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2018 has been the first full year for the Samvera Community following our re-branding from Hydra. The first part of the year saw the completion of work by the Governance Working Group and a firm set of proposals taken to, and agreed unanimously by, the Partners at their Spring meeting in Stanford (see page 10). This positive affirmation of the route that Samvera should take towards maturing as a community and organization was a great experience of all our stakeholders coming together to create an agreed way forward. It was particularly good to have new voices from the Community contribute to this work and emphasize the role that all its members can play in our ongoing success. The agreed governance changes are now being progressed.

Samvera’s Steering Group had its first open election for new members in August. As a result, we welcomed to the team Rosalyn Metz, John Weise and Julie Allinson, and also Carolyn Caizzi following a subsequent resignation due to a career move. We offer our grateful thanks to those who stepped down, Tom Cramer, Bess Sadler, Mark Bussey, and Debra Hanken Kurtz, for the inspiration and energy they gave Samvera during their time on the Group. A second round of elections will take place during 2019 as Steering moves to be a fully elected body by 2020.

The Governance Working Group’s proposal to work towards central staffing, and the fundraising required for this, has seen work undertaken to understand what this entails and that is progressing into 2019. The associated definition of a contribution model to inform fundraising and recognize how institutions can make varied and valuable contributions to the Community is gathering momentum through a working group.

On the technical front, the Roadmap Council has been getting up and running and has been setting out its workplan for 2019 whilst the Component Maintenance Working Group has worked to provide stability and ongoing maintenance for core community code. Of particular note has been the continuing interest and activity around Hyku, the multi-tenant...
version of Samvera’s software based on Hyrax. This work is being coordinated through the Hyku Interest Group, and has attracted particular involvement amongst vendors looking to provide hosted Samvera solutions. Alongside Hyrax and Avalon, Hyku is now a genuine option for institutions looking for a Samvera solution, and it has been rewarding to see the work of the ‘Hydra in a Box’ project bearing ongoing fruit. At our 2018 Connect conference (see below) there was much interest in the continuing development of our Valkyrie initiative to support flexible back-end storage options for Samvera repositories; Valkyrie will see further work going into 2019 to enable production use. The development of Hyrax itself in 2018 has been structured through two groups, the Samvera Interest Group for Advising the Hyrax Roadmap (SIGAHR), and the Hyrax Working Group, the latter helping to focus specific contributions from the Community towards ongoing development. It is particularly good to see many accessibility needs being addressed through the work of this second group.

Community meetings continued to be a popular way for members of the Community to come together and exchange experiences and ideas. Our annual face-to-face conference Samvera Connect was superbly hosted by the University of Utah in October, including the now standard poster presentations from Partners that act as a valuable way to provide updates on ongoing work. Virtual Connect in July was again very successful – to the extent that in 2019 it will be run over two days to accommodate demand. The event will be moved to a new slot in April so that there is a key Community event every six months or so. There were a number of training camps run, including a joint one with Fedora in Berlin, and regional meetings in the UK and on the West Coast of the US. A full list of events can be found on page 14.

Outside of meetings, the Samvera Interest and Working Groups continue to provide focused opportunities to come together and discuss specific themes of interest. Noting those that have already been mentioned, the longstanding work of some of the groups is now well-established and they continue to produce valuable outputs - for instance, the final report of the MODS and RDF Descriptive Metadata group brought the year to a productive close. 2018 also saw new ventures including a Marketing Working Group to build on our re-branding as the Samvera Community and make more people aware of the benefits that Samvera can offer.

2018 has been a year of transition, but also a year of progress in consolidating the Samvera Community and its technical developments and how these can continue to evolve in the years to come. We thank the many people and institutions who have given us contributions and support to make Samvera what it is. 2019 will look to build on the Community’s strengths and develop these. We encourage you to engage with Samvera at whatever level you feel comfortable – you’ll be very welcome!
In 2018 we welcomed CoSector at the University of London as a new Samvera Partner. Sadly, a small number of institutions withdrew from Partnership as their organizations decided to follow a different technology path. We are sad to see them go but wish them well and hope to keep in touch. At the time of writing Samvera has 34 formal Partners with another two anticipated early in 2019.

