The Small Publisher’s Guide to Digitally Driven OA Journal Development

How to publish discoverable, top-quality open access content at any scale
Brought to you by Scholastica:

Scholastica is a scholarly publishing technology solutions provider with easy-to-integrate software and services for every aspect of publishing academic journals — from peer review to production to hosting and discovery support. Our mission is to empower publishers of any size to make quality research available more efficiently and affordably in order to facilitate a sustainable research future. Over 1,000 journals across disciplines use Scholastica.

Learn more at: scholasticahq.com

The Small Publisher’s Guide to Digitally Driven OA Journal Development is licensed under a Creative Commons Attribution 4.0 International License

Published 18 November 2021
TABLE OF CONTENTS

1  Introduction: From digital to digitally driven journal development
2  Adopt Agile principles to make iterative improvements
7  Start with modern website design and discovery
17  Prioritize indexing expansion and enhancement
27  Take a digital-first approach to article production
33  Archive content for preservation AND discovery
36  Scale more sustainably with digital tools and services
39  Conclusion: Digitally-driven open access the way forward
Introduction: From digital to digitally driven journal development

With Open Access publishing fees outpacing inflation in recent years — a trend that could lead to OA costing the academy more than subscriptions if left unchecked — there’s never been a greater need for mission-driven publishers to introduce sustainable OA journals. And there’s never been a better time for scholarly organizations of any size to publish OA, with more possible funding models and affordable online hosting options than ever before. But that doesn’t mean it’s not without its challenges. The research landscape is changing fast — from shifts in how readers find and engage with content to new archiving and indexing requirements. It’s a lot to keep up with, especially for smaller-sized publishers!

Are you and your team trying to figure out how to stay on top of the latest standards and trends — short of cloning yourselves?

One of the best places to start is identifying and leveraging opportunities to become a digitally driven publisher. And by that, we mean more than making articles available online. Being digitally driven is about harnessing the full workflow automation and content optimization potential of the modern web to publish more efficiently and adopting principles of Agile project management where applicable to become more readily adaptive to change.

This guide covers Agile project management practices and digitally driven content hosting, production, and dissemination strategies that scholarly organizations of any size can implement to take their journal program to the next level sustainably. You’ll learn how to:

• Optimize your journal website for online readers and search engines
• Expand your article indexing and meet the latest metadata recommendations
• Adopt a digital-first production process to publish more efficiently
• Establish policies for content and data archiving and stick to them

Throughout this guide, we’ve included specific examples and "Quick Tip" boxes with links to relevant resources, as well as this "Digital OA Journal Publishing Professionalization Checklist" to help you bring everything together. Use the checklist to determine where you stand in the spectrum of digital-first publishing best practices and what steps to take next.

We’ve designed this guide to make it easy to jump between sections — so feel free to start with whatever is most relevant to you and your current publishing program stage. Now, without further ado — let’s get to it!
Adopt Agile principles to make iterative improvements
Agile methodology: The what, why, and how

Before we dive into the aspects of digitally driven OA journal development that small publishers should prioritize, we want to talk about what’s sure to be a leading factor in the success of any initiative you embark on — how you approach project management.

When trying to keep everything running smoothly at one or more journals, taking a step back to determine where you should update your processes, let alone planning and executing new projects, can be challenging to say the least. That’s why it’s imperative for your team to focus on identifying and pursuing achievable smaller-scale initiatives that can help you move towards your larger goals to avoid becoming overwhelmed, or worse, feeling burnt out. One of the best ways to do that is by adopting relevant Agile project management principles. In this section, we’ll cover why and how.

First, what is Agile exactly? “Agile” is a project management methodology that originated in software development in the early 2000s as an alternative to the then-dominant “waterfall” method to enable developers to get products to end-users faster with opportunities to pivot plans as needed. The term “Agile” was coined in 2001 when 17 software developers gathered to draft the "Agile Manifesto."

