and development of the resource, so that it remains useful to its audience, and how will the project team identify the resources needed to do this? Whether the university is covering costs or the project is paying them directly, the host institution is a stakeholder like any other. Determining how the project will achieve its goals and prove its value to the full range of its stakeholders are key questions and the ones we have sought to address with the Strategic Content Alliance/Ithaka S+R Case Studies in Sustainability.

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7   This symbiotic relationship is often part of a project plan from its earliest stages. Some grant-makers, during the process of considering an application to fund the creation or enhancement of a digital resource, stipulate that the project leader's host institution must agree to help support the digital project, whether during the grant period itself, through contributed costs (e.g., the UK Heritage Lottery Fund's 'partnership' and shared costs of a project grant), or afterwards, by promising to make content available for a certain period of time (e.g., the JISC e-Content programme's requirement that some digitised content be made freely available for five years after launch).

Background

In 2008, the Strategic Content Alliance first commissioned Ithaka S+R to study twelve digital content projects in the humanities and social sciences based at libraries, museums, archives and other institutions in the United States, the United Kingdom, France, Germany and Egypt. This year-long research effort led to the publication of a report on sustainability strategies for online projects and detailed stand-alone case studies on each of these twelve digital projects.[8] The projects studied included some initiatives that were just a few years old as well as others that had developed over the course of decades. However, only the for-profit open-access publisher Hindawi could be considered truly independent and financially self-sufficient. The others were all to some extent embedded in larger organisations, but in a wide variety of ways, from the Licensed Internet Associates programme (a licensing programme that draws deeply from the holdings of its parent organisation, The National Archives), to the Stanford Encyclopedia of Philosophy, a scholarly publishing project ensconced at Stanford University but whose daily workflow relies on a team of paid and volunteer scholars from all over the world.

Based on the premise that each of the projects studied was intended to endure for the long term, the original case studies sought to provide a portrait of how their project leaders were developing or implementing sustainability plans to support their endeavours.

Some… had a very clear and measurable indicator for sustainability and success: financial profitability.

Some, like the publisher Hindawi and Inamédiapro, the commercial licensing arm of the French National Audiovisual Institute (INA), had a very clear and measurable indicator for sustainability and success: financial profitability. For others, though, 'sustainability' goals were more nuanced. INA's public website ina.fr, for example, was expected to cover its direct costs but was also highly valued for its contributions to the mission of the parent organisation, providing all French citizens with access to INA's rich archival content.

In addition to highlighting the various sources of revenue that each project team was able to cultivate, the profiles we developed sought to provide insight into the actions the project team had taken and the reasoning behind those choices, while also offering enough contextual information to determine which strategies, or parts of them, might serve as models for other projects. Why did the Stanford Encyclopedia of Philosophy, for example, decide to develop its own endowment, and how did a two-person staff attempt to do this? How has DigiZeitschriften, the German-language journals database, managed to keep running on such a low-cost model, and should its strategy of 'staying small' be considered an achievement or a risk factor? The National Archives (U.K.) have digitsed nearly 100 million documents in the past few years through partnerships with commercial vendors; what trade-offs have these arrangements required? The original cases address these and other similar questions.

The case studies have resonated with many who struggle with these questions. In speaking engagements, presentations and workshops over the past two years, Ithaka S+R staff have met with hundreds of project leaders, funders and others in the United States, Europe and Canada who have found it valuable to learn about what others are doing as they themselves struggle with these issues. Some of those we have met are at the earliest stages of creating a project. But more often, work is well underway, and the project team is beginning to be concerned about the next steps they must take. The cases, and the report that accompanied them, have been downloaded nearly 90,000 times since July 2009, and we have heard from library directors, funders and instructors who have found the material quite useful to discuss and debate with colleagues, staff and students.

Given the response to the original work, and given the difficult economic environment of the past couple of years, the JISC-led Strategic Content Alliance and Ithaka S+R agreed that this seemed to be a good time to check back with the projects to see how their models had held up, where weaknesses might be starting to show, and what new strategies project leaders were adopting in response to changes in the environment.

8   Nancy L. Maron, Kirby Smith, and Matthew Loy, 'Sustaining Digital Resources: An On-the-Ground View of Projects Today' (2009), **www.ithaka.org/ithaka-s-r/ research/ithaka-case-studies-in-sustainability/report/SCA_Ithaka_SustainingDigitalResources_Report.pdf** In addition to funding from JISC, grants from the National Endowment for the Humanities and the National Science Foundation helped to support the 2009 case studies project.

What Is a Sustainability Plan?

In 'Sustaining Digital Resources: An On-the-Ground View of Projects Today', we defined sustainability as:

"*the ability to generate or gain access to the resources – financial or otherwise – needed to protect and increase the value of the content or service for those who use it*. A sustainable project covers its operating costs through a combination of revenue sources and cost-management strategies and continues to enhance its value based on the needs of the user community. Covering operating costs is necessary but hardly sufficient: a project must not only meet the financial criteria required to cover these costs, but must also demonstrate ongoing development of the resource itself. Not all of the resources required to do this are strictly financial; non-financial resources may be quite important, too."[9]

This definition suggests a desirable outcome – ongoing value and growth of the resource – as well as the process of identifying the resources to accomplish this. While speaking with people from various grant-making organisations during the research process for 'Funding for Sustainability: How Funders' Practices Influence the Future of Digital Resources' (2011),[10] we encountered different, less satisfying interpretations. Some programme officers suggested that they had assured the sustainability of their funded projects by requiring that the project team and its host institution commit to making the resources freely available to the public for a certain amount of time. To them, sustainability was equated to accessibility, and in particular, 'open access', or availability of the content in a freely accessible format. While guaranteeing that the access costs would be borne by the project team or their institution, these notions do not begin to address the ongoing strategy the project will require for assuring the continued development of the resource; nor do they address who will bear the costs of access to the resource beyond the mandated period.

iStockphoto

9 Maron, Smith, and Loy, 'Sustaining Digital Resources', p. 11.
10 Nancy L. Maron and Matthew Loy, 'Funding for Sustainability: How Funders' Practices Influence the Future of Digital Resources (2011)', **www.ithaka.org/ithaka-s-r/research/funding-for-sustainability/FundingForSustainability.pdf**

Developing a coherent sustainability plan is not as simple as enforcing access requirements. The 'secret' to success in attaining long-term viability of a resource is in the development and successful implementation of a coherent sustainability plan: the steps a project commits to taking in order to deliver value to its users and, as a result, generate the resources it will need to survive and continue to grow.

If *sustainability* describes the state of a project that has successfully identified the network of resources it needs to continue to grow and develop, then a *sustainability plan* is the business plan that describes the mechanisms by which the project will obtain these resources. These mechanisms may include revenue streams to generate income, incentive plans to strengthen volunteer networks, or outreach plans to attract and encourage donors; the resources may include financial and non-financial elements, such as contributed costs and volunteered labor; and measures of success are likely to include reaching financial targets as well as achieving non-financial mission-based goals. This planning process is valuable for any type of ongoing digital project, regardless of format, access or revenue model.

Some premises of this approach include the following:

- **It's not just about the money.** A sustainability plan is a holistic strategic plan for how a project is going to be able to continue to grow, develop and find the resources – of all types – it will need to do this. Some resources, certainly, will be financial. Others will be donated, perhaps the work of volunteers, or in-kind contributions from the host institution. But whether cash or people's donated time, all resources are precious, and strategies for obtaining them need to be carefully developed and refined over time.[11]

- **It's not just about 'getting by'.** As has been pointed out elsewhere,[12] just squeaking by and covering budgeted costs is not enough in the long run. Though many project leaders rejoice at successfully covering their direct operating costs, a robust sustainability plan needs to include room for growth and continued investment. The digital environment is constantly changing; without continuous reinvestment, digital resources lose value. User expectations are shaped by experience on the commercial web and grow ever more demanding.

- **It's all about identifying the value...** A viable plan needs to address the value that the resource will offer to users – how people will use it, why they will want to use it – whether the value is to users who will pay money for access to the resource, to university administrators who will agree to subsidise it, or to volunteer contributors who will offer their time and expertise. The ongoing success of the resource will depend on its ongoing value to its stakeholders.[13]

- **...to a specific stakeholder or group**. Just as there is no inherent value to a resource without a stakeholder who cares about it, there are different possible ways to conceive of this value. These conceptions may change over time, as user expectations grow and new technology and tools allow for new ways of engaging with content. Project leaders must stay in touch with their audiences and with other stakeholders to understand when their needs change and what the implications will be for the resource.

These are not radical or new ideas. The world of business lives by them. The difference here is that while many of these projects are, in fact, businesses – ongoing enterprises – their leaders and sponsoring organisations may not always think of them this way. While many research projects or 'experiments' are initially supported by closed-ended grant funding, the ones that we focused on in this report are those that end up requiring ongoing development and financial resources well after the initial grant funding comes to an end. How quickly their leadership is able to grasp that this shift has taken place, and how well they adjust to it, will go a long way in determining the strength, and indeed the survival, of the ongoing enterprise.

11 For Ithaka S+R's discussion of mindsets, see Kevin Guthrie et al., 'Sustainability and Revenue Models for Online Academic Resources' (2008), **www.ithaka. org/ithaka-s-r/strategyold/sca_ithaka_sustainability_report-final.pdf**
12 See Joe Esposito, 'How to Go Beyond "Sustainability" and Into "Viability"', *The Scholarly Kitchen* (23 June 2010), **http://scholarlykitchen.sspnet. org/2010/06/23/stage-five-book-publishing-how-to-go-beyond-sustainability-and-into-viability/**.
13 For a study of the many ways to assess project impact, see: Eric T. Meyer, 'Splashes and Ripples: Synthesizing the Evidence on the Impacts of Digital Resources', Oxford Internet Institute, 2011, **www.jisc.ac.uk/media/documents/programmes/digitisation/Impact_Synthesis%20report_FINAL.pdf**.

Methodology

The past two years have been a tumultuous period for the economy in general, and for higher education and cultural heritage institutions in particular. In revisiting the original twelve case studies, we wanted to focus not just on the revenue models that the projects adopted, but on the decision-making process in which project leaders engaged to form and adjust their sustainability plans. How had the financial crisis affected their sustainability plans and goals, if at all? And what steps were they taking, whether directly because of the economy or for other reasons, to generate new revenue, broaden their base of users and deepen their impact?

Rather than capturing the projects at a 'snapshot' moment in time, the updates provide a time-lapsed picture of the project leaders and their teams reacting to changing circumstances.

To answer these questions, we approached the leaders of the same twelve projects that we examined in the 2009 study and asked for permission to study them again; all generously agreed. We designed these new studies to be brief updates; they are not meant to be as comprehensive as the original case studies, which included the history and origins of each project in some depth. While many of the original case studies were based on interviews with many stakeholders of a project – in some cases ten or more – this time, due to more limited resources, we began by interviewing only the primary contact for each project and went broader where time and resources allowed. That said, we did not rely on solely one phone interview; from mid-2010 through mid-2011, we held several interviews with these leaders and exchanged many follow-up emails, often learning about internal changes and shifts as they were happening. This time, rather than capturing the projects at a 'snapshot' moment in time, the updates provide a time-lapsed picture of the project leaders and their teams reacting to changing circumstances.

The original case studies include detailed budget tables outlining a project's costs and revenues. One of the innovative features of these budgets is that we were able to work with the project leaders to develop estimates of the projects' direct costs as well as *unbudgeted* costs, including those that were being covered by the many types of in-kind contributions they were receiving, whether from volunteers, commercial partners, or their own host institution. In some cases, this process required project leaders to estimate the value of the time or labour of shared staff from other departments, or to provide an inventory of categories of costs they were not required to cover themselves. This process helped bring to the surface the deep reliance projects have on their hosts, and the challenges in quantifying the value of that relationship.

This time, we have attempted to update the project budgets, but in somewhat less detail, given the significant amount of time that this process requires. Nevertheless, each case does include summary tables that provide a means to measure change and progress in terms of the changing costs and revenues of each project.

While the project leaders were in all cases wonderfully generous with their time, it was clear that budgetary constraints were taking a toll on many levels. Several principal investigators cited downsized departments and heavier workloads as a reason for having less time to help us develop the detailed financial data we were able to share in the original case studies.

How the Projects Are Faring Two Years Later

An assessment of the projects we studied paints a complicated picture: while all of the projects still exist in some form, there have been some significant changes over the past couple of years.

- Two projects have re-imagined their mission, one radically so, as a result of financial pressures.

- One project has reached the end of its grant funding, with no clear sustainability plan in place.

- Many have confronted severe budgetary challenges, brought on by a combination of environmental factors, institutional budget cuts chief among them.

- Even some of those that succeed in covering their costs are feeling the impact of budget and staff cuts.

- A few demonstrate particularly innovative thinking and experimentation, even in the face of severe resource constraints.

Most of the other projects, however, have a more nuanced message to share…

Have there been outright successes? The for-profit open-access publisher Hindawi continues to grow, adding hundreds of journals to its list and enjoying a successful business model based on author payments. Most of the other projects, however, have a more nuanced message to share: The National Archives' Licensed Internet Associates programme, for example, has enjoyed a 40 percent increase in revenue since 2009, though its small project team was not spared staffing cuts mandated by the parent organisation. The overall content base of the Institut national de l'audiovisuel (INA), as well as the content freely available on its public website, has grown significantly, but revenues have been flat.[14] DigiZeitschriften, a library partnership that digitises and sells subscriptions to German-language scholarly journals, has generated a surplus for several years, but its leadership reports significant and worrying obstacles to increasing its content holdings and customer base in years to come. Of the eleven non-profit projects we studied, five were able to cover their budgeted costs in the last fiscal year, another four did so with help from their parent organisations and one failed to cover its budgeted costs; we do not have financial data for the eleventh non-profit.

An increased reliance on the host institution

In 2009, we observed many projects benefitting from what we loosely identified as 'host institution support', a range of possible contributions from their home institution that can include such support as office space, shared staff time, or financial advice. Often, the host's contributions were unbudgeted, making the precise value of them difficult for project leaders themselves to assess. Even in cases where the support contributed by the host institution is not apparent, a project within a larger organisation often enjoys advantages that independent projects could not: the ability to buy out the time of highly trained staff from other parts of the organisation (or even to receive those services for free), a robust technological infrastructure or other benefits. These significant, but often hidden, contributions and intangible benefits can represent a substantial portion of the resources needed to operate the project, and yet we rarely saw these contributions quantified in project budgets.

Based on conversations with leaders of the original twelve projects we profiled, it is clear that today the host institution continues to be an important source of support for every non-profit project we studied, and in some cases has become even more important than in the past. Particularly among the university-based projects we studied, the host institution has emerged as a vital element of sustainability, as projects find themselves relying on the university to cover any gaps in their

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14 The number of hours of footage has increased by 24% since 2009, and in addition, INA created a new archive featuring over 200,000 television advertisements.

budgets. Where the host becomes such an important stakeholder, this close dependence, in turn, can strongly influence the shaping of the project's value proposition. Such was the case when the Southampton Library's BOPCRIS Digitisation Centre took a hard look at its prospects as a competitive digitisation service and chose to become the Southampton Library Digitisation Unit, aligning itself with the needs of the university rather than with what it perceived to be a diminishing pool of external clients.

Even those projects whose leaders have developed substantial external revenue streams – such as the subscriptions that have begun to support the Electronic Enlightenment and the endowment raised by the Stanford Encyclopedia of Philosophy – have needed to rely to a greater extent than in the past on the largesse of their host institutions, as a temporary measure, it is hoped, to bridge a revenue gap in a difficult year. (The Thesaurus Linguae Graecae, on the other hand, didn't have that option: faced with reduced funding from the University of California, Irvine, TLG had to raise revenue from subscriptions in order to replace lost institutional funding.)

Just as we have heard funders extol the virtues of making grants to well-endowed or well-established research universities that are likely to agree to support digital resources post-grant, we have begun to hear project leaders themselves actively seek ways to make sure that their projects become 'embedded' in the host institution in order to secure ongoing funding and support for their digital resource project. This stands to reason, given the importance of the contributions host institutions offer, and the deep reliance of project leaders on this form of support. Whether or not this is a desirable state of affairs is a separate, but worthy, question. Is this project–host institution relationship mutually beneficial, providing value to both parties? Or do the costs that each new project incurs eventually pose financial challenges to the institutions that harbor them? Does this relationship pave the way for universities to efficiently manage multiple projects with shared costs and services? Or does it lead to many separate projects being managed in parallel, without fully accounting for the costs they incur, or fully exploiting the richness all of this content would have if it were to be more strategically coordinated? While the current study does not directly address these questions, they seem ripe for further exploration.

The five steps to sustainability revisited

In 2009, we identified Five Steps to Sustainability: five categories of action and planning that characterised projects that had developed strong digital resources (see figure 1).[15] We think these are still a useful way to frame the process that project leaders are taking to develop successful projects. Not every project we studied has realised each component equally well, and every step will not carry the same weight for every project. But each step encompasses a range of activities that greatly improve the probability of success. The five steps are:

1. **Empowering dedicated and entrepreneurial leadership**. Sustainable projects empower a project leader or a management team to define and articulate the mission of the project and the steps needed to reach goals.

   Today, this is more important than ever, as leaders faced with difficult choices must marshal their resources to the greatest effect and not be afraid, as one project leader noted, to make 'pragmatic choices' as needed.[16]

2. **Creating a clear value proposition**. Sustainable projects create a resource that offers unique value and continue to add to that value, based on an evolving understanding of users' needs.

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15 Maron, Smith, and Loy, 'Sustaining Digital Resources', pp. 13–27.
16 See the Southampton 2011 Case Study Update

As several of the case studies illustrate clearly, things change, and being able to evaluate and fine-tune the value proposition of a project is a critical aspect of its success. Where models are not thriving, we have seen leaders carefully re-thinking the basic structures and missions of their projects, in order to strengthen ties with those most likely to be able to offer reliable, ongoing support.[17]

3. **Minimising direct costs**. Sustainable projects find creative ways to lower the direct costs of running the project. Over the past two years of mandated budget cuts, many project leaders have been obliged to run their projects with less.

While this aspect might not qualify as 'creative' management of costs, we observed some developments that do so qualify, including strategic partnerships that allowed projects to explore new distribution and revenue strategies without making large investments to do so.[18]

4. **Developing diverse and reliable revenue sources**. Sustainable projects cultivate multiple sources of revenue to cover both direct costs and ongoing upgrades, and they show a willingness to experiment with different revenue models to find the ones that are the best fit for the project.

Two years ago, we stressed diversifying revenue sources as a hedge against the fickle nature of relying on a single-source funder. This is still true today, as one of our cases shows, but perhaps an equally important message to emerge is that diversity of revenue sources alone is not an ideal to strive for; reliability of revenue sources is.[19]

5. **Establishing clear accountability and metrics for success**: Sustainable projects establish a system of accountability and measurement of the success of the resource and the revenue model, including ways to assess progress towards both mission-based and financial goals and targets.

Keeping an eye on progress toward goals, whether revenue-based or otherwise, continues to be a key component of developing successful projects and can productively feed back to each of the steps listed above. In some cases, we have seen this kind of watchfulness used as a way to identify new opportunities, or to gently alter course; in the more extreme examples, this process provides a means to evaluate projects that just are not working out, as well as those that are.[20]

Figure 1. Five steps to sustainability

Empower leadership to define the mission and take action

Create a strong value proposition by knowing your users

Creatively manage costs

Cultivate diverse and reliable sources of revenue

Establish realistic goals and a system of accountability

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17 See the **Southampton** and **DDH** 2011 Case Study Updates
18 See the **eBird** and **INA** 2011 Case Study Updates
19 See the **MSP2** 2011 Case Study Update
20 See the **V&A Images** 2011 Case Study Update

1. Empower leadership to define the mission, recruit the right staff, and take action

In 2009, the critical role of entrepreneurial leaders stood out to us as truly vital to the success of a project. As leaders of academic projects at research universities, several of the project leaders we interviewed were the driving force of the project, tirelessly promoting the resource, serving as chief advocate and cheerleader, while coaching staff to pursue new avenues when needed. Even for those initiatives housed within larger organisations, we found much the same thing, with projects being led by very entrepreneurial personalities, aggressively seeking out new opportunities and actively communicating the values of the projects they were leading.

How project leaders work over the long term to win host institution support: TLG

The **Thesaurus Lingua Graecae** project (TLG) at the University of California, Irvine, has been able to translate its long-term presence on campus into university support. Over nearly four decades, the TLG has had only two directors: Theodore Brunner, who founded the project in the 1970s and led the TLG until his retirement from academia in 1997, and Irvine classics professor Maria Pantelia, who has been in charge since then. Both leaders, along with the rest of the TLG project team, have effectively communicated to administrators on campus the value and importance of the TLG. Partly as a result, the project benefits from an array of support from the university, ranging from funding, to investment management services for the project's endowment, to providing permanent support for the director, a tenured faculty position. The way this position is funded also provides Pantelia with a sense of security and gives her the chance to undertake long-term planning – a privilege that not many leaders of digital content projects enjoy, and one that has allowed the TLG to continue to grow over the past forty years.

What happened, and what did we learn?

The past two years have brought many changes and plenty of challenges for project leaders, and these have included impacts on staffing: both the need to cut costs in order to survive, and the need to recruit new staff members to carry out necessary functions, even when funding is scarce.

Staff reductions and restructuring. Many of the projects we studied – including four of the five United Kingdom–based projects – have needed to cut staff and run more streamlined operations than in 2009, in most cases as a direct response to institutional budget cuts. The one outlier is the Hindawi Publishing Corporation, which reports significant increases to staffing over the past couple of years, from just fewer than 270 in 2009, to 450 today, as it builds its capacity to launch new journals quickly. INA's public website team has not increased its editorial staffing but has become responsible for covering the costs of all ten programmers assigned to the project, whereas two years ago the team assumed costs for only six of the programmers.

New skills needed. In some cases, even where cuts were required, projects found it important to hire staff with different skills. The Department of Digital Humanities (DDH) at King's College London (formerly the Centre for Computing in the Humanities, or CCH) has lost administrative staff due to across-the-board cuts at King's College London. But they were successful in making the case to hire a financial administrator to help manage the multiple grants that support the unit. Similarly, the Library Digitisation Unit at the University of Southampton added a business administrator to their core staff, in order to help manage the flow of work associated with their various scanning projects.

2. Create a strong value proposition

The strongest projects we studied in 2009 had a sharp sense of who their target audience was, what that audience valued most, and how what they did was uniquely valuable to their stakeholders. While this sounds obvious, it can be quite a challenge for projects that have assumed that 'excellence' in the execution of a project design and implementation plan are a sufficient benchmark for success, rather than looking to the evidence of audience demand to guide the development of the project.

Staying small and well-focused can be a successful sustainability strategy: DigiZeitscriften

Today, **DigiZeitschriften** stands out as one of the few projects we have studied that manages to generate surplus revenue from a stable core of subscribing institutions, illustrating that staying small and well-focused can be a successful sustainability strategy if the project manages to attract a core group of supportive customers. Since we first studied the project in 2009, DigiZeitschriften, a German-language online archive of scholarly journals, has continued to successfully support its operations and generate a surplus through a combination of its subscription model and its low cost base, which is due to the support it receives from its 14 partner libraries. While some real challenges loom on the horizon – both new customers and new content are proving very hard to come by – its strategy has helped it to survive in a competitive market by simply concentrating on a well-defined and carefully scoped mission.

What happened, and what did we learn?

Some of the projects have been, as a matter of course, scrupulous about defining a value proposition, taking pains to identify target audiences and stakeholders (or beneficiaries) and making sure that the product or service offered is something beneficiaries will value and be willing to support. Faced with budget cuts, all projects are forced to think hard about these questions. Particularly in cases where projects struggled with attaining their desired impact – whether measured by revenue, audience, or some other metric – we observed some fairly striking examples of a process of rethinking and reimagining the core value of projects and departments (see insets on V&A Images and the University of Southampton Library Digitisation Unit). In other cases, we observed examples of projects succeeding in areas where they had done the hard work needed to accurately assess the needs of their audience and the value of their content to that audience (see inset on The National Archives Licensed Internet Associates).

Engaging with users remains a vital element in any sustainability plan for a digital resource.

Keeping in close touch with users. Engaging with users remains a vital element in any sustainability plan for a digital resource. Findings from user-experience studies led The National Archives to develop a unified search interface for their digital content. Conversely, the case of the Electronic Enlightenment illustrates one of the risks of giving up some level of control over contact with customers. After contracting with a large publisher to distribute the Electronic Enlightenment to libraries as a subscription product, Project Director Robert McNamee (See inset, p. 19) found himself missing the contact he had once had with users. Without the direct feedback from those using the content (librarians and end users), he felt he was missing important information that would help him further shape his project, and was perhaps also missing a chance to directly express the value of the resource to those who use it most. As a result, he plans to travel to several U.K. libraries and speak with librarians and scholars to more clearly promote EE's value, and to learn more about why they do (or do not!) appreciate it.

Building on project strengths. Where project teams had been able to clearly identify the value of their product or service to a specific audience, we saw examples of strategic expansion of those models. The National Archives' Licensed Internet Associates programme has demonstrated an ability to access the value of its archival holdings to the commercial partners who bid for the right to digitise that content; over the last two years the programme has found ways to maximise the income it

receives from commercial partners and has rolled out a model that will aggregate holdings of regional archives to create the scale that commercial partners find most attractive. The Hindawi Publishing Corporation has continued to build on its model, as well, strengthening the value that scholars find in the author-funded open-access model and shorter time to publication that the publisher offers.

Revising a weakened value proposition. Other projects have faced more difficult challenges, perhaps trying to accomplish too much and ultimately losing sight of the main goal. When the V&A Images (VAI) unit was first created, its main goal was to generate revenue for the Victoria and Albert Museum from rights licensing. Over time, the unit was buffeted by a series of decisions that had the cumulative effect of weakening its value: it took on non-revenue-generating work to support larger museum-based goals and assumed a role of educating other units in the museum concerning digital workflow issues. When the rights licensing work did not reach revenue targets, the unit sought other revenue-generation methods, experimented with developing mobile applications, and further extended its role as a digital expert group within the museum. In 2011, engaged in a wide range of activity but still not meeting revenue goals, management decided that VAI had expanded beyond its original remit and chose to downsize and restructure the group to focus solely on image licensing. As a part of the museum's commercial trading unit, revenue generation became the main requirement, not an option. (See inset, p.26.)

Creating value for customers through selection and scale: TNA's Licensed Internet Associates Program

Not everyone would see gold in the thousands of yellowing pages that comprise the "Register of dead men's wages… giving the names of the ships on which they served…1787–1809." But Caroline Kimbell does. She and her colleagues who developed the **Licensed Internet Associates programme at TNA** have succeeded in getting private companies to digitise millions of documents and agree to pay royalties to TNA for the right to use this content. By first selecting the valuable, name-rich documents such as ships' logs and managing the bidding process, LIA staff have signed deals with several genealogy websites, resulting in a savings of well over £53 million in digitisation costs. Recognising that smaller regional archives may not have, individually, the scale of content needed to create attractive packages for bidders, TNA has begun to coordinate the process among 107 regional and county archives, which will make it easier to attract competitive bids for a large selection of valuable documents.

Improving alignment with the host institution, in name and in deed. Given the extent to which projects rely on their parent institutions, defining a value proposition necessarily involves defining one's value to the host institution itself. All but one of our projects, the for-profit Hindawi Publishing Corporation, depend to some extent on a host university, library or museum for direct or in-kind support, and shrinking institutional budgets mean that projects like the ones we have studied face an increasingly competitive environment for internal funding. Project leaders spoke about the importance of communicating the value of their project to institutional administrators – and making sure that those administrators feel that the institution's continued investment in the project is justified. Strengthening ties with a host institution can take the form of increased communications with administrators, revisiting the core mission of the project to better align it with that of its host, or even changing the name of the project to better reflect its connection to the host organisation.

Figure 2. Has staffing increased or decreased since 2009?

TNA	INA*	MSP2	eBird	TLG	SEP	EE	VAI	Southampton	DZ	Hindawi	DDH
↓	↑	n/a	same	↓	same	same	↓	↓	same	↑	↓

Key: small arrows represent changes of approximately 10% or less; large arrows changes greater than 10%.

*INA data are for ina.fr only.

Leaders of the University of Southampton's BOPCRIS Digitisation Centre were at a crossroads, having spent several years building capacity for large-scale digitisation projects involving content from Southampton and other client universities, only to find a slowing pipeline of grant funding for such initiatives. The equipment for large-scale digitisation carried not-inconsiderable maintenance costs for the unit, even as fewer and fewer mass digitisation projects materialised. Taking what she has described as a 'pragmatic approach', Southampton's Head of E-Library Services Christine Fowler and her team opted to sell off their main large-scale scanner altogether and refocus their efforts on scanning jobs for rare and fragile content and other digitisation efforts specifically tied to the mission of the university, such as scanning doctoral theses and developing content for the university repository.[21]

Reshaping the value proposition in a difficult marketplace: Southampton Library Digitisation Unit

When the original case study was published in 2009, the **Southampton Library Digitisation Unit**, then known by the acronym BOPCRIS, had just completed several multi-year, large-scale digitisation projects involving historical government documents, pamphlets, and other materials from Southampton and other British research libraries. These grant-funded efforts had allowed Southampton to invest in specialised scanning equipment to use for future digitisation projects. Since then, sharp cutbacks in British public funding have made scarce the grants needed for the kind of large-scale digitisation work that Southampton had set itself up to do. Faced with limited prospects and burdensome maintenance costs for the scanning equipment, the Library's leadership decided to shift its focus back to the University, providing internal services including digitising the Library's special collections and scanning course reading lists. As part of the shift in focus, the Unit renamed itself and sold off its mass-digitising robotic scanner to avoid costly upkeep for the machine.

Just as important as making these changes is making sure that stakeholders and others know about them, and many projects told us how and why they do this. To signal the re-alignment of the unit and emphasise its newly refined mission, Fowler and her team at Southampton chose to rename the unit, from the acronym BOPCRIS – which stood for the British Official Publications Collaborative Reader Information Service[22] – to the Southampton Library Digitisation Unit, a name chosen to more clearly describe the function of the group and to more clearly announce its role within the university and its close ties to it.

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21 For a description of the repository, see 'Repository Ranking Underlines Southampton's Global Influence', **www.ecs.soton.ac.uk/about/news/3311**
22 This was the name of one of the Hartley Library's early digitisation projects, but eventually the acronym came to refer to the digitisation unit as a whole.

King's College London's Center for Computing in the Humanities also sought to better reflect its status as an academic department in recent years, and in spring 2011 officially changed its name to Department of Digital Humanities. As Simon Tanner, a member of the department, explained,

"Moving from having 'Centre' to 'Department' in the title is necessary as a signpost that we are a full academic department. Such signposting is important both internally and externally. It removes any last misconceptions that we are a 'service' or in some way not a normal academic department. [Internally], it does really help our fellow academics in the School (Faculty) to see us as reflecting the same values as they have and this obviously fosters collaboration. Externally, it just makes for a clearer academic brand – we do what we say on the tin."[23]

Project leaders undertake other ongoing activities to be sure they are communicating the value of their project to those in a position to help them. The leaders of the Thesaurus Linguae Graecae, for example, make a point of meeting regularly with new university administrators in order to talk about the history of the project (the University of California, Irvine, has been host to the TLG for nearly forty years) and build goodwill and support for it. The simple act of holding these conversations is so important that the project leader talks about this function as a key part of her role.

In Brief: Communicating Value

At a joint Strategic Content Alliance–Ithaka S+R workshop held in London in March 2011, representatives of projects based at universities, libraries and heritage collections in the United Kingdom shared their techniques for communicating value to key institutional stakeholders, providing the following guidance:

- **Make sure to have a seat at the table** whenever and wherever decisions are being made about digital resources.

- **Engage administrators early on** to develop a shared sense of responsibility for the success of the project.

- **Begin or step up an advocacy campaign** with your constituents/users *outside* the institution as a way to influence management opinion by bringing strong external voices of support to the table when they are needed.

- **Identify the different segments of your stakeholders**, and plan a strategy for each segment, including identifying champions who can help make your case for you.

- **Plan on frequent contact with senior managers**, since they often change roles.[24]

3. Creatively manage costs

In 2009, we observed projects keeping direct costs low by finding ways to have the host institution contribute, whether in terms of office space, staff time, server space, or even direct payments to fill gaps in the budget. As mentioned above, while this tactic does help as a short-term means for keeping direct costs to a minimum, many projects we studied had an incomplete sense of what these contributions were worth, and what costs they might someday need to cover should the host no longer be in a position to provide these contributions. Other activities highlighted at the time included the strategic choice to outsource certain aspects of the work when it could be done elsewhere at lower cost, and developing partnerships to benefit from the expertise of others. Harnessing volunteer labour, a specific instance of outsourcing, was proving to be a powerful technique when well executed; several of the projects profiled made good use of volunteers to write or edit articles, contribute data, or perform other core activities to support the resource.

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23 Email from Simon Tanner, 6 July 2011.
24 Notes from SCA/Ithaka S+R Business Models Workshop, 17 March 2011.

What happened, and what did we learn?

Over the past two years, the projects we profiled continued to make good use of partnerships and of their host relationships. Still, in many cases, mandatory budget cuts made cost management not so much a creative effort as an exercise in triage. Organisations like The National Archives and the King's College London Department of Digital Humanities began the process of scaling back before mandated cuts came into effect, in the hope of phasing in what otherwise would have been dramatic changes from one year to the next, both teams losing staff positions in the process. In the case of V&A Images, described above, the method taken to align costs was somewhat more radical, as management chose to eliminate all but the revenue-generating positions.

Cost management strategies can create difficulties of their own

The **Electronic Enlightenment** (EE), an online collection of edited and interlinked letters from the early seventeenth to mid-nineteenth centuries, entered into a distribution agreement with Oxford University Press, which would assume responsibility for sales, marketing, and customer service for the project in exchange for a share of revenue. EE's leaders were hopeful that the arrangement would be more effective than hiring an internal sales and marketing manager, and that the Press' pre-existing sales network would give them access to institutional subscribers that they would not otherwise be able to reach. Since the product first launched, EE's leader Robert McNamee has noticed an important trade-off of outsourcing distribution. Feeling he was no longer in close contact with EE's end users and the librarians who might subscribe to it, he and his team decided to undertake greater outreach efforts themselves. While partnerships can effectively fulfil key parts of a strategy, they do not erase the need to stay close to the audience and customers.

Where there was some flexibility to creatively manage costs, we observed a continued strong dependence on host institutions and volunteer contributions, as well as some new evidence of creative partnerships:

Partnerships to foster innovation at low startup cost. In the original case studies, we pointed to partnerships as a way to more efficiently fill roles, such as sales and marketing, that many projects require but are expensive to staff internally. Partnerships can also allow a project to pursue innovative new paths while minimising the initial investment – and overall risk – to the project, and by extension, to the host organisation. As one example, eBird, the database of birding observations, was approached by an external developer that wished to build a mobile application to allow users to view eBird content from their phones. The developer took on all the costs of building the resource, with the eBird team receiving a portion of the proceeds from sales of the resulting app – a move that allowed the project leader to minimise both the financial risk associated with investing in a new development and the opportunity costs of diverting his staff's time away from their other tasks. A similar model was used by ina.fr, whose director was eager to make the archive's content available to users via mobile devices without necessarily wanting to take on the cost of app development. By partnering with the commercial video-sharing site DailyMotion, ina.fr was able to offer this easily and turn its attentions to other ventures where it sees great potential, including video-on-demand and Connected TV.[25]

25 Connected TV, sometimes called Smart TV or hybrid TV, offers the interactivity of the web delivered via the larger format of the television. It is estimated that "of the 220m flat panel TVs sold in 2012, 48% or 106m units will be internet-connected," according to Gene Munster, as reported on Barron's Tech Trader Daily blog, February 3, 2011. **http://blogs.barrons.com/techtraderdaily/2011/02/03/apple-television-set-piper-says-yes-a-window-into-software/**. Also see Jim O'Neill, 'Research: Connected TV Will Be Consumers' Portal to the Web by 2015,'FierceOnlineVideo, **www.fierceonlinevideo.com/story/research-connected-tv-will-be-consumers-portal-web-2015/2011-08-10** and articles about Connected TV at Mashable, **http://mashable.com/follow/topics/follow/connected-tv//**

Support from the host institution. In 2009, we highlighted the fact that many projects were depending on their host institution for cash and contributions of office space, staff time, IT infrastructure, and other items and functions. These 'in-kind contributions' may be cataloged by the project leaders, but they are rarely quantified – that is, if the university or museum administration were to withdraw these in-kind donations, the project leaders would be unlikely to have sufficient funds in their budgets to cover the new costs.

The types of unbudgeted contributions we reported seeing in 2009 still seem to be in place at the projects we profiled. These include:

- office space
- use of staff time across the organisation
- software, hardware, storage/hosting fees
- legal support and rights clearance work
- investment guidance
- assistance with donor and sponsorship development

While several projects have needed to rely on these in-kind contributions in the past two years, we also noted some cases where projects were gradually taking on more of their direct costs. In the case of the ina.fr website, they are now responsible for paying salaries for all ten developers who work on the site, where before they only paid for six, with INA covering the costs of the other four.

Figure 3: Types of support contributed by host institution

TNA	INA	MSP2	eBird	TLG	SEP
Legal, content selection	Costs related to scanning, metadata creation and transcriptions and rights clearance	n/a	Financial services, technology support and office space provided by the Cornell Lab of Ornithology	Half of management salaries, office space and endowment management provided by the University of California Office of the President	Gap funds, endowment management, office space, hosting and tech support provided by Stanford University

EE	VAI	Southampton	DZ	Hindawi	DDH
Gap funds and staff time provided by the University of Oxford.	Rights, content management, office space, digitisation services and IT support provided by the Victoria and Albert Museum	n/a	Technology support, staff time and office space provided by the Göttingen State and University Library	n/a	Gap funds provided by King's College London

Volunteer contributions, e.g. crowdsourcing and outsourcing. When we profiled the citizen-science project eBird in 2009, crowdsourcing was just coming into its own. Since then, many other types of projects have been willing to experiment with ways to leverage the participation of users. In 2010, as part of the 'Africa Through a Lens' project, The National Archives posted thousands of images on Flickr, spanning over 100 years of African history, and asked the public to share its knowledge by tagging the images if they recognised anything or anyone in the photographs,[26] a marked departure from the more curated approach archivists generally take toward creating metadata for special collections. As Head of Licensing Caroline Kimbell put it: "When there are huge barriers to doing things the old, expensive, cumbersome ways . . . you roll your sleeves up and try it some other way."

26 See 'Africa Through a Lens', Flickr, **www.flickr.com/photos/nationalarchives/collections/72157625827328771/**

By relying on networks of volunteers, several sites have managed to keep direct costs low. This is a key strategy for open-access journal publisher Hindawi, which in 2010 introduced the International Scholarly Research Network (ISRN), a series of peer-reviewed, open-access journals designed to provide a speedier peer-review process for submitted articles. To quickly generate five reviews for each submission, each journal draws from an editorial board of between 100 and 300 scholars who commit to reviewing manuscripts within two weeks of submission.

When cost management becomes counter-productive. Where cost management is in alignment with organisational mission, for example, if everyone agrees that certain tasks are no longer priorities, cutting back and reducing expenses seems to be a healthy way to proceed. Where projects take a good hard look around and determine that they are not in the same business they have been in in the past, and make an intentional shift, leading to cost savings, this, too, feels like a wise move.

But cost cutting for cost cutting's sake can be problematic. Many of the projects we studied are quite small to begin with. Of the twelve case study projects, seven reported annual operating budgets below $500,000 and staff of fewer than ten FTEs, and quite frequently just two to three core staff members.[27] When projects this small must reduce their staff, their ability to maintain the status quo, much less to perform major upgrades in order to meet the always-increasing expectations of users, is jeopardised.

In such an environment, it is very difficult to protect funds to invest in new activities that could grow revenues and support the enterprise.

Five of our case study projects are based at universities and cultural heritage institutions in the United Kingdom, where deep reductions in government funding have made staff redundancies and lay-offs virtually unavoidable. This is difficult enough for any institution. Further complicating matters for the projects we studied is that each functions as an enterprise unit with an explicit mission to generate earned revenue – making them, in some sense, outliers within their home institutions. This creates its own set of complications when these units are subjected to the same 'across-the-board' cuts as other units of an organisation. In such an environment, it is very difficult to protect funds to invest in new activities that could grow revenues and support the enterprise. Consider the example of the Licensed Internet Associates (LIA) programme of The National Archives: the unit is charged with generating the resources to fund digitisation and with managing the outsourcing and vendor relationships needed to manage digitisation. The unit has increased its revenues over the past two years, in part by implementing new pricing strategies and aggregating the digitised content of smaller, regional archives in the United Kingdom. In effect, it has acted as a broker to negotiate more favorable terms with commercial vendors that seek to license cultural heritage content. Yet the LIA team now stands at a slightly lower staffing level than two years ago, with one set of budget cuts completed and a second set due to begin next year – just when this relatively young programme seems to be taking off. Although there are obviously no easy choices during a budget crisis of the magnitude facing U.K. not-for-profit organisations, the situation of LIA underscores just how difficult it may be for 'mini-businesses' within museums and libraries to grow in the years to come.

4. Cultivate diverse and reliable sources of revenue

It sounds obvious enough that all digital resources, even those that benefit from partnerships and user-contributed content, will still cost something to operate, update and enhance over time. All of the projects that we studied, with the exception of the fully independent Hindawi, managed to keep costs relatively low by securing in-kind contributions from their host organisation, but in nearly all cases these projects must secure revenue from external sources as well.

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27 Projects with annual budgets in this range include eBird, DigiZeitschriften, Electronic Enlightenment, MSP2, Stanford Encyclopedia of Philosophy, Thesaurus Linguae Graecae and the LIA programme at The National Archives.

In Brief: Revenue Models for Digital Content

Some common revenue models for digital content include:[28]

Support from direct beneficiaries (users of the digital resource)
- Subscription
- Author/contributor payments
- Licensing models
- Pay per use
- Membership fees
- Endowments

Support from indirect beneficiaries of the digital resource
- Host institutional funds/in-kind contributions
- Corporate sponsorships
- Advertisers
- Build diverse streams of philanthropic funding
- Leveraging content through third-party licensing

In selecting the case study projects at the start of our research in 2008, we sought projects that had a track record of generating earned revenue and we sought a diversity of revenue models in the final selection of twelve. Wherever we found examples of unusual models, we highlighted them. Some projects had secured advertising or other sponsorship support: eBird had secured a corporate sponsorship from an optics manufacturer that was worth $50,000 during its peak year, and INA's public website, ina.fr, had garnered advertising contracts amounting to several hundred thousand euros per year in revenue. Others had launched licensing businesses: V&A Images was running a picture licensing business on behalf of the Victoria and Albert Museum, and Inamédiapro was running a very large commercial licensing unit for INA, turning over approximately €15 million annually. Through a structured licensing programme working with commercial vendors and publishers of digitised content, The National Archives (U.K.) had arranged to digitise some of their most highly demanded series while returning royalty payments to the Archives, with the vendors obliged to digitise lower-demand materials selected by the Archives staff. The original case studies even profiled an academic department, now known as the Department of Digital Humanities at King's College London, where faculty supplemented the young department's research and teaching funding with revenue consulting and training programmes.

The examples we studied reveal three themes: that stakeholders will pay if they perceive value in the resource; that it can be hard to know, at the outset of a project, just what revenue model will fit it best, so that some experimentation may be necessary; and that by and large, it is wise to have more than one revenue stream, as protection against an overreliance on any one strategy.

How relying on one source of revenue may put a project at risk: MSP2

Many digital projects for research and teaching are first developed through grant funding, but an over-reliance on grant funding puts a project at risk. This was the case for **Middle School Portal 2** (MSP2), a grant-supported portal devoted to collecting high-quality teaching resources for use by middle school educators in science, technology, engineering, and mathematics. Since the project team had received a three-year grant as part of the National Science Foundation's National Science Digital Library programme, they had begun to develop a sustainability plan, but the pressures of launching the project and budget difficulties at one of their partner institutions slowed progress on this planning, and project leaders may have felt it would be possible to receive further funding from the National Science Foundation. The NSF, however, announced in February 2011 that the NSDL funding programme was being closed, with no further funding forthcoming. Project leaders are now actively seeking new sources of support for MSP2, once their grant period ends in August 2011. This case illustrates the challenge of transitioning a project from grant funding to a long-term, self-sustaining operation – all the more challenging if sustainability planning does not happen right at the start.

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28 Kevin Guthrie, Rebecca Griffiths, and Nancy L. Maron, 'Sustainability and Revenue Models for Online Academic Resources' (2008), **www.ithaka.org/ithaka-s-r/strategyold/sca_ithaka_sustainability_report-final.pdf**

What happened, and what did we learn?

Revenue generation, for many projects seeking sustainable models, can seem like the ivory-billed woodpecker, the rare bird everyone hopes to see, but most do not. Over the past two years, with the backdrop of budget cuts at institutions of higher education in the United States and Europe, even some of the revenue models we observed two years ago have faced considerable challenges.

Projects are still trying to generate revenue, though some of the more innovative 'outlier' models – those models that we observed in 2009 that seemed unusual for academic projects – have not fared particularly well. For example, eBird's corporate sponsorship ended (although the group is seeking a new sponsor), and INA's advertising revenue has 'yo-yoed' from €300,000 in 2007 to nearly zero in 2008, and back to €150,000 in 2010, due primarily to changes in the French advertising landscape from year to year.[29]

That said, both of these projects were in a sense 'protected' from these losses thanks to the suite of other revenue-generating efforts – some of them innovative, and some more traditional – that each has developed: ina.fr can count on a steady stream from video downloads, advertising and partnerships, while eBird has developed a mix of streams including endowment payouts, rental fees from Trail Tracker kiosks and grants. And both projects are still fully engaged in pursuing new models as well: eBird through partnerships with mobile app developers and ina.fr by placing strategic bets on the emerging market in Connected TV. For these two project teams, an underlying strategy of assessing current audience needs, and imagining what they are likely to be in the near future, has been a critical part of their success in developing innovative revenue streams.

The more traditional model of paid subscription has fared well. For those digital resources with a relatively long track record – such as the Thesaurus Linguae Graecae (in place since at least the early 1990s), which relies in part on a subscription model, or DigiZeitschriften, which relies on a partnership and subscription model – relatively little has changed: neither resource has seen any appreciable attrition from its subscriber base and both have enjoyed *increased* revenue from this stream, either by attracting new subscribers or raising subscription prices.

The ability of the project leaders to avoid cancellations of subscriptions… suggests the value of these resources to their customers.

The ability of the project leaders to avoid cancellations of subscriptions by their institutional customers – even during a very difficult period for institutional budgets – suggests the value of these resources to their customers. (It is also fair to point out that the annual subscription fees for these resources are quite modest in the grander scheme of an academic library budget, and are therefore not likely to top the list of potential cuts for libraries.) On the other hand, another subscription-based resource in our cohort, Electronic Enlightenment, had the misfortune to launch in early 2009, as the impact of budget cuts was starting to hit. It has not yet reached the target number of subscribing institutions that its project leaders had laid out in their sustainability plan.

Balancing open access with the need to support the project. In recent years, the desire of many authors, project leaders and funders to produce online works that can be made freely available to the widest audience possible has grown. The increased demand for Hindawi's publishing services suggests that the 'contributor pays' model is a viable one. But how can one cover the costs of smaller, mission-based projects in non-scientific disciplines, whose contributor base may not be willing or able to pay?

Projects like the Stanford Encyclopedia of Philosophy face a real challenge: offer open content, without charging contributors, users, or institutional donors (beyond the initial investment made by the institution, that is). Is it possible to offer free access to content while also charging for valued premium services? Facing the prospect of difficult times ahead, SEP has launched an individual membership program, 'Friends of the SEP', through which individuals pay an annual fee to access formatted versions of the Encyclopedia's entries, optimised for reading on mobile devices. SEP's willingness to encourage contributions from their core audience of users could seem to be at odds with an OA mandate in some ways; after all, they initially set up their endowment so that they

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[29] In 2008, ad sales on ina.fr were affected when President Nicholas Sarkozy announced a ban on television ads on public stations during the peak evening broadcast hours, resulting in advertisers defecting from INA's ad agency. In 2009, the announcement that public television stations would stop running advertising by 2012 has also had an impact.

would not have to ask for money from users. Yet this model, which is entirely voluntary, has yielded about $20,000 per year, nearly 10 percent of SEP's annual operating costs. By identifying the core audience of supporters – those who value this resource most and would most like to see it succeed – and offering them something extra (in this case, more useful file formats), SEP's leadership has succeeded in drawing its strongest advocates even closer, without curtailing access to the content itself, still freely available to all on their website.

Other project teams are pursuing similar kinds of hybrids – often called 'freemium' models – offering open content alongside paid services, and finding effective ways to clearly delineate one from the other. INA's public website, Ina.fr, provides 31,000 hours of video clips for visitors to watch free of charge; those who wish to do more than view the videos – download them, use them to create customised physical DVDs, or watch them via a cable TV station – may do so for a fee. For professional users, who intend to re-use the video content for commercial ends, there is Inamediapro; the content it offers is from the same archive, but it is of broadcast quality and is priced in accordance with the standards of the video-production industry. By monetising specific uses of its content – while making the content itself freely viewable on the organisation's website – INA has found a way to meet both mission and revenue goals.

Business model innovation and experimentation: L'Institut national de l'audiovisuel (INA)

The **Institut national de l'audiovisuel** has had its share of up and downs when it comes to revenue models used by its public website, ina.fr. Advertising did well in 2007, then plummeted the following year; a new initiative to offer photographic images may be bringing in less than hoped. Still, the predominant model for ina.fr is not any one method of revenue generation, but a mindset of paying close attention to users and what they are likely to want next. Observing user behavior and obstacles in downloading files led to the successful 'DVD on demand' option, which allows users to select ina.fr content to build their own DVDs, which are then mailed to them. Partnerships with cable providers bring the 'ina' station to home subscribers via their televisions, and a new initiative in Connected TV is aimed at turning users' TVs into a large computer screen, with INA content available for rental (not just clips, but pay-per-view films as well). And though INA may want to be everywhere its users are, this doesn't mean building everything from scratch; a strategic partnership with the video-sharing site DailyMotion has allowed it to offer video content via mobile platforms, without the large investment needed to build the applications itself.

The revenue model used by The National Archives could be considered a hybrid in this sense as well, in that the arrangements their Licensed Internet Associates (LIA) programme has made with commercial partners have allowed them to have millions of documents digitised at no cost to TNA, while providing visitors to the Archives with access to the digitised documents free of charge. On top of that, they negotiate a royalty rate with the winning bidder. In 2010, they took a different approach to this. Aware that the series of documents up for bid was especially valuable, TNA decided to seek an independent, outside valuation to support their asking price.[30] 'TNA was being pushed hard', remembers Kimbell, but 'we were confident that [our price] was realistic, and so we spent money to conduct a valuation'. This then allowed them to hold firm on their price, resulting in the most lucrative deal the LIA programme has made to date.

Is diversity of revenue sources the key? Not exactly. As others have pointed out, there is nothing inherently beneficial about having multiple revenue streams, particularly if many of them are doing poorly.[31] In the case of V&A Images, chasing new revenue streams may have made it harder for the unit to focus on delivering sales through the picture library. In the case of the Department of Digital

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30 Among the factors that the independent valuator took into account in determining the market value of the content were analysis of the market, price sensitivity, market trends and the sales projections of the two firms involved in the bidding.
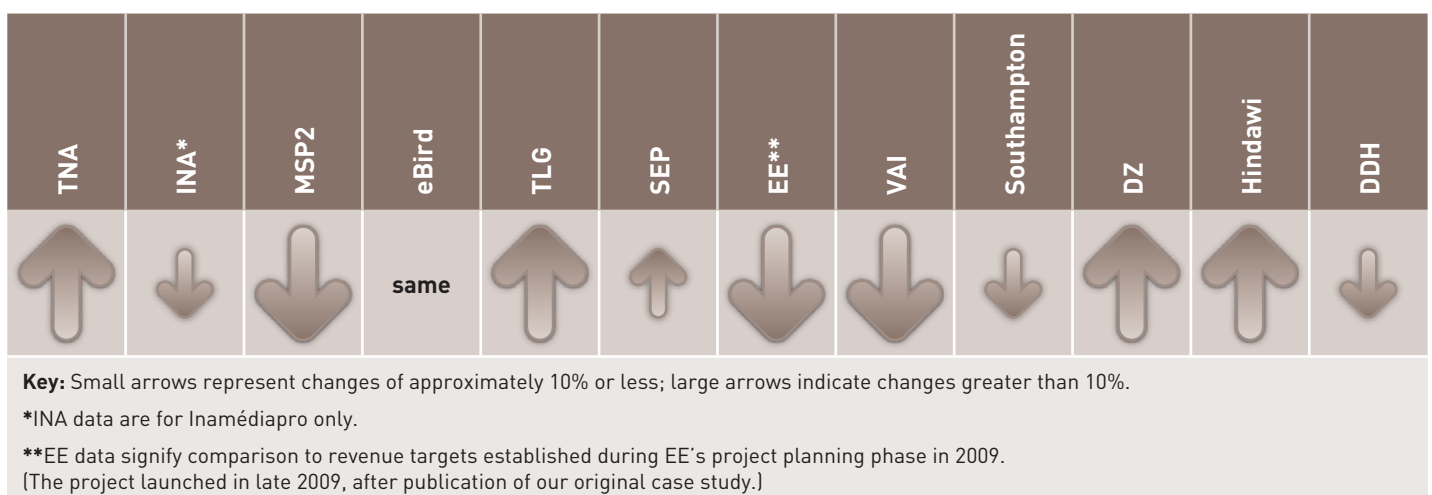31 William Foster and Gail Fine, 'How Non-Profits Get Really Big', *Stanford Social Innovation Review*, Spring 2007. www.ssireview.org/images/articles/2007SP_feature_fosterfine.pdf

Humanities, eBird, and the Institut national de l'audiovisuel (INA), some of the more innovative, experimental revenue streams may someday become a major factor, but for the moment they are not the primary means of support for these initiatives.

Still, dependence on a single revenue source is clearly too risky. Reliance on one source for funding – such as a single grant or single funder – removes control from the hands of the project leader. In the case of the Middle School Portal 2: Math and Science Pathways (MSP2) project, funding under the National Science Digital Library programme (NSDL) was seen as the main source of support of the project; a previous version of the project had been funded through this programme, and there was reason to believe, for a while at least, that there would be future opportunities to apply for further funding. When the National Science Foundation announced in 2011 that funding for the entire NSDL programme was to be phased out, the MSP2 project faced a very uncertain future. To be sure, some digital projects have proven extremely successful at relying on one type of funding – grants, for example – but in these cases, the projects have received multiple grants from multiple sources and have a created a fabric of funding that feels more reliable, if somewhat costly to construct and maintain.[32]

And when all else fails, the host institution may still be able to fill the gap. Even given the best intentions, some projects try but fail to reach revenue targets, for a variety of reasons. The Electronic Enlightenment's launch as a subscription product fell short of its goal in its first year. The Stanford Encyclopedia of Philosophy earned less from its endowment than it needed in 2010, due to a lower returns in a difficult market and to its not having fully attaining its original fundraising targets. The Department of Digital Humanities (DDH) at King's College London had pinned high hopes on the receipt of significant funding for research and teaching through the United Kingdom's Research Assessment Exercise (RAE), one of the main channels through which government funds for higher education are disbursed. Reductions in the amount of funding made available through the RAE left DDH with significantly less than they had anticipated, given the high marks they received in the assessment for the quality of their research output. In these cases and others, the projects were fortunate that their host institutions were willing to cover the shortfall.

Figure 4. Have revenues increased or decreased since 2009?

TNA	INA*	MSP2	eBird	TLG	SEP	EE**	VAI	Southampton	DZ	Hindawi	DDH
↑	↓	↓	same	↑	↑	↓	↓	↓	↑	↑	↓

Key: Small arrows represent changes of approximately 10% or less; large arrows indicate changes greater than 10%.

*INA data are for Inamédiapro only.

**EE data signify comparison to revenue targets established during EE's project planning phase in 2009.
(The project launched in late 2009, after publication of our original case study.)

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32 See the description of the Center for History and New Media at George Mason University in the report 'Off the Tracks: Laying New Lines for Digital Humanities Scholars', MediaCommons Press, **http://mediacommons.futureofthebook.org/mcpress/offthetracks/part-two-position-descriptions-at-established-and-emerging-digital-humanities-centers/center-for-history-and-new-media-george-mason-university/**. Grant funding as the sole option has its proponents; for example the Center for History and New Media has explained the relative stability of its revenue model, "as the amount of grant funding has grown and become more consistent and as its sources have become more diversified." And the Protein Data Bank, in existence for over 40 years, continues to be subsidised from an array of grants. So ongoing funding that relies on grants is certainly possible. Of course, relying on just one funding programme – as the case of the NSF's NSDL programme, which funded the MSP2 project, has shown – is a real risk: one programme closes, and funding disappears.

Aside from providing gap funding, there are other, less risky ways we have observed host institutions helping projects develop sustainable models. In a best-case scenario, a project may become deeply embedded in the host institution so that it becomes eligible for recurrent core funding. This is more likely to happen when the mission and goals of the project and of the host are very closely aligned, as in the cases of the DDH at King's College London or the endowed chair held by the leader of the Thesaurus Linguae Graecae at the University of California, Irvine. Another means of support that host institutions can offer comes in the form of guidance: providing assistance to the project in identifying external sources of revenue. As one example, eBird, part of the Lab of Ornithology at Cornell University, has access to the Lab's Development Office, which has directed funding to the project in the past.

5. Establish realistic goals and a system of accountability

In 2009, we pointed to examples of projects establishing measurable goals and systems of accountability and suggested that the process of setting goals – and then sticking to those goals – was an important aspect of sustainability.

Some of the projects we studied, such as the Institut national de l'audiovisuel (INA), were governed from above by a very clear set of expectations – in INA's case, a formal document that INA negotiates with its main funder, the Ministry of Culture and Communication, outlining fiscal guidelines and mission-based objectives for a period of five years.[33] Similarly, many projects that began as grant-funded efforts were required to establish goals – most often in conjunction with the funder – at the outset of work. These goals and expectations might include identifying how much money a project needs to raise, how many customers it must attract, how many documents it must digitise, and so forth.

Making changes in response to a difficult climate: V&A Images

Until recently, **V&A Images** (VAI) was the image-licensing unit of the Victoria and Albert Museum; its staff provided image licensing and on-demand generation of prints for both commercial and academic purposes. When we first studied the unit in 2009, its sustainability mandate from the museum was simply to break even—the high costs of its services and the significant amount of internal work that members of the unit provided to other parts of the museum meant that V&A Images was unlikely to turn a profit. This delicate balance between mission- and revenue-related goals proved difficult to maintain. In early 2011, despite efforts to identify new sources of revenue, it became increasingly clear that the unit's struggle to generate income from external customers while also providing a significant menu of services to other parts of the V&A organisation was unsustainable. In our 2011 follow-up, Jo Prosser, Director of V&A Enterprises Ltd, said, 'We defended and justified our system too much instead of integrating it into others… Then we realised we needed other skills'; and so they 'started a process of "down-ambitioning" the goals of the V&A Images unit'. Citing the 'financial impossibility of undertaking non-commercial activity' for a unit like V&A Images, the museum's management dissolved it and embedded its staff in different units across the Victoria and Albert Museum.

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33 'Contrat d'objectifs et de moyens etre l'Etat et l'INA, 2010–2014, **www.institut-national-audiovisuel.fr/sites/ina/medias/upload/ina-en-bref/contrat_ dobjectifs_moyens3.pdf**. The French government provides approximately two-thirds of INA's operating budget (in 2008, the governmental contribution amounted to just under €80 million), with the expectation that INA will generate the remaining one-third through earned revenue activities; INA, in turn, generates this revenue through a series of activities that include commercial licensing, publishing, and other ventures.

What happened and what did we learn?

The successful projects set clear short-term goals that would put them on a path toward their longer-term objectives. For example, early in the process of developing their endowment, the project leaders of the Stanford Encyclopedia of Philosophy received a Challenge Grant from the National Endowment for the Humanities (NEH). In order to receive the full value of the award, the project leaders were obliged to raise three dollars for every one dollar of grant funding from NEH – a goal that the project leaders met, and that helped them make significant progress toward their overall fundraising goal for their endowment.

And on a regular basis, each project establishes the metrics that are most meaningful for it. DigiZeitschriften, for example, focuses on ingesting content and covering its costs, and is successful at that. eBird closely measures user engagement with the site, carefully tracking not just the number of users on the site, but the number of active users and, most important, the number of birding observations they submit. The DDH at King's College London, as an academic department, is concerned with maintaining the excellence of its research, attracting strong students and important grant-funded projects. While these projects are also clearly aware of their revenue goals, their mission goals come first. By way of contrast, revenue generation is a primary goal for commercial trading units like INA's Inamediapro, the TNA's Licensed Internet Associates programme, and V&A Images. Case in point: when VAI proved unable to cover its direct costs and return revenue to the parent organisation, the unit was ultimately shut down.
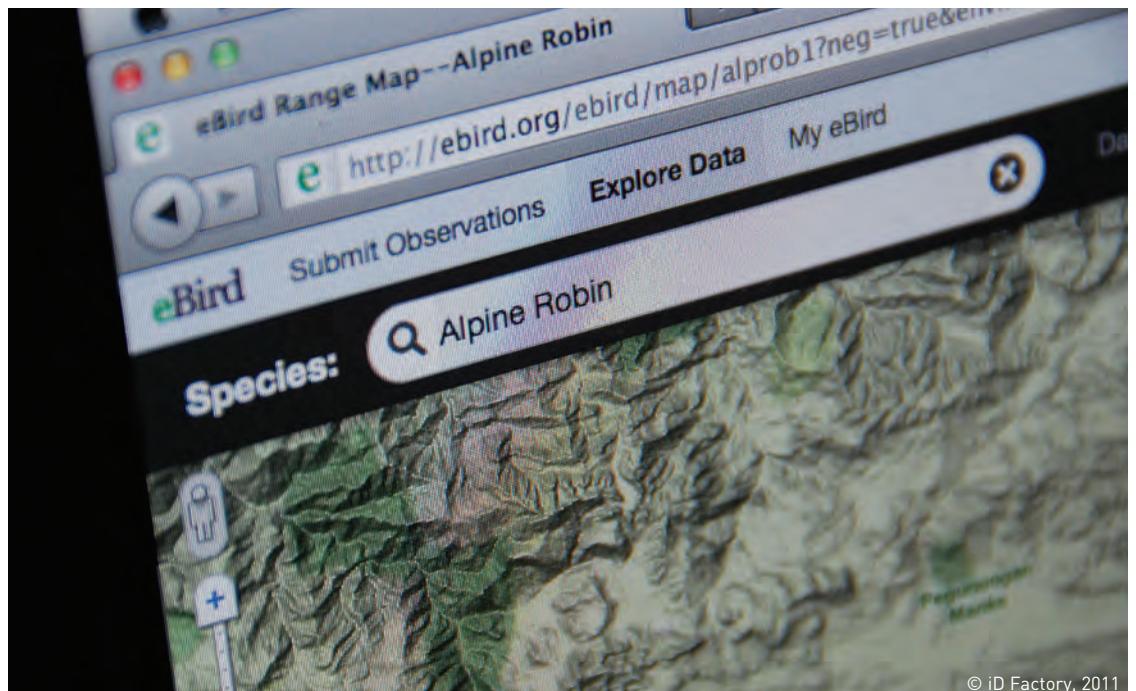
© iD Factory, 2011

Determining what sort of metrics will be most valuable to a project in order to measure progress is not easy…

Additionally, just as we observed different sets of metrics in play for these different projects, the methods for assessing them – and penalties for missing targets – were quite different as well. Some project teams, such as those of Hindawi, eBird and INA, have established systems of feedback that provide regular quantitative and qualitative information on user activity, which in turn informs the directions the project leaders choose to take. Other project teams, like that of DigiZeitschriften, seem not to require the same frequency or intensity of feedback, measuring success in annual figures that show positive growth of the resource. Determining what sort of metrics will be most valuable to a project in order to measure progress is not easy, but there is recent research that may help to highlight possible impact measures digital projects can consider when establishing goals for themselves.

The twelve projects profiled here have, by and large, approached this difficult process early, and have done so in consultation with funders and others. Perhaps more important is that those organisations that are having difficulty reaching their targets demonstrate a willingness to listen to feedback from users, assess progress, and make changes as needed.

Concluding Thoughts:
The Importance of Intention

What can we learn, then, from this follow-up to the twelve projects profiled in 2009? Are there models that stand out as particularly successful, and are there obvious pitfalls to avoid? What broader lessons can be learned from these attempts to sustain digital resources?

One important lesson reaffirmed by this review is that successful projects have excellent and committed leaders who set and pursue clearly articulated goals while being prepared to adapt to changing circumstances. They identify and quantify both the financial and non-financial resources needed to continue to develop their projects and they continue to assess progress towards their goals all along the way. They understand and cultivate their audiences and other stakeholders who value what the resources provide. Most of the projects we studied, including eBird, INA, Hindawi, The National Archives, the Stanford Encyclopedia of Philosophy and TLG, have nurtured reliable audiences who have proven willing to invest in them, year after year, whether by direct or donated resources. These projects have demonstrated an ability to consistently innovate and develop their services, adding new content, upgrading the user experience, and forging partnerships as needed. And in most cases, even if revenue generation is not the primary goal of these projects, their leaders recognise its importance, and have:

- thought hard about ways to generate revenue to support their projects

- devoted the same energy to strategising about the donated goods and services they receive as they do for the revenue they earn

- actively sought new sources of investment, whether from the host institution, new revenue streams, or grants, in order to fund these efforts; and

- continued to make decisions about growth and innovation in ways that are consistent with the needs and demands of their users.

These strike us as the kinds of activities the kinds of activities that would improve the likelihood of success for any project.

Still, reviewing these twelve projects two years later highlights just how difficult it is to develop a financially independent digital resource in the higher education and cultural heritage sectors. Certainly, full financial independence was never a stated goal of most of the projects we studied. This fact sets a clear boundary between one of our cases, Hindawi – which is an independent commercial organisation – and all the others. And it led us to conclude that the intentions behind founding a project have important implications for how project leaders pursue sustainability. We have therefore grouped our cases into three categories, based on the primary intention that appears to have driven a project's creation.

Intention: Separate and independent enterprise

At one extreme in our sample is Hindawi, conceived at the start as a for-profit and independent entity. Its founders chose to create the business based on a canny assessment of the demand for its services and the educated, low-wage workforce available to them in Cairo. Hindawi's business model has changed over time, from subscription-based publishing to open-access publishing financed by contributor fees, but never its intention to operate as an independent and profitable enterprise. Setting up an enterprise with a goal to operate independently is not an approach limited to commercial organisations; not-for-profit projects can be set up with that intention as well. None of the not-for-profit initiatives we studied had that as a founding principle.

Intention: Revenue contribution to host organisation

Of the twelve projects we studied, three were commercial trading units within larger cultural heritage or academic institutions. The V&A Images licensing unit of the Victoria and Albert Museum, the Licensed Internet Associates programme at The National Archives and Inamédiapro of the Institut national de l'audiovisuel were founded by their host institutions with clear mandates to generate revenue that could be used to achieve mission goals of the parent institution. They had buy-in and support from top-level administrators within the host organisation, clear financial targets and consequences for failing to meet those targets. As we have seen, where a project of this type is unable to meet its financial targets – as was the case with V&A Images – the response can be dramatic. With such clear metrics, the host organisation may choose, as the Victoria and Albert did in this case, to stop funding the activity of the group and reorganise or disband it.

Intention: Primary focus on a research or teaching mission

The financial goals of the projects in the first two categories were fairly well established from the earliest stages: an entrepreneur starts up a business, hoping to become independent and self-sustaining; an organisation undertakes commercial activity with a specific need for the project to generate surplus revenue to fuel the organisation's mission.

The projects that fall into this third category – what we call here mission-first digital initiatives – were not started with a primary objective of generating revenue. They were founded by one or more researchers operating within a host library, museum, or university and were conceived with a primary mission based on the project leader's specific research or teaching goals. For these projects, developed by departments or small teams of scholars, becoming sustainable was not the first or even second objective on their list.[34] One of the greatest challenges for this type of project is that key measures of success or failure can be difficult to define. By contrast, projects for which financial performance is the top priority are easier to evaluate. They are also generally better positioned to evaluate themselves, and adapt when necessary, than are projects for which delivery on mission is the more important objective.

Two years and one economic crisis since we conducted our original round of case studies, the mission-first projects in the sample appear to be relying more than ever on their host institutions for support. Earned revenue, though often a valuable part of the mix, is still insufficient to fully support the ongoing direct costs of running these projects, and many have needed to fall back on their institutional host to bridge a financial gap. In some cases, the need for subsidy from the host organisation was due to very specific shortfalls – a hoped-for grant that did not come through, a drop in subscriptions, lower-than-expected payouts from an endowment, or an unanticipated cut in core government funding.

Yet failing to meet financial projections is rarely fatal for these mission-first projects hosted at larger organisations, as a case can often be made that the work being done is so important that it deserves to be sustained, either for its own sake or in the hope that things will improve. Further, when external resources are reduced, these projects can often turn to their host organisations for increased in-kind support of various kinds, whether it be infrastructure or shared staffing. This can help a project continue to exist even in difficult times.

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34 In the original case studies, we learned that it was often the programme officer who made clear that the project needed to develop a plan for becoming self-sustaining. For DigiZeitschriften, developing a business plan was a requirement of the initial funding by the DFG; by the second or third round of funding for the Electronic Enlightenment, the Andrew W. Mellon Foundation required project leaders to start developing a sustainable model, and even funded the creation of a business plan to this end. The Stanford Encyclopedia of Philosophy, after a few rounds of grant funding, received a similar nudge from their programme officer at the National Endowment for the Humanities. The Thesaurus Linguae Graecae was an exception. Started with funds from a generous alumna in the early 1970s, it developed its current model a decade later, as the project struggled to stay afloat.

There is, however, a flip side to sharing in the wealth of resources a host can offer; projects can be required to share in the sacrifices the host may call for when budgets are tight. We observed some digital resource projects suffering from broadly instituted budget cuts, imposed across the entire institution. The challenge here is that the host organisations and these digital resource projects – which are really like small start-up businesses – are at dramatically different stages of their life cycles. Policies and practices that are right for one may not be right for the other. Unfortunately, many of the larger, stable organisations are putting in place across-the-board budget reductions at a time when the entrepreneurial projects embedded within them are just starting out and need capital investment to reach the point of sustaining themselves. As a result, these projects are forced to operate with much less support (financial and non-financial) than before. While 'cost management' can sound like a virtue, in many of the cases we observed, a lower cost base was the result of reducing the number of staff members had been employed in trying build the resource. Clearly, this is not a strategy the projects would have adopted by choice. Staying small is only a virtue if the model still accounts for ongoing investment; 'just scraping by' is not a model any promising start-up project should want to emulate.

This deep reliance on a parent organisation may help to keep a project afloat, but the question is: for how long? If what starts off as 'temporary' or 'gap' funding begins to become a more permanent mechanism for support, are the costs associated with the commitment well understood and properly recognised by both the host organisation and the project? The relationship between project and host is something that must be negotiated, defined, and nurtured, perhaps even more when a project has been externally funded at the start, rather than having grown more organically from within a larger organisation. What value does the host derive from providing financial and other forms of support for the project? What elements of support will it offer, and for how long? How will the value of the project to the host be evaluated? And what are the costs incurred by the host to keep the project operating? Having a better understanding of just what the host has agreed to contribute and the dynamics of this exchange are topics that deserve more careful scrutiny when thinking about the long-term sustainability of mission-driven digital projects.

Given the small size of the sample used both for the original study and for this update, one cannot make grand and sweeping generalisations. However, the cases studied suggest that developing projects that are financially completely self-sufficient remains very challenging. The economies of scale needed to develop and deliver electronic resources do not favour the creation of many small, independent entities, each developing its own infrastructure and content to serve niche audiences. Even the most prestigious national collections with vast holdings to draw from, such as The National Archives and INA, actively develop content partnerships and continuously seek ways to achieve the scale they feel will provide value to their users and their customers. Smaller, niche collections surely have their work cut out for them.

Nevertheless, academic and cultural communities thrive on the flourishing landscape of new, rare and diverse content that digital technologies have helped bring to light and share so much more widely than in the past. As new digital resources are developed, it will be important to watch how their leaders wrestle with this fundamental challenge. Will they continue to try to get closer to their host institutions, making the case that what they have to offer is of fundamental importance to the mission of the organisation? Or will they pursue scale economies by developing partnerships with commercial and not-for-profit aggregators and service providers to make their content available and accessible?

The answers to these questions remain to be seen. For now, these project leaders forge ahead, shaping and refining their goals and nudging their projects ever closer to the mission goals of the institutions that harbor them. Those with a deep and evolving understanding of their users and the changing world around them are poised for continued growth, success, even sustainability. Those without the inclination or ability to change course as needed, and to communicate the importance of the project to all those who have a stake in its success, will find rough waters ahead.

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www.kcl.ac.uk/artshums/depts/ddh

JISC Content   Ithaka Case Studies in Sustainability

In 2009, the Department of Digital Humanities (DDH) – formerly known as the Centre for Computing in the Humanities (CCH) – presented the model of a successful cross-disciplinary collective of digital practitioners engaged in teaching and research, with knowledge-transfer activities and a significant number of research grants contributing to its ongoing revenue plan. Support from King's College London to create the department was to be phased out after the results of the government's 2008 Research Assessment Exercise (RAE), which was expected to become a major source of support for the department. Two years later, the DDH revenue model has been challenged by reduced government spending, leading to budget cuts at the college, a revised RAE funding model that reduced the level of expected support, and a difficult market for consulting clients. This update will examine how DDH has weathered the challenge of reduced revenues in 2010-2011 and how its leaders have responded by re-focusing on their reputation as an academic department conducting first-rate research.

The Department of Digital Humanities (DDH), known until April 2011 as the Centre for Computing in the Humanities, is an academic department at King's College London focusing on the advancement of the digital humanities.[1] The department engages in collaborative research projects nationally and internationally with scholars in the humanities and social sciences. While the starting point for DDH projects are research questions, the creation of scholarly digital resources as outcomes of that research is a major element of the department's collaborations. In the past, according to

Simon Tanner, Director, King's Digital Consultancy Service, 'the user requirements taken into account were largely focused on academic users. Over the past few years in particular, the emphasis of funders, including the Arts and Humanities Research Council (AHRC), on "impact" has meant that increasing attention is now paid to the needs of a much wider range of potential users'. This shift, the department surmises, will better position DDH to 'address the impact case studies required for the forthcoming RAE than many other humanities departments.'[2]

As of May 2011, DDH has 70 research projects in progress or completed, compared with 58 projects two years earlier. DDH faculty teaches digital humanities courses at the undergraduate level, and offers three MA degrees: Digital Humanities; Digital Culture and Society (jointly with the Centre for Culture, Media and Creative Industries); and Digital Asset Management (jointly with the Centre for e-Research). DDH also runs a PhD programme in Digital Humanities.

Original sustainability model (2009)

As an academic department, DDH employs a sustainability model more commonly found in the sciences: revenue is derived from government and institutional funding for research and teaching; a significant number of research grants; and monies generated through 'knowledge-transfer' activities, which include consulting and training offered to the outside community through the King's Digital Consultancy Service. From its early years, DDH received a subsidy from King's College London to cover 35% to 40% of its costs, with the assumption that should the quality of research done by DDH staff be deemed of international significance in the 2008 National Research Assessment Exercise (RAE), this would provide the department with a research-funding allocation and solidify its position as an academic department. In

1   Unlike most of our case studies, DDH is itself the object of study here, not the digital projects its scholars help to produce. See, K. Kirby Smith, 'Centre for Computing in the Humanities: Leveraging Shared Infrastructure and Expertise to Develop Digital Projects in an Academic Department' (New York: Ithaka S+R, 2009), **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_CaseStudy_CCH.pdf**

2   Anthea Lipsett, 'Universities Braced for Heavier Research Burden', guardian. co.uk, 1 March 2011, available here: **www.guardian.co.uk/education/2011/mar/01/research-excellence-framework-academics**

addition, department staff regularly develop projects that are grant funded, which also serves to support department overheads.[3]

Still, according to Tanner, the DDH strategy is to 'never rely on one source in income', and indeed DDH has several other avenues of funding. As noted above, embedded within the DDH is the King's Digital Consulting Service (KDCS), which offers consulting services, workshops and training programmes related to the creation and management of digital resources, as well as the King's Visualisation Laboratory (KVL), which leverages its expertise in visualisation techniques on behalf of museums, theatre companies, archaeological projects and others.

At the time of the original case study, the department was awaiting news about the outcome of the RAE, as this was considered a critical element of its funding strategy. Among the strengths of the model at the time were the ever-stronger ties the department was forging with King's College and its success in securing grant funding for its projects. Some concerns included the extent to which the centre could support the projects in the long term, particularly those with the potential to continue beyond the duration of the grant. And preservations issues were generally left for the project leaders to resolve. While DDH's policy is to preserve research outputs for at least ten years, this was in part because former director Harold Short felt that a national infrastructure for the preservation of born-digital research would be in place by then. When the Arts and Humanities Data Service (AHDS) closed down in 2008, it was unclear what community-based solution might emerge.

How the model has fared

The past few years have brought both good news and bad for DDH. Results of the RAE 2008 were very positive: it ranked DDH either first or second in its sector, depending on the measure used to derive the ranking; 35% of DDH's research was found to be 'world-leading' and 65% was judged to be 'world-leading' or 'internationally excellent'.[4] However, since the Higher Education Funding Council for England (HEFCE) had recently developed a new funding model for its quality-related research grants, the actual amount of the research funding awarded was 45% less than had been anticipated, according to calculations based on HEFCE's old funding formula.

The number of grants awarded to DDH decreased in 2009-2010. This may have been due in part to an extensive reorganisation within the AHRC, which funds various DDH projects, and in part to a reduction in the number of grant proposals DDH staff submitted as the department went through the process of reducing its staff complement.

But perhaps most dramatic were changes implemented by the university, which in 2008-2009 and 2009-2010 required 15% cost reductions in all departments across the university.[5] This led DDH to cut back their staff by 6.5 full-time employees in 2008-2009, including 2 full-time professors and 3.5 administrative staff, and to cut staff again by 2.5 full-time employees in 2009-2010, including 1.3 full-time professors. The strategy of King's College London, says Short, now Director Emeritus of DDH, was 'maximum pain now, so we are better placed for later'. However, the significant research grants announced in the second half of 2010 and the early part of 2011 have resulted in the restoration of at least two of the DDH posts that had been cut, albeit on the basis of renewable one-year contracts.

According to Tanner, the single biggest change recently has been the increased unpredictability of the rhythms of revenue flow: 'We have gone from an environment of steady work and growth, where it is fairly reliable that more is coming, and even having to prioritise opportunities, to an environment that we predict in 2011 will be somewhat more uncertain for research; and for knowledge transfer and consultancy, "feast or famine" over shorter cycles.' While the KDCS had an uptick in consulting contracts in 2010, the consultancy used to have six to eight months of committed work at any point in time; since December 2010, that horizon has shrunk to one month, with fewer apparent opportunities to bid for new contracts.

Even the department's annual five-day training event, Digital Futures, had a difficult year. Its workshop in Australia was not well attended and is not slated to run again until 2012. The April 2010 London session, which was initially over-subscribed, also suffered from an unexpected drop in enrolment, although this was due to factors beyond the control of DDH: out-of-town delegates found themselves unable to reach London due to the ash cloud from the eruption of the Icelandic volcano Eyjafjallajökull, which halted all airline travel for several days.[6]

New directions and initiatives

With less predictability in revenue streams since 2008, DDH has focused on enhancing its value to King's College London, and on looking for ways to strengthen and communicate this value to administrators and students:

- *The new Department of Digital Humanities*: In April 2011, the Centre was officially re-named the 'Department of Digital Humanities', which according to Tanner was a strategy intended to more clearly identify it as an academic department, rather than a service centre. The department was in fact given full academic status in 2002, but as Short pointed out, 'the decision at the time was to retain CCH for

3 Government research grants secured by the department help fund the central administration through indirect cost allocations worked out with the Higher Education Funding Council for England (HEFCE) under a system known as Full Economic Costing (FeC). See **www.hefce.ac.uk/finance/fundinghe/trac/fssg**

4 See **http://rae.ac.uk/results/qualityProfile.aspx?id=132&type=hei**

5 'King's chief warns of cuts twice as severe as those made by Thatcher', *Times Higher Education*, February 25, 2010; available at **www.timeshighereducation.co.uk/story.asp?storycode=410485**

6 There are tentative plans to hold another workshop in September 2011, but staffing cuts have limited KDCS's capacity for event management.

Sustainability dashboard

	2009 Case Study*	2011 Update**	What's Changed?
Content	58 research projects completed or under way	70 research projects completed or under way	12 new projects undertaken
Functionality	(Not relevant for this case study, which focuses on the department as a whole)		
Sustainability Model	■ Research grants ■ Host institution support ■ Consulting	■ Research grants ■ Host institution support ■ Consulting ■ RAE funding	Both Research Assessment Exercise (RAE) and host support were lower than anticipated
Costs	(Not disclosed)	(Not disclosed)	Cost base is lower, due to positions lost
Revenues	■ £17 million in research grants generated over seven years	■ £2 million+ additional grants secured in 2011 ■ 15% cut in host institution support (2010) ■ Funding council (HEFCE) revenue 45% lower than expectations	Shortfall in government and university under-funding somewhat mitigated by strong showing in grants awarded in 2010 and 2011
Impact	■ High rating in 2008 governmental RAE 2008	■ A new MA programme in Digital Asset Management draws new students to the department.	■ High rating in RAE 2008 validated the quality of the department's research, but government funding based on RAE fell short of expectations ■ 188% increase in income from MA and PhD students
Sustainability Bottom Line	King's College London provided start-up subsidy, supplemented by other revenue streams	Despite shortfall due to revised RAE model and challenges to the consulting business, department has persevered thanks to many successful research proposals for grants and ongoing support of its host institution	

* These costs and revenues numbers reflect DDH's 2007-08 fiscal year.

** These costs and revenues numbers reflect DDH's 2010-11 fiscal year.

"brand recognition" purposes'. This re-naming coincided with a major shift in governance, as former director Short retired in the autumn of 2010. Professor Andrew Prescott has recently been named to this post, and will take up his position as head of department later in 2011. Going forward, the structure will resemble that of a standard academic department, with the directorship rotating every three to five years, a change which will devolve more decision-making to the senior-manager level. The expectation is that each time a new head is appointed, there will be minimal change in the strategic direction of the department.

■ *Continued focus on securing grant funding for new projects*: Since the summer of 2010, the department has secured three of the four AHRC grants it applied for, totalling £2 million, and has also received grants from the Andrew W. Mellon Foundation for a Ben Johnson digital edition and from the European Union for a digital palaeography project. These are multi-year grants, so this revenue stream will be steady for the next few years.

■ *New Masters programmes*: In September 2010, DDH launched a new Masters programme in Digital Asset Management in collaboration with the college's Centre for e-Research, drawing six new students to the department. While the newly mandated system of 'administrative hubs', a cost-savings measure that requires departments to share administrative staff, has not always been easy, there have been some silver linings: the pairing of DDH with the Department of Culture, Media and Creative Industries has led to a redefinition of that department's existing MA in Digital Culture and Technology as a jointly taught MA in Digital Culture and Society.

Finally, the issue of digital preservation has not yet been resolved. Although no community solution has yet replaced AHDS, DDH has a leading role in the UK's Network of Centres of Excellence, of which Prescott is the current chair. This network is active in seeking funding and developing activities that were previously within the purview of the AHDS, in particular in relation to technical standards, sustainability and long-term preservation. According to Tanner, while 'there are no immediate "solutions" in prospect, there are clear indications that funders and institutions are coming to understand the need to develop a range of approaches, and the Network has a clear and significant role in taking this work forward'.

Sustainability outlook

In today's economic times, DDH's relationship with its host institution has proven to be a vital source of support, as research funding cycles have proven unreliable. DDH's other revenue streams have helped to buffer the department in the face of difficult times, allowing it to spread its financial risk across several activities. Still, the greatest accomplishment for the former Centre for Computing in the Humanities is to have further cemented its status as an academic department – the Department of Digital Humanities – at King's College London.

'Looking ahead, the landscape for funding is somewhat uncertain'.

Looking ahead, the landscape for funding is somewhat uncertain. While the department will receive research funding, it is not immediately clear what will bridge the gap between the level of funding it first expected and what it will receive. The department's additional revenue sources have also been affected by the economic crisis, so it is not safe to depend on them. Focusing on core values, including the strength of the scholarship produced, and obtaining project grants with collaborators will continue to be the most important paths to follow.

Lessons learnt over the past two years

- Host institution support can be vital, particularly when other less reliable revenue streams are at risk

- Since we cannot all expect to be Google, naming the project or unit in a way that clearly expresses what it does is an important first step in communicating with key audiences and stakeholders

- Diversity of revenue streams in itself does not guarantee financial stability; however, experimentation with different models may help to identify which are the strongest and should be built and strengthened

Interviewees

Harold Short, Director Emeritus, Centre for Computing in the Humanities, King's College London, 25 January 2011

Simon Tanner, Director, King's Digital Consultancy Service, Centre for Computing in the Humanities, King's College London, 9 March 2011

This case study update was researched and written by Nancy L. Maron as part of the Ithaka Case Studies in Sustainability project.

Summary of revenues and costs

	2007-08	2010-11	Comments
Total revenue			
External research grants	45-50%	50%	
Institutional funding	35–40%	0%	Institutional subsidies are no longer available
HEFC research funding		25%	Government research funding, resulting from RAE 2008 results
Teaching funds	5%	15%	Increase due to increase in department's teaching responsibilities
Knowledge-transfer activities	10–15%	10%	
Total costs			
Personnel costs	85–90%	Over 90%	About 70% of staff are lecturers, researchers and contract staff
Non-personnel costs	~15%	Less than 10%	
Number of staff	33–43 FTE	26–35 FTE	Approximately 20% decline in total staff
In-kind/volunteer contributions	**n/a**	**n/a**	

Explanatory note

The information presented in this table is intended as a broad picture of revenues and budgeted costs associated with the project, not as a detailed financial report. It does not include in-kind contributions or other unbudgeted items, though these are described where they are known. The financial data, which are presented in the currency in which the project reported the information, were compiled as part of the interview process with project leaders and staff, and in some cases were supplemented with publicly available documents, such as annual reports. Many of the figures are rounded or best estimates. Some leaders preferred not to offer figures at all, but suggested percentages instead. Because of the variability in the way each institution estimated the various categories of revenues and costs, the information presented in the table is of limited value for detailed cross-project comparisons.

# DigiZeitschriften: A Niche Project at a Crossroads

Case Study Update 2011

www.digizeitschriften.de

DigiZeitschriften, a collection of digitised German-language scholarly journals, has continued to successfully support its operations and generate a surplus through a combination of its subscription model and a low cost base, thanks to its 14 partner libraries, which help to curate the content and seek grant funding as needed. Since we profiled this project in 2009, its website has been revamped, and Google and other search engines are now allowed to crawl some content for the first time. And yet many significant challenges lie ahead, as finding sources of new content has become difficult and new customers are increasingly hard to come by.

DigiZeitschriften is a German-language online archive of scholarly journals, launched as an online service in 2005 with funding from the German Research Foundation (DFG).[1] Its aim was to provide access to important German-language periodicals, following a similar model to that of JSTOR in the United States. Today, DigiZeitschriften operates as a not-for-profit organisation, headquartered at the Göttingen State and University Library at the University of Göttingen, and is supported by the contributed efforts of 14 partner university libraries. When we first profiled DigiZeitschriften in 2009, the resource boasted 3.5 million pages from 144 journals in 18 academic fields, and counted 192 subscribing institutions.

As of May 2011, DigiZeitschriften (or 'DigiZeit') has expanded its subject offerings to include 19 academic disciplines. The resource now contains 420,000 scholarly articles from 166 journals, totalling four million pages of scanned content. Subject areas covered include German language and literature, history, art, philosophy, mathematics and economics. New titles have been added in the areas of history, philosophy, philology and art. The resource is managed on a daily basis by Project Manager Caren Schweder, who heads DigiZeit's Administrative Office, and
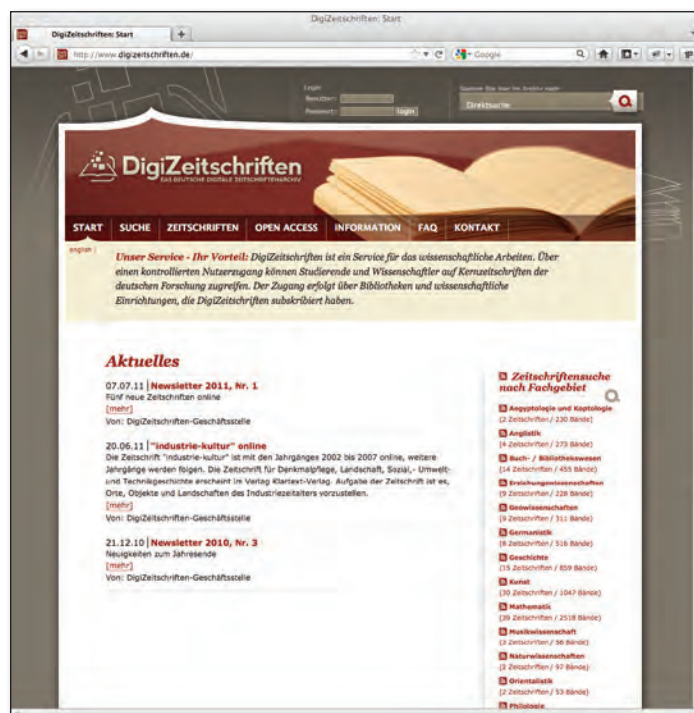
www.digizeitschriften.de

one part-time colleague; strategic decisions are made by the DigiZeitschriften board, which is chaired by Dr. Berndt Dugall, who recently succeeded Dr. Norbert Lossau as the board's chairman. Dr. Norbert Lossau remains connected with DigiZeitschriften through his capacity as the director of the Göttingen State and University Library.

Original sustainability model (2009)

From DigiZeit's earliest days, among the conditions of its grant from the German funder DFG was that its business model would need to ensure that the project could generate enough revenue to continue its activities without the need for further grants (although additional outside grants could be sought for major digitisation projects). The project has been able to do this successfully by keeping costs very low, relying on institutional support and the contributed efforts

1 Nancy Maron, 'DigiZeitschriften: Library Partnership and a Subscription Model for Journal Database' (New York: Ithaka S+R, 2009), **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_CaseStudy_DigiZeit.pdf**

In 2009, Ithaka S+R published twelve detailed case studies of online digital resources, exploring the strategies project leaders were using to sustain those projects for the long term. All of the case studies have been updated in 2011, to revisit the original sustainability models and see how they have fared over the past two years. To read the original case studies, please visit: www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability

of its 14 member libraries – which assist the project by selecting content for inclusion, clearing intellectual property rights, and preparing bound volumes for scanning – and by seeking additional grants for discrete digitisation projects. An institutional subscription model has provided a reliable source of revenue.

In 2009 we highlighted a major strength of the DigiZeit model: its close collaboration with the Göttingen State and University Library and its network of partner libraries. Among the challenges facing the resource were its relative insulation from its end users, with most decisions made between DigiZeit executive staff and the partner libraries.

How the model has fared

DigiZeit's basic business model has changed very little over the past two years. The archive has continued to benefit from close collaboration with its host institution and the partner libraries and has introduced efforts to address end-user needs. DigiZeit's subscriber base has slightly increased from 192 subscribing institutions in 2008 to 206 subscribing institutions in 2011, with almost no attrition from the existing subscriber base. The number of participating publishers has remained the same, and partner libraries continue to provide support when needed. Despite the recent global economic downturn, support from the Göttingen State and University Library has been unaffected and is still a major piece of the equation as they continue to allocate staff to digitisation and administrative activities in support of the project. At the time of this writing, Dugall noted that the university's level of commitment to the project has not changed. In 2011, DigiZeit's institutional subscriptions are expected to generate €218,400 ($305,760), up from €180,000 ($252,000) in 2009. With operating costs of approximately €122,250 ($175,000) in 2009 and €126,250 ($176,750) in 2011, DigiZeit continues to produce a surplus.

Changes in direction and new initiatives

Challenges identifying content. As in 2009, where to get new content and how to fund its digitisation are still important issues:

- DigiZeit has encouraged its partner libraries to identify subject areas for which they can secure grants for digitisation. For example, DFG recently provided financial support for the digitisation of 12 journals from Heidelberg University Library's Art and Satire Journals of the 19th and 20th Centuries, due to the initiative of librarians at that partner institution.[2] At the same time, the moving wall – the period of delay between original publication and inclusion on the DigiZeit website – in the past has ranged from six months to 10 years, with an average of about five years. More recently, the average delay has shortened, with 30% to 40% of publishers using a moving wall of

just two to three years, demonstrating their desire to see their content in the database sooner, without sacrificing revenue from the sales of current issues.

- On the other hand, there are challenges concerning long-term prospects for content acquisition. Larger publishers, such as Springer, have insisted on fixed walls, so that none of their content beyond a certain date will ever appear on DigiZeit. In 2011, approximately 85% of the journals in the archive have a moving wall and 15% have a fixed wall. While in the early years many publishers were willing to have their content included in DigiZeit, Dugall reports that it has become much more difficult for DigiZeit to expand the roster of publishers on its platform and thus build its content base. According to Dugall, 'the same publishers we started out with 15 years ago are still with us', but no new ones have been added in recent years. Larger publishers, such as Wiley and de Gruyter, do not participate in DigiZeit because they prefer to keep their content on their own platforms. Smaller publishers without the resources to create their own platforms comprise the majority of DigiZeit's holdings at this point.

Addressing user needs. DigiZeit continues to rely upon its partner libraries to keep in touch with the patrons who use the resource and has not undertaken any comprehensive end user market research studies itself. Since 2008, DigiZeit has undertaken some significant improvements, designed both to improve the discovery of information on their site and to enhance the value to users:

- *An overhaul of the website*: Based on requests from partner libraries, DigiZeit has added full-text search, RSS feeds, an OAI interface and new search options. Another new feature is *Previewimport*, in which scanned pages are placed online as soon as they have been digitised, allowing for access before final formatting has been completed.

- *Improved discovery*: In 2009, publishers' concerns about intellectual property rights hindered DigiZeit's ability to gain exposure on the internet via major search engines. As of early 2010, DigiZeit began allowing Google to index the metadata of their freely available material, and to search the first and second pages of each article for keywords. Google also searches the content of the paid-access content in spite of prohibition by German intellectual property rights laws. Despite this step, Dugall reports that traffic to the DigiZeit site has only increased 'a bit' as a result, and that most visitors are still coming directly to the site rather than arriving through search engines.

- *Directing users to other journals*: As part of a strategic decision to increase its value to customers, DigiZeit links users to current issues of journals which are not yet available on DigiZeit's site. While Dugall feels that these changes have been valuable for users, the resource has a limited ability at present to gauge increases in site usage or changes to other impact measurements.

- *Expanding the open-access domain*: In 2011, 40% of DigiZeit's content is available on an open-access basis, and DigiZeit is constantly trying to expand the open-

Sustainability dashboard

	2009 Case Study*	2011 Update**	What's Changed?
Content	144 German-language journals, including 300,000 articles covering 18 academic subjects	166 German-language journals, including 420,000 articles covering 19 academic subjects	A 15% increase in number of journals, and a 40% increase in number of articles
Functionality	■ Authenticated access for subscribing institutions ■ Browsing of journals by discipline, title, year	■ Website redesign ■ Full-text search capability ■ Google crawling on first pages of each article	Improved functionality
Sustainability Model	■ Host institution support ■ Partner libraries network support ■ Subscription fees and one-time payments from subscribing institutions	■ Same	No significant shifts in the model
Costs	€122,250 ($175,000)	€126,250 ($182,000)	Costs remained steady
Revenues	■ €180,000 ($252,000) ■ Subscription fees from 192 subscribing institutions (65% from Germany, 35% from other countries)	■ €218,400 ($315,000) ■ Subscription fees from 206 subscribing institutions (71% from Germany, 29% from other countries)	A 21% increase in revenues
Impact	35,000 article downloads per month, on average	142,556 article downloads per month, on average	Average monthly downloads quadrupled
Sustainability Bottom Line	■ Resource succeeded in generating a surplus on directly budgeted costs ■ Contributed staff time from library partnership model kept costs low	Partnership and subscription model still keeping costs low and resource still succeeding in generating an overall surplus, but difficulty in attracting new publishers and more content could hinder growth in the future	

* These costs and revenues reflect DigiZeitschriften's 2009 fiscal year.

** These costs and revenues reflect projections for DigiZeitschriften's 2011 fiscal year.

access domain. All articles hosted by DigiZeit which were published before 1900 are available for free due to DigiZeit's general publishing policy. Some newer articles are freely available in DigiZeit's open-access domain due to DigiZeit's cooperation agreements with certain publishers and archives.

A market with limited growth opportunities. While DigiZeit's costs are modest, its target market of libraries with an interest in German-language scholarly resources is necessarily finite, and the pool of materials from which DigiZeit can draw is, likewise, finite if the archive cannot enlist more publishers to its cause. Dugall believes that DigiZeit has saturated its core market of Western and Central European academic libraries, and it expects most of its new business to come from Eastern Europe and Asia. Dugall acknowledges the limitations of the current model: he anticipates that in the next five years, DigiZeit will have 220–225 customers, and that that may represent the ceiling in the number of customers the project can realistically attract under the current model. Dugall recognises that DigiZeit's overall business model presents challenges, which point to the reality that specialised aggregators may need to integrate into larger content platforms to survive.

Sustainability outlook

Today, DigiZeit stands out as one of the few projects we have studied that manages to generate a surplus from a stable core of subscribing institutions. With little to no attrition among its subscribers, DigiZeit has consistently added to its content base and expanded the range of disciplines it covers. DigiZeit has aspirations to expand into new markets, though its minimal staffing may make this difficult.

DigiZeit has successfully kept its focus on a well-defined mission: to offer German-language scholarly journal content to a scholarly audience. By keeping the focus on this mission, DigiZeit has effectively provided a valuable service to its partner libraries whose collections are being digitised, and to those users who seek access to the deep backfile of journal content.

Looking ahead, however, DigiZeit has already begun to encounter several obstacles that could easily hinder future growth:

■ *Finding new content*: Without new content to enrich the collection over time, and facing increasing availability of journal backfiles on competitive platforms, DigiZeit may have trouble maintaining its value to its users. Making

publisher participation more appealing in some way – either financially or by virtue of the greater exposure the platform could offer – seems important, but is not necessarily a direction being explored at present.

- **Signing up new customers**: While their current customer base is quite stable, a finite market of libraries with an interest in German-language scholarly resources will make it difficult for DigiZeit to expand its subscriber base beyond a certain threshold.

- **Building a strong user base**: While the strength of DigiZeit's relationships with its partner libraries and with its other subscribing libraries is clear, DigiZeit's relationship to its users is less so. Recent years have brought some important improvements to the user experience, from the interface to search engine discovery. Still, by relying on the partner libraries to serve as proxies for users in determining user needs, the resource may have difficulty in being responsive enough as user needs evolve.

- **Remaining competitive**: With more players in the digital content field, for how long will DigiZeit's subscription model remain strong? It will be of the utmost importance that DigiZeit remains alert to competing forces in the industry and proactive in seeking out opportunities for growth and in planning strategically for the future.

Lessons learnt over the past two years

- Staying small and well-focused, with a core of supportive customers who truly value the resource, can be a successful sustainability strategy

- As the competitive environment changes, projects may need to consider ways to strengthen their value to users

Interviewees

Dr. Berndt Dugall, Chairman, DigiZeitschriften,
15 February 2011

Caren Schweder, Project Manager, DigiZeitschriften,
2 May 2011, 17 June 2011

This case study update was researched and written by Nancy L. Maron and Sabine Zander as part of the Ithaka Case Studies in Sustainability project.

Summary of revenues and costs

	2009	2011	Comments
Total revenue*	**€180,000**	**€218,400**	**+21%**
Subscription fees	98.4%	85.6%	
Member fees	0.75%	0.65%	Partner libraries pay a yearly membership fee of €100 each.
One-time fees charged to new subscribers	0.85%	13.75%	New subscribers pay a one-time fee equal to 3 times their annual subscription fee.
Total costs	**€122,250**	**€126,250**	**+3%**
Personnel costs	68%	65%	
Non-personnel costs	32%	35%	
Number of staff	1.5 FTE	1.5 FTE	Project manager (0.75 FTE) and administrative assistant (0.75 FTE)
In-kind/volunteer contributions	**14 partner libraries responsible for content selection; technology support provided by Digitisation Centre; office space provided by host institution**		

Explanatory note

The information presented in this table is intended as a broad picture of revenues and budgeted costs associated with the project, not as a detailed financial report. It does not include in-kind contributions or other unbudgeted items, though these are described where they are known. The financial data, which are presented in the currency in which the project reported the information, were compiled as part of the interview process with project leaders and staff, and in some cases were supplemented with publicly available documents, such as annual reports. Many of the figures are rounded or best estimates. Some leaders preferred not to offer figures at all, but suggested percentages instead. Because of the variability in the way each institution estimated the various categories of revenues and costs, the information presented in the table is of limited value for detailed cross-project comparisons.

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* In our 2009 publication, total revenue was not broken up into the segments 'subscription fees', 'one-time payments' and 'member fees'. For our 2011 publication, DigiZeitschriften provided us with such a break-up for the 2009 fiscal year retrospectively and for the 2011 fiscal year.

JISC

Strategic Content Alliance

building bridges to digital content

ITHAKA S+R

eBird:
Driving Impact through Crowdsourcing
Case Study Update 2011
www.ebird.org
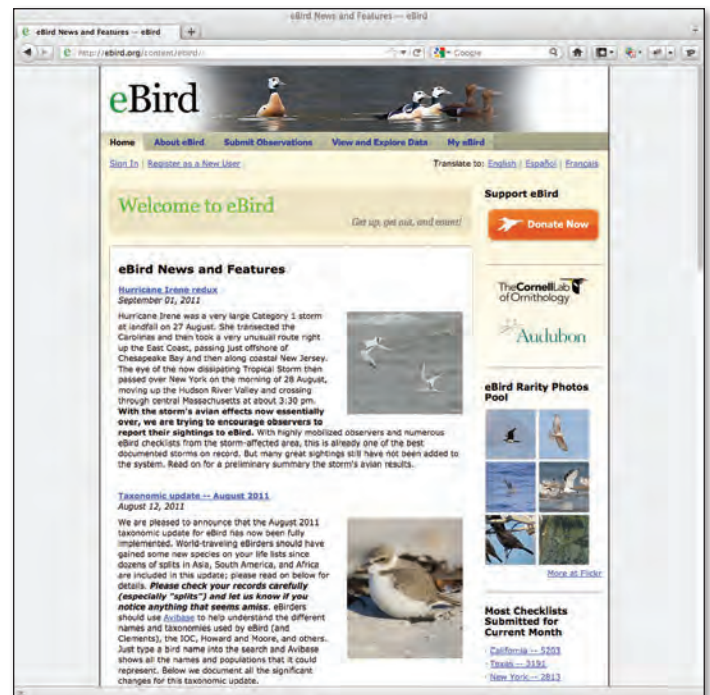
JISC Content   Ithaka Case Studies in Sustainability

In 2009, when Ithaka S+R first studied the sustainability model for eBird, a database of bird sightings, we highlighted its strong focus on the needs of its end users and the extent to which the Information Science Department, where it is housed, encouraged eBird's project leaders to pursue entrepreneurial activities. The project leader and his three co-managers, who were selected because of their familiarity with the needs of both academic ornithology researchers and casual birding enthusiasts, have developed a range of services which have not only enhanced the project's value to both those communities, but have also provided licensing and sponsorship income to help support the project.

In 2002, the Cornell Lab of Ornithology launched eBird, an interactive database designed to gather sightings of bird species from casual enthusiasts and make that data available to researchers. eBird enables bird watchers to record observations from their expeditions and build personalised lists of the species they have encountered. These observations, in turn, become part of an aggregated dataset that researchers can use to estimate the abundance of a bird species in a given region, track high-level migration patterns, and build hypotheses about how a manmade disaster, such as an oil spill, affects species populations.[1]

Housed in the Lab's Information Science Department, eBird benefits from being part of a larger organisation whose expertise and costs are spread across multiple projects, and from the department's entrepreneurial activities, which help fund its programmes and make the Lab's outputs available to a wide range of users. But eBird's achievements are not just a function of scale – it has also successfully increased the average number of monthly data submissions

www.ebird.org

from birding enthusiasts, making even more data available to researchers and putting the project in a better position to pursue opportunities to generate revenue. In May 2011, eBird recorded an all-time high of three million observations submitted in a single month.

Original sustainability model (2009)

As a project that is freely available and accessible, eBird is supported through a combination of grants from government agencies, annual payouts from the endowment of the Lab of Ornithology, and a number of initiatives that generate earned revenue. When Ithaka S+R first wrote about eBird in 2009, we found that the project leaders had developed several means to supplement their grants and endowment income, including:

- A programme to license customised versions of the eBird.org interface to regional and international wildlife societies.

1 Matthew Loy, 'eBird: A Two-sided Market for Academic Researchers and Enthusiasts' (New York: Ithaka S+R, 2009), **www.ithaka.org/ithaka-s-r/ research/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_ CaseStudy_eBird.pdf**

In 2009, Ithaka S+R published twelve detailed case studies of online digital resources, exploring the strategies project leaders were using to sustain those projects for the long term. All of the case studies have been updated in 2011, to revisit the original sustainability models and see how they have fared over the past two years. To read the original case studies, please visit: www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability

- An initiative to rent on-site eBird kiosks to nature centres and wildlife preserves, allowing visitors to those organisations to access background information on birds and to enter their own birding observations at the end of their visit.

- A corporate sponsorship by a binoculars manufacturer, who wished to market to eBird's specialist audience; at its peak, the sponsorship brought in approximately $50,000 per year.

The project was able to develop these revenue sources in great part because it had already begun to attract significant usage from the birding community; securing the sponsorship, in particular, depended on the ability of eBird to attract the eyeballs of serious birders, who may be users of high-end binoculars. This success was made possible in part by a drastic shift in the project's strategy in its early days. eBird had been built with the needs of academic researchers in mind, and soon after launch, the project reached a plateau of birding submissions that seemed low to the Lab's leadership. In order to boost data submissions by birding enthusiasts, Lab of Ornithology Information Science Director Steve Kelling, who oversees the eBird project, installed three project co-managers, each of whom had ties both to the birding enthusiast world and to the academic ornithology community, and gave them a mandate to provide a better experience for the casual user. The co-managers oversaw the addition of several functions, including one that allows users to create and save lists of all the bird species they have observed, which Kelling cites as one of the key drivers for participation by birders.

The project also benefits from the expertise, resources, and infrastructure available elsewhere in the Lab of Ornithology. The Information Science Department has a role in developing and operating a host of other online projects, including the Avian Knowledge Network, an interface that pools data from eBird and other sources for use by scientists; Birds of North America, a subscription-based online resource targeted at birding enthusiasts; Science Pipes, an online visualisation tool for use with biodiversity data; and other projects. eBird's team includes Lab of Ornithology staff members who devote portions of their time to one or another of these parallel projects, and eBird also draws on the technological infrastructure and the Lab-wide knowledge that the development of all these projects has helped to build.

How the model has fared

According to the project leader, eBird's sustainability model depends heavily on growing and maintaining submissions of high-quality birding data. Since 2009, the project team has launched a number of new initiatives to increase user participation. Perhaps most important was a move to open eBird to submissions from all over the world. (Previously, data submissions to eBird could be made only by users in North America and a selection of other regions.) The increased availability seems to have paid off: during April and May 2011, key migration months for birds and, accordingly, the months

in which eBird has traditionally seen its highest submission rates, the number of submitted observations far exceeded expectations: 'We received more observations [in May 2011] than we received in our first three years', noted Kelling.

From a financial standpoint, eBird's sustainability goal has not changed since 2009: Kelling and his three project co-managers seek to secure sufficient financial resources to cover eBird's operating costs, estimated at approximately $300,000 per year, while seeking grants to fund new developments. (Assigning a firm budget amount to eBird is difficult because the Lab of Ornithology's Information Science Department runs a number of online initiatives that share staff time and draw on the Lab's infrastructure.) Kelling's goal for eBird is to maintain an even mix among broad revenue sources: one-third coming from payouts from the Lab's endowment, one-third coming from earned revenue sources, and one-third coming from grants and contracts.

The revenue streams have fared differently over the past two years:

- **Endowment payouts**: The Information Science Department benefits from a share of the annual payout from the Lab of Ornithology's endowment. The fund is managed alongside Cornell University's general endowment. Kelling estimated that in 2011, approximately $100,000 of the Information Science Department's share was apportioned to eBird—a slight decrease from the estimates provided in 2009, when the endowment accounted for $110,000 of eBird's budget.

- **Sponsorship**: eBird's most significant sponsorship came from Zeiss Optics, a manufacturer of binoculars and other specialised glass products. The company's logo had a prominent place on the eBird website, for which eBird received approximately $50,000 in the highest year of the sponsorship. With Zeiss' business goals changing, the sponsorship decreased to approximately $20,000 in 2010, and the arrangement ended in 2011.

- **Kiosk rentals**: Kelling estimated that approximately 35 nature centres currently rent kiosks from eBird, down slightly from the total at the time of our original case study. The kiosks, which carry an annual rental fee of $2,000, generate about $70,000 for eBird.

- **Customised eBird portals**: The group continues to support requests for customised eBird portals from regional birding and wildlife organisations. There are approximately 30 of these now in operation, and eBird charges an annual licensing fee of $1,000 for each. In addition, the group developed two new portals for external clients in the past year, for which they charged approximately $10,000, putting the overall revenue from these sources at about $50,000.

New directions and initiatives

In order to continue driving usage – and to meet its financial goal of covering the costs of operation and funding new developments to eBird – the project team has moved ahead with several new initiatives over the past year.

Sustainability dashboard

	2009 Case Study*	2011 Update**	What's Changed?
Content	1.4 million birding observations submitted per month	2+ million birding observations submitted per month	+40%
Functionality	Personal birding lists function	Ability to submit birding observations from any region in the world	Significant increase in functionality
Sustainability Model	■ Endowment ■ Grants and contracts ■ Software licensing ■ Kiosk rentals ■ Host institution support ■ Sponsorship	■ Endowment ■ Grants and contracts ■ Software licensing ■ Kiosk rentals ■ Host institution support ■ Licensing for mobile app	Sponsorship arrangement ended; eBird data licensed to mobile app developer
Cost Estimates	$300,000	$300,000	No change
Revenue Estimates[2]	$300,000	$300,000	Estimated revenues meeting the estimated costs for eBird
Impact	18,000 active registered users	23,000 active registered users	+27%
Sustainability Bottom Line	Project leaders reshaped eBird to focus on needs of birding enthusiasts rather than scientists, winning increased usage.	Project leaders continue to seek opportunities to generate earned revenue, while also applying for grants to fund major new developments to the resource.	

* These costs and revenues reflect eBird's 2008-09 fiscal year.

** These costs and revenues reflect eBird's 2010-11 fiscal year.

Third-party application development. Testifying to the popular interest in and commercial appeal of bird watching, a Virginia-based developer approached the eBird team about the possibility of building and marketing a mobile application that draws on eBird data to provide users with information on birds that have been spotted in their area. A deal was set up by the Lab's marketing director in consultation with Cornell University's general counsel, and the resulting app, BirdsEye, was released in 2010 and is sold through Apple's online store. The app is priced at $19.99 per download – a relatively high cost for an iPhone app, and Kelling feels that this high price has hindered uptake.[3] As the eBird team is simply a licensor in this arrangement, it has no control over the product's pricing, and limited control over the design of the project and the relationship with the app's users. The eBird team incurred no development costs, and will receive approximately 30% of the revenue on every sale. Although Kelling characterised the Lab's take from the deal as thus far 'very small', the partnership allowed them to experiment in the mobile app space without investing staff time in development, which Kelling put down to a 'risk-averse' approach on his part.

Building an international audience. Over the past two years, eBird has widened its reach, moving from a focus on North American submissions to opening its database to submissions from around the world. This initiative required the project team to update the user-facing data submission screen in order to reflect the full taxonomy of birds around the world, and to tweak the automated data filters that screen out questionable or obviously incorrect submissions. The eBird team has also built up a solid network of approximately 400 volunteer data editors to manually check entries that are flagged by the automated data filters as questionable. Most of these volunteer editors are based in the United States and work on data submissions from their own regions (where they are familiar with bird species' abundance and migration); with the expansion, then, comes the acknowledgment that the project will be less able to rely on a human data check in non-North American countries.

Pursuit of grants to further develop the resource. The Lab's Information Science Department has always depended on grants to fund new developments to its various technology projects, and eBird has been particularly active in seeking awards and contracts over the past two years. Kelling cited eBird's recent grant from the National Science Foundation to customise the data submission interface to allow Gulf Coast birders to track the impact of the BP oil spill on bird populations and breeding patterns in the region. The development work needed to add the necessary data fields to eBird also allowed the project team to improve the overall data submission process, making it more flexible and intuitive for users.

2 The costs and revenues presented here are high-level estimates provided by the project leader. The organisation does not typically break out budgets on a project-by-project basis.

3 The app was the subject of a brief review on Gadgetwise, a *New York Times* blog: http://gadgetwise.blogs.nytimes.com/2010/02/23/app-of-the-week-spot-spring-on-the-wing.

Sustainability outlook

Today, the eBird sustainability model seems to be in a relatively strong position. Despite some fluctuations in its revenue streams and the closing of a sponsorship, the project team still has access to sufficient revenue from a mix of sources – including the Lab's endowment and grants, and its kiosk rental and software customisation projects – to meet direct costs and fund new developments. Kelling talks often about the project team's goal of 'launching at least one big new initiative per year'.

Looking ahead, eBird's increases in usage certainly bode well for the resource. In addition, the project team is encouraged by the Lab's management to seek external earned revenue. Any surplus revenue earned can be reinvested in the project (rather than being fed into the Lab's overall budget) – so the incentives are in place for the project team to continue its entrepreneurial efforts. If there is one potentially troubling question for the team, it is about their ability to scale up the network of volunteer data editors who help to clean the data and ensure its integrity for use by researchers.

Lessons learnt over the past two years

- Licensing to a third party can be a cost-effective way to enhance the impact of a resource, but project leaders need to balance the benefits of this against other factors, such as potential lack of control over branding and the relationship with users

- In some cases, the sustainability of a project depends in great part on the sustainability of a larger unit – in the form of the shared staff, resources, and infrastructure that an individual project can draw on

- Organisations can take concrete steps to encourage project leaders to be entrepreneurial, by allowing them to reinvest surplus revenue directly in new development

Interviewee

Steve Kelling, Director of Information Science for the Cornell Lab of Ornithology
21 June 2011, 29 April 2010 and 19 October 2010

This case study update was researched and written by Matthew Loy as part of the Ithaka Case Studies in Sustainability project.

Summary of revenues and costs

(~ = approximately)

	2008-09	2010-11	Comments
Total revenue	**~$300,000**	**~$300,000**	**No significant change in total revenue**
Endowment payouts	37%	33%	
Trail Tracker kiosks rental fees	13%	23%	
eBird customised portals	33%	17%	
eBird sponsorship	17%	-	
Grants	-	27%	
Mobile app share	-	less than 1%	
Total costs	**~$300,000**	**~$300,000**	**No significant change in total costs**
Personnel costs	77%	77%	
Non-personnel costs	33%	33%	
Number of staff	4.25 FTE	4.25 FTE	
In-kind/volunteer contributions	**400 volunteer regional data editors; financial services and office space provided by the Lab of Ornithology**		

Explanatory note

The information presented in this table is intended as a broad picture of revenues and budgeted costs associated with the project, not as a detailed financial report. It does not include in-kind contributions or other unbudgeted items, though these are described where they are known. The financial data, which are presented in the currency in which the project reported the information, were compiled as part of the interview process with project leaders and staff, and in some cases were supplemented with publicly available documents, such as annual reports. Many of the figures are rounded or best estimates. Some leaders preferred not to offer figures at all, but suggested percentages instead. Because of the variability in the way each institution estimated the various categories of revenues and costs, the information presented in the table is of limited value for detailed cross-project comparisons.

JISC Strategic Content Alliance building bridges to digital content

ITHAKA S+R

Electronic Enlightenment: Outreach or Outsource? The Benefits and Challenges of Partnership
Case Study Update 2011
www.e-enlightenment.com

JISC Content   Ithaka Case Studies in Sustainability

In 2008, the Electronic Enlightenment launched efforts to transition to an institutional subscription model, part of its long-term plan for sustaining itself beyond the period of grant funding. Now housed at Oxford's Bodleian Library, and working with Oxford University Press as its sales, marketing and distribution partner, Electronic Enlightenment is still in the process of building its subscriber base, a task made more challenging by the impact of the recession on library budgets. This update reports on the challenges the project team has faced in reaching its revenue goals, and the steps it is taking to further develop its subscription model and the resource itself.

The Electronic Enlightenment (EE) is an online collection of edited correspondence from the early seventeenth century to the mid-nineteenth century, intended to reconstruct the 'world's first global social network'.[1] It began as a research project at the University of Oxford's Voltaire Foundation, with the original goal of digitising critical editions of the works of Voltaire and other authors published by the Foundation. Between 2001 and its public launch in 2008, with funding primarily from the Andrew W. Mellon Foundation, the project expanded its mission to capture the correspondence not just of the well-known *philosophes* of the Republic of Letters, such as Rousseau, Voltaire, and Diderot, but of all others who at some point came into their orbit, including politicians and ordinary people from across Europe, America, and Asia. The database's value lies in its rich interlinking and cross-searching functions, creating an 'extraordinary web of correspondence that marked the birth of the modern world'.[2] As of March 2011, the resource contained over 58,000 letters and documents from over 7,000 correspondents representing 45 different nationalities and 11 languages, and offered a range of search functions, as well as active links to over 50

www.e-enlightenment.com

online resources, including the Oxford Dictionary of National Biography.[3] In recognition of the resource's scholarly value, Electronic Enlightenment received the Digital Award for 2010 from the British Society for Eighteenth-Century Studies.[4]

Original sustainability model (2009)

The intention always has been to transition EE from a grant-funded project to a financially sustainable resource, and to achieve this objective the project leadership built a sustainability model with three elements at its core: 1) generation of revenue through institutional subscriptions; 2) an institutional relationship with the Bodleian Library at the University of Oxford, which would provide a new base
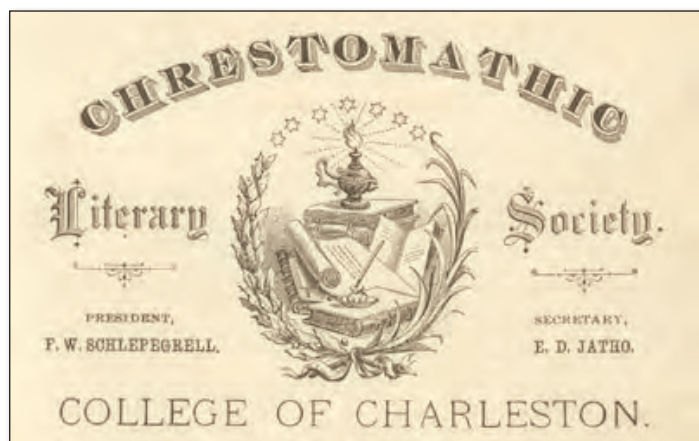
1 K. Kirby Smith, 'Electronic Enlightenment: Subscription-Based Resource Sold Through a University Press' (New York: Ithaka S+R, 2009), **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_CaseStudy_EE.pdf**

2 Electronic Enlightenment website, **www.e-enlightenment.com/info**

3 For a full description of contents and functionality, see **www.e-enlightenment.com/info/about/ee_facts**

4 **www.oup.com/uk/pressreleases/ee**

In 2009, Ithaka S+R published twelve detailed case studies of online digital resources, exploring the strategies project leaders were using to sustain those projects for the long term. All of the case studies have been updated in 2011, to revisit the original sustainability models and see how they have fared over the past two years. To read the original case studies, please visit: **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability**

of operations and support for the project; and 3) a business partnership with Oxford University Press (OUP), which would assume responsibility for sales, marketing, distribution, and customer services. Though part of the Bodleian Library, EE pays for physical space, administrative support including staff, technical design and marketing and sales, as well as for further digitisation as needed.

The project team seeks additional grants for sub-projects to enhance content and functionality in specific ways. A recent grant in partnership with the New York Public Library, for example, supported updating its archive of the letters of Voltaire. As another example, EE has partnered with researchers at Stanford University and the University of Oklahoma on a 'Digging into Data' grant co-funded by the National Endowment for the Humanities, the National Science Foundation, and the Joint Information Systems Committee, in order to improve search functionality and add some new features.[5]

How the model has fared

Reaching its original sustainability goal has so far been a challenge for this project. The original business plan assumed that EE would go live in 2008 and attract between 250 and 300 subscribers within three years. By February 2009, EE had 47 subscribers, and the total was up to 100 at the end of 2010. As of March 2011, the project had more than 120 subscribing institutions, including 65 from North America. Estimated revenue for the resource is £134,000 ($216,000), though as Director Robert McNamee noted, EE is the 'only OUP electronic resource with a 100% renewal rate'.

Project costs in 2008 were £220,000 ($354,000), excluding royalty payments and commissions to OUP, and have remained steady or have been reduced somewhat. Although one new full-time project manager was hired in 2010, the search for a replacement correspondence editor is on hold for budgetary reasons. Going forward, no expenses have

been allocated for data capture or acquisition, since there is a significant backlog of material which still must be added to the site. In 2008, approximately £45,000 ($72,000) was designated for this purpose.

The project is currently operating at a 'hefty' deficit, which is being covered by the Bodleian Library. Although the Library experienced 10% budget cuts in 2010, funds have been earmarked to support EE for the next two years.

Changes in direction and new initiatives

Since the launch of the subscription service in 2008, the priorities of the EE team and its leader, McNamee, have been to improve the value of the resource, re-think some of their business premises, and solidify the relationships with their partners, the Bodleian Library and OUP. Both OUP and McNamee agree that expressing the value of the resource to potential customers has been a challenge.

A new outreach campaign. Going forward, McNamee has obtained approval from the deputy director of the Bodleian to visit 12 key institutions in the United Kingdom to demonstrate the resource for them. He thinks that will make the difference, because these visits will ensure that people will better understand the value of EE. The project team held its first annual colloquium in November, with very good feedback and a large turnout, but McNamee was 'shocked at how many people didn't know' about EE. In addition, there may be more to do to remain in touch with users themselves. While some feedback does come in, McNamee thinks it is likely that many more of these comments go directly to the publisher's site, where he is less likely to see them.

'…libraries are willing to spend more to own a resource outright, rather than pay a subscription rate each year to gain access.'

Additional business model. EE and OUP are developing plans to offer a perpetual-access licence in addition to renewable subscriptions. This is a priority for OUP because it has noticed that this type of purchasing arrangement is preferred in Germany and the Far East, and is gaining in acceptance in the United States, where libraries are willing to spend more to own a resource outright, rather than pay a subscription rate each year to gain access. However, as of early 2011, there were still some technology and rights-clearance issues to address in order to implement this model. And we wonder what the projections concerning pricing and take-up would be, so that this one-time payment model would match or eventually surpass the current revenue that EE is generating through subscriptions.

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5 For more information, see **www.diggingintodata.org/Home/ AwardRecipients2009/DiggingintotheEnlightenment/tabid/177/Default.aspx**

Sustainability dashboard

	2009 Case Study*	2011 Update**	What's Changed?
Content	■ 53,000 letters by 6,000 individuals ■ 230,000 scholarly annotations	■ 58,776 letters by 7,114 individuals ■ 258,408 scholarly annotations	Content is growing
Functionality	■ Cross-searching among and between letters by keyword, name, nationality, occupation, etc	■ Re-launched winter 2011 as 'EE2' ■ External links to 50 scholarly sources ■ New MARC records ■ Link to Google Earth ■ Digital publishing platform for online publishing	Increased functionality
Sustainability Model	■ Subscription fees ■ Host institution support	■ Subscription fees ■ Host institution support	Same as 2009
Costs	■ £220,000 ($354,000) direct ■ £45,000 ($72,000) for data capture and acquisition	■ Direct costs about the same ■ No costs budgeted for data capture and acquisition	Costs remain steady, maybe even lower
Revenues	■ (Subscriptions not yet available)	■ Estimated £134,000 ($216,000)	Revenue not meeting targets
Impact	■ (Subscriptions not yet available)	■ 120+ subscribers with 100% renewal rate ■ Award from British Society for Eighteenth-Century Studies (BSECS)	
Sustainability Bottom Line	■ Transitioning from grant-funded to income-generating model ■ Expectation of sufficient subscription income to cover operating budget	Strong support from the host institution has been instrumental, as initial efforts with a subscription model have not yet reached desired targets. Exploring new perpetual-access licensing model	

* These costs and revenues reflect EE's 2008 fiscal year.

** These costs and revenues reflect EE's 2010 fiscal year.

Enriching the content base... through new partnerships.
EE is pursuing a preliminary offer from a music organisation to provide a fellowship for a researcher to edit correspondence between composers from this period, and it is in discussion with the History of Science Department at Oxford and with the Wellcome Library in London about forming working groups for science and medicine. Finally, EE aims to develop translation programmes in the United States in which graduate students would assist in converting content to other languages.

Enriching the content base... through crowd-sourcing.
To further build the database, EE expects to add correspondence that may not yet have the level of scholarly annotation that has thus far been a hallmark of the resource. The project leaders have invited the community not only to assist in locating this correspondence in special collections, but also to add scholarly commentary and other born-digital material to it. They have created a digital publishing platform which will provide a complete workflow for this online publishing. The primary aim of this initiative is to build community involvement for the resource, but it will also

yield some cost-savings benefits. To date, six collections of correspondence have been offered to EE, bypassing traditional publication through an academic press. A review board will be created to assess the material. It is a proof in practice of the growing desire for academic participation in the development of such resources.

Enhancing features and functionality. EE relaunched its website in 2010 to emphasise functionality that makes it more useful to libraries, including new MARC records and more interconnections with WorldCat, a large network of library content and services. For the end user, the project has added a 'map room' that offers high-quality images of historical maps, as well as the ability to link to Google Earth to find locations that appear in correspondence. The site also includes an EE classroom, with resources to help teachers use the collection.

Increasing discoverability. There is some concern that the paywall hinders Google from crawling the site's content. While EE wants to provide free access to enough materials 'to give people a sense of what is inside', its managers realise

that in order to generate income from subscriptions, they have to restrict access to the bulk of the content to paying subscribers.. One new effort involves moving a blurb about each person cited in the correspondence to outside the paywall, but for the most part EE still plans to restrict access to the edited versions of the biographies.

Sustainability outlook

Today the Electronic Enlightenment is in an interesting position. The critical response to the resource has been excellent. However, it has not yet become a 'must-have' purchase for libraries and is not self-sustaining; it is operating at a deficit, which is currently covered by the Bodleian Library. EE's management realises that the success of niche resources depends on the ability of the scholarly community to convince academic libraries that they and their students need to have those resources.

EE's business partnership with OUP has proven to be an efficient way to market the project. However, in the long run, such a distribution arrangement might also inadvertently have the effect of distancing the project team from direct and very valuable interaction with customers and end users of the service. Therefore EE has to create new avenues to stay in touch with its customers beyond OUP's marketing efforts.

Looking ahead, the project team's efforts to develop new initiatives and increase awareness will be quite important. By launching new outreach campaigns and increasing discoverability and functionality, EE hopes to create awareness in the scholarly community and to increase its customer base.

Lessons learnt over the past two years

- Strong support from the host institution is vital, particularly when revenue models are in their early days and not yet reaching targets

- Selling subscriptions is hard work and requires an insider's understanding of the needs and interests of the target audience and how best to communicate with them

- Even when content is licensed to a third party, it may be very important to maintain ties both to customers and to end users, both as a means of receiving feedback and for purposes of outreach

Interviewees

Robert McNamee, Director, Electronic Enlightenment, University of Oxford, 14 December 2010

Rebecca Seger, Library and Online Sales Director, Oxford University Press USA, 16 March 2011

This case study update was researched and written by Nancy L. Maron as part of the Ithaka Case Studies in Sustainability project.

Summary of revenues and costs

	2008	2010	Comments
Total revenue	**n/a**	**£134,000**	**In 2009, subscription service had not yet been launched**
Subscription fees	n/a	100%	
Total costs	**£220,000**	**n/a**	**Costs are the same or possibly lower**
Personnel costs	60%	84%	
Non-personnel costs	40%	16%	
Number of staff	2.0 FTE	2.0 FTE	
In-kind/volunteer contributions	**n/a**	**n/a**	

Explanatory note

The information presented in this table is intended as a broad picture of revenues and budgeted costs associated with the project, not as a detailed financial report. It does not include in-kind contributions or other unbudgeted items, though these are described where they are known. The financial data, which are presented in the currency in which the project reported the information, were compiled as part of the interview process with project leaders and staff, and in some cases were supplemented with publicly available documents, such as annual reports. Many of the figures are rounded or best estimates. Some leaders preferred not to offer figures at all, but suggested percentages instead. Because of the variability in the way each institution estimated the various categories of revenues and costs, the information presented in the table is of limited value for detailed cross-project comparisons.

JISC
Strategic Content Alliance
building bridges to digital content

ITHAKA S+R

Hindawi Publishing Corporation: Growing an Open-Access Contributor-Pays Business Model

Case Study Update 2011

www.hindawi.com

JISC Content   Ithaka Case Studies in Sustainability

The original case study in 2009 explored Hindawi's transition from a subscription-based journal operation to an all open-access publisher, with the bulk of revenues derived from fees from authors rather than subscription charges. Because the company's growth depends on the number of articles published each year, the company changed its focus from marketing to end users to developing new products, entering into partnerships with societies and other publishers, and creating a publishing experience for authors and editors that would encourage them to contribute their articles to Hindawi's journals. Over the past two years, the company's leadership has continued to develop programmes to launch new journals, while trying to maintain a high level of quality and to shorten the time between article submission and publication.

Hindawi Publishing Corporation is a for-profit publisher of peer-reviewed journals in science, technology, medicine and social science, founded in 1997 as a subscription-based business.[1] After experimenting with a hybrid subscription–open-access model, Hindawi evolved into an all open-access publisher, with revenues generated by article processing charges. Hindawi originally specialised in mathematics and engineering, but moved quickly into biomedicine, perceiving it as a growth area in journals publishing.

Original sustainability model (2009)

As an open-access publisher, Hindawi uses the 'contributor-pays' revenue model, by which authors pay for the costs associated with the publication of their articles, usually with the help of research grants or support from their academic institutions. Hindawi made the transition to this model over the course of several years, charging article processing fees ranging from $0 to $1,500, depending on the popularity and

www.hindawi.com

costs of the journals.[2] To achieve its financial goals, Hindawi has had to shift its emphasis from building a subscriber base to increasing the volume of articles published and setting fees that cover costs.

On a smaller scale, Hindawi also offers an institutional membership programme: institutions pay a flat yearly subscription fee, and in return, scholars at that institution are able to contribute articles without having to pay the author submission charge. Only 25 institutions participate in this programme, and these memberships provide only 1–2% of Hindawi's total revenue.

In 2010 Hindawi had revenues of over $4 million, growing from just over $2 million in 2008. The growth was fuelled both by new journals and by the performance of previously

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1   Nancy Maron, 'Hindawi Publishing Corporation: The Open Access Contributor Pays Model' (New York: Ithaka S+R, 2009), **www.ithaka.org/ithaka-s-r/research/ ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_CaseStudy_ Hindawi.pdf**

2   For a discussion of this transition, see Paul Peters, 'Case Study: Going All the Way: How Hindawi Became an Open Access Publisher', *Learned Publishing* 20:3 (July 2007), 191–95.

launched journals, according to Paul Peters, Head of Business Development at Hindawi. The company's journals received over 23,000 submissions in 2010, and they estimate, based on data from the first eight months of 2011, that they will receive approximately 40,000 submissions in 2011, of which 13,000–14,000 will be accepted. This represents a significant increase in submissions from 2008, when Hindawi received about 7,600 submissions, but Peters says that the average acceptance rate for Hindawi journals has remained between 30% and 35%, and they expect this to continue moving forward.

'Perhaps the most significant single factor in Hindawi's sustainability model is its location in Cairo, Egypt, which allows the company to draw on a large pool of well-educated workers, at salary levels well below those found in Europe and the United States.'

Perhaps the most significant single factor in Hindawi's sustainability model is its location in Cairo, Egypt, which allows the company to draw on a large pool of well-educated workers, at salary levels well below those found in Europe and the United States. As a result, Hindawi is able to maintain a staff of over 450 people, with considerable human resources devoted to business development, editorial functions, and technology development.

How the model has fared

When we first began updating this case study, we did not expect that Hindawi would have faced challenges to the same extent as the other projects we studied: as an open-access publisher, Hindawi was insulated to some extent from the economic downturn of the past several years, in a way that subscription-based journal publishers may not have been. Because Hindawi depends on author submission charges rather than institutional subscriptions, decreases in libraries' materials budgets should have had a limited impact on Hindawi's revenue model. Indeed, Hindawi's revenues increased by 80% between 2008 and 2010.

In early 2010, protests in Egypt led to the resignation of the country's president, amid a wave of general unrest in the Middle East. Nearly all of Hindawi's staff are based in Cairo. If political instability in Egypt becomes a longer-term problem, companies in Egypt, including Hindawi, could be faced with a more challenging environment for day-to-day operations.

Changes in direction and new initiatives

According to Peters, Hindawi's strategy for growth depends on new journal development as well as on building the prestige of its existing journals. Over the past two years, the company has expanded and launched initiatives that help Hindawi to accomplish both of those goals.

A selection of journals from www.hindawi.com

Sustainability dashboard

	2009 Case Study*	2011 Update**	What's Changed?
Content	■ 160 journals ■ 2,500 published articles	■ 300 journals ■ 13,000 published articles	420% increase in number of journal articles published per year
Functionality	■ Custom-built platform with a manuscript tracking system	■ Journals covered by abstracting and indexing services	Added functionality
Sustainability Model	■ Author fees ■ Print editions of Hindawi's e-journals ■ Institutional memberships	■ Author fees ■ Print editions of Hindawi's e-journals ■ Institutional memberships	Same model. Author fees provide the bulk of Hindawi's revenue
Costs	$2.0 million	$3.4 million	+ 70%
Revenues	$2.2 million	$6.0 million	+173%
Impact	■ 7,600 articles submitted	■ Est. 40,000 articles will be submitted	■ Est. +426% growth in submissions
Sustainability Bottom Line	Relatively low labour costs help the project to sustain operations entirely through author-pays charges; a model based on contributor fees may motivate the company to launch new journals quickly.		Hindawi continues to grow and launch new journals quickly, but this strategy may not sustain the company over the long term if potential contributors sense a low level of quality.

* These costs and revenues flect Hindawi's 2008 fiscal year.

** The costs, revenues, and numbers of published and submitted articles are estimates for calendar year 2011, based on the first eight months of the year.

New journal development. Because Hindawi's revenue model depends on the number of articles published, the company experiments constantly with ideas for new journals, with a focus on launching those journals rapidly. The company plans to launch approximately 100 new journals in 2011, which are expected to receive approximately 5,000 total submissions by the end of the year. All of these journals will fall under two relatively new editorial models for Hindawi: one is the Community Journals programme, for which large volunteer editorial boards of 30 to 100 scholars oversee the peer-review process for submitted manuscripts, and the other is the International Scholarly Research Network, discussed below.

Shortening the time from submission to publication. According to Peters, one of the major reasons that scholars value Hindawi is that its editorial models shorten the time between the submission of an article and a decision on whether or not to publish that article. To accelerate this process (and to encourage more scholars to submit their work), Hindawi introduced another editorial model in 2010, the International Scholarly Research Network (ISRN). ISRN is a series of peer-reviewed, open-access journals designed to provide a speedier peer-review process for submitted articles. Peters said that the goal for this model is an average review time of 28 days (compared to a three-month review cycle for other Hindawi journals). Each journal in this model draws on an editorial board of between 100 and 300 scholars, who commit to reviewing manuscripts within two weeks of submission. Five editorial board members review each submission; if

there is disagreement among the editors, the manuscript enters a second phase of review in which the editors read all of the editorial reports and have the opportunity to alter their initial decisions. To date, more than 3,000 articles have been submitted to HIndawi's ISRN journals. (It bears noting that 17 of the 48 journals launched under this model currently accept articles free of charge, which is likely to increase overall submissions.) Peters posits that volunteer editors will continue to participate because of 'the prestige of being associated with a well-regarded journal, particularly one that embraces an open-access mode'.

Indexing in PubMed Central and Web of Science. Building a credible reputation for a journal is a slow process, since it can take three to five years for science journals to begin to appear in citation and impact factor services. In 2009, nearly all of Hindawi's journals were too new in their respective fields to be included in these indices, but as of 2011, 170 of Hindawi's journals are included in Scopus, and 25 are included in Web of Science. Both of these services provide article-level indexing and citation analysis. An additional 90 Hindawi journals are now included in PubMed, an indexing service for biomedical scholars, and the final published versions of all articles in these journals are made freely available on PubMed Central, an open-access repository for biomedical articles funded by the National Institutes of Health. Peters feels that inclusion of these articles in PubMed Central will significantly increase the visibility of Hindawi's content.

Sustainability outlook

Today, Hindawi's sustainability model is closely tied to quantity: the more articles they publish, the higher their revenue base. In that sense, given the rapid growth in article submissions since we last studied Hindawi (a 426% increase), their model is in a strong position. Peters notes that Hindawi is 'experimenting all the time', and the community journals and ISRN journals are examples of the company's work to test new ways to bring in content. With that said, Hindawi's willingness to rapidly launch new journals carries a risk: that the company will fail to strike a balance between volume of content and quality of content. In a business model that generates more revenue by publishing more articles, the company must be vigilant about the quality of the work it publishes, or it risks damaging the prestige of its journals.

Looking ahead, Hindawi may need to pay special attention to its authors and volunteer editors in order to continue growing. All of Hindawi's journal models depend on a large number of volunteer editors – in the case of the company's ISRN journals, between 100 and 300 scholars participate on each editorial board. Although each scholar may be called upon to review an article submission only infrequently, convincing scholars to participate in the first place carries time costs for Hindawi's staff. It remains to be seen whether an approach that requires so many volunteer editors will scale in the future. Similarly, the company must continue to attract a high volume of authors, and so those authors must be assured that the journals attract a large readership.

Lessons learnt over the past two years

- The ability to experiment with new revenue models is important for any project

- If a business model depends on volunteers, project leaders must effectively communicate the value of participation to the volunteers and have a contingency plan if participation tapers off

- Particularly in an author-pays model, project leaders need to strike a balance between quality and quantity; having robust measures in place to control for quality (in regard to which an impact factor might play a part) will be crucial for maintaining the ultimate value proposition of the service for scholars

Interviewee

Paul Peters, Head of Business Development, 17 February 2011; emails of 15 February 2011 and 17 July 2011

This case study update was researched and written by Matthew Loy as part of the Ithaka Case Studies in Sustainability project.

Summary of revenues and costs

	2008	2011 Projections	Comments
Total revenue	**$2,200,000**	**$6,000,000**	**+173%**
Article processing charges	91%	94%	
Sales of books and print journals and other service fees	9%	6%	
Total costs	**$2,000,000**	**$3,400,000**	**+70%**
Personnel costs	50%	47%	
Non-personnel costs	50%	53%	
Number of staff	265 FTE	450 FTE	+32%
In-kind/volunteer contributions	**Journal editors, members of editorial boards, and peer reviewers volunteer their time**		

Explanatory note

The information presented in this table is intended as a broad picture of revenues and budgeted costs associated with the project, not as a detailed financial report. It does not include in-kind contributions or other unbudgeted items, though these are described where they are known. The financial data, which are presented in the currency in which the project reported the information, were compiled as part of the interview process with project leaders and staff, and in some cases were supplemented with publicly available documents, such as annual reports. Many of the figures are rounded or best estimates. Some leaders preferred not to offer figures at all, but suggested percentages instead. Because of the variability in the way each institution estimated the various categories of revenues and costs, the information presented in the table is of limited value for detailed cross-project comparisons.

L'Institut national de l'audiovisuel: Balancing Mission-based Goals and Revenue Generation

Case Study Update 2011

www.inamediapro.com | www.ina.fr

L'Institut national de l'audiovisuel (INA), the French national archive for audiovisual materials, is tasked with preserving France's audiovisual heritage through ambitious goals for digitising, preserving, and sharing this content. In addition to the government funding that INA receives, its commercial activities support this work. This update examines Inamédiapro, the commercial rights licensing service, and ina.fr, the public website, and their complementary ways of monetising the rich archival holdings in recent years, through a close examination of user needs and strategic partnerships. While both services suffered some declines in revenue within the period studied, they have since rebounded, in part due to consistent attention to serving users and ongoing innovation with new ways to deliver audiovisual content.

www.inamediapro.com

The National Audiovisual Institute (L'Institut national de l'audiovisuel, or INA) houses an enormous collection of French television and radio recordings from the past 70. This rich collection, which contains everything from coverage of local town meetings to speeches by General de Gaulle and performances by Georges Brassens, includes close to four million hours of recorded material, in two distinct categories: 1) the audiovisual archives of France's public stations, including radio broadcasts from the 1930s and television footage dating from 1940; and 2) France's legal deposit archive, consisting of broadcasts from 120 public and private radio and television stations, a collection which grows by 800,000 hours each year.[1] By 2015, France expects to be the first country to save 100% of its audiovisual memory.[2]

The two divisions of INA discussed in this study, Inamédiapro and ina.fr, utilise these vast holdings in different but complementary ways. Inamédiapro, the business-to-business rights-licensing group, today offers 500,000 digitised hours of television and 300,000 hours of radio broadcasts to a professional audience including advertising agencies, broadcast companies and video and music producers. As of May 2011, Inamédiapro had 11,000 registered customers, up from 8,000 in 2009.

The public face of the organisation, ina.fr, serves a broader mission of providing public access to a pool of rights-cleared content – 31,000 hours (up from 25,000 hours in 2008). This unit places audience development at the heart of its mission, in addition to generating revenue through a range of innovative programmes – with the objectives of building an audience for the content, and monetising it to cover the costs of the division. As of May 2011, the website was recording

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1   Nancy L. Maron, 'L'Institut national de l'audiovisuel: Free Content and Rights Licensing as Complementary Strategies' (New York: Ithaka S+R, 2009), www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_CaseStudy_INA.pdf

2   See www.institut-national-audiovisuel.fr/nous-connaitre/entreprise/histoire.html

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In 2009, Ithaka S+R published twelve detailed case studies of online digital resources, exploring the strategies project leaders were using to sustain those projects for the long term. All of the case studies have been updated in 2011, to revisit the original sustainability models and see how they have fared over the past two years. To read the original case studies, please visit: www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability

over 1.7 million visits per month, compared to 1.5 million in 2008 and had annual revenues of €1,300,000, up from €1,100,000 in 2008.[3]

Original sustainability model (2009)

INA receives the largest share of its funding from the French government; the terms of that funding are set out in five-year contracts with the Department of Culture and Communication. The latest agreement was renewed in 2010 on terms similar to those of the previous contract: government funding is guaranteed for 66% of INA's operating budget of €127,600,000, and a 34% contribution from INA is required, to be earned through its own commercial activities. INA determines how the government funds are allocated within the organisation, as well as the financial expectations for each individual division.[4]

Inamédiapro, the professional licensing service, has accounted for just over a third of INA's earned revenue in the past, earning €14,500,000 in 2009 against direct costs of €8,080,000.[5] The unit benefits from in-kind contributions from other departments in the organisation; costs for the legal team who handle rights clearance issues, for example, are not charged back.

The website ina.fr, on the other hand, is considered valuable to INA as the public face of the organisation, and as a laboratory for experimenting with different revenue models. Its efforts draw users to the organisation's many facets, including the commercial licensing business and the educational division as well as the public archive. INA continues to support investment and experimentation within ina.fr. Though in 2009 ina.fr was not covering its direct costs, its greater value to the larger organisation was mission-based: drawing a large audience to benefit from the vast holdings of the archive.

In 2009 both units displayed certain mindsets and practices that we felt boded well for the future: Inamédiapro had recently revamped its processes to be much more responsive to its commercial customers and had shortened its response time. The leader of the ina.fr website had cultivated an environment that supported experimentation, launching revenue-generating projects at low cost, some of which had turned out to be successful. Both units had built strong partnerships with complementary services; Inamédiapro with content holders, and ina.fr with other media outlets, such as the daily newspaper *Le Monde* and the video-sharing site DailyMotion, which vastly increased the reach of their content.

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3   Maron, op cit, p.5.
4   The current 'Contrat d'objectifs et de moyens entre l'Etat et L'Ina' is available at **www.ina-entreprise.com/sites/ina/medias/upload/ina-en-bref/contrat_dobjectifs_moyens3.pdf**
5   Other sources of revenue generation at INA come from their education division, archiving services, publishing efforts, and research activities.

How the model has fared

Overall, INA has had a good couple of years; the budget as dictated by the Department of Culture and Communication for the period 2010–2014 signalled an increase of government funding of 5.4%, to €92 million. As part of the recent major investment in digitisation by the French government, INA was one of the first organisations to receive funding.

All the same, neither of the two divisions we studied last time, ina.fr and Inamédiapro, has been insulated from the impact of a poor economy and the lower purchasing powers of struggling customers in recent years.

In 2007 ina.fr earned €300,000 from advertising, but the next few years were difficult for a variety of reasons, and ad revenues dropped precipitously thanks to a slow economy and specific challenges to the French advertising market. By 2010 the website was on an upswing, earning €160,000 from advertising, which Roei Amit, Head of Multimedia Publishing at INA, characterises as 'satisfactory, given the market'. The objective is to reach earnings of €220,000 in 2012. Amit says this would be a 'good supplement' but that 'ads will never be a major part of our revenue'. Otherwise, the mix of revenue-generating activities the website has used in the past – sales of their publications, downloads of video and audio clips, and custom DVDs – has helped to support activities of the site.

Inamédiapro, too, suffered somewhat of a setback. After generating €14.5 million from its licensing business in 2008 (as reported in the original case study), in 2009 it experienced a sharp decline – €2.5 million – due to two main reasons:

- The economic slowdown and its impact on the television advertising market that has led to a decline in revenue and producing projects for their clients.

- The reform of French public television (a major customer), which has stopped some projects.

But by taking a proactive approach, offering innovative payment schedules and discount schemes and adding an FTP delivery system to their high-quality services, thereby lowering costs for their customers and speeding up delivery times, by 2010 Inamédiapro had rebounded from the precipitous drop and reported revenues of €13 million. Stéphane Cochet, Sales Manager at Inamédiapro, underlines the emphasis the team tries to place on customer service, noting that they actively promote the philosophy that when their customers are in difficulty, 'INA is a provider that can help them'.

New directions and initiatives

As an organisation, INA devotes a great deal of effort to understanding its users, both its commercial clients and those who are part of the general public, and it offers services designed to expand its user base and enhance the customer experience:

Sustainability dashboard

In this case study, we examine two separate units of France's National Audiovisual Institute, ina.fr and Inamédiapro.com.

		2009 Case Study*	2011 Update**	What's Changed?
Content	Inamédiapro	■ 500,000 hours of digitised television and radio broadcasts	■ 500,000 hours of digitised television ■ 300,000 hours of digitised radio broadcasts	Strong content growth
	Ina.fr	■ 25,000 hours of digitised television and radio broadcasts ■ About 100,000 separate audio and video clips	■ 31,000 hours of digitised television and radio broadcasts ■ About 330,000 separate audio and video clips, including new archive of 200,000 advertisements	Strong content growth
Functionality	Inamédiapro	■ Log-in intranet for registered professionals ■ Registered users have access to the same tools as INA staff	New user interface launched in April 2011	New functions added, and some existing ones have been upgraded
	Ina.fr	■ The content is browsable by thematic topic ■ DVD on demand as one paid service	■ New interface launched in 2009. ■ Several new applications in 2010	Improved functionality
Sustainability Model	Inamédiapro	Rights licensing	Same as 2009	
	Ina.fr	■ E-commerce ■ Pay per download ■ DVD on demand ■ Publishing ■ Advertising ■ Video on demand	■ E-commerce ■ Pay per download ■ DVD on demand ■ Publishing ■ Advertising ■ Mobile ■ Subscription SVoD	Two new revenue sources added to the mix (mobile, video on demand) and increased merchandising (photo on demand)
Costs	Inamédiapro	€8,080,000 ($10,665,600)	approximately €7,500,000 ($10,744,000)	-7%
	Ina.fr	€1,350,000 ($1,782,000)	Same	
Revenues	Inamédiapro	€14,500,000 ($19,140,000)	€13,000,000 ($18,600,000)	-10%; but revenue is growing again after two years of decrease and a low of €12,000,000 ($17,200,000) in 2009
	Ina.fr	€1,100,000	Approximately €1,300,000	+18%
Impact	Inamédiapro	8,000 registered users	11,000 registered users	Customer base is growing
	Ina.fr	4 million page views per month, 1.5 million videos streamed per month and 1 million visits per month from 600,000 unique users	5.8 million page views per month, 3.2 million videos streamed per month and 1.7 million visits from 900,000 unique visitors per month	Website usage is growing
Sustainability Bottom Line (for both units)	Attention to metadata makes trove of content highly valuable to users, and massive government investment in INA as a whole is key to sustainability		INA benefits from the efforts of several revenue strategies to supplement the core funding from the French government. Inamédiapro continues to return a profit to the parent organisation; ina.fr does not fully cover its expenses, but continues to innovate with business models and serves the organisation's mission to offer content to the public	

* These costs and revenues reflect the 2009 fiscal year.

** These costs and revenues reflect the 2011 fiscal year.

- **Website**: In 2009, ina.fr re-launched its website, introducing a more dynamic interface, including 'most viewed' and similar referral features. Previously, ina.fr was the URL for the homepage of the organisation itself, a page that included information about its governance and strategy as well as links to other sites, including Inamédiapro and the public content site, called 'Archives pour tous'. By making the public-facing site more dynamic and a more obvious starting point[6] INA hoped to draw greater audience directly to the content.[7] And it is not resting on its laurels; as of July 2011, ina.fr is again working on revisions to the interface, with previews of the new site slated for March 2012.
  In May 2011, Inamédiapro launched a new version of its website that includes more text, video and audio content, including more customer-friendly promotional videos illustrating more ways in which potential customers can consider finding and using the content INA holds. This site offers a referral ('See also') function to help users refine their searches and find additional points of entry into any topic they are researching. Four new search modes make searches faster and more detailed by offering a range of working methods for each user, for laymen as well as for experts. The new website also incorporates a new media player for higher-quality viewing and an upgraded system for creating excerpts second by second.

- **Focus on users**: Ina.fr has long demonstrated attention to users, including a willingness to deliver video content to them wherever they are, regardless of the devices they are using. In 2009 ina.fr partnered with DailyMotion to deliver content via the popular video-sharing site, as well as with *Le Monde*. This strategy has continued. To date, while ina.fr has chosen to defer developing smart phone applications, it has formed strategic partnerships with companies with the technology to reach these viewers.

- **Partnership**: INA recently entered into a formal partnership with DailyMotion, France's most popular video-sharing site, to offer over 50,000 video clips to their approximately 72 million unique monthly visitors.[8] This helps INA to share its content more widely, while also benefiting from DailyMotion's advertising sales expertise.

- **Facebook**: Ina.fr has developed a proactive Facebook strategy, reaching an agreement to be a video provider to that site. It adapted the INA Player to allow content to be visible directly on Facebook without having to follow a link. As of September 2011, ina.fr currently has more than 17,000 Facebook fans and expects this number to more than double by 2012.

'While ina.fr has been cautious about not jumping at every new trend, it has built a reputation for engaging quickly with new technologies.'

New services: While ina.fr has been cautious about not jumping at every new trend, it has built a reputation for engaging quickly with new technologies. Autumn 2011 will see the development of smartphone apps, timed to be ready for major events, including the 2012 French presidential election. And INA has also chosen to invest in the new Connected TV platform, and has already launched four applications using free video content with TV manufacturers Samsung, Philips, Sony and Toshiba.[9] Other new services launched over the past two years include:

- **SVOD (Subscription Video on Demand)**: Based on the proposition that people prefer to watch television content on their televisions, ina.fr has invested in developing a new platform for the online delivery of their content through internet providers, building applications that allow viewers to access programmes through their cable boxes. The service, called INA Premium, which was launched with two out of four internet providers in May 2011, makes 100 hours of thematic programming available on an on-demand, pay-per-view basis, or for a subscription of €3.99 per month, with 25 hours to be refreshed each week.[10] As of May 2011, the offering on the market has attracted several hundred subscribers, with projections of several hundred more each month. Ina.fr shares revenue with the distributing internet service providers with whom they now partner, employing, on average, a 50/50 split. While the organisation does not expect to earn a great deal of revenue from this service in the short term, ina.fr management sees this as a long-term investment which allows them to tap into a large new audience – 14 million households – with the potential to become a source of revenue in the future.[11]

- **DVD on Demand**: Launched shortly before the original case study was published, this innovative experiment – which allows people to create custom physical DVDs from the digital content available on the ina.fr site – has now become a permanent offering of the website.

- **Photograph collection**: As part of the INA 'Boutique', customers can order posters, postcards, calendars and other products derived from INA's extensive photography collection. This initiative has not generated much revenue yet, but the investment in the service was low and it is considered an experiment.

6 'Le site de l'INA change de visage', L'Express.com, June 25, 2009: **www.lexpress.fr/actualite/high-tech/le-site-de-l-ina-change-de-visage_770253.html**

7 In July 2011, the INA corporate site re-launched as well: **www.institut-national-audiovisuel.fr/nous-connaitre/entreprise/edito.html**; **www.institut-national-audiovisuel.fr/presse/pdf/689.pdf**

8 'Dailymotion accueille la formidable base d'archives vidéo de l'Ina', press release, 20 October 2010; available at **http://press.dailymotion.com/fr/wp-content/uploads/CP-Dailymotion-INA-20.10.2010.pdf**

9 **www.rapidtvnews.com/index.php/rtvn-francaise/nouvelles/les-images-de-lina-arrivent-sur-les-tv-connectees-philips.html**

10 **www.numericable.tv/vod/boutique/INA**

11 **http://cblog.culture.fr/2011/05/03/les-images-de-l%E2%80%99ina-sur-les-televisions-connectees**

Partnerships. Creating partnerships was a relatively new initiative for Ina in 2008, but it has taken on increased importance in subsequent years. Ina considers these arrangements a key strategy for expanding the content base for their commercial clients, but now also negotiates for rights on behalf of the entire organisation so that INA can develop a range of additional products for general audiences. The sports world has been a particularly strong area for partnerships, because the sports federations see collaboration with INA as the best way to promote and distribute their footage. In addition to earlier arrangements with the IOC, the Tour de France and the French Open tennis tournament, in 2010 Ina entered into relationships with the French Federation of Soccer and the French Federation of Rugby. It has also added 300 hours of high-definition images from the collection of Yann Arthus-Bertrand, a French environmentalist and documentarian known for his aerial photography. Looking ahead, the organisation hopes to increase its partnerships with French and foreign production companies to increase access to historical content and popular, contemporary formats such as live and variety shows, talk shows and short programmes.

Governance. In May 2010, Emmanuel Hoog was replaced as President of INA by Mathieu Gallet, a choice that was contested by some at the time and has continued to stir some controversy.[12] Among the concerns voiced in a recent article in *Marianne* are that his approach is more attuned to generating profit and less focused on the mission-based goals of the organisation.[13] A plan, ultimately rejected, to move INA from the site it has occupied since the 1980s, in an eastern suburb of Paris, to the west of Paris, where many of the larger media companies are located, was met with strong opposition, including a protest by 150 of its 1,000 employees.[14]

Sustainability outlook

Today, INA continues to successfully balance its mission and the need to generate revenue through the activities of Inamédiapro and ina.fr, two complementary services. Making audiovisual content findable and useful online requires tremendous investment. INA's managers have understood that images alone have little value if they are not contextualised and made available to the public. Their strategic decisions are based on the following considerations:

- *Focus on users, not on innovation for innovation's sake*: Ina.fr determined that users wanted to access content via mobile devices, but this did not mean that ina.fr needed to lead the charge in developing new software to do this. Rather, by creating strategic partnerships with enterprises

that already maintain platforms for various electronic devices, ina.fr is able to focus on content development and building a user base – areas in which it excels – rather than on developing technology, which is costly and changes quickly. Similarly, Inamédiapro has continued to pay attention to user needs and to shape services designed to enhance the experiences of its users and customers.

- *Don't overlook the obvious*: Ina.fr's successful DVD on Demand experiment grew out of the observation that DVD sales were up, even as more people were online. In the same spirit, the upcoming SVOD initiative is based on the assumption that people will want to watch television content … on their televisions.

Looking ahead, both ina.fr and Inamédiapro are likely to remain important parts of the INA sustainability strategy. Maintaining the right balance of revenue generation and mission-serving open content, though, has recently been a challenge, at least in the eyes of some observers. Going forward, maintaining the mission goals of preservation and access will be very important in assuring INA's role as a cornerstone of France's audiovisual heritage.

Lessons learnt over the past two years

- Combining a public mission (offering open content) and commercial activities is possible, particularly when products are clearly differentiated

- Learning from users – what they need, where they go for content, how they want and need to use it – is a powerful way to shape offerings

- Partnerships can be effective in furthering mission goals, without taking on expensive development risks

- For any project that must compete –for customers, for users, for attention – in the marketplace, keeping a close eye not just on what conditions are today, but how they are likely to develop, is essential

Interviewees

Roei Amit, Head of Multimedia Publishing, INA, 25 February 2011 and 29 June 2011

Stéphane Cochet, Marketing and Sales Manager, INA, 29 March 2011

This case study update was researched and written by Nancy L. Maron as part of the Ithaka Case Studies in Sustainability project.

12 www.lepoint.fr/chroniqueurs-du-point/emmanuel-berretta/ina-mathieu-gallet-nomme-president-26-05-2010-459110_52.php

13 www.marianne2.fr/Exclusif-l-INA-au-bord-de-la-crise_a200841.html and www.marianne2.fr/INA-Mathieu-Gallet-toujours-sur-la-sellette_a205014.html?com#comments

14 http://bry.citoyens.com/2011/lina-va-t-il-quitter-lest-parisien,07-04-2011.html

Summary of revenues and costs: ina.fr

	2009	2011	Comments
Total revenue	**€1,100,000**	**€1,300,000**	**+18%**
Advertising	27%	21%	
Video downloads	27%	29%	
DVD on Demand programme	18%	15%	
Hypermedia partnerships	27%	29%	
Subscription Video on Demand (new in 2011)	n/a	5%	
Photographs/INA Boutique	n/a	1%	
Total costs	**€1,350,000**	**€1,350,000**	**+%(Note: costs do not include royalties paid to rights holders)**
Personnel costs	78%	78%	Now covering costs of ten full-time tech staff, up from six in 2009. Editorial staff size remains the same
Non-personnel costs	22%	22%	
Number of staff	21 FTE	21 FTE	
In-kind/volunteer contributions	**Costs related to scanning, metadata creation and transcriptions, hosting, IT support, and rights clearance are not charged to this division; only six out of ten programmers are charged to ina.fr**		**Now, all ten programmers are covered directly by ina.fr**

Summary of revenues and costs: Inamédiapro

(~ = approximately)

	2009	2011	Comments
Total revenue	**€14,500,000***	**~€13,000,000**	**-10%**
Rights licensing	100%	100%	
Total costs	**€8,080,000**	**~€7,700,000**	**-7%**
Personnel costs	46%	50%	
Non-personnel costs	54%	50%	
Number of staff	71 FTE	68 FTE	Over 90% of staff involved in sales and marketing
In-kind/volunteer contributions	**Costs related to scanning, metadata creation and transcriptions, and rights clearance are not charged to this division**		

Explanatory note

The information presented in these tables is intended as a broad picture of revenues and budgeted costs associated with the project, not as a detailed financial report. It does not include in-kind contributions or other unbudgeted items, though these are described where they are known. The financial data, which are presented in the currency in which the project reported the information, were compiled as part of the interview process with project leaders and staff, and in some cases were supplemented with publicly available documents, such as annual reports. Many of the figures are rounded or best estimates. Some leaders preferred not to offer figures at all, but suggested percentages instead. Because of the variability in the way each institution estimated the various categories of revenues and costs, the information presented in the table is of limited value for detailed cross-project comparisons.

* Includes global turnover for marketing and sales divisions, including footage sales, sales of television programmes and sales to publishers.

JISC

Strategic
Content
Alliance

building
bridges
to digital
content

ITHAKA S+R

The National Archives (UK):
Enhancing the Value of Content
through Selection and Curation

Case Study Update 2011

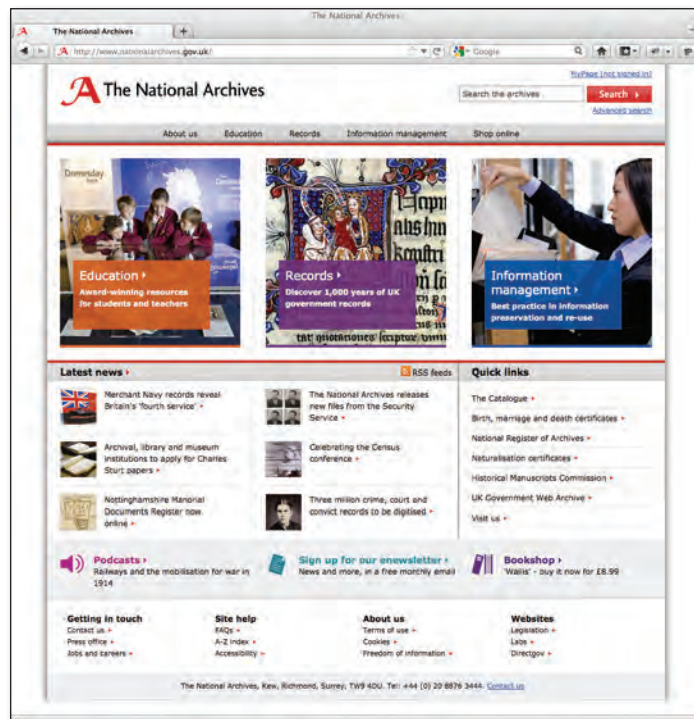www.nationalarchives.gov.uk

JISC Content   Ithaka Case Studies in Sustainability

In 2008, we examined the activities of the Licensed Internet Associates programme (LIA), a business operation within The National Archives (TNA) that licenses TNA's holdings to commercial entities. Beyond providing direct revenue to TNA in the form of royalty income, the LIA programme has played a major role in the rapid digitisation of TNA's documents at an extremely low cost, outsourcing the function to its licensing partners. In the face of a projected 25% cut in government funding over the next four years, TNA has sought to generate more revenue through this project than in the past, by using commercial techniques of valuation and actively seeking out new collections of content for the market, as licensing revenue shifts from being an extra bonus to becoming a 'must have'.

The National Archives (TNA), the official archive of the government of the United Kingdom and for England and Wales, is one of the most significant historical collections in the world, including archival materials from across the United Kingdom spanning the past 1,000 years. [1] The archive is close to achieving its mission of having 100 million documents digitised by 2011 so that they can be accessed and used by the public. In 2009-2010, TNA's own website had 20 million online visits, compared to 14.4 million in 2007-2008, and the ratio of online to on-site document delivery increased to 221:1 in 2009-2010 from under 200:1 in 2008. [2]

The Licensed Internet Associates programme (LIA) has been a major factor in this plan, and it continues to grow. By allowing vendors such as Findmypast.com and Ancestry.com to bid on content packages and digitise content for

www.nationalarchives.gov.uk

re-use, the LIA programme both saves on the direct costs of digitisation and earns revenue through the royalties TNA receives. TNA staff have continued to mine the collection for content that is appealing for its name-rich content. Recent licences offered include those for the Chelsea Pensioners (British Army) records; Crime, Courts and Convicts; and Railway Service Records. [3]

Original sustainability model (2009)

When it began in 2004, the LIA programme was considered a critical means to digitise the archives at very low cost: TNA staff would select and 'package' bundles of content and put them out to bid, and the winning commercial bidder would

1   Rebecca Griffiths and Nancy L. Maron, 'The National Archives (UK): Digitisation with Commercial Partnerships via the Licensed Internet Associates Programme' (New York: Ithaka S+R, 2009), **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_CaseStudy_NatArchives.pdf**

2   The National Archives, 'Annual Report and Resource Accounts 2009-2010', July 2010; available at **www.nationalarchives.gov.uk/how-we-are-run/our-performance.htm**

3   www.nationalarchives.gov.uk/business/licensing.htm

In 2009, Ithaka S+R published twelve detailed case studies of online digital resources, exploring the strategies project leaders were using to sustain those projects for the long term. All of the case studies have been updated in 2011, to revisit the original sustainability models and see how they have fared over the past two years. To read the original case studies, please visit: www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability

absorb the cost of digitising the collection in exchange for the right to exploit the content for ten years.[4] The greatest benefit of the arrangement was essentially in cost savings, and there were inherent tradeoffs: the digitised content, for example, would be commercialised, and so while it was made freely available on-site at TNA, elsewhere it was available on a fee-only basis. In exchange, TNA was able to digitise and share a far wider range of content then it would have been able to do had the organisation needed to pay the digitisation costs itself.

In 2009, the revenue generated from this stream was not insubstantial – £1.5 million in royalty income per year – but it was still a very small part of the £45 million ($72 million) total needed to support operations of TNA in 2010-2011. Rather, the main benefit was considered to be the investment in scanning, transcription and online provision made by private sector partners at no cost to the British tax payer, an investment estimated to have totalled £56 million ($90 million) since 2004.

Today, these commercial partnerships are increasingly taking on a more central role. 'As an organisation, TNA's service provision would be severely restrained without this income', says Caroline Kimbell, Head of Licensing.

How the model has fared

About 75% of TNA's budget is supplied by the British government, and in October 2010, an official spending review proposed a 25% reduction in public funding to the organisation, to be phased in over the following four years. TNA leadership had anticipated this scenario, and rather than wait had instituted a 10% budget cut in 2010, with the expectation that this lower cost base combined with income from its commercial activities – of which the LIA programme is a part – would allow TNA to absorb the loss of public funds without requiring any further staff layoffs.[5] These cost-saving measures resulted in the loss of 70 posts in 2010, and since January 2010, the Archives have been closed to the public on Mondays.

Since 2008, there have been significant changes in the staffing and management structure of TNA. Oliver Morley, the former Director of Customer and Business Development, was named Acting CEO in 2010 and was formally appointed to the role in 2011, and the position of Grants Manager has been eliminated. The LIA programme itself is still run by Kimbell, but with a reduction in staff and added responsibility for transitioning the book publishing operation to external co-publishers. The backlist of TNA book titles was sold to Bloomsbury in April 2011 as part of this initiative.

New directions and initiatives

These dramatic budget cuts have affected TNA in several ways, in particular by placing higher expectations for revenue on all commercial services and by serving as a catalyst for finding additional means to enhance the collection at low direct cost.

Continued growth of the LIA programme. In 2009-2010, royalty income from licensing contracts was £2.1 million ($3.5 million), compared to £1.5 million ($2.4 million) in 2008. Along with several other significant licenses, the LIA programme recorded its biggest-ever partnership deal in 2010, in which two competing genealogy websites banded together to secure the rights as second-to-market providers of the 1911 Census, a dataset of such importance that TNA decided to seek an independent outside valuation to support its asking price.[6] 'TNA was being pushed hard', remembers Kimbell, but 'we were confident that [our price] was realistic, and so we spent money to conduct a valuation'. Since the release of the product in February 2009, there have been 4.9 million downloads from the partners' websites.

Collaboration among collections. The LIA programme and a team from the Archive Sector Development group within TNA[7] recently formed a national consortium of 107 regional and county archives to create a licensing package of educational records. This step, in response to the 'Archives for the 21st Century' government policy issued in November 2009,[8] provides value both to the potential partners and to holders of smaller collections who would not be in a position to independently exploit them. Though this is a promising new initiative, the amount of effort that went into developing the package was substantial, and Kimbell says that, given staff reductions, they would be unlikely to undertake a similar project today. This trend towards consolidation and coordination of archival content is only likely to continue, with the announcement in April 2011 that TNA 'will take on the leadership role for the archives sector' effective April 2012, when the Museums, Libraries and Archives Council officially closes.[9]

A foray into community-supplied content. In 2010, as part of the 'Africa Through a Lens' project, TNA posted thousands of images on Flickr, spanning over 100 years of African history, and asked the public to share its knowledge and to tag the images if they recognised anything or anyone in the photographs.[10] In a departure from a more curated approach, 'we thought, we'll just put these images on Flickr and see what happens', said Kimbell. Though this is not a long-term solution to gathering information, it is an imaginative and

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4   Terms of the licences are non-exclusive and renewable after ten years.

5   The National Archives, 'Comprehensive Spending Review – What It Means for Us', 20 October 2010; available at www.nationalarchives.gov.uk/news/505.htm

6   Among the factors that the independent valuator took into account in determining the market value of the content were analysis of the market, price sensitivity, market trends and the sales projections of the two firms involved in the bidding.

7   www.nationalarchives.gov.uk/information-management/projects-and-work/archives-sector-development.htm

8   www.nationalarchives.gov.uk/documents/information-management/archives-for-the-21st-century.pdf

9   See the TNA press release issued 20 April 2011: www.nationalarchives.gov.uk/documents/20-04-11-mla.pdf

10   www.flickr.com/photos/nationalarchives/collections/72157625827328771/

Sustainability dashboard

	2009 Case study*	2011 Update**	What's Changed?
Content	80 million digitised documents	Nearly 100 million digitised documents	+25%
Functionality	■ Digitised records available through commercial partners ■ DocumentsOnline is freely searchable with pay-per-download function	■ Major redesign of the online catalogue to provide integrated search of TNA and partner sites ■ User-generated content site will go live in 2012	Significant changes
Sustainability Model	■ Royalty revenues ■ In-kind contribution of digitisation work	■ Royalty revenues ■ In-kind contribution of digitisation work	No significant change in model
Costs	£113,200 ($182,252)	Cost base is lower, due to 10% budget cuts instituted in 2010, in preparation for 25% cut in government funding to be implemented by 2014	approximately 10% reduction
Revenues	£1.5 million royalty income ($2.4 million)	■ £2.1 million ($3.5 million) in royalties from LIA partners ■ Major commercial re-licence secured for 1911 Census	+40% in royalty income
Impact	112 million document downloads	■ 132 million document downloads in 2010-2011 ■ 1911 Census had additional 4.9 million visits on partner site	+15%
Sustainability Bottom Line	LIA programme contributed by saving TNA digitisation costs, but yielded only a small part of TNA's income	Deep budget cuts have placed added pressure on LIA programme to generate revenue for the organisation. Some successes already, as TNA seeks market value for re-use of its content	

* These costs and revenues reflect TNA's 2008/09 fiscal year.

** These costs and revenues reflect TNA's 2009/10 fiscal year.

proactive response to the recent budget cuts. As Kimbell put it: 'When there are huge barriers to doing things the old, expensive, cumbersome ways ... you roll your sleeves up and try it some other way'. She reports that this initiative has received positive press coverage, and British embassies throughout Africa have instructed their staff to go into the communities to solicit information about the photographs. According to Kimbell, 'Thanks to great media coverage and outreach work with African communities in London, initial submissions have been wonderful, ranging from detailed explanations of costumes, ceremonies and fishing equipment to the more informal "that's my dad's boat!"'. TNA reported nearly '10,000 visitors and 250,000 downloads on the first day alone'.[11]

Responding to user feedback. One concern raised in the original case study was that the user experience could feel fragmented due to the various websites where content and its metadata were being offered. In 2009-2010, drawing on the results of a comprehensive market research study,

TNA completely revamped its website and redesigned its online catalogue to be more accessible to users, including an improved search function and a series of online self-help tools. While in the past the LIA partner content resided only on the vendors' separate platforms and was searchable only there, centralised searches are now possible on the TNA platform that 'send you right to the image' if it is online, via services called 'looking for a place?' and 'looking for a person?'. The system will also allow users to submit their own record descriptions that are integrated on the site after being vetted by the site moderator.[12]

Sustainability outlook

Today, TNA presents an inspiring model of maximising returns on the valuable content it holds by seeking out new ways to package content, and making sure that it is receiving fair compensation from its commercial partners.

11 The National Archives, 'Annual Report and Accounts 2010-11', Available at www.nationalarchives.gov.uk/documents/annualreport-10-11.pdf

12 This first phase of this feature went live in April 2011 in beta form. See http://discovery.nationalarchives.gov.uk/SearchUI

Aggregating content to create packages of value for vendors. In the past, TNA has been astute in developing content packages that will appear to vendors, rather than expecting vendors to come in and identify the pieces they want most. Extending this philosophy of curation to a wider group of smaller archives has the potential to allow smaller archives to benefit from the aggregated scale of the offer, and to allow TNA to share in a new revenue stream.

Knowing what the content is worth. By seeking a professional assessment of the market value of the 1911 Census, TNA was able to maximise the financial benefit of the biggest image resale to date and establish clear ground-rules for such sales in the future.

Experimentation at low cost. When the old, expensive ways are just not possible, experimenting with the tools available helped TNA to start learning more about its collection of vintage photographs of Africa. While it is not clear what value the community tagging exercise will ultimately have, the engagement of new communities with the collection is surely itself a valuable outcome and could end up providing annotations and contextual data that would not otherwise be available.

The challenges that lie ahead for TNA are clear: reduced staff makes undertaking innovative new projects difficult, if not impossible. The licences, while quite effective at producing digital copies quickly at low (no) cost, are for ten-year terms. While this has been a boon in the present, less certain is what is expected to happen at the end of the ten-year licence, since TNA does not host the content itself.

Having nearly reached the 100 million document point, though, how many more LIA partnerships will be possible once the largest series of documents have been digitised? TNA is hoping that negotiating more advantageous royalty arrangements for those collections with the greatest appeal will help support its other ongoing costs well into the future.

Lessons learnt over the past two years

- Knowing your resource's worth is essential for maximising financial benefits
- Packaging content to suit users' needs is key to success
- It can be highly cost effective to find ways to work with digital partners and/or commercial firms, when scale merits such an approach

Interviewee

Caroline Kimbell, Head of Licensing,
13 April 2010, 24 March 2011, email of 9 May 2011

This case study update was researched and written by Nancy L. Maron as part of the Ithaka Case Studies in Sustainability project.

Summary of revenues and costs

(~ = approximately)

	2009/09	2009/10	Comments
Total revenue	**£1,500,000**	**£2,100,000**	**+40%**
Royalties from LIA partners	100%	100%	
Total costs	**£113,200**	**~£100,000**	**Cost base about 10% lower in 2011**
Personnel costs	77%	n/a	
Non-personnel costs	23%	n/a	
Number of staff	2.22 FTE	n/a	
In-kind/volunteer contributions	**LIA partners responsible for all digital production costs and content hosting**		

Explanatory note

The information presented in this table is intended as a broad picture of revenues and budgeted costs associated with the project, not as a detailed financial report. It does not include in-kind contributions or other unbudgeted items, though these are described where they are known. The financial data, which are presented in the currency in which the project reported the information, were compiled as part of the interview process with project leaders and staff, and in some cases were supplemented with publicly available documents, such as annual reports. Many of the figures are rounded or best estimates. Some leaders preferred not to offer figures at all, but suggested percentages instead. Because of the variability in the way each institution estimated the various categories of revenues and costs, the information presented in the table is of limited value for detailed cross-project comparisons.

JISC

Strategic Content Alliance

building bridges to digital content

ITHAKA S+R

The Middle School Portal 2: Math and Science Pathways, National Science Digital Library: The Challenges of Sustaining a Project as the End of a Grant Approaches

Case Study Update 2011

www.msteacher2.org

JISC Content   Ithaka Case Studies in Sustainability

The original case study, 'The Middle School Portal 2 (MSP2): Math and Science Pathways, National Science Digital Library: Early Sustainability Planning for a Grant-Funded Digital Library', profiled a new grant-supported initiative: a portal devoted to collecting high-quality teaching resources for use by middle-school educators. The resource was part of the National Science Foundation's National Science Digital Library (NSDL) programme, a collection of online resources for educators in STEM disciplines (science, technology, engineering, and mathematics). In the first year of their three-year grant, the MSP2 project team focused on developing and launching the new social media enabled site, and tied the ultimate success and sustainability of the resource to their ability to create a robust community of users. In August 2011 the initial grant will draw to a close, leaving MSP2 with the challenge of finding new sources of funding. One possible avenue would have been to apply for another grant from the same funder, but in early 2011 the National Science Foundation announced the close of the NSDL programme, removing one source of future funding and setting up a series of difficult questions about the next steps for the initiative.

Since 2000, the National Science Foundation (NSF) has sponsored the National Science Digital Library (NSDL), a constellation of online collections, services, and tools for teachers at all levels of maths and science education.[1] In an effort to make these collections more accessible, the NSDL created portals – called 'Pathways' – which were meant to guide users to teaching resources in specific subject areas

www.msteacher2.org

or for specific age ranges. The Middle School Portal 2: Math and Science Pathway (MSP2) aims to provide middle-school teachers with easy access to selected digital educational resources along with teaching tips and guidance.

> *'An important feature of the project is the participation of three partner organisations...'*

MSP2 was created both as an aggregation of teaching resources and as a social networking site for maths and science teachers to share teaching resources and techniques. An important feature of the project is the participation of three partner organisations – the Ohio State University College of Education and Human Ecology, the Education Development Center (EDC), and the National

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[1] Kate Wittenberg and Nancy L. Maron, 'The Middle School Portal 2: Math and Science Pathways, National Science Digital Library: Early Sustainability Planning for a Grant-Funded Digital Library' (New York: Ithaka S+R, 2009), **www.ithaka. org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/ SCA_BMS_CaseStudy_NSDL.pdf**.

In 2009, Ithaka S+R published twelve detailed case studies of online digital resources, exploring the strategies project leaders were using to sustain those projects for the long term. All of the case studies have been updated in 2011, to revisit the original sustainability models and see how they have fared over the past two years. To read the original case studies, please visit: **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability**

Middle School Association (now known as the Association for Middle Level Education), each of which budgeted some proportion of staff time to the development of MSP2. In addition, MSP2 budgeted funds in the grant for a cohort of 'Teacher Leaders' to help curate the resources in the Pathway, and also to perform outreach for MSP2.

When we first interviewed the project leader, Dr. Kim Lightle of The Ohio State University's College of Education and Human Ecology, in March 2009, the new MSP2 site had just gone live. As of May 2011, MSP2 had 1,608 registered members – a modest slice of the overall potential audience of middle-school maths and science teachers, but still a large increase from the project's early days.

Original sustainability model (2009)

MSP2 was funded for the period 2008–2011 through an NSF grant of approximately $2.3 million. Our original case study was written while MSP2 was still in a start-up phase, and although the project leaders did not have a fully developed sustainability plan at that time, they intended to apply to NSF (and possibly to other sources) for additional grants and to explore e-commerce and sponsorship opportunities. They further thought that the project could be sustained if three conditions were met:

- If a robust community of teachers continued to contribute content.

- If the MSP2 site could remain on the central NSDL platform.

- If the project leaders could identify partners willing to provide long-term solutions for content development and hosting.

The project has reached a critical point in its life cycle, as the grant is set to expire in August 2011, yet Lightle says the project leaders have been so focused on 'tasks' that they 'haven't been able to focus the necessary effort on sustainability.' According to Lightle, the project has enough

Picture of the day from www.msteacher2.org © Science 360 / Ken Bondy

remaining grant funds to function through December 2011, which she feels will give the project team sufficient time to make plans to apply for additional grants.

'As a project that depends solely on grant funding at present, MSP2 faces a serious challenge.'

How the model has fared

As a project that depends solely on grant funding at present, MSP2 faces a serious challenge. One of the main assumptions underlying MSP2's sustainability strategy was that it would be possible to receive additional NSDL funding through the NSF's 'Pathways II' grant programme. The NSF, however, announced in February 2011 that this programme was being closed, shutting off what was a likely source of short-term additional funding for the project.

Beyond that, MSP2 has had limited success in meeting the three conditions that the project leaders felt would be needed to sustain the project. First, although the project has attracted over 1,600 registered users, it remains to be seen whether the community will grow and continue to attract content and commentary, as the project will have no funding for active marketing once the grant ends. Second, the central NSDL platform, which has been hosting some parts of the MSP2 site, including its blog wiki, is now at risk as a result of the closing of the overall NSDL programme; the platform, which was operated at Cornell University by the NSDL Technical Services group, has in recent years been funded through a 15% 'tax' (or service fee) on all NSDL grants, and so the future of that services group is also in question now.[2]

Third, the project leaders may have to search beyond their home institutions for a partnership that can sustain the project. Creating a partnership of three institutions was instrumental for receiving a Pathways grant; the expectation was that each partner would be responsible for some element of the project's overall strategy. This arrangement has presented some challenges, however: in 2009, the National Middle School Association experienced significant budget cutbacks, sharply reducing the resources that the organisation could devote to MSP2. As a result, some planned initiatives – including an exploration of opportunities for e-commerce via the site, which the MSP2 leaders felt was one possible post-grant sustainability strategy – have not moved forward. With the current set of partnerships in doubt, the MSP2 may need to seek other partner institutions in order to secure long-term hosting.

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2   In the early days of NSDL the NSF established a Technical Services group to provide central technology functions to the NSDL projects and to identify gaps in the content and functionality of the overall NSDL collection. Without the predictable income stream provided by the 15% service fee, the Technical Services group's functions, including the provision of a central platform and the preservation of NSDL metadata, will be at risk.

Sustainability dashboard

	2009 Case Study	2011 Update	What's Changed?
Content	Curated collection of links to maths and science teaching resources; social networking for educators	Built SMARTR, a companion science website for students, and linked it to MSP2; conducted webinars and other outreach to users	Increased number of links and registered users
Functionality	Built and launched the MSP2 site	Same as 2009	No significant changes, per workplan in the grant
Sustainability Model	■ Grant ■ Host institution support	■ Grant ■ Host institution support	No change in model
Costs	$1,171,765 (first year of a three-year grant)	$475,982 (third year of a three-year grant)	$2.3-million grant has been nearly spent down
Revenues	Costs paid by the project's three-year, $2.3-million grant	Same as 2009 – no new support	Funder has closed this funding stream
Impact	(Figures collected in March 2009, shortly after launch): ■ 873 visits ■ 3,501 page views ■ Few registered users	(Figures are cumulative from March 2009 launch): ■ 75,000 visits ■ 206,000 page views ■ 1,608 registered users	Usage has grown steadily since the launch of the site
Sustainability Bottom Line	Grant-funded until 2011, and exploring potential earned strategies for earning revenue	With the project's final grant expiring at the end of 2011, MSP2 is facing an uncertain future, though they continue to pursue grant funding	

New directions and initiatives

Recognising the challenges facing MSP2 in the post-grant period, the project team has taken steps to explore relationships with one or more host institutions that might play a role in sustaining the costs of the resource.

Seeking closer integration with a host institution. The Ohio State University provides overall leadership for MSP2, and the project's advisory board has encouraged the project leaders to approach University administrators about the institution's role in sustaining the project. The state of the economy presents a formidable hurdle to this solution, however, since the University expects to see a sharp decrease in funding in the new state budget.[3] One possibility that the project leaders have explored is that the University's College of Education and Human Ecology could integrate MSP2's resources into a series of professional development courses for educators in some way, and the College could justify sustaining the costs associated with MSP2 as a result.

Exploring new partnerships. Beyond pursuing an ongoing commitment from The Ohio State University, Lightle is in discussion with a number of potential partners (whom she prefers not to name at this stage), including a federal agency and two other online education websites, which might either use the MSP2 project to facilitate online professional development services for educators, or simply agree to host the project's existing content and social networking site.

Sustainability outlook

Today, MSP2 is facing an uncertain future. The project team has built the resource they originally set out to create, but they do not yet have a confirmed plan for continuing operations once funds run out at the end of 2011. The struggle of balancing the completion of tasks with long-term planning is an issue that many organisations – both commercial and not-for-profit – face, but with the grant period drawing to a close, this case study highlights the difficulties of drafting such a plan, and the risks of delaying the planning process.

'...budget cuts at one of the institutions have sharply curtailed staff time that was meant to be spent on sustainability planning.'

In particular, the partnership among the three organisations that participate in MSP2 has allowed the project to take advantage of different skill sets and strengths, but it has also provided a set of additional challenges: budget cuts at one

3 Natalie Knoth, 'How hard will Kasich swing his higher-education budget axe?', *The Athens News* (Athens, Ohio), 11 November 2010; available at **www.athensnews.com/ohio/article-32572-how-hard-will-kasich-swing-his-higher-education-budget-axe.html**

of the institutions have sharply curtailed staff time that was meant to be spent on sustainability planning. In a slightly different vein, the project depended partially on a separate, grant-funded technology infrastructure to host its blog and wiki site – but that infrastructure was funded by the same now-closed NSF programme as MSP2, so the project leaders may need to find a back-up hosting and access platform for that content. MSP2 will need to act quickly to identify those parts of the project that need to be sustained and to secure the resources (possibly from a host institution) needed to ensure the continuation of those aspects of the resource in the future.

Lessons learnt over the past two years

- Planning for post-grant sustainability should happen as early as possible

- All resources need to develop a deep understanding of their potential audience, but just as important is having a strong plan for how to effectively reach them and provide incentives for participation

- Partnerships can offer a strategic advantage, but there must be 1) clearly defined goals and expectations for each partner; and 2) a contingency plan, so that a project's content and community can carry on even if a strategic relationship ends

Interviewees

Kimberly Lightle, Principal Investigator and Director, MSP2, and Director of Digital Library Projects, School of Teaching and Learning at the College of Education and Human Ecology, The Ohio State University, 18 February 2011

Sarita Pillai, Co-Principal Investigator, MSP2 Grant, and Senior Project Director, Education Development Center, Inc., email of 8 March 2011

This case study update was researched and written by Matthew Loy as part of the Ithaka Case Studies in Sustainability project.

University of Southampton Library Digitisation Unit: Reimagining the Value Proposition

Case Study Update 2011

www.soton.ac.uk/library/ldu

When the original case study was published in 2009, the staff of the BOPCRIS digitisation centre at the University of Southampton's Hartley Library had recently completed three large-scale, grant-funded digitisation projects and were exploring different means of ensuring access to the digital content they had created.[1] An early experiment with local hosting had shown that the Library was unprepared to deal with the ongoing costs of maintaining these resources, and they turned to external content providers – ProQuest and JSTOR – for deals that would allow them to focus on their core competency of digitisation. Over the past two years, the changing economic climate has led to sharp cutbacks in British public funding for large-scale digitisation – the Unit's specialty. As a result, the staff have worked to reshape the Unit, scaling back its capacity for mass digitisation, focusing on materials from Southampton's local collections, and finding partners that can deliver previously digitised content at a lower cost – and changing its name from 'BOPCRIS' to the 'University of Southampton Library Digitisation Unit', which more clearly identifies their connection to the University.

The digitisation efforts at the University of Southampton have their roots in the late 1980s, when a Southampton research scholar helped to spearhead the indexing and scanning of key British government documents.[2] From early days, the staff of the University's Hartley Library were involved in that project, which gradually expanded and found a permanent home within the Library. By the 1990s, the project had grown into a subscription-based online abstracting and indexing service for British parliamentary papers and

www.soton.ac.uk/library/ldu

other public records, marketed to academic libraries. The Library made the decision to close that service in the late 1990s when it became clear that the increased availability of full-text documents online had significantly eroded the value proposition for indexing services. ('We've always had a tight budget', notes current Library Digitisation Unit leader Christine Fowler, Head of e-Library Services at Southampton, 'so we've always had to be hard-nosed about where we put our resources.')

Even as that project ended, the Library began receiving government grants to manage the large-scale digitisation of government documents, and it scaled up to tackle ever more complex projects. When we studied it two years ago, the Unit, having benefited greatly from a massive wave of government investment in digitisation, had built up capacity for mass digitisation of delicate documents from multiple university and research library collections – in some ways, a major shift from the tiny scholar-led project that kicked off this programme for Southampton in the 1980s. With continued

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1 When we first studied the Unit, it was called BOPCRIS; BOPCRIS stood for 'British Official Publications Collaborative Reader Information Service'.

2 K. Kirby Smith, 'BOPCRIS Digitisation Centre: Experimentation with Sustainability and Partnerships for Library Digitisation Projects' (New York: Ithaka S+R, 2009), **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/ case-studies/SCA_BMS_CaseStudy_Southampton.pdf**

In 2009, Ithaka S+R published twelve detailed case studies of online digital resources, exploring the strategies project leaders were using to sustain those projects for the long term. All of the case studies have been updated in 2011, to revisit the original sustainability models and see how they have fared over the past two years. To read the original case studies, please visit: **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability**

Mlle Riego de la Branchardiere, The Abergeldie winter book, London: Simpkin, Marshall and Co., 1867, www.southampton.ac.uk/library/ldu/gallery.shtml. Image courtesy of the University of Southampton Library.

support from a series of grants, the Unit completed several large-scale digitisation projects focusing on British heritage materials such as parliamentary papers and pamphlets.[3] Collectively, the three multi-year initiatives provided for the digitisation of approximately 2.8 million pages of content. They also left the Unit paying the costs of an expensive infrastructure meant to support a business that serves other institutions – costs that, in the past two years, the Unit ultimately decided it could not support.

Original sustainability model (2009)

When we first studied the Unit, its staff defined sustainability as the ability to generate sufficient revenue to maintain their infrastructure for digitisation, as well as to ensure that the materials they digitised were continuously available:

- The Library experimented with digitising and hosting locally a collection of historical materials, Enhanced British Parliamentary Papers on Ireland, 1801–1922 and a local version of the Eighteenth-Century Parliamentary Papers collection. This experiment led the Library's management to the conclusion that they are not well-positioned to sustain the costs of long-term access, user support, and updating for a large number of digitisation projects. With this in mind, the Unit began to explore partnerships that would allow the Library to transfer this responsibility to a third-party provider for their other major digitisation projects.

- For Eighteenth-Century Parliamentary Papers, a grant-funded digitisation project for which 43% of the content came from Cambridge University and the British Library, Southampton and its partners on the grant entered into a licensing agreement with commercial content provider ProQuest. Although the exact terms of the deal are protected by a non-disclosure agreement, ProQuest agreed to make the content freely available to higher

education institutions in the United Kingdom until September 2012, while selling perpetual-access licences to institutions in other countries. While research for this case study update was under way, the agreement covering ProQuest's exclusivity period expired, so Southampton is potentially free to make the scanned images available should the partners see fit to do so.

- The content digitised by the Nineteenth-Century Pamphlets Online project, which was gathered from several research libraries in the United Kingdom, is now sold via subscription by JSTOR.[4] Although Southampton and its partners do not receive any royalties, the arrangement provides free access to this content to UK higher education institutions for 25 years from the date of launch, allowing Southampton to avoid long-term hosting and storage costs.

How the model has fared

Two factors have forced the Unit to reshape its strategy. First, the project team perceived a significant decline in the amount of available grant funding for digitisation projects, which the Unit had depended on as they scaled up to handle large projects. Although the Unit had originally been funded to become a 'centre of excellence' for large-scale scanning, not enough grant-funded projects from other institutions were being funnelled to Southampton to support the costs of the infrastructure they had built.

'…the ongoing costs associated with hosting and preserving digitised content on the Library's servers and in a dark store… had become more pronounced in a challenging economic climate.'

Second, the ongoing costs associated with hosting and preserving digitised content on the Library's servers and in a dark store – an issue that the project team acknowledged when we first studied the Unit – had become more pronounced in a challenging economic climate. Faced with mounting costs, the Unit has identified partners that could host the digitised content, and has eliminated the custom-built local hosting platforms that had been launched to host the individual digitisation projects.

Changes in direction and new initiatives

As a result of the economic changes and the realities of the competitive market the Unit has faced in the past two years, it has had to make strategic decisions about how

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3 **www.southampton.ac.uk/library/bopcris/projects.html**

4 In the interest of disclosure: Ithaka S+R, the authors of this report, and JSTOR are part of the same organisation, ITHAKA.

Sustainability dashboard

	2009 Case Study*	2011 Update**	What's Changed?
Content	Three major mass digitisation collections: ■ Historical pamphlets ■ Two government document collections	Smaller-scale digitisation projects, including: ■ Library's special collections ■ Theses and dissertations ■ Reading lists	Funding for mass digitisation has decreased
Functionality	Not applicable to this case study, which focuses on the Unit as a whole		
Sustainability Model	■ Vendor licensing fees ■ Grants ■ Internal funding	■ Limited vendor licensing fees ■ Internal funding	Less grant funding available
Costs	Core staffing and costs included: ■ 3.6 FTE permanent staff ■ 2.0 FTE contract staff ■ £25,000/year to maintain robotic scanner	Core staffing and costs include: ■ 4.5 FTE central staff ■ No contract staff	■ Added a business administrator and a laboratory support officer to the permanent staff ■ Sold robotic scanner
Revenues	■ Multi-year digitisation grants ■ Licensing fees from vendors	■ Internal funding from host institution ■ Monitoring possibilities for further collaborative work	■ Grant funding for mass digitisation less available ■ Main vendor licensing arrangement will provide limited future payments
Sustainability Bottom Line	BOPCRIS had scaled up to take on mass digitisation of content from multiple institutions, for which it was dependent on grant funding.	The Unit, renamed the University of Southampton Library Digitisation Unit, now focuses on digitising locally held materials. The Unit still aims for partial cost recovery from commissions and grants, but does not cover costs completely. Software has been updated from royalty revenues to provide capacity for further collaborative mass digitisation should opportunities emerge	

* These costs and revenues reflect the project's 2007-08 fiscal year.

** These costs and revenues reflect the project's 2010-11 fiscal year.

best to fulfil its mission, given limited new funding for mass digitisation. The group is shifting from providing a wide range of digitisation activities to a focus on specialised, small-batch materials such as manuscripts, music scores, diaries and maps – rare materials that reflect the Unit's core expertise. Although the Unit continues to seek projects from other institutions and commercial clients, the immediate focus is on digitising materials owned by the University:

■ *Scaling back physical infrastructure*: In 2009, the Unit sold its mass-digitising robotic scanner, which had been a major investment. The fact that the machine was aging played into the decision, but the primary motivation was an insufficient market demand for mass digitisation services in the academic sector. Faced with a difficult question about the Unit's primary purpose, the Library's leadership came to the decision that paying the ongoing costs of maintaining equipment for mass digitisation was a mismatch with the Unit's core focus on delicate materials. 'There just wasn't a sufficient business case to keep it', says University Librarian Mark Brown. Selling the scanner enabled the Library to repurpose valuable space, generated modest revenue that could be reinvested in other activities, and led to cost savings from

the termination of the maintenance contract. Some of these savings have been invested in commissioning new workflow software to streamline production.

■ *Dismantling custom-built local platforms*: The Library had maintained local hosting for two of its significant collections, the Enhanced British Parliamentary Papers on Ireland and the Eighteenth-Century Parliamentary Papers collection. In an effort to reduce costs, the Library decided to discontinue the custom platform for this resource in 2010, handing the content to a major UK research library, which will be responsible for long-term preservation. The Library estimates that this will yield annual savings of £10,575 ($17,000) in storage charges.

■ *Focusing on material owned by Southampton*: In general, the Unit is more closely emphasising its relation to the University, in part by digitising more material directly in support of Southampton faculty's research and teaching activities. (Although the Unit has done some commercial contract digitisation work over the past two years, they do not advertise and have not actively sought out such contracts. Brown noted that they 'don't want to be seen as a bureau for digitisation services'.) Currently, in terms of local work, the unit is scanning all Southampton theses for

input into the University's institutional repository.[5] Course reading list texts are also scanned under agreement with the UK Copyright Licensing Authority, and the Unit works with Southampton's academic staff to create content for the University's learning object repository.[6] Closer alignment with the Archives and Special Collections Department continues to provide new opportunities for digitisation of rare materials: Fowler pointed to the Library's purchase within the past several years of a major archival collection related to British colonial history as one major opportunity for the Unit to help make the University's significant collections more widely available.[7] And, from a practical perspective, the Unit renamed itself, partly in order to communicate more clearly its relationship to the host university.

Sustainability outlook

Today, the Unit's role is very different from how it was originally envisioned when it was launched in the 1980s. Like many other scholarly digital projects, as the Unit grew, it faced tension between generating external funds and serving local needs. For now, the Unit's leadership has chosen to focus on the latter, in part because funding for external projects is limited.

'...the future will tell whether the other parties to these agreements will continue to provide access to these valuable resources if their commercial imperatives and missions should change.'

Looking ahead, there are two major challenges for the Unit. First, for the content that Southampton has already digitised, a range of third-party arrangements have helped the Unit to keep its ongoing costs for hosting and preservation low. However, these deals have also forced Southampton to give up some control over this content, and the future will tell whether the other parties to these agreements will continue to provide access to these valuable resources if their commercial imperatives and missions should change.

Second, as the Unit explores the implications of a shift from being an external publisher of digitised rare collections to becoming an internal service provider for the University, it will need to continue to demonstrate value to the Library and other Southampton units. Accordingly, the Unit plans to continue to take part in new research collaborations and to experiment with different services for projects with the University, ranging from high-end, preservation-level scanning to basic web copy. Proving the value of its services to University constituents and administrators will be of continuous importance if the Unit remains heavily dependent on internal funding in the future. The Unit will continue to explore options for future collaborative work to offset costs, and this remains an element in its business plan.

Lessons learnt over the past two years

- Project leaders must consider the life-cycle costs of digital content and infrastructure, as the one-time costs of digitising content mask a much wider range of outlays around infrastructure maintenance, user support, and digital hosting and preservation
- The intentions for an operation like this are important: if a project is to serve external customers, it needs to have a clear mission and vision for operating as an ongoing business, including a business plan and an understanding of the competitive market in which it operates

Interviewees

Mark Brown, University Librarian, Hartley Library, University of Southampton, 5 May 2010

Christine Fowler, Head of e-Library Services, Hartley Library, University of Southampton, 28 January 2011 and 1 June 2011

This case study update was researched and written by Matthew Loy as part of the Ithaka Case Studies in Sustainability project.

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[5] http://eprints.soton.ac.uk

[6] www.edshare.soton.ac.uk

[7] Chris Woolgar, 'Broadlands Archives Fundraising Campaign Successfully Completed', November 2009, www.southampton.ac.uk/archives/Broadlands/index.html

JISC

Strategic Content Alliance

building bridges to digital content

ITHAKA S+R

Stanford Encyclopedia of Philosophy: Launching a 'Freemium' Model

Case Study Update 2011

http://plato.stanford.edu

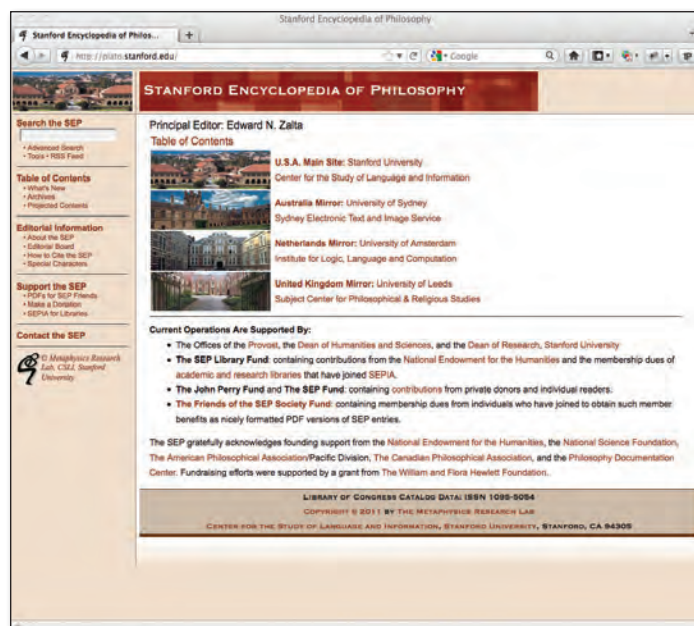**JISC Content**   Ithaka Case Studies in Sustainability

The Stanford Encyclopedia of Philosophy (SEP), a peer-reviewed, open-access online reference, draws the majority of its funding from investment returns from a project endowment, built from the financial contributions of academic libraries. When we first studied the project, it had made great progress toward its goal of building a $4.125-million endowment, but it faced uncertainty over the extent to which the economic downturn in 2008 would affect its investments. In the two years since then, as endowment support has not yet reached needed levels, SEP's leaders have developed a new channel of support for the resource by designing and launching a 'Friends of the SEP' membership programme for individuals, who gain access to PDF versions of SEP entries and versions formatted for mobile devices.

Founded by Stanford University researchers John Perry and Edward Zalta in 1995, the Stanford Encyclopedia of Philosophy (SEP) is an online, open-access reference source that consists of more than 1,200 original, signed entries, ranging from 'abstract objects' to 'zombies'.[1] The entries are written, edited, and reviewed by philosophy scholars who volunteer their time, and the entire operation is managed by Zalta and senior editor Uri Nodelman, each of whom is allocated to the project at 0.75 FTE, with assistance from three additional part-time project staff members, based at Stanford's Center for the Study of Language and Information.

http://plato.stanford.edu

participation by scholars remains high in 2011, validating the project leaders' assumption that a rigorously reviewed, open-access resource would attract strong participation from authors, subject editors and reviewers.

'SEP's goal has been to build a project endowment that will provide sufficient funds to cover all direct operating costs, including editing, updating and maintaining the SEP's content and technology.'

Once it became a mature reference work (in 2002), SEP's goal has been to build a project endowment that will provide sufficient funds to cover all direct operating costs, including editing, updating and maintaining the SEP's content and technology. Initially, project leaders estimated that this

Original sustainability model (2009)

In order to provide free content, the SEP model has always kept direct costs low by relying heavily on volunteer labour to write, review and edit the articles. According to Zalta,

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1 Matthew Loy, 'Stanford Encyclopedia of Philosophy: Building an Endowment with Community Support' (New York: Ithaka S+R, 2009), **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_CaseStudy_SEP.pdf**.

In 2009, Ithaka S+R published twelve detailed case studies of online digital resources, exploring the strategies project leaders were using to sustain those projects for the long term. All of the case studies have been updated in 2011, to revisit the original sustainability models and see how they have fared over the past two years. To read the original case studies, please visit: **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability**

The Library at Stanford University, Flickr / dacoach88_89

would require an endowment with principal of $4.125 million. As of 2009, their intensive outreach efforts had yielded a total of $3.3 million: more than $1.7 million from academic libraries, with an additional $1.125 million from private donors (raised with the help of Stanford) and $500,000 from a matching funds award from the National Endowment for the Humanities Office of Challenge Grants.

University and college libraries that wish to be recognised as members are asked to make a one-time contribution to the project endowment, which may be spread over three years. The size of the requested contribution is based on the highest academic degree that an institution offers in philosophy: schools that grant only undergraduate degrees are asked to contribute $3,150, while doctoral institutions are asked to contribute $15,750.

The project's success in raising funds from academic libraries – even though SEP's content is freely available to all – was born out of a general unease in the academic library community at the time about the high cost of subscriptions to scholarly journals. According to Zalta, the idea of building an endowment to support an open-access resource seemed to librarians like a worthwhile experiment, given what libraries were paying for other scholarly resources.

The support of Stanford University is another critical piece of SEP's sustainability model. Because the endowment has not yet reached the targeted size, its annual payouts do not provide enough funding to cover the project's annual costs. To help sustain the project, Stanford's Provost and Dean of Research have provided direct funding to cover the difference between endowment income and the project's overall costs. The project leaders continue to communicate with Stanford's administrators about the project's impact and its value to the University.

How the model has fared

In the two years since we first studied SEP, the project's sustainability model has felt the effects of the difficult economic climate, in great part because of its reliance on an endowment. The economic downturn lowered the value of the investments held by the SEP endowment in 2009-2010; however, the project's investments have rebounded since that time. In budget projections for 2010-2011, the project leaders forecast that the endowment would pay out approximately $178,500. The current value of the endowment is approximately $3.34 million, which puts SEP approximately $780,000 away from its original fundraising goal (and so in markedly better shape than in 2009-2010). Of course, if the economic environment changes, fluctuations in the endowment's market value and yield will have consequences for the project's budget and for its overall fundraising goal.

Changes in direction and new initiatives

While the endowment model is still the cornerstone of SEP's sustainability model, over the past two years only 12 additional academic libraries have opted to contribute. As the endowment is not yet large enough to return sufficient investment income each year to cover the project's costs, and as economic conditions can always potentially lead to fluctuations in the value of the endowment, the project leaders have begun to identify new sources of revenue.

Introducing an individual membership model. In 2009, SEP experimented with a new programme to generate revenue, launching the 'Friends of the SEP Society'. Designed for individuals rather than institutions, the programme allows

Sustainability dashboard

	2009 Case Study*	2011 Update**	What's Changed?
Content	1,000 entries	1,254 entries	+25%
Functionality	Full-text search	Added formatting for mobile devices	Added functionality
Sustainability Model	■ Endowment ■ Institutional support	■ Endowment ■ Institutional support ■ Introduction of an individual membership program	New membership programme accounts for much of the increase in revenue
Costs	$220,724	$234,985	+6%
Revenues	$220,724	$234,985	+6% (host institution provides bridge funding, so the project breaks exactly even)
Impact	■ Nearly 1,300 authors contributed (or were commissioned to contribute) entries ■ Nearly 600 libraries made contributions to the endowment	■ 12 additional libraries have contributed to the endowment since 2008 ■ 1,700 individuals have joined Friends of the SEP	Modest increase in the number of libraries contributing to the project's endowment
Sustainability Bottom Line	Support from the philosophy and research-library communities has helped to build a significant body of original scholarly content, and a sizable endowment	While the endowment has been successful in supporting the majority of the project's operating costs, SEP's original fundraising goals have not yet been met; it has created a new revenue stream via individual memberships and relies in part on direct support from Stanford	

* These costs and revenues reflect SEP's 2008-09 fiscal year.
  Note: Estimates provided in 2009 case study have been updated with actual figures.

** These costs and revenues reflect projections for SEP's 2010-11 fiscal year.

paying members to receive access to formatted PDF versions of entries from SEP.[2] Users can print these files or export them to a Kindle, iPad, or other mobile reading device. Memberships are priced in three tiers:

- Student members pay $5.00 per year and can download up to five different PDF entries per day.

- Non-student 'associate members' pay $10.00 per year and can download up to five different PDF entries per day.

- Professional members pay $25.00 per year and can download an unlimited number of PDF entries.

In the first year of the new service, the Society attracted approximately 1,700 members, most of them at the lower two price tiers, generating revenue of $20,000. The revenue from individual memberships far exceeded the project leaders' initial goal of $10,000; given their modest expectations, Nodelman calls the programme 'an unqualified success'.

Supporting the costs of services that were once contributed. The SEP depends on individual volunteers for writing and editing, but it has also relied on contributed efforts from other organisations. One example was billing services, which

were contributed by the former SOLINET library consortium. Since the time of the original case study, SOLINET merged with another library consortium to form a new entity, and it no longer provides free billing services to SEP. The cost of library memberships to support the SEP endowment has been increased to pay the Philosophy Documentation Center, a not-for-profit organisation that serves the academic philosophy community, to manage the process of billing libraries that contribute to the project endowment.[3] SEP has raised the amount of the requested contribution from each tier of academic library by 4.76% – a modest increase, but a step that the project may need to use again in the future if it is required to take on the costs of in-kind contributions from Stanford University or other partner organisations.

For now, no appeal to member libraries to contribute more funding. One potential source of revenue for SEP – and one way to further build the endowment – would be to ask those libraries that have already sent funds to the endowment to make another contribution. However, Zalta and Nodelman have resisted taking this path, saying that they would only contemplate returning to SEP member libraries for more funding if those libraries received additional services in return for the new payment.

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2 The programme relies on an automated PDF formatting process, which was designed and implemented with the support of a grant from the Hewlett Foundation.

3 www.pdcnet.org

Sustainability outlook

SEP is in an interesting position today. While endowment payouts are rising again after a difficult year in 2009-2010, recent years have shown how challenging it can be to rely solely on income from an endowment. In the past, the project has been able to depend on Stanford University for funding to bridge the gap between the endowment payouts and its budget, and it has worked to build a robust new revenue stream through the Friends of the SEP Society individual membership programme. These factors have helped to mitigate the impact of an economic downturn on the project's endowment, which remains the largest source of support for SEP.

Moving forward in a time of economy uncertainty, it is clear that outreach will continue to be important for the project. SEP's leaders have put a great deal of time and energy into advocating for the resource to other philosophers, to academic librarians, and, in particular, to senior-level administrators within the project's home institution. SEP's relationship with Stanford is particularly important, as the University provides bridge funding that allows the project to meet its year-to-year budget, so ensuring the stability of that relationship, and communicating the value of the SEP to Stanford's administrators, will be crucial to the project's sustainability plan in the years to come.

Lessons learnt over the past two years

- Even projects that offer open access to content can develop alternative revenue streams: project leaders must, however, create the proper incentives for the user community to contribute

- When community support is a critical factor in the success of a project, time and effort must be made not only to cultivate new relationships, but to nurture existing ones

Interviewees

Edward Zalta, Principal Editor, Stanford Encyclopedia of Philosophy

Uri Nodelman, Senior Editor, Stanford Encyclopedia of Philosophy,
23 April 2010 and email of 16 February 2011

This case study update was researched and written by Matthew Loy as part of the Ithaka Case Studies in Sustainability project.

Summary of revenues and costs

	2008-2009*	2010-2011	Comments
Total revenue	**$220,774**	**$234,985**	**+6%**
Endowment payouts	82%	76%	
University support	13%	13%	
Misc. income (Friends of SEP, royalties, etc)	6%	11%	
Total costs	**$220,774**	**$234,985**	**+6%**
Personnel costs	92%	87%	
Non-personnel costs	8%	13%	
Number of staff	1.85 FTE	1.85 FTE	
In-kind/volunteer contributions	Endowment management, office space, hosting, and tech support provided by Stanford; 100+ volunteer subject editors and 1,300 volunteer author contributors		**Billing services formerly contributed but now included in budget**

Note: estimates provided in 2009 case study have been updated with actual figures.

Explanatory note

The information presented in this table is intended as a broad picture of revenues and budgeted costs associated with the project, not as a detailed financial report. It does not include in-kind contributions or other unbudgeted items, though these are described where they are known. The financial data, which are presented in the currency in which the project reported the information, were compiled as part of the interview process with project leaders and staff, and in some cases were supplemented with publicly available documents, such as annual reports. Many of the figures are rounded or best estimates. Some leaders preferred not to offer figures at all, but suggested percentages instead. Because of the variability in the way each institution estimated the various categories of revenues and costs, the information presented in the table is of limited value for detailed cross-project comparisons.

JISC

Strategic Content Alliance

building bridges to digital content

ITHAKA S+R

The Thesaurus Linguae Graecae®: How a Specialised Resource Begins to Address a Wider Audience

Case Study Update 2011

www.tlg.uci.edu

JISC Content   Ithaka Case Studies in Sustainability

The Thesaurus Linguae Graecae® (TLG) provides an example of a specialised resource which draws on multiple revenue streams for its sustainability model. This collection of digitised ancient Greek texts is considered essential for scholars of the classics, which has allowed the project to successfully implement a fee for access despite appealing to a relatively small primary audience. In addition to subscription fees from institutions and individuals, income from an endowment and funding from the University of California, Irvine (where it has been housed since its inception) support the project. As TLG approaches its fortieth anniversary, support from the University has been reduced, and the project is now more reliant than ever on subscription income and endowment payouts to cover its expenses.

The Thesaurus Linguae Graecae® (TLG) is a comprehensive online corpus of works of Greek literature, including works from the ancient era through the fifteenth century CE.[1] Founded in 1972 by Marianne MacDonald, then a classics graduate student, and directed by Theodore Brunner, a classics scholar at the Irvine campus, the project is now led by Irvine classics professor Maria Pantelia. The resource already includes a digital edition of nearly every extant work of literature from ancient Greece, with progressively later works now being entered – approximately 15,000 works by 4,000 authors, with new sets of more than 100 texts added to the resource three to four times per year. The project also makes a selection of approximately 1,000 core texts freely available, including works of interest to general and secondary school audiences, such as Sophocles' *Oedipus Rex* and *Antigone*.

The value of the resource is not just in its comprehensiveness, but in the project team's attention to the needs of researchers. The project leader and researchers

www.tlg.uci.edu

select specific editions of the texts for digitisation, and the project team carefully edits the digitised texts before they are presented on the TLG site. (Rather than displaying page scans, TLG displays the texts in a standardised Greek font.) Beyond the editing, the resource's searching and browsing functionality has been developed to meet the needs of classics researchers, and includes the ability to search by letters of either the Latin or the Greek alphabet. Indeed, even the project's programmers are literate in ancient Greek, underscoring the importance of scholarship to every aspect of the project's development.

Original sustainability model (2009)

TLG relies on three streams of revenue to cover its direct budgeted costs: university funding, payouts from a project endowment, and subscription fees.

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[1] Matthew Loy, 'The Thesaurus Linguae Graecae®: Specialised Historical Content for a Niche Audience' (New York: Ithaka S+R, July 2009), **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_CaseStudy_TLG.pdf**

In 2009, Ithaka S+R published twelve detailed case studies of online digital resources, exploring the strategies project leaders were using to sustain those projects for the long term. All of the case studies have been updated in 2011, to revisit the original sustainability models and see how they have fared over the past two years. To read the original case studies, please visit: **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability**

First, the University of California at Irvine has traditionally provided approximately a quarter of the project's revenue. This source of funding has decreased as public universities in California grapple with a budget crisis. In 2011, university funding provided only 15% of the project's revenue ($88,000 out of $585,000 in total revenue), a decline from 2008-2009 when we last examined the project, when the University contributed nearly 22% of the project's direct budget ($108,000 out of $500,000 in total revenue).

Second, TLG has a project endowment, which has been funded in large part by grants (including a National Endowment for the Humanities Challenge Grant) and philanthropic gifts since its inception in the mid-1990s. The project endowment is managed by the University of California Office of the President. Many endowments in higher education have experienced fluctuations in the several years, but because fund managers generally pay out returns using a practice known as 'smoothing' – that is, making payouts from an endowment based on an average of the past several years' returns, rather than on the immediate prior year's returns alone – the effects of the economic downturn on TLG's budget will be spread over several years, dampening the effects of an extraordinarily bad or good investment year on the yearly payout that TLG receives. In addition, the project has been able to increase the principal of the endowment. Together, these factors contributed to an overall increase in the amount of the endowment payout from our last study of the project in 2008-2009.

Third, TLG sells access to the database to approximately 2,000 institutions and individuals around the world; these subscriptions account for more than half of the project's revenue. TLG has been able to successfully operate as a subscription resource in part because of its highly specialised content; many classics scholars consider the resource indispensable for their research, and so academic libraries are willing to fund ongoing subscriptions.

How the model has fared

Since 2008, the project's three revenue streams have fared differently from one another. As noted above, the value of the project's endowment has fluctuated over the past two years, although the payouts for the last year represent an increase from our first study of the project. The same factors that affected the project endowment were felt by the University as a whole, and the project's direct funding from Irvine has been reduced as a result: when we first began to study TLG in late 2008, the University's subsidy to the project was approximately $120,000; by the time we completed the original case study research, the University's support had dropped to $108,000; and by 2011, that contribution had declined further, to $88,000. This is in line with the broader, bleak picture for public university budgets in the state of California, which has put in place significant decreases in

Detail from the Elgin Marbles at the British Museum. Flickr / Chris Devers

higher education funding.[2] The Irvine campus does continue to provide valuable in-kind support for TLG, such as office space and certain administrative costs. Pantelia does not believe that all aspects of the reduction in university support will be permanent, and feels the project can make up the shortfall with subscription revenue.

Subscription revenue, which historically constitutes more than 50% percent of TLG's income, has increased by 30% over the past two years, according to Pantelia. However, there is some concern that the economic climate could have an impact on subscription renewals: when possible, TLG sets prices for customers in five-year billing cycles, meaning that subscriptions of institutions that have been affected by the challenging economy of the past few years may only now be coming up for renewal. Academic libraries with straitened budgets may be particularly sensitive to increases in subscription prices, challenging TLG's ability to offset the decline in university funding and endowment payouts with higher subscription revenues.

Changes in direction and new initiatives

The TLG project team has continued to add new content, including a dictionary meant to help broaden TLG's appeal to non-expert users, and to advocate for the resource with their colleagues in the Irvine administration.

Continuing to add historical texts to the database. Because nearly all the literary works from the ancient Greek period have now been digitised for TLG, the project team has expanded the original scope of the resource to include works from the Byzantine period through the seventeenth century. The intention is to continue moving the project's content scope forward in time, with the expectation that an expanded database will also expand the user base.

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2   At the time of this research in early 2011, one proposal called for a reduction of $1 billion in state funding for higher education. See Larry Gordon, 'California Higher Education Leaders Warn of Further Tuition Increases', *Los Angeles Times*, 8 February 2011) available at **http://articles.latimes.com/2011/feb/08/local/la-me-universities-20110208**

Sustainability dashboard

	2009 Case Study*	2011 Update**	What's Changed?
Content	Over 15,000 ancient Greek works	■ Over 15,000 works ■ Online version of a well-known Greek–English dictionary	Continued growth in content and addition of a new resource type
Functionality	Searchable by standard and specialised criteria	Redesigned interface; addition of customised interface to support use of the lexicon	Significant additional functionality
Costs	$500,000	$530,000	+6%
Sustainability Model	■ Subscription fees ■ Endowment payouts ■ University support	■ Subscription fees ■ Endowment payouts ■ University support	No significant change in model
Revenue	$500,000	$585,000	+17%
Impact	2,000 institutional and individual subscribers	Approximately the same number of subscribers	Maintaining existing subscriptions during a period of library budget cuts
Sustainability Bottom Line	Multiple revenue streams cover costs of project, with any excess reinvested in endowment	The existence of multiple revenue streams continues to be a strong factor in sustaining the project, allowing it to weather a downturn in any one stream	

* These costs and revenues reflect the project's 2008-09 fiscal year.

** These costs and revenues reflect estimates for the project's 2010-11 fiscal year.

Linking resources. Perhaps more significantly, the project team recently brought online a freely available reference work: a digitised and edited version of the Liddell–Scott–Jones Greek–English lexicon. The reputation of the Liddell–Scott–Jones lexicon is well established in the classics community (the first edition was published in the 1840s). The work, which according to Pantelia comes to approximately 2,200 pages in print format, took approximately five years for the TLG project team to edit and develop for online use. They have hyperlinked the references from the lexicon's entries to the historical texts in TLG, providing a path from the open-access content into the subscription texts. The reference source will, Pantelia hopes, be invaluable for users who are interested in Greek texts but lack the literacy level of research scholars. In this way, the lexicon provides a new point of entry to TLG for an audience wider than that of advanced classics scholars, including religious studies scholars and students and lay readers of Greek. 'If we appeal only to classicists, we're finished', Pantelia says of the decision to digitise the Liddell–Scott–Jones for the benefit of a broader audience.

Importance of continued outreach to institutional administrators. TLG has a long history on the Irvine campus and has consistently received support from the University's administrators. 'We've always been treated as an exception, as a boutique project that the University wants to support', Pantelia says. This is reflected not just in the University's direct contributions to TLG's budget and its in-kind contributions, but also in the fact that the TLG directorship is part of a tenured faculty position – giving the project a clearer succession plan and a more assured on-campus future than

many university-based digital resources can claim. But in a difficult economic environment, Pantelia feels that it is even more important to advocate on behalf of the project to administrators. This is a continuous process: she notes that a regular influx of new administrators may not be familiar with the project, so 'educating' them about TLG must be a priority.

Sustainability outlook

Today, TLG's diversity of revenue sources helps to guard against declines in any one source. In the original case study on the resource, we highlighted its three relatively large revenue sources as a strength. Indeed, in the two years since then, the project's access to a variety of funding streams clearly seems to have been beneficial. (As a hypothetical, imagine the impact of a 35% decrease in university funding if that support had accounted for nearly all of the project's budget, rather than just a quarter of the overall budget.) Although attending to each of these revenue sources takes time, this diversity has helped TLG to weather the past two difficult years.

Looking ahead, TLG may face difficulty in attracting a greater number of institutional customers if the resource is seen as serving only classics departments – this is a known and circumscribed market. Additionally, so far TLG has had little in the way of direct online competition, in part because of the project's 'first-mover' advantage in digitising Greek texts decades before widespread internet access came to university campuses. Pantelia acknowledges, however, that the potential for a direct competitor to TLG exists – if not

from a mass digitisation project like Google Books, then from scholarly publishers that issue print editions of classical texts. To meet this challenge, TLG's project team plans to continue to improve its functionality, add new features, and expand the range of the database, all of which will be difficult to accomplish if funds are not available for investment.

Lessons learnt over the past two years

- Multiple revenue streams help protect a project in difficult economic times

- Outreach to institutional administrators is even more important during a difficult time for university budgets

- Even for very specialised content resources, project teams should reach out to new audiences in order to broaden their appeal and their value proposition

Interviewee

Maria Pantelia, Director of the Thesaurus Linguae Graecae® and Professor of Classics, University of California, Irvine, 14 April 2010 and 31 March 2011

This case study update was researched and written by Matthew Loy as part of the Ithaka Case Studies in Sustainability project.

"Chalkidian" Black Figure amphora. Flickr / Dan Diffendale

Summary of revenues and costs

	2008-2009	2010-2011	Comments
Total revenue	**$500,000**	**$585,000**	**+17%**
Subscription fees	50%	55%	
Endowment payouts	29%	30%	
University support	22%	15%	
Total costs	**$500,000**	**$530,000**	**+6%**
Personnel costs	80%	80%	
Non-personnel costs	20%	20%	
Number of staff	7.15 FTE	5.25 FTE	
In-kind/volunteer contributions	**Half of management salaries paid by UC-Irvine; endowment management provided by University of California Office of the President**		

Explanatory note

The information presented in this table is intended as a broad picture of revenues and budgeted costs associated with the project, not as a detailed financial report. It does not include in-kind contributions or other unbudgeted items, though these are described where they are known. The financial data, which are presented in the currency in which the project reported the information, were compiled as part of the interview process with project leaders and staff, and in some cases were supplemented with publicly available documents, such as annual reports. Many of the figures are rounded or best estimates. Some leaders preferred not to offer figures at all, but suggested percentages instead. Because of the variability in the way each institution estimated the various categories of revenues and costs, the information presented in the table is of limited value for detailed cross-project comparisons.

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V&A Images:
Scaling Back to Refocus on Revenue
## Case Study Update 2011
www.vandaimages.com

JISC Content

Ithaka Case Studies in Sustainability

V&A Images, the commercial image licensing unit of the Victoria and Albert Museum, had a difficult task: to generate profits through image licensing while also fostering the museum's public and scholarly mission of providing access. In 2009, our study focused on the challenges of operating an image licensing business whose sustainability model depends on monetising the same assets that are available for free. In part due to these challenges, the group expanded their scope in 2010 to include mobile app development in addition to content production, rights management and sales. Yet in 2011, with revenues not keeping pace with costs, the museum opted to disband the unit, retaining only the sales function.

The Victoria and Albert Museum (V&A) is the world's largest museum of decorative arts and design, with a renowned collection of ceramics, furniture, fashion, glass, jewellery, metalwork, photographs, sculpture, textiles and paintings.[1] It is committed to offering free online access to its collections, and has expended significant resources to develop its 'Search the Collections' portal, which was re-launched in 2009 with images of more than 100,000 objects and over a million records detailing items in the museum's collection. The museum's goal is to increase annual web traffic, from 20 million visits a year in 2010 to 30 million visits a year by 2015, and to continue the systematic digitisation of the collection.[2]

The museum includes a commercial trading division, V&A Enterprises (VAE), that generates revenue through various means, including e-commerce and the licensing of the right to use the 'V&A Museum' brand to manufacturers using V&A images or textile patterns on linens, stationery and
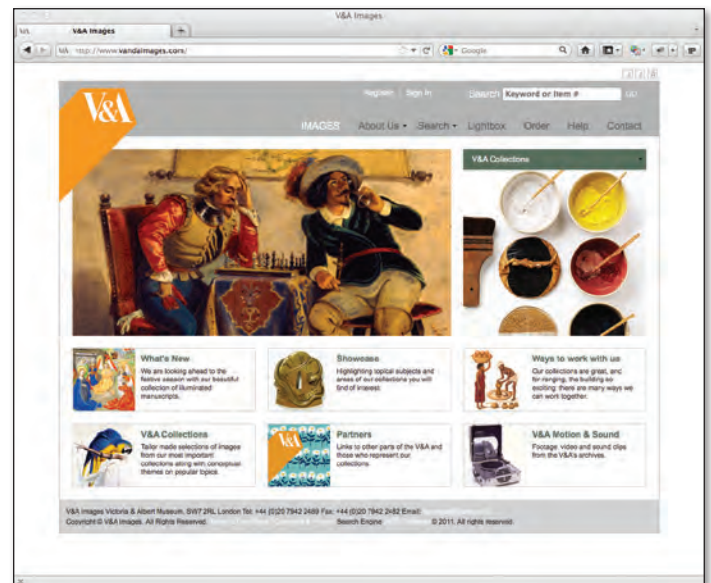
www.vandaimages.com

other goods. The digital picture library, V&A Images (VAI), was a unit of VAE, and until June 2011 was responsible for licensing images of objects in the museum's collections for commercial, educational and personal uses. By 2011 it was offering approximately 30,000 digital images in its online catalogue and had expanded its activities in many directions, including rights management and development of software applications to enhance visitors' experience of museum exhibits. While VAE intends to continue licensing the museum's images, in June 2011 it was decided that the department that had conducted this work, V&A Images, would be reorganised, its several functions embedded into other departments within VAE and elsewhere in the museum.

Original sustainability model (2009)

The Victoria and Albert Museum relies heavily on funding from the Department for Culture, Media and Sport, supplementing its budget with income generated through V&A Enterprises (VAE), a for-profit commercial subsidiary that returns its profits to the institution, and through other

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[1] The original Ithaka case study provides the history and further detail on the sustainability of V&A Images. See K. Kirby Smith, 'V&A Images: Image Licensing at a Cultural Heritage Institution', available at **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_CaseStudy_V-AImages.pdf**

[2] Victoria and Albert Museum, 'Strategic Plan 2010–2015' (2010/11), p. 11. Available at **http://media.vam.ac.uk/media/documents/about-us/2010/v&a-strategicplan2010-15.pdf**

In 2009, Ithaka S+R published twelve detailed case studies of online digital resources, exploring the strategies project leaders were using to sustain those projects for the long term. All of the case studies have been updated in 2011, to revisit the original sustainability models and see how they have fared over the past two years. To read the original case studies, please visit: **www.ithaka.org/ithaka-s-r/research/ithaka-case-studies-in-sustainability**

David Decapitating Goliath, by Francesco Parmigianino (1503-40). Drawing. Italy, 16th century. Copyright © V&A Images

activities.[3] VAE's mandate has been clear since the beginning, according to the Managing Director of VAE, Jo Prosser. 'The unit should make money. If we stop making money, we should stop doing what we do.'

Within VAE, V&A Images was established in 2003 as a picture library, with the goal of monetising images from the general collection and providing guidance on rights.[4] The unit's revenue-generating activities included image licensing for commercial clients, custom photography, research services, and on-demand generation of prints. In 2008, V&A Images had revenues of £348,000 ($560,280) and costs of £405,000. In its initial years the unit handled not only commercial requests, but also requests for academic uses of images in research and publications. Its costs included staff to manage the commercial and academic requests as well as the production process, including creation of custom metadata to suit the academic market and high-quality scanning to meet the needs of commercial customers. It managed some costs by drawing on shared services within the museum and on support from a cadre of interns.

'Andrea Stern... estimated that this decision may have cost the unit, which continued to handle academics' requests for images, as much as 25% of its annual revenue.'

In 2007, museum management chose to begin providing images at no charge for academic uses. In early spring 2010, Andrea Stern, VAI's Director of Digital Sales and Development at the time, estimated that this decision may have cost the unit, which continued to handle academics' requests for images, as much as 25% of its annual revenue. At that time, the cost of supporting picture research and provision for scholarly uses, which now generated no revenue, was acknowledged to be a trade-off between revenue and enhancing the role of the unit in the larger educational mission of the museum.

How the model has fared

Over the past two years, a great deal has changed for the VAI unit, as the tightening economic environment, paired with a reassessment of the unit's core strengths, led first to some new avenues of activity, and finally to a radical streamlining and downsizing of the entire unit.

Economic environment. Following the change of government in 2010, the appropriation contributed by the Department for Culture Media and Sport (DCMS) was reduced to 55% of the museum's operating costs, from the 60% of those costs that it had covered in 2008. Along with other similar institutions, the museum was also asked by DCMS to prepare for reductions of 25% to 30% over the next four years.[5] According to Stern, the museum had already begun preparing by making gradual cutbacks over the past several years, so there were few redundancies in the wake of the economic slowdown.

'The commercial market for 'stills' has undergone a revolution, with consumers now expecting images free of charge, free of usage restrictions, and instantly available for use...'

Changing market for images. According to Prosser, since 2006 there has been a fundamental shift in the landscape for digital images that has made it a more challenging

3   Additional revenue is generated through entry fees, private donations, income from restaurants and snack bars, and lottery income. See Victoria and Albert Museum, 'Annual Report and Accounts 2009–2010' (July 2010), p. 32. Available at **http://www.vam.ac.uk/media/documents/about-us/2010/v&a-annualreportandaccount2009-2010.pdf**

4   The other units of VAE include V&A Licensing, V&A Publishing, V&A Retail and V&A Corporate Events.

5   Victoria and Albert Museum, 'Strategic Plan 2010–2015' (2010–2011), p. 5; **http://media.vam.ac.uk/media/documents/about-us/2010/v&a-strategicplan2010-15.pdf**

Sustainability dashboard

	2009 Case Study*	2011 Update	What's Changed?
Content	20,000 digital images	30,000 digital images	Growing content base
Functionality	Licensing images for commercial and scholarly uses		
Costs	£405,000 ($652,050)	Going forward, the costs of the unit will be just those of the sales staff, and its revenues would be just those they generate through licensing image content	
Revenues	£348,000 ($560,280)		
Impact			
Sustainability Bottom Line	V&A Images not quite achieving its goal to be 'profit neutral' and cover its costs	V&A Images was disbanded as a department in spring 2011, its image licensing work folded into the ongoing work of the branded licensing team	

* These costs and revenues reflect V&A's 2007/08 fiscal year.

business. 'The commercial market for "stills" has undergone a revolution, with consumers now expecting images free of charge, free of usage restrictions, and instantly available for use ... In summary, more people want more content, from more complex sources and at more speed, but are less prepared to pay for it and less sympathetic to the real, non-digital, human resource required to deliver it.'

Changes in direction and new initiatives, 2009-2010

The re-launch in September 2009 of the 'Search the Collections' portal[6] made high-resolution images freely available, resulting in a drop in the revenues VAI had previously received from academic users, according to Stern, and 'with the recession VAI needed to look for other ways to attract new and maintain existing customers'. In addition, VAI continued to expand its role in several ways, looking to identify new sources of revenue to cover its costs, and seeking to further expand its role in helping to lead the rest of the organisation in developing a workflow better suited to digital content, for instance, in encouraging the collections staff think about metadata requirements at the earliest stages of a new acquisition.

Expanded role for VAI. By 2010, the unit had expanded to include four departments: Rights, Research and Development (including app development), Sales and Production. This expansion figured as part of a larger strategy, according to Stern, to reflect the changing world of images, and the new-found admission that museums now recognise 'images as assets ... the sales side of images has become very important'. Through 2009 and 2010, the VAI unit continued to carry the same level of staffing, and it introduced several new initiatives:

- *Internal centralisation of activities related to digital assets*: This larger role for VAI was developing into a means to educate the rest of the organisation about the

full workflow involved in handling digital material, to 'educate people all along the chain about providing proper documentation for objects, starting with cataloguing' and including other critical stages of the process, including development of detailed metadata, raising awareness of copyright issues within the institution, and actively clearing rights for audio and video materials from other sources so that they could be repurposed for commercial use. According to a memo drafted by Prosser, 'the department also undertook rights clearance of non-V&A content (eg from exhibitions) for publishing, merchandise, etc, as well as resale, in a commendable attempt to centralise this activity'.

- *Mobile app development*: VAI developed new apps for mobile devices that were launched in March 2011, each with somewhat different features. The app related to the museum's permanent medieval and Renaissance

Men and woman in 18th century dress seated on a pew, by Josiah Wedgwood (1730-95). Salt-glazed stoneware with applied brown details. Staffordshire, England, mid-18th century. Copyright © V&A Images

6 http://collections.vam.ac.uk/

collections includes text, stills, video and audio, and allows the user to follow the exhibit based on a particular interest (ie politics, religion, etc), with guidance provided by the museum's curators. The app accompanying the upcoming 'Cult of Beauty' exhibit will serve as an exhibition guide, pointing to specific items on display. It also features an audio tour that takes the user out of the building to points of interest related to the exhibition. The apps will be offered at a price point of £1.00–£2.50 ($1.60–$4.00). Stern views this as an experiment to determine to what extent people are willing to pay for this offering. 'We are trying to find the balance between free apps and paid-for apps', according to Stern, 'but it's hard to see how we are going to make a profit from this kind of activity'. The costs of developing the content included hiring a celebrity narrator, plus a consultant to manage the technology side of the project. These activities have now been moved elsewhere in the museum.

New sales and marketing strategies. Stern reported in early 2011 that to encourage more effective working relationships with its customers and build sales volume, VAI in 2009 had began to offer 'loyalty rates' to customers who could commit to licensing a certain number of images each year and to encourage customers to license multiple images rather than single images in each transaction, through bulk pricing rates.

Changes in direction and new initiatives, 2011

Despite efforts to identify new sources of revenue for the unit, in April 2011, after about eight years of operation as a commercial unit, V&A Images as such ceased to exist. 'Andrea and I agreed that we had tried everything', said Prosser. 'The picture library days were over. '

According to Prosser, the unit had 'outgrown what it had originally focused on'. While the immediate problem was that revenues were not sufficiently covering the costs of operating the unit, this was due to an underlying structural flaw that had persisted for several years, as VAI continued to carry staff that were tasked with supporting other units in the museum and with providing services to a non-paying audience - academic researchers - without hope of seeing any revenue in return. The unit had 'started taking on functions for internal museum management', says Prosser, but the 'balance was unsustainable'. According to an internal memo drafted in 2011 by Prosser, 'The huge number of inquiries and requests that continue to flood into the V&A for images ... has created a situation where a service is being run on behalf of the V&A that is not recognised or valued - or fully costed. The reality is that the level of demand reflects a real and on-going demand that needs to be considered rather than pushed to the margins in the hope that it will reduce with time and automated delivery'.

Management thus acknowledged the 'financial impossibility of undertaking non-commercial activity' and that the structure of the unit and the organisation of its original team were not suited to take on the challenges of the new environment, noting that 'different skills are needed at different times'. For a while, reports Prosser, 'we defended and justified our system too much instead of integrating it into others. ... Then we realised we needed other skills' and 'started a process of "down-ambitioning" the goals of the V&A Images unit'.

V&A Ceramics. Flickr / Tim Regan

In its new incarnation, the commercial image licensing business still takes place via the website 'vandaimages. com', and is staffed by four sales people and a recently hired sales manager, a new position. This group has joined the Brand Licensing unit of VAE, so that, according to a department memo circulated by Prosser, 'unbranded and branded permissions can be coordinated.[7] Rights clearance has been centralised to support the whole of VAE, with Central Design and Research.' Their new experiments in developing applications for sale to museum visitors are not being entirely phased out, but will continue on a project basis. Perhaps most telling, with this realignment, all activities deemed 'non-commercial' have been 'returned to the museum, thanks to the efforts of Andrea Stern and colleagues within the V&A, who see the rationale for this'.

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[7] Branded licensing includes rights deals that capitalise on the V&A brand itself, for such products as wallpaper, stationery and bed linens. See **www.vandalicensing.com/VAProducts**

V&A Foyer. Flickr / Prodromos Sarigianis

So the enterprise group will not continue VAI's style of creating sophisticated metadata for the scholarly audience, coaching those in other divisions in digital workflow issues, or hand-selecting images from the museum's main content management system to be part of the VAI commercial database. Rather than trying to be all things to all people, the unit formerly known as V&A Images will now consist of a sales staff with a much clearer mandate: to generate revenue through the sale of images from the collection via the website, vandaimages.com.

To smooth the transition, management worked to place VAI staff elsewhere within the museum. They have successfully done this with the exception of the unit's director, who has left the organisation. Overall, the transition has not been easy. 'It's been difficult', says Prosser. 'The plus side is we are getting somewhere. … We know where we fit and what our relationship is to the museum.'

Sustainability outlook

Today, there is little guesswork involved when talking about the current or future sustainability of V&A Images; as an operating unit it has officially ceased to exist. In its most recent form it was deemed not sustainable.

And yet what was 'unsustainable' was not the picture licensing activity itself, but rather the particular shape of this department, which had taken on activities that were not financially supported by the commercial activity at its centre. The component parts that it had developed over time are still vital to both the commercial and mission-based activities of the museum; this is borne out by the maintenance of the vandaimages.com website and by the placement of former VAI staff throughout the larger organisation. Whether image

licensing itself is a sustainable activity for the museum is a separate question, and one not taken up by this update. But by no longer burdening an image sales group with the need to also support activities that are handled elsewhere in the organisation, the group's success will be much easier to measure.

Lessons learnt over the past two years

- Aligning revenues with costs is essential

- Free and fee models for digital content can co-exist, but clearly differentiating the free offer from the fee offer is important, both for users' experience of the service and ultimately for revenue generation

- It is vitally important to focus on the value proposition of a service: how it performs something in some way that is essential to others without duplicating work done elsewhere

Interviewees

Jo Prosser, Director of V&A Enterprises Ltd., Victoria and Albert Museum, 27 May 2011

Andrea Stern, formerly the Director of Digital Sales and Development, V&A Images, Victoria and Albert Museum, 27 May 2010 and 8 March 2011

This case study update was researched and written by Nancy L. Maron as part of the Ithaka Case Studies in Sustainability project.

Summary of revenues and costs

	2008/09	2011*	Comments
Total revenue			
Commercial image licensing fees	62%	n/a	
Academic/non-profit image licensing fees	17%	n/a	
Fees related to loans to museums	15%	n/a	
Other fees (eg public print-on-demand)	6%	n/a	
Total costs			
Personnel costs	80-95%	100%	
Non-personnel costs	10-15%	n/a	
Number of staff	8.4 FTE	4 FTE	In 2009, 8.4 FTE included head of department, 3 in sales, 3 in rights clearance; 1 in production; .4 in print requests. In 2011, shifted to 4 sales people and a manager
In-kind/volunteer contributions	**8 unpaid interns; digitisation services, office space, and IT support provided by V&A Museum**	**n/a**	

*Note: As of 2011, V&A Images is no longer considered a separate 'unit', but rather is activity within the larger Branding unit. Revenue figures for sales of licensed images were not available for publication.

Explanatory note

The information presented in this table is intended as a broad picture of revenues and budgeted costs associated with the project, not as a detailed financial report. It does not include in-kind contributions or other unbudgeted items, though these are described where they are known. The financial data, which are presented in the currency in which the project reported the information, were compiled as part of the interview process with project leaders and staff, and in some cases were supplemented with publicly available documents, such as annual reports. Many of the figures are rounded or best estimates. Some leaders preferred not to offer figures at all, but suggested percentages instead. Because of the variability in the way each institution estimated the various categories of revenues and costs, the information presented in the table is of limited value for detailed cross-project comparisons.

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Framework for Post-Grant Sustainability Planning for Digital Resources

JISC Content **Produced and funded by the Strategic Content Alliance**

When planning to build a digital resource, project leaders tend to spend a great deal of time thinking about the execution of the project itself, and considerably less time thinking about what will happen once the resource is built and operational.

This framework can help project leaders and those who support them to better define the activities, costs and revenues that will be needed to achieve the sustainable outcomes they desire.

All types of projects should find this useful. Leaders of some "closed-ended" projects, such as completed research papers, may find themselves filling in just some of the columns on the chart. But leaders of the kinds of projects likely to result in what should become ongoing enterprises – large contributed databases, for example – will want to address the questions in nearly every column and every row.

Here are the steps to follow when using this framework:

STEP 1 **DEFINE** the desirable post-grant impact of your resource. Do you expect it to have impact by virtue of the large audience it will reach or by the cutting edge technical innovation it offers? Do you intend for it to grow to be comprehensive in its coverage of a topic, and to continue to grow through the addition of new content? Or do you simply want to make sure that the content you have created remains safe and preserved for future users?

STEP 2 **SET GOALS** for each type of outcomes it will be necessary to sustain in order to make this desired impact possible for the long term. So, if you are hoping that your resource will continue to be developed through additional content, you will need to think about what this really means. How much additional content? Added how often? Created by whom? And so forth.

STEP 3 **IDENTIFY** the **ACTIVITIES** these goals will require. If adding new and updated content is a goal, who will be doing this, and how? Will this require full-time or part-time paid staff, volunteer help, or some combination of these? Even activities you assume your host institution may provide (such as server maintenance and technical updates) should be included here.

STEP 4 **DETERMINE** the **COSTS** these activities will incur. Think about this picture across the full range of activities needed to sustain your resource in the manner you have defined. Include the estimated costs of activities you are assuming will be contributed (not paid for directly), to gain a fuller sense of the costs of sustaining this resource.

STEP 5 **BUILD** a **REVENUE PLAN** that shows where the needed resources will come from post-grant. Some may be covered by a host institution; some may be contributed by partners or volunteers; but there are likely to be some costs that will still need to be covered each year. Start thinking about different ways that you may be able to generate sufficient revenue to cover them.

Table 1. Framework for Post-grant Sustainability Planning

The table below shows how digital resource project director might begin to frame a post-grant sustainability plan. The activities and costs shown below illustrate the types of activities that will be needed and costs that will be incurred for the project to operate on an ongoing basis. This table does not represent a full financial model, but is intended as a tool to help project leaders systematically consider the future costs of their enterprises and the resources needed to achieve their goals.

STEP 1 DEFINE DESIRED POST-GRANT IMPACT

	Components of Post-Grant Sustainability				
	Technical Requirements	**Content**	**Access and Discovery**	**Audience and Impact**	**Staffing of Ongoing Enterprise**
STEP 2 SET GOALS To achieve desired post-grant impact, what must be sustained? Consider all components, though each project's goals will influence its needs.	What will the resource require for long-term conservation, storage, server space, migration to new formats?	Will the resource require ongoing editorial updating, new content, new metadata, other enhancements?	Does the project team have a desire or obligation to provide open access?	How does the project define its goals in terms of reaching an audience? (Or: What size/kind of audience, and what audience impacts, are desired?)	Who is needed to maintain the resource: PI, full project team, expertise in a certain area?
STEP 3 IDENTIFY ACTIVITIES What ongoing activities will be needed to accomplish the goals above?	Regular maintenance plus labour devoted to updating of hardware and software	Labour (of staff or volunteers) in developing and updating content and metadata	Maintenance and upgrading of user interface and search and discovery tool; search engine optimisation	Development and execution of outreach or marketing plans	Succession planning for leadership; staff training, retention; recruiting new staff, experts, volunteers as needed
STEP 4 DETERMINE COSTS What resources will be required to support these activities?	Included here should be direct costs as well as needs for non-financial resources, including volunteer labor and in-kind services.				
STEP 5 BUILD REVENUE PLAN Where will the project obtain resources needed to cover costs?	Included here should be a plan addressing all possible sources of revenue, including direct and indirect support from host institution, potential earned income, and additional grants, donations, or endowment payouts.				

Table 2: Project Worksheet

	Components of Post-Grant Sustainability				
	Technical Requirements	Content	Access and Discovery	Audience and Impact	Staffing of Ongoing Enterprise
STEP 1 DEFINE DESIRED POST-GRANT IMPACT					
STEP 2 SET GOALS					
STEP 3 IDENTIFY ACTIVITIES					
STEP 4 DETERMINE COSTS					
STEP 5 BUILD REVENUE PLAN					

Table 3: Worked Example

The hypothetical project described below is a digital library of historical documents, whose project team will digitise and provide access to a core set of the most essential early modern French plays for research and teaching, with critical commentary contributed by leading scholars. Citations within the scholarly apparatus will be linked to full-text versions of secondary and primary sources held elsewhere online.

STEP 1 DEFINE DESIRED POST-GRANT IMPACT

The project leaders envision this resource continuing to develop and grow past the grant period, ideally becoming a trusted and popular destination for students, scholars and others interested in the field.

Components of Post-Grant Sustainability

	Technical Requirements	Content	Access and Discovery	Audience and Impact	Staffing of Ongoing Enterprise
STEP 2 SET GOALS What will need to be sustained?	■ Interface that allows users to easily download texts, link between texts on the site and between texts on the site and external resources. ■ Platform that performs with speed comparable to that of other high-quality academic resources.	■ The integrity of the initial content on the site must be maintained. ■ To maintain site's value for long-term users, 20 new plays and accompanying teaching materials will be added each year, and all teaching materials will be revised as needed.	■ Provision of links from citations to external resources, and assurance of link vitality. ■ Outreach to both e-licensing librarians and subject librarians. ■ A system for responding to user enquiries within 24 hours.	■ There are approximately 800 courses in the U.S. and U.K. with early modern French drama on the syllabus. Of these, approximately 400 are at research universities, 200 are at mid-sized universities, and 200 are at liberal arts colleges. We aim for subscriptions at 80% of these institutions by Year 3 after launch, with a 20% increase in usage each year beyond that.	■ Key staff will need to be supported for the forseeable future to manage the project and select content, and for procurement, marketing and sales functions.
STEP 3 IDENTIFY ACTIVITIES How will you reach these goals?	■ Maintaining platform. ■ Procuring bandwidth and server space sufficient to meet demand. ■ Upgrading core functions as needed including search, browse, and page-loading response time. ■ Technical support (must be available on 24-hour emergency basis, in the event site goes down].	■ Selecting new primary sources for digitisation. ■ Soliciting and editing scholarly commentary on the primary sources. ■ Migrating content to new formats in future [will be PDFs at launch]. ■ Clearing rights as needed.	■ Providing user support services. ■ Registering texts for linking and identification purposes (e.g., DOIs].	■ Marketing activities to promote resource. ■ Sales and other outreach activities to reach audience targets (e.g., selling institutional subscriptions].	■ Engaging of marketing and sales staff. ■ Access to office space, office supplies, other staples. ■ Efforts of human resources and legal staff, as needed.
STEP 4 DETERMINE COSTS What will these activities cost?	■ Maintaining a platform: – **Est. £10,000/year to vendor.** ■ Servers and bandwidth: – **Est. £10,000.** ■ Technical support services: – **We may need to buy out time from a staff member employed by our university. Est. 0.5 FTE @ £60,000/year.** ■ Technical developer/project manager: – **1.0 FTE @ £60,000/year.**	■ Project management, including content selection and editorial oversight: – **1.0 FTE @ £80,000/year.** ■ Shipping volumes from contributing libraries: – **Est. £30/volume via vendor.** ■ Commissioning costs for scholarly commentary: – **Working on assumption that scholars will contribute freely.**	■ User-support specialist: – **0.5 FTE @ £50,000/year.** (Working on assumption that we will find part-time contractor for this in Year 1 and Year 2 post-launch.] ■ Costs of registering texts for linking and identification purposes. – **Est. £5/text.**	■ Marketing materials: – **Est. £20,000.** ■ Sales and marketing time: – **1.0 FTE @ £70,000.**	■ Office space: – **Seeking institutional contribution.** ■ Legal and human resources: – **Will need to seek these within our institution.**

STEP 5 BUILD REVENUE PLAN

■ Based on these activities, we estimate the ongoing direct costs of the project to be approximately £310,000 per year. We estimate needing an additional 20% in surplus revenue to grow the project.
■ So, in Year 1 and Year 2 after launch, we estimate that we will need to generate £387,500 per year.
■ This figure does NOT include several types of [unbudgeted] contributions that we hope our host institution will provide, including office space and legal and human resources services. We have opened conversations about these contributions with our Provost, who has agreed to sign a letter attesting that the university will support our project in this way. We will continue conversations with her office.
■ Our subscription model is intended to fully cover the direct operating costs needed to run this digital resource.
■ During the grant period, our grant funding will ramp down each year as our subscription revenue grows.
■ Our sales projections show that by Year x we will be covering our direct operating costs via subscription revenue; and by Year y we will be generating the target 20% surplus.

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"Know your audience" is a theme that we heard again and again from project leaders, and so we have we tried to heed that advice, sharing early findings of this research in presentations and workshops in the United Kingdom and in the United States. Many thanks to all of those who participated in these events, including our session at the JISC Conference 2011, the SCA Business Modeling Workshops in March and July 2011, and at the CNI Membership Meeting in April 2011. Our special thanks go to project leaders Maria Pantelia, Steve Kelling, Edward Zalta, Simon Tanner and Christine Fowler for joining us at these events to speak about their work.

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Suggested further reading

Sustainability and Revenue Models for Online Academic Resources (2008)

On Building a New Market for Culture: Virtue and necessity in a screen-based economy (2009)

Sustaining Digital Resources: An On-the-Ground View of Projects Today Case Studies in Sustainability (2009)
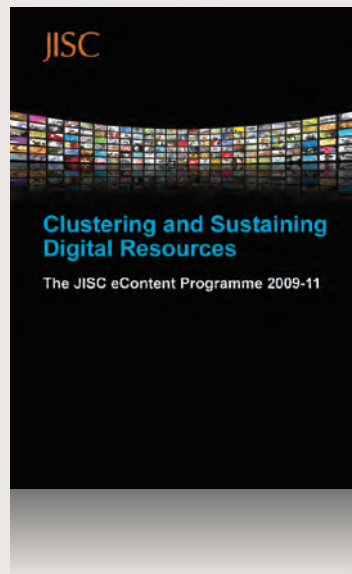

Funding for Sustainability: How Funders' Practices Influence the Future of Digital Resources (2011)
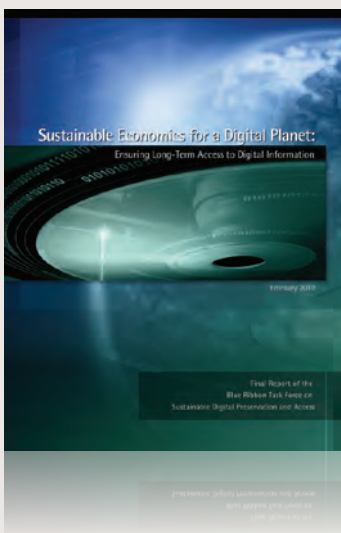

Sustaining and Embedding Innovations Good Practice Guide (2011)

Content Clustering and Sustaining Digital Resources (2011)

Sustainability and Revenue Models for Online Academic Resources (2008)

Sustainability and Revenue Models for Online Academic Resources (2008)

Revenue, Recession, Reliance: Revisiting the SCA/Ithaka S+R Case Studies in Sustainability

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