- Boston Public Library
- Columbia University
- Cornell University
- CoSector, University of London
- Data Curation Experts
- The Digital Public Library of America (DPLA)
- The Digital Repository of Ireland
- Duke University
- DuraSpace
- Emory University
- Indiana University
- Lafayette College
- The London School of Economics and Political Science (LSE)
- Northwestern University
- Oregon State University
- Penn State University
- Princeton University
- Stanford University
- Tufts University
- University of Alberta
- University of California Santa Barbara
- University of California San Diego
- University of Cincinnati
- University of Houston
- University of Hull
- University of Michigan
- University of Notre Dame
- University of Oregon
- University of Virginia
- University of York
- Virginia Tech
- Washington University in St Louis (WUSTL)
- WGBH, Boston
- Yale University

We are grateful for the many kinds of support that we get, not only from our formal Partners and their staffs, but also from many other organizations in our Community. At the time of this Report we held contributor license agreements (CLAs) for more than 74 organizations and some 335 individuals.
partner profiles:
indiana

Founded in 1820, Indiana University (IU) is a major multicampus public research institution, grounded in the liberal arts and sciences, and a world leader in professional, medical, and technological education.

The libraries of Indiana University Bloomington (IUB), IU’s flagship residential campus, have been using Fedora since 2003 as the basis for repositories supporting digital collections, with a rich set of locally-developed Java applications supporting digitization output from special collections in units such as the Lilly Library, Archives of Traditional Music, and University Archives. At the same time, the University Library at Indiana University Purdue University Indianapolis (IUPUI), IU’s urban public research university campus, has engaged in many community partnerships to digitize and expose collections from cultural institutions and organizations across the greater Indianapolis area, using a locally-hosted instance of CONTENTdm. Both IUB and IUPUI are also long-time users of DSpace for institutional repositories.

IUB first began working with Samvera (then Hydra) in 2011 with the launch of Avalon Media System, co-developed with Northwestern University Libraries, with support from IMLS and the Mellon Foundation. The success of this experience led to further joint exploration of Samvera with IUPUI, and in 2016, IUB and IUPUI entered into a new initiative in collaboration with IU’s central IT organization, to develop an enterprise-level repository environment for use by libraries and archives in Bloomington, Indianapolis, and at IU’s seven regional campuses and centers based on Samvera.

IU is currently focused on three main Samvera-based initiatives, all building upon the Hyrax solution bundle: 1) offering Avalon as an enterprise-wide service for AV collections, including those from mass digitization efforts; 2) developing an image repository to replace legacy services; and 3) developing a new research data repository application jointly with the University of Michigan (UM). IUB and IUPUI have also both contributed developers to core Hyrax development to help ensure its sustainability as a basis for IU’s repository efforts, and IU librarians and staff participate on many Samvera working and interest groups.

As part of IU’s bicentennial celebration taking place in 2020, much effort is being put into the creation of new digital projects, including digitization of historical student newspapers from across IU’s campuses, and Samvera is critical for these efforts. By leveraging the expertise, experience, and code from the worldwide community of Samvera partners and adopters, as well as the efforts of multiple university campuses and departments, IU has truly been able to embrace the Samvera spirit of “going farther, together.”
CoSector – University of London began working with Samvera in 2017, and went live with our first Hyku repository for the King’s Fund in 2018. From 2017, work was in progress to introduce Samvera to our existing repository development and hosting services as a new option for customers. At that time, the Research Technologies team at CoSector were already working with open source systems, and wanted to widen our existing offerings to include options that could address new customer requirements. Samvera was chosen as a solution that had a stable, yet actively developing set of components and also had a robust and active community built around the technology.

Hyku, in particular, was of great interest to us as a lot of work has gone into making it ‘ready for hosting’, which means that we could offer easily deployed services. This also helped us in lowering the barrier for adoption of our new solution. Our first Hyku customer, The King’s Fund, were already using our repository services. They were interested in moving their repository to Hyku because it offered them a more flexible solution. Not only could support their current content, but it could also provide a robust base from which to develop their repository in line with their own expanding digital content and services into the future.

