2017-2018 Strategic Summary

Prepared by the DuraSpace Staff [3]
Introduction

DuraSpace and the communities it serves are increasingly interconnected through national and international initiatives working to build and implement the open, ever-expanding digital scholarly ecosystem and infrastructure that connects us all. Our global community continued to contribute to the growth, advancement, and adoption rate of DSpace, Fedora, and VIVO in 2017-2018. In addition, a growing subscriber base to DuraSpace hosted services is adding to an effective customer service best practices knowledge base while increasing DuraSpace revenues.

We are grateful for our community’s financial support, and for their engagement in the enterprise we share as we work together to provide enduring access to the world’s digital heritage.

We continue to hear from our community that interoperability between and among Fedora, DSpace, and VIVO would be an advantage in addressing ongoing individual institutions’ strategic goals.

With your support our
organization has taken opportunities to review and reset our strategic direction in 2017-2018.

We continue to hear from our community that interoperability between and among Fedora, DSpace, and VIVO would be an advantage in addressing ongoing institutional strategic goals. To make progress towards interoperability DuraSpace has made operational improvements to work more effectively across our open source projects and communities. We are documenting details of common workflows to identify

**DuraSpace Cloud Services**

2017 was a year of growth for DuraSpace hosted services. A record number of new customers were added, including international customers. DuraSpace services maintained a customer retention rate of over 90%. DuraSpace exhibited at the Society of American Archivists Annual Meeting In Portland, and presented at the DPN 2017 Membership Meeting in Atlanta, GA. In 2018, DuraSpace introduced new lower service pricing and new partnerships as well as additional opportunities for outreach to institutions that could benefit from the low-cost, hosted preservation and access serviced DuraSpace provides.
Beginning in 2018, the ArchivesDirect service transitioned to a Certified Partner Program with Artefactual Systems. Artefactual Systems is now responsible for the sales and implementation process for ArchivesDirect, and in return they provide 5% of ArchivesDirect revenue to DuraSpace. DuraCloud will continue to provide the preservation storage for ArchivesDirect customers and DuraSpace will continue to host the ArchivesDirect website, promote the service, and invoice existing customers. Both DuraSpace and Artefactual Systems are confident this new model will allow the service to grow more quickly and reach those institutions that would most benefit from a hosted open source version of Archivematica.

DuraCloud will continue to provide the software information and training available to our community.
DSpaceDirect grew rapidly in 2017, nearly doubling in size to 30 customers. The institutions who rely on DSpaceDirect for their hosted DSpace repositories are mostly small digital collections; 26 customers currently utilize less than 40GB of storage for their repository. DSpaceDirect lost three customers in 2017; in all three cases, the repository lost a local champion and was completely discontinued rather than being migrated to another platform. Hosted repositories that do not become strategically integral to their host campus within three years appear to be most susceptible to this kind of loss.

In 2018, DSpaceDirect reduced the number of add-on packages and streamlined the service to make future upgrades easier. Service planning for improvements addresses needed maintenance, including a recent upgrade to Postgres, upgrading all repositories to DSpace 6, as well as sharing fifty percent of the net income from the service with the DSpace project. Net income from 2018 will be available to the DSpace project in the 2019 fiscal year. The DSpace Steering Committee will decide how to allocate these funds.
DuraCloud customers grew by nearly one fifth in 2017. Today 50 customers rely on DuraCloud as part of their preservation storage strategy. Institutions are continuing to invest in DuraCloud, with over one-third of customers adding at least 1 TB of additional storage to their subscriptions in 2017. Since 2009, DuraCloud and DuraCloud Vault use has grown to include more than 400 TB of content in preservation storage.

DuraCloud began 2018 by rolling out a new pricing model for accounts of 20 TB and above passing on storage savings to customers and making it easier to plan for and add additional storage as needed. For the first time in 2018, DuraSpace is offering a first-year discount to new customers who are DuraSpace members at Silver level and above.

