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Since their inception in the early 2000s, institutional repositories have carried the potential to play a key role in addressing key strategic issues facing higher education institutions. They hold the promise to fundamentally change the way scholarship is communicated by providing expanded access to scholarly research and raising the visibility of an institution's work. They can also provide an alternative to traditional publishing channels such as scholarly journals, introducing competition into a market where competition is sorely needed, and lessening the economic burden on academic and research libraries. Perhaps most critically, institutional repositories can provide an avenue for academic institutions to reassert control of the scholarly output that they produce—helping to broadly demonstrate the scientific, social, and economic value of the research, and raising the visibility and prestige of the institution as a whole.

However, as the earlier chapters in this volume clearly illustrate, this promise has so far been only partially realized—due in part to the natural complexities of introducing wholesale change into a system as large and as entrenched as the traditional scholarly communication system, but also to the lack of implementation of the *full* vision of what institutional repositories might be structured to achieve. To further complicate the picture, the world keeps on changing, and new technologies and economic and political exigencies have emerged that also put pressure on us to expand on the original vision of exactly what institutional repositories are, and how they might contribute to a new vision of sharing scientific and scholarly information.

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In 2002, the Scholarly Publishing and Academic Resources Coalition (SPARC) published an important position paper titled "The Case for Institutional Repositories," in which Raym Crow examined the strategic roles that institutional repositories might play for colleges and universities. In this paper, institutional repositories were defined as digital collections that collect, preserve, and disseminate the intellectual output of a single- or multiuniversity community.

Crow placed a heavy emphasis on the potential of institutional repositories to play an immediate role in providing faculty with a convenient local mechanism to support the growing desire of authors to be able to share their scholarly work online at various stages of the research and publication process, as well as to ensure that access to these works be as nearly universal and perpetual as possible. This function has proven appealing to a growing segment of the faculty, student, and research community that chose to house their research outputs in repositories. It has also received a boost from institutional leadership, as a growing number of colleges and universities enact policies affirming that locally generated content logically should be housed in the institution's repository, in order to accrue the benefits of greater visibility and reach.

Looking across the current landscape of institutional repositories, this portion of the vision has been implemented to a reasonable degree. However, in the same paper, Crow was careful to emphasize that the rationale for implementing IRs extended far beyond the benefits that might accrue to individual authors at a single institution. The impetus was twofold: to generate direct and immediate benefits to individual institutions, of course, but also to ensure that repositories are effectively networked to create a global, interoperable system to benefit institutions—and stakeholders—collectively. The full power of repositories, Crow argued, lay in the creation of a robust infrastructure that would provide stakeholders in the academic community with the opportunity to reimagine—and reconstruct—the current scholarly communication system by offering options for where and when traditional components of the system (registration, certification, dissemination) could take place.

This notion of disaggregating (or unbundling) the system embodied by academic journal publishing further extended the potential benefits of IRs by presenting the possibility for real market efficiencies to be introduced

through the creation of competitive, university-based publishing services—a particularly attractive proposition given the persistent economic pressures facing libraries.

Yet the reality is, while thousands of repositories have been successfully established on college and university campuses around the globe, and care has been taken to ensure that the majority of these are built using open source software platforms and using open communications protocols, with a few exceptions (most notably, the OpenAIRE initiative in the European Union), we have not yet seen the type of universal interoperability among these IRs implemented as originally envisioned. And while some new academy-based publishing services are beginning to emerge, the growth has been slow and has not yet been established on the scale needed to provide truly transformative change.

What does this mean for the future prospects of institutional repositories? As noted earlier, this somewhat slow pace of change is largely to be expected. Creating wholesale change to a long-established structure like the current scholarly publishing model is neither simple nor quick to accomplish. But a foundation for such change has been effectively established. The challenge now is for the community to take stock of the results of the significant collective investments made to date in the infrastructure of institutional repositories and to strategically move to strengthen the opportunities for this investment to realize its full potential. The chapters in this book surface many key opportunities that merit serious consideration, but there are three in particular that I would like to highlight here.

First, the need to provide a deeper and more meaningful level of functional interoperability among repositories stands out. No man is an island, and it is increasingly clear that this holds true for repositories as well. In order for the vision of a seamless, openly accessible global database of research and scholarship to come to fruition, a focused effort to address the nontrivial task of ensuring technical interoperability among as great a number of international repositories as possible must be supported by the community. The Confederation of Open Access Repositories (COAR) eloquently notes the need—and some of the potential outcomes—of such a large-scale effort in its mission statement, calling for repositories to develop the ability to "communicate with each other and pass information back and forth in a usable format. Interoperability allows us to exploit today's computational

power so that we can aggregate, data mine, create new tools and services, and generate new knowledge from repository content." Such an effort will require significant additional investment, but the potential returns to the community are also significant and will be amplified by the collective nature of this endeavor.

A second key strategic opportunity is also alluded to in the COAR mission statement above, and requires broadly rethinking the kinds of content that repositories might hold and the activities that can be facilitated around various content types. While the original emphasis of institutional repositories lent itself to thinking about the infrastructure as primarily supporting a communications and preservation channel, we are beginning to see an important shift to thinking about repositories as a dynamic workspace for scholars and researchers as well. As institutions—and scholars—become more comfortable with the digital environment, repositories offer an increasingly attractive option for works-in-progress and collaborative or large-scale projects to be created, nurtured, and ultimately housed. This shift in focus also opens up new possibilities for active collaborations with other entities on campus, from university presses to individual labs or departments that have an interest in leveraging local, cost-effective infrastructure for sharing scholarly research outputs.

This is a particularly crucial development, as it holds the potential to further amplify the value of the repository to individual institutions, as scholars turn to this locally provided resource to surface and communicate information about their work at new and earlier stages in the research process, as well as to the global community, as collaboration across boundaries is facilitated in real time. It also presents the opportunity consider expanding the utility of the materials in the repository for other critical campus uses, particularly in terms of integration as teaching materials for classroom use.

Finally, it also seems increasingly clear that for institutional repositories to succeed on any scale, they must be considered as integral to the mission of the larger body in which they are housed and be able to demonstrate their clear value. Many efforts to date have focused on raising the number of objects—mainly articles, manuscripts, and dissertations—housed in the repository and have emphasized the increased use/visibility these objects—and their authors—received as a result. While this is an important

strategy, it should not be the sole focus of communicating the value of a repository. These objects represent the tip of the iceberg in terms of the repository's potential value, and effectively communicating the additional benefits that can accrue as repositories are networked and increasingly utilized by scholars as active workspaces is an important message to send throughout the academy.

These are just a handful of the strategic opportunities to consider as the community looks forward to forging the next steps in the evolution of the scholarly communication system. The scope of the challenges are global, large-scale, and systemic, and they require focused, collective action to address effectively, but the ultimate result—a system of communicating research and scholarship that directly and equitably serves the needs of all stakeholders—remains well worth the effort.