The King’s Fund Digital Archive was migrated from EPrints using an importer script we adapted from Hyku. It contains over 1700 digitized publications from the King’s Fund, some 130,000 images. Central to the King’s Fund Digital Archive was the use of Universal Viewer and the International Image Interoperability Framework (IIIF) – a feature that was available in Hyku, and has since been made available in Hyrax. We were able to enhance the IIIF support in Hyku and added a custom IIIF Search which we’re hoping to contribute back to the community in future.

For us, Hyku has enabled us to overcome barriers of entry for our customers to adopting a more flexible system. Hyku also gave us a ready-made solution from which to launch our services. Into the future, we will be building on the work we have already done for the King’s Fund to develop further the core Hyku offering that will be standard, to widen our range of open source configurable ‘plug-in’ features, and to build custom repository solutions based on Hyrax.

The King’s Fund Digital Archive: https://archive.kingsfund.org.uk/
Princeton first became involved in the Samvera community looking for a more sustainable way of managing our repository. Our pilot project was developing an application to manage our Latin American Ephemera collection. Based on our experience with that project, we began growing our development team and building the Plum repository based on CurationConcerns, and then Hyrax. As we scaled up to a production release, we struggled with poor performance on our largest items (such as books with 2000+ pages), and we found our use cases increasingly diverging from Hyrax. We explored a number of options to resolve our performance problems, including working on the performance of all levels of the Samvera stack, and using a different persistence option instead of Fedora. Throughout these discussions, one of our highest priorities was solving our problems in a way we could share with the broader community, which we have found very valuable, both as a technical collaboration, and as colleagues tackling the same kinds of problems.

The solution we ultimately implemented is Valkyrie — a new persistence layer for Samvera applications that allows using multiple backends, including Fedora and PostgreSQL. Our new repository, Figgy, uses Valkyrie with PostgreSQL, allowing us to meet our performance goals and continuing to use a number of Samvera community gems, including hydra-head, hydra-access-controls, hydra-editor, hydra-role-management, hydra-derivatives, iiif_manifest, and most recently, BPL's blacklight_iiif_search. Figgy is a staff tool for ingesting files, building digital objects, and managing workflow. Once published, objects are shared with other applications using IIIF, and are embedded in our Blacklight catalog, Spotlight digital collections site, and GeoBlacklight maps portal.
Building on the relationship established over the previous few years, Samvera once again signed a Memorandum of Understanding with DuraSpace for fiscal sponsorship in 2018. Income for the year is up on 2017, largely due to an increased focus on fundraising. Expenditure is greater than in 2017 and this is mainly attributable to three significant factors: DuraSpace charges are for a full year (rather than nine months in 2017), we commissioned an independent accessibility audit of Hyrax, and we moved to the paid version of Slack which is an important communication channel for the Community.

We recognize that not every institution is in a position to contribute directly to our funds, and so we are grateful to some 20 of our Partners and Supporters who, between them, contributed more than $90k to our fundraising effort. We are also grateful to the many Partners and others who contributed significant amounts of staff time and other resources “in kind” to further our Community’s work.

Accounts

<table>
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<th>1st January 2018—31 December 2018</th>
<th>Income ($)</th>
<th>Expenditure ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundraising, donations and 2017 invoices paid</td>
<td>113,108</td>
<td></td>
</tr>
<tr>
<td>DuraSpace fixed service costs (financial, accounting work etc)</td>
<td></td>
<td>7,032</td>
</tr>
<tr>
<td>DuraSpace variable costs (staff time)</td>
<td></td>
<td>4,897</td>
</tr>
<tr>
<td>Contractors and consulting (mainly accessibility audit), legal services</td>
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<td>4,698</td>
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<tr>
<td>Sales and marketing (logo design, website related and domain registrations etc)</td>
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<td>1,467</td>
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<tr>
<td>Communication Services (Slack subscription)</td>
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<td>2,130</td>
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<tr>
<td>Bank charges and merchant fees</td>
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<td>17</td>
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<tr>
<td>DuraSpace affiliation fee</td>
<td></td>
<td>3,000</td>
</tr>
<tr>
<td>Total</td>
<td>113,108</td>
<td>23,241</td>
</tr>
</tbody>
</table>