Mapping the Scholarly Ecosystem

As our work evolves to include greater participation across profit and non-profit sectors of the scholarly ecosystem, our board and community have identified the need to map parts and pieces of the scholarly ecosystem in a coherent manner to promote a better understanding.
DuraCloud Vault
DuraCloud Vault continues to be a popular option for members of the Digital Preservation Network (DPN) who wish to deposit their most valuable digital assets into Chronopolis and the rest of the DPN nodes. 29 institutions currently rely on DuraCloud Vault to transfer their items into the DPN network. The relationship between DuraSpace services and the DPN and Chronopolis teams remain strong with The relationship between DuraSpace services and the DPN and Chronopolis teams remain strong with weekly meetings and sharing of technical expertise benefiting all DPN members as well as DuraCloud and DuraCloud Vault users.

DuraSpace intends to more effectively lead and participate in advancing and hardening the scholarly infrastructure. Of how all of our efforts intersect, are parallel, duplicative, and/or complementary to one another. By providing this informational tool DuraSpace intends to more effectively lead and participate in advancing and hardening the scholarly infrastructure we all depend on. With help from our Board of Directors DuraSpace has completed a draft map. The map of the scholarly ecosystem will be released for public comment later this year.
Participation, interest and stakeholders in the scholarly ecosystem are found in every part of the world. Though technical, social, and political barriers to open sharing of information and data exist, DuraSpace has joined with many other institutions, consortia, and organizations in the belief that by working together we can provide enduring access to the world’s digital heritage.

One of the expected results of mapping the scholarly ecosystem is a better overview and understanding of the national and international organizations that share similar and complementary missions with DuraSpace. There is a growing interest in technological standards and systems interoperability within and beyond the scholarly ecosystem. DuraSpace has the unique value of representing a global and diverse community of developers, users, managers, and decision makers, making it strategically interesting for different kinds of organizations from around the world to partner with us such as ministerial agencies, national consortia; international organizations and communities such as euroCRIS, COAR, OpenAIRE, ORCID and
To expand global membership and take advantage of revenue-generating business opportunities DuraSpace created two new staff positions in 2017. Erin Tripp was hired as the Business Development Manager for DuraSpace and Michele Mennielli joined the team as the new International Membership and Partnership Manager.

Mrs. Tripp came to Duraspace from discoverygarden inc, an Islandora service provider, where she gained deep experience as a Project Manager, coordinating development for dozens of digital repository projects. She later became discoverygarden’s Business Development Manager, overseeing community outreach and sales. With Erin’s help DuraSpace is working directly with community projects and service providers to expand mutually beneficial collaborations.

Mr. Mennielli is a longtime member of the DuraSpace community. His contributions include serving on the DSpace Steering Group and working as a Registered Service Provider liaison for CINECA and 4Science. He led the DSpace marketing interest group in 2015 and developed a DSpace Marketing Strategy that provided an analysis of DSpace competitors.
and suggestions for how to leverage the strength of the large, international DSpace repository community. In 2015, Mr. Mennielli presented contrasting and well-received views of the open access policy landscapes in the United States and Europe at the DuraSpace Member Summit. He is leading efforts to improve member benefits and expand participation in open source project governance.

Service Provider Highlights

DuraSpace establishes partnerships with service providers (companies, non-profits, consortia, etc.) that wish to provide open source software services with the support of DuraSpace through the DuraSpace Registered Service Provider (RSP) program.

4Science will begin offering DuraCloud services as a Certified DuraSpace Partner in 2018. This partnership will facilitate delivery of DuraCloud preservation and content storage services in Europe and offer application support in additional time zones and languages. 4Science is an active participant of the DSpace open source repository community. The company is a member of the RSP program, contributes the technical expertise of two committers, participates in
the development of the new DSpace 7 Angular UI, leads the REST API Subteam, and served on the Steering Committee for DSpace.