In contrast to the waterfall project management approach, wherein teams map out entire software applications from start to finish and then code them to completion, the Agile methodology involves incremental planning and execution. In Agile, teams build versions or pieces of products, test them, iterate as needed, and then decide what to build next. Agile teams work in “sprints” of time (usually two weeks) and use the start of each sprint to assess their progress.

It’s important to clarify here that the “plan as you go” nature of Agile doesn’t mean Agile teams have no idea of what the outcomes of their initiatives will be. Rather, Agile teams regularly reassess any assumptions they have about how to reach their larger goals (i.e., what order to build components of software in). And they decouple work as much as possible to avoid being locked into completing multiple dependent phases of a project without the option to change the approach. Think of it like building a quilt block by block with the ability to alter the final pattern along the way.
Among the key benefits of Agile project management for software teams are being able to:

• Deliver value to end-users more quickly
• Pivot plans as needed to meet the latest technical best practices
• Avoid the sunk-cost fallacy by abandoning projects that aren’t yielding results

Quick Tip: Explore Agile

For a more detailed overview of Agile as it applies to academic publishing, check out Scholastica’s report, "Iterate to Innovate: How scholarly publishers can use Agile methodologies to respond to change more effectively." The paper covers:

• Why publishers need to become more responsive to change in the digital landscape
• The genesis of the Agile methodology in software development and its applications in other industries
• Examples of publishers using Agile methods to pilot new initiatives

Applying Agile to journal publishing

In recent years, various industries outside of Software as a Service (SaaS) — from farm equipment manufacturing to radio programming — have begun borrowing principles of Agile project management to work iteratively, create space to reflect on the progress of projects, and change course as needed. With the world of academic publishing evolving more rapidly in the digital landscape, Agile is also becoming increasingly applicable in journal planning and development. This is particularly true for OA journals as many OA initiatives, such as funder mandates, are in the early stages.

The "Agile Manifesto" for software development contains 12 guiding principles — some more transferable to a range of industries than others. Effectively applying Agile in journal publishing requires focusing on just those transferable principles. The most broadly applicable are:

• Prioritizing early and continuous project delivery: As described above, a core tenet of Agile is that teams break up projects into parts and pieces they can complete and start getting value from as they go. So instead of scoping out all the resources and steps needed to reach a larger goal, teams should develop a high-level roadmap of what they ultimately want to achieve and then decide on discrete steps they’ll take to get there incrementally. Improvements will likely feel smaller when taking this approach, but they will also happen sooner and more frequently.
• **Regularly reflecting on project progress:** Agile project planning should also include time for progress updates and reflection (i.e., at the end of each “sprint”) to determine if the team is successfully moving towards its desired objective. Teams can also use progress update check ins as an opportunity to identify ways to make improvements to working pieces of projects they've already completed.

• **Ensuring Agile projects can be sustainably developed:** Essential to Agile planning is that teams have the time, energy, and resources to keep iterating towards reaching their larger goals indefinitely. For example, if your goal is to make richer index deposits, you should be prepared to regularly reassess the quality of your deposits relative to the latest standards and make updates as needed. Or you should seek to work with a software/service provider that will maintain that initiative for you. Another relevant tenant of Agile worth mentioning here is “simplicity — the art of maximizing the amount of work not done — is essential.” Translated: Keep the scope of your projects limited to just what is needed to avoid getting bogged down by extra steps and added complexity that may ultimately detract from your final outcome.

• **Building projects around motivated individuals:** Finally, given the fluctuating nature of Agile projects and the need for continual progress assessment and planning, it’s essential for everyone involved to be excited and on the same page about iteratively working towards their ultimate goal. Everyone needs to be open to questioning assumptions and making adjustments.

The various digital publishing best practices we'll cover in this guide are prime candidates for Agile planning and implementation because it's possible (and often necessary) to break them up into smaller decoupled projects that can be "shipped" or completed individually. For example, journals can take an iterative approach to getting their articles indexed in relevant discovery services by taking it one index at a time, rather than trying to map out and work through the technical requirements of all the indexes they plan to apply to upfront. They can also take an iterative approach to improving their indexing outcomes. For example, publishers not yet producing machine-readable metadata for their journals can seek inclusion in scholarly indexes that support manual data entry to start while developing a plan for creating machine-readable metadata files, which are best for indexing. In this way, they can immediately begin to get the benefits of some indexing while working towards a more complete and digitally optimized solution.