Net income from above $89,867

Less invoices outstanding at 12/31/2018 $(19,108)

Cash balance forward from 2017* $105,284

Cash balance 31 December 2018 $176,043

* Following the publication of last year’s Annual Report, corrections to our accounts reduced the cash balance brought forward from 2017 by $3,617.
Governance

As noted last year in our Annual Report, a Working Group was established in 2017 to review the governance and structure of our Community. This Group produced a lengthy report and, at the end of that year, Samvera’s Partners commissioned a follow-on Working Group to produce from it a set of specific recommendations. This second document was presented to Partners in March 2018. It contained six specific recommendations:

1. **The Samvera Steering Group should become an elected body from Partners**
   Steering should consist of nine elected members, each from a different institution, and three members should rotate off each year. No member may serve for more than two consecutive terms.

2. **Samvera should hire centralized staff**
   Samvera should undertake fundraising with the aim of eventually hiring a full-time Community Manager and a full-time Technical Manager to support the Community.

3. **Samvera Partners should develop a contribution model**
   Partner discussions have supported the idea of a required contribution model that equitably distributes the resourcing burden. The contribution model should include both financial and in-kind staff time tiered options.

4. **Samvera Partners should establish a Roadmap Council**
   The Roadmap Council would bring together representatives of Samvera’s key groups to align their various roadmaps, inform the Community about them and, when appropriate, organize development and maintenance sprints.

5. **The newly established Steering Group will update its existing bylaws**
   Once the Steering Group is restructured (see recommendation #1), it should update the existing Bylaws for the Group to reflect the changes proposed here.

6. **Partners should assess governance at the end of 2019**
   The effectiveness of recommendations 1-5 should be assessed by Partners at the time of the Samvera Connect conference in 2019.

The recommendations were unanimously adopted by a full Partner vote in April. The first three elected members of the Steering Group took office in August and a new set of Bylaws was approved by Partners in November. The Roadmap Council was duly established and met for the first time in October. A Contribution Model Working Group was established in May and reported to Partners in October; Partners decided that the initiative required further work and
established a phase two Group to build out the recommendations. They also established a Fundraising Working Group to develop recommendations about fundraising strategies generally, but particularly in support of raising funds to hire staff.

**Avalon**

Avalon Media System, a Samvera repository solution bundle for audio and video media, continued to grow as both a technology and community in 2018.

With a goal of developing toward sustainability, this year the teams at Indiana and Northwestern University saw great progress in the development of Avalon 7, re-architecting the product to share more underlying technologies and expertise across the Samvera community. By basing Avalon 7 not just on Samvera Core Components, but also the Hyrax repository solution bundle for key infrastructure management, the Avalon team better integrated with the larger community and focused Avalon development efforts on the specific features for audio and video. While users may choose to use the solution bundle comprised of Ruby gems and components operating alongside Hyrax, they may also deploy Avalon 7 components against their local Samvera installation, selecting just the features they need, providing anything from an embeddable audio/video player to playlists.

2018 saw a number of collaborative development efforts, from Hyrax and Samvera Core Component development work, to grant-driven development efforts alongside AVP, WGBH and the American Archive of Public Broadcasting. Avalon also contributed to development of standards for audio and moving image within the International Image Interoperability Framework (IIIF), and provided resources for developing metadata standards in the Avalon Community. The work resulted in batch upload improvements, compatibility with the Oral History Metadata Synchronizer, metadata standards work and stabilization of the base technologies supporting Avalon 6 and 7.

To better connect with existing users and those interested in learning more about Avalon, the team implemented the Avalon Forum, a monthly update on Avalon development progress and a providing a spotlight on work occurring at user institutions. We also instituted weekly Office Hours, giving the wider community a chance to meet the Avalon team and discuss issues, questions or any Avalon-related subject. For those considering Avalon, all-
hands “Kick-Off Meetings” including staff from both Avalon and the adopting institutions have become a vital resource. Further, adoption of Avalon expanded, with new users in Texas, California, and across the globe.