Longtime DuraSpace Registered Service Provider Atmire has been a key DuraSpace collaborator and instrumental in advancing DSpace development, and in supporting the global DSpace community. The company is a member of the RSP program, contributes technical expertise, participates in the development of the new DSpace 7 Angular UI, and serves on the Steering Committee. In 2017, Atmire launched hosted DSpace services: DSpace Express and Open Repository.

The current RSP Program will be restructured and rebranded in 2018 as the DuraSpace Service Provider (DSP) Program. It will offer more ways to collaborate with DuraSpace for different types of service providers in our community, large and small.

The goals of the new Program are four-fold:

• Generating revenue to fund DuraSpace staff positions to manage code contributions/merges, releases, bug fixes, and community leadership and outreach efforts in support of DuraSpace open technologies and communities
• Working more closely with open source service providers to generate
qualified leads and promote the adoption of DuraSpace open technologies to a broader group of prospect organizations

• Celebrating the expertise and in-kind contributions of service providers as it propels the quality and functionality of our code-bases and open knowledge to empower users

• Providing support and mentorship to service providers who want to start contributing to our communities

The new DuraSpace Service Provider (DSP) Program has three tiers:

• Certified DuraSpace Partners,
• Certified DuraSpace Contributors, and
• DuraSpace Listed Service Providers

Each tier has categories for DSpace, Fedora (Samvera/Islandora), VIVO, DuraCloud, and ArchivesDirect.

More details on the new program will be available in May 2018.

Evolving the DuraSpace Business Model

In 2013 the DuraSpace business model was based on this goal: “Continue to provide leadership in OS software development and collaboration and develop revenue generating services to complement our work.”
At that time membership covered only 20% of total organizational costs. The 2017-2018 revenue picture shows greater business diversification with a continued strategic emphasis on building revenue-generating services.

Member financial contributions and active participation make open source project advances possible:

**DSpace**
DSpace project advances include five DSpace bug-fix releases, coordinated development and training on the upcoming DSpace 7 User Interface and REST API, and increased international engagement through attendance at regional meetings and user groups.

In addition to helping to pay for staff who provide technical leadership, direct strategic planning, organize community outreach and communications, and coordinate timely software releases, your membership dollars will help the DSpace community accomplish:

- Coordinated, community-wide development on the DSpace 7 release, including both a new User Interface (based on Angular) and a new REST API (based on current REST best practices)
- Increase developer knowledge sharing and participation through
organized Community Sprints, Show & Tell meetings, and/or Virtual Developers Conferences

- Coordinated, community-wide strategic planning, especially regarding enhancements to the DSpace data model to support new Entities (e.g. Author objects/profiles, etc)
- Work with the community to make DSpace compliant with emerging international standards and recommendations
- Strengthen support for DSpace user groups, including coordination of cross-user group meetings / resource sharing, and facilitation of new regional user groups throughout the world.
- Organizing in-person and virtual workshops in partnership with other international and national organizations.

**Fedora**

With your help and active participation the Fedora project has achieved great things this past year, including 4 software releases, domestic and international Fedora workshops, a 3-day Fedora Camp and a 5 day Samvera and Fedora Camp.

In addition to helping to pay for staff who provide technical leadership, direct strategic planning, organize community outreach, and coordinate timely software releases, your membership dollars will
also help the Fedora community accomplish the following:
• Support for Fedora 3 to Fedora 4 migrations
• Domestic and International Fedora workshops and user group meetings
• High-priority technical goals such as the API specification effort
• Broader adoption and compatibility with front-end interfaces from Samvera, Islandora, and other custom applications.

VIVO
Since July 2017, the VIVO project coordinated the first community-organized VIVO Conference at Weill Cornell Medicine, two VIVO training camps, and launched the Research Graph Cloud Pilot hosted VIVO service. International activity has been strong, with workshops held in Denmark, Germany and India, an internationalization task force planning VIVO improvements, and new worldwide VIVO implementations. Currently, VIVO counts 150+ implementations in 27 countries, with many more in progress. Strong interest in VIVO continues.