Another common factor that makes Agile planning preferable to waterfall for implementing the best practices in this guide is that they are all subject to changing requirements. For example, scholarly indexes are increasingly reassessing and updating their application and content deposit guidelines to ensure research quality and support greater interoperability between their systems and other discovery services.
Given that reality, it would not be advisable for your team to map out a multi-year indexing plan and then dogmatically follow it — as some of the specifications outlined would likely change by the time you were ready to implement them.

The Directory of Open Access Journals (DOAJ) is one index that’s been making more frequent updates to its guidelines in recent years, including introducing a new application form in early 2020 and changes to index deposit requirements/processes in December of 2020. The DOAJ also signed a "Memorandum of Understanding" with Crossref in June of 2021, signaling that they will likely be developing more interoperable metadata standards with Crossref, which may require publishers to update their metadata production processes in the future.

Also, bear in mind that there is and will always be A LOT to cover due to the ever-expanding nature of digital best practices and their constant evolution. So know that if you can't make progress in every single area, that's OK. Start with the initiatives you think will be the best value adds for your publishing program, ship incremental working steps towards them, and celebrate each of those wins along the way.

Now let's dig into specific digitally driven publishing best practices. We know we said you’re welcome to jump around this guide, but we recommend at least skimming this next part first!

Staying ahead of the curve means knowing you’ll always be a bit behind

It may sound backward, but part of staying ahead of the curve in digital publishing is knowing that you’re always going to be a few steps behind. Technology changes fast! So plan to always be iterating — trying to make one sweeping set of changes in any area and then close that door won’t work.
Start with modern website design and discovery
Treat digital as your canonical publishing format

It’s no secret that scholars are conducting the majority of their research online. So publishers should be focused on optimizing their journal websites to ensure they are easy for readers to browse and discoverable in online searches. Your website is the “face” of your journals, so it’s essential that it appears current, engaging, and reputable.

In this section, we’ll cover some high-level design best practices to keep your website in top shape. Then we’ll dive into technical aspects of website management you should be prioritizing to ensure your journal articles are discoverable via mainstream search engines like Google and that your website complies with the latest digital security standards. We’ll wrap up with some tips for maintaining a modern website for publishing teams of any scale.

If you come away from this section with only one takeaway, let it be the header above — “treat digital as your canonical publishing format.” We’re going to repeat that one more time, “treat digital as your canonical publishing format.”

To start, if you’re not already, it’s worth seriously considering publishing online only. With more scholars transitioning to online reading, many publishers are either launching “born digital” journals or phasing out printed editions of existing titles, especially when flipping them to OA.

Transitioning to online-only publishing can simplify your production workflows, enable you to become laser-focused on digital content organization and production best practices, and help you cut time and costs.

From there, make sure you’re optimizing your journal website for the needs of both human and machine readers (i.e., search engines and other discovery services). That means moving away from print-centric publishing practices of yore, such as only
Quick Tip: If you need to print, do it on demand

If you publish with an organization that still has a need for printed journal issues, such as a scholarly society that offers print copies to members, consider transitioning from full print runs to print on demand. Many service providers now offer on-demand printing with no minimum order requirements.

Below are design best practices to make journal websites a lot more browsable:

- Showcase new articles on the journal homepage
- Group articles into skimmable category pages that readers can quickly access from your top navigation (i.e., via a dropdown menu)
- Incorporate search into your website so readers can easily find specific content
- Add images to articles (i.e., in previews) to make them more engaging
- Include brief descriptions or abstract snippets below article listings on the journal homepage and category pages so readers can preview what they’re about

A few words on modern web design — keep it simple!
Ok, we’ll elaborate a bit more here. Whether you’re launching a new journal website or updating an existing one, bear in mind that adding nonessential elements to your website (think embedded Twitter feeds and infrequently updated “news and announcements” pages) can lead to a