In 2019, work will continue on Avalon 7, with some features also made available for Avalon 6. Early 2020 will see the debut of Avalon 7, complete with solid upgrade and metadata migration paths from Avalon 6. Additionally, Avalon will continue to develop the community of users and adopters with new outreach and collaborative opportunities.

Hyrax

Over the past year, the Samvera Community has continued to work diligently to make improvements to Hyrax, including new features, new stability, and a change in the way the Community resources Hyrax work. The beginning of the year saw the completion of the much anticipated Collection Extensions work, allowing for creation and administration of a variety of types of collections in Hyrax. We also focused efforts on addressing issues raised as part of an external accessibility audit commissioned by the Community; we were able to address more than 70% of the issues therein.

This year also saw the emergence of the Hyrax Working Group - a team of Community contributed developers whose focus is on providing stability to the Hyrax codebase, and facilitating progress on the Hyrax Roadmap. The Hyrax Working Group was largely responsible for the accelerated rate of releases for Hyrax as well as helping us realize our promises for semantic versioning, version support, and managing technical debt.

Last, the community has rallied resources around completing the Hyrax Roadmap in the coming year. We are optimistic that we are moving Hyrax toward the vision we have shared for the solution bundle: to be a base platform for a range of digital repository types. We look forward to continuing to work with the Samvera Community to move Hyrax forward. One specific area we are focusing resources on is the implementation of Hyrax with Valkyrie. Early work in this area is promising, and we hope that this work will allow Hyrax with swappable back-end functionality sometime in mid-2019.

Valkyrie

It’s been an exciting year for Valkyrie. The gem has added support for things such as ordered properties, optimistic locking, single-valued fields, new queries, configurability for Hyrax, and support for Fedora 5. We anticipate that the project will be promoted to the core Samvera repository early in 2019, receiving support from institutions developing Valkyrie-based repositories at Princeton, Penn State, Northeastern, and

Exclusive dining facilities at Connect 2018!
Emory. Valkyrie will also be added as a dependency of Hyrax in an ongoing effort to smoothly integrate alternate back-ends as an option. The future is looking bright and an ever-growing group of developers are giving their feedback and contributions to this Community project.

**Hyku**

Hyku is Samvera’s multi-tenant solution based on Hyrax and 2018 has seen some significant take-up by Service Providers.

Ubiquity Press, an open access publisher based in London, has partnered with the British Library, the national library of the United Kingdom, to develop shared open-source repository services built using Hyku. The pilot repository will initially include research outputs from the British Library, the British Museum, the Tate galleries, National Museums Scotland, and the Museum of London Archaeology.

CoSector, at the University of London, launched their first Hyku-based repository for a client in mid 2018 (see their case study on page 7): the King’s Fund Digital Archive contains over 1700 digitized publications, comprising over 130,000 images - it was migrated from the EPrints software using an open source importer developed by CoSector, based on the Hyku import functionality. CoSector have contributed to the development and maintenance of the Hyku codebase, helping with the IIIF and Universal Viewer support and with the promotion of Hyku to being a core Samvera component.

Notch8, based in San Diego, have been working on two major projects: the first is for the New York City Department of Records and Information Services (DORIS) and the second for the Pennsylvania Academic Library Consortium. As part of these developments they have made some significant contributions to the Hyku code. In addition, they are planning a launch of general Hyku hosting services for summer 2019.

The Texas Digital Library has investigated Hyku as a possible migration path from other systems for some of its members. They report that “despite the unlikelihood of immediate adoption, TDL and its members will continue to monitor and assess the long-term viability of the Hyku service provider community and conduct additional investigatory work.”

A small group of Hyku implementers has formed a Hyku Service Providers Group which meets on-line each month and we anticipate that 2019 will see a number of vendors offering hosted Hyrax and/or Hyku repository services.
Samvera is extremely fortunate in having many active Interest Groups and Working Groups whose members contribute so much to our Community. In addition to this work, which takes place predominantly on-line, 2018 saw a number of face-to-face events organized involving members of the Samvera Community. Already a number are planned for 2019.