VIVO release 1.10 is planned for availability at the ninth annual VIVO Conference on June 6 to 8 at the JB Duke Hotel at Duke University.

Ambitious plans for next year are underway, and VIVO appreciates your membership support.
more than ever. From July 2018 to June 2019, your membership dollars will enable DuraSpace staff to coordinate development work, provide community infrastructure, and manage organizational and financial services. Additionally, your membership will support the VIVO community’s work on these and other initiatives:

- Developing VIVO 1.11 with a modern, mobile-first user experience
- Adding to the VIVO ontologies to share innovations developed by the VIVO community
- Revitalizing the developer community with new processes and more ways to get involved
- Hosting two VIVO camps and a new kind of VIVO conference
- Helping members define and create success for VIVO over the next twelve months.

**CASRAI**

DuraSpace and CASRAI, The Consortia Advancing Standards in Research Administration Information, recently announced that CASRAI is now a project of DuraSpace adding ‘open systems’ and ‘open standards’ to the current focus on ‘open source’—a layered open stack we will be calling OS3 or “OS-cubed”. Together we plan to add a Research Management Information (RMI) dimension to our focus on scholarly communications and open access program.
DuraSpace’s financial position remains strong. Net income from 2017 reflected the strongest year in our organization’s history, at $237K. Membership revenue shows that the financial support from our community remains stable year over year, at $1.1 million. DuraSpace continues to explore service offerings that are in demand by the community, including both our well-established Cloud Services, DuraCloud, DuraCloud Vault, DSpaceDirect and ArchivesDirect, as well as new consulting and contract services. In addition we are re-calibrating our service provider program as well as engaging in new partnership and affiliate arrangements that both broaden our community engagement and further diversify our revenue stream.
In 2017 DuraSpace revenue grew by 10% or $217K over 2016 with the growth coming from Cloud Service revenue, which was up by 33% or $158K. At the same time DuraSpace expenses increased 4% or $85K, due to additional cloud storage fees and outside contractors. Revenue for 2018 is expected to drop by 10% or $237K due to the conclusion of a grant-funded project. 2018 expenses are expected to increase slightly by 3% or by $61K for the continued investment in business development/partnership efforts.
Cash trends, 2015-2017

DuraSpace ended 2017 in a strong cash position, with over a million dollars in the bank. Our cash flow will continue to flatten throughout the year as our revenue stream diversifies.
There has been overall growth in annual financial support from our community since the launch of the DuraSpace Community Sponsorship Program in 2010, growing from $298K in 2010 to $1.117 million in the 2017 Membership Campaign. This trend represents nearly a 3x growth in fundraising revenue since 2010. For most of the DuraSpace projects membership remained stable for 2017 compared to 2016.

**Hosted Services growth & consulting revenue, 2011-2017**

Strong growth of the combined suite of DuraSpace hosted services including DuraCloud, DuraCloud Vault, DSpaceDirect, and ArchivesDirect has led to cloud service revenue of $646K at the end of 2017.
Overall revenue growth for services has been in excess of 30% each year since 2015. We expect that growth will plateau in 2018 as we seek more medium-sized customers. We have also cultivated consulting and contract services of interest to the community which will further diversify our revenue streams. We anticipate a small amount of this revenue, roughly $25K in 2018.

Business Opportunities and Diversified Revenue Streams

As our community grows and changes, we in turn are being called on to coordinate and share skills and resources more widely and efficiently. We continue to seek our community’s guidance on how we, a small organization, can help meet community challenges by expanding
the reach of our projects and programs and working more effectively across projects, technologies and international communities.

An Internal Consulting Services work group is developing preliminary ideas/next steps with an eye towards a broad view of integrated business opportunities. As part of that process a Community Survey was conducted in Jan-Feb 2017 aimed at learning more about how DuraSpace might better serve our community. We are moving forward towards taking on contract-ed and consulting work where possible given the small size of our current staff.

In 2018 DuraSpace will actively pursue collaborative opportunities to provide solutions to fill gaps in custom development, training, and consulting services as indicated by our community. These endeavors must align with our mission, and sustain and grow the programs and the DuraSpace organization as a whole.

**International Outreach and Action**

DuraSpace seeks to broaden and extend our reach to support efforts in the ecosystem to preserve and make accessible cultural heritage and academic resources globally. These assets should be accessible and usable by researchers of every stripe to advance
interdisciplinary research and discovery around the world. Our reputation as experts in this field combined with our agility, suit us to influence rather than to take ownership of this work and to shape the efforts of community. While our small size and location just outside of academia positions us to adapt and respond to cultural and political shifts, it also makes us vulnerable financially and organizationally. Over the next two years the DuraSpace organization intends to grow large enough to sustain and grow operations while retaining the agility of a small organization.

Addressing the vulnerability of our small size and lean funding is chief among our goals in 2018. Over the next two years we will grow staff and operations with diversified revenue streams to sustain and grow the organization. At the same time, we want to retain the agility of a smaller organization and maintain the confidence and trust of a community that has come to rely on the services and expertise we offer individually and collectively.

In order to strengthen the international outreach and engagement, we are working on two main activities: developing relations with national organizations and consortia, that could serve as regional contact points. Examples are the Consor-
tium of University in Italy (Cineca) and Spain (Sigma), the National Agency for Science and Technology in Peru (CONCYTEC), the National Library Association in Turkey (ANKOS); we’re also supporting and co-ordinating regional User Groups, getting more involved with the existing ones (in Germany and the US) or facilitating the creation of new ones.

Strategic Partners
DuraSpace Strategic Partners are aligned with our mission and help fulfill it by working with their communities to meet shared goals.

The first organization we signed a MoU with in February 2017 to officially establish a Strategic Partnership was euroCRIS. euroCRIS is a not-for-profit, statutory association (http://www.eurocris.org), governed by Dutch law, dedicated to the development and implementation of efficient and effective institutional, national and international research information systems and their interoperability, based on CERIF (Common European Research Information Format). The motivation for the collaboration is that the two organizations strongly believe that international cooperation is the right way to create a high-quality technological ecosystem for academic and scientific research and that
Current Research Information Systems (CRISs) and Institutional Repositories (IRs) are two fundamental and interoperable components of such an ecosystem, both dealing with the new challenges regarding Open Access, Open Data, National Assessment, and Research Funding worldwide. Based on this partnership DuraSpace and euroCRIs are jointly organizing a Repository-CRIS workshop prior to the 2018 CRIS Conference in June 2018.

We’re currently considering 2 other strategic partnerships, one with OpenAIRE aiming at enhancing the repositories so to comply with international standards and recommendations for interoperability; the other one with COAR to provide joint workshops around the world about the current and future role of repository in the scholarly ecosystem.

**Extending Membership Benefits**

The current business model that relies on membership funds to sustain our open source projects is not sustainable. Institutions in North America, our main contributors, are facing funding issues. We need to change our membership focus to include outreach for memberships internationally.

We have developed a new
membership model and value proposition to allow a broader part of the community to be more active members of DuraSpace. The new membership value proposition introduces two new levels - Supporter ($500) and Copper ($1000) - harmonizes the model for all the projects. It aims to create a governance structure which is inclusive and representative of our global community. We also introduced a model for Consortia Membership which is currently being negotiated for a specific group of institutions in Germany.

2017 Community Survey: Learning How DuraSpace Can Better Serve our Community

In 2017 we surveyed our community to help us learn more about how DuraSpace might better serve our community.

We heard directly and indirectly from seg-
ments of our community that different types of technical assistance would be helpful at their institutions. In 2018 we are investigating how we at DuraSpace might be further able to help you achieve your goals.

**Grants and Partnerships**

In 2017-2018 we concluded our collaboration with Stanford University Libraries and the Digital Public Library of America (DPLA), on Hyku, the IMLS-funded, Hydra-in-a-box (LG-70-15-0006-15) repository bundle. Our efforts included the HykuDirect Pilot Project. Feedback from participants validated our understanding of the needs of the cultural heritage and research communities, and the need to pursue a solution that simplifies the process of implementing and managing the system for a variety of users and workflows. It also strengthened relationships with the pilot organizations and our resolve to continue work on Hyku. In February 2018, DuraSpace submitted an IMLS preliminary project proposal called Deploying Hyku to Library Consortia: A Living Laboratory Project to build capacity for U.S. library consortia to run and maintain shared Hyku digital repositories for their members.

DuraSpace also submitted an IMLS preliminary planning project proposal
for Designing a Migration Path: Assessing Barriers Upgrading to Fedora 4.x. The project focuses on consultation with the Islandora, Samvera, and Fedora communities to improve resources and support for the hundreds of organizations planning to upgrade the current, supported release of Fedora. We hope to be invited by IMLS to submit a full proposals for both projects in May 2018.

In November 2017, DuraSpace announced its new Certified DuraSpace Partner program for DuraCloud. Its first member is 4Science, an active participant of the DSpace community. 4Science will begin to offer DuraCloud Europe, open source preservation and content storage services as well as application support in European time zones and languages, beginning in spring 2018. This Partnership is part of a growing number of initiatives to foster greater engagement and collaboration around DuraCloud. For example, in Spring 2017 DuraSpace worked with the Texas Digital Library (TDL) to deliver installation and training support so it can provide DuraCloud to its members. Also, DuraSpace was accepted into the latest cohort of the Mozilla Open Leaders program, with its project Open Sourcing DuraCloud: Beyond the License to develop communication products and a framework
that will engage Dura-Cloud users and prospect contributors.

DuraSpace is collaborating with Digital Divide Data (DDD), a non-profit social enterprise creating sustainable jobs for disadvantaged, underprivileged, and underserved communities. DDD provides technical training for youth by partnering with Amazon Web Services (AWS) and Intel. Together they formed a Cloud Academy in Nairobi, Kenya in January 2017 with a goal to teach AWS cloud competencies and skills that are globally credentialed and certified. The training gives graduates access to employment opportunities in cloud computing.

A new collaboration with the California Digital Library (CDL) to build an open, international community around the Archival Resource Key (ARK) persistent identifier started in January 2018. Since 2001, CDL has served as the incubator for ARK infrastructure. To achieve long-term sustainability, DuraSpace and CDL will consult with ARK stakeholders to guide the future of the ARK community and infrastructure.

Duraspace, VIVO, and Research Graph, an open collaborative effort toward connecting scholarly records across global research repositories, partnered on a
pilot project in 2018. The pilot project will test a cloud-based platform for augmenting research repositories with information from the global network of scholarly works. This platform also will enable transforming metadata about research activities and their outcomes to a cloud-hosted VIVO instance.

https://docs.google.com/document/d/1KU-ex2PZHT-GdMA2alYbvk-2VhiSV_sq7pNUfJvhkyoc/edit#heading=h.knag1fmet6dr

2017-2018 DuraSpace Strategic Summary credits:

Content contributions
David Baker, Bill Branan, Mike Conlon, Tim Donohue, Valorie Hollister, Heather Greer Klein, Debra Hanken Kurtz, Michele Menielli, Carol Minton Morris, Erin Tripp, David Wilcox, Andrew Woods

Editing
DuraSpace staff

Copy editing
Kristi Searle

Charts
Valorie Hollister

Design
Carol Minton Morris

Photo credits
cover, iStock photo–Maxiphotography; page 16, iStock photo–SasinParaksa