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
Suggested further reading

1. Sustainability and Revenue Models for Online Academic Resources (2008)
5. Content Clustering and Sustaining Digital Resources (2011)
7. Sustainability and Revenue Models for Online Academic Resources (2008)
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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.

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.


- **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. 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. 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.

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 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. 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) and the Institute for Museum and Library Services (cut by $23.3 million, or a 9.6% reduction since 2011). 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.’

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

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. 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, like the publisher Hindawi and Inamédipro, 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 digitised 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.

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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."  

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), 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.

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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.\(^\text{11}\)

■ **It’s not just about ‘getting by’**. As has been pointed out elsewhere,\(^\text{12}\) 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.\(^\text{13}\)

■ **...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.

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\(^{11}\) 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](http://www.ithaka.org/ithaka-s-r/strategyold/sca_ithaka_sustainability_report-final.pdf)


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?

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.

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. 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]. 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.

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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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.  

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.

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.

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.

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

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: DigiZeitschriften

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.
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.

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 – 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.”

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.

### 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.
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 fulfill 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

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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

<table>
<thead>
<tr>
<th>TNA</th>
<th>INA</th>
<th>MSP2</th>
<th>eBird</th>
<th>TLG</th>
<th>SEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal, content selection</td>
<td>Costs related to scanning, metadata creation and transcriptions and rights clearance</td>
<td>n/a</td>
<td>Financial services, technology support and office space provided by the Cornell Lab of Ornithology</td>
<td>Half of management salaries, office space and endowment management provided by the University of California Office of the President</td>
<td>Gap funds, endowment management, office space, hosting and tech support provided by Stanford University</td>
</tr>
<tr>
<td>EE</td>
<td>VAI</td>
<td>Southampton</td>
<td>DZ</td>
<td>Hindawi</td>
<td>DDH</td>
</tr>
<tr>
<td>Gap funds and staff time provided by the University of Oxford.</td>
<td>Rights, content management, office space, digitisation services and IT support provided by the Victoria and Albert Museum</td>
<td>n/a</td>
<td>Technology support, staff time and office space provided by the Göttingen State and University Library</td>
<td>n/a</td>
<td>Gap funds provided by King’s College London</td>
</tr>
</tbody>
</table>

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, 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.”
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. 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.

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:

**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 Inamédia pro 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.
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 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. 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. 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.

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 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?**

<table>
<thead>
<tr>
<th>TNA</th>
<th>INA*</th>
<th>MSP2</th>
<th>eBird</th>
<th>TLG</th>
<th>SEP</th>
<th>EE*</th>
<th>VAI</th>
<th>Southampton</th>
<th>DZ</th>
<th>Hindawi</th>
<th>DDH</th>
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<td><img src="%E2%86%98%EF%B8%8F" alt="Down" /></td>
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<td><img src="%E2%86%98%EF%B8%8F" alt="Down" /></td>
</tr>
</tbody>
</table>

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

*INA data are for Inamédia|pro 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.

33 ‘Contrat d’objectifs et de moyens entre 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.

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 Inamédiaipro 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. 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.

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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“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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