January

**Steering Group Winter Retreat, Stanford University**
Each year members of the Samvera Steering Group take two days out to reflect on the previous year’s activities and to plan for the coming year. Much of this meeting was taken up discussing how Samvera might potentially fund one or two permanent staff—a concern also addressed by the Governance Working Group recommendations in March.

March

**Samvera West Coast Regional Group Meeting, Fresno State University**
The agenda included talks on launching and maintaining a Samvera App, advice for those just starting with Samvera and discussion of batch workflows.

**Samvera Developers’ Congress, Stanford University**
As in previous years, many developers who attended the LDCX conference at Stanford stayed on and took the opportunity to work on shared initiatives.

**Samvera Partners’ Meeting, Stanford University**
Much of the March Partner meeting’s first day was taken up with discussing the operation of the proposed and/or new structures in our Community—the Core Components Working Group and the Roadmap Council, for instance. The main business of the second day was discussion of the recommendations from the Governance Working Group which became the focus of a full Partner vote in April.

April

**Samvera Training Camp, Portland, OR**
Samvera Partner DCE hosted an introductory training camp at the Oregon Health and Science University aimed at building the skills of those new to working with the Samvera technology stack.

**Samvera Europe Regional Meeting, University of London**
Delegates heard an update from the recent Partners’ meeting, an update on the Hyrax roadmap and work on Hyrax analytics and discussed such matters as metadata modeling for theses and marketing Samvera.
May

**Advanced Samvera Camp, Minneapolis**
This was our second advanced Samvera camp. The event was aimed at established developers in the Community to update them on new code and technology.

July

**Samvera Virtual Connect, On-line**
Not face-to-face, but a very important event, Samvera’s third Virtual Connect on-line conference was a great success, with more than 160 people joining the call—more than twice the previous attendance. The event offers participants a catch-up on Community activities and, from the feedback we received, this was much appreciated.

September

**Samvera Europe Regional Meeting, University of London**
A well attended meeting discussed such diverse matters as marketing, contribution models and best practices for Samvera backup/restore.

**Samvera Training Camp, Duke University**
A second introductory Samvera Camp, this time at Duke University in Durham, NC.

October

**Samvera Partners’ Meeting, University of Utah**
The October Partner meeting focused on the progress towards the governance recommendations adopted in April, and on the progress of a number of key Working Groups.

**Samvera Connect, University of Utah**
Once again, Samvera held a very successful annual conference combining workshops, presentations, poster sessions and unconference groups. We are grateful to the team at the University of Utah for their exemplary hosting: the post-conference satisfaction survey was almost unanimous in its praise of their work.

November

**Joint Samvera and Fedora Training, Berlin, Germany**
Following a successful, collaborative event in Oxford during 2017, Samvera’s Partner DCE once again joined with the Fedora team to provide a joint training camp—this time in Berlin.

December

**Samvera Europe Regional Meeting, University of London**
Topics included Samvera/Hyrax resourcing, contributing
back to Hyrax, the Hyrax roadmap, the Oxford Common Filesystem Layout and working with the International Image Interoperability Framework.

2019

January
Samvera Steering Group Winter Retreat, Emory University
Hyrax-Valkyrie Development Working Group scoping meeting, Penn State University

March
Samvera Europe Regional Meeting, University of Oxford

April
Samvera Virtual Connect, on-line: in two parts on consecutive days
Samvera Partner Meeting, IUPUI, Indianapolis

September
Samvera Europe Regional Meeting, University of Oxford (tbc)

October
Samvera Partner’s Meeting, Washington University in St Louis
Samvera Connect, Washington University in St Louis

December
Samvera Europe Regional Meeting, University of Oxford (tbc)

2020

Fall
Samvera Connect, University of California, Santa Barbara

Sunset at Samvera Connect 2018 in Salt Lake City
The name Samvera is a registered Trade Mark within the USA and the European Union. It is the subject of a Trade Mark application in Canada.

The Samvera logo is the subject of Trade Mark applications in the USA, Canada and the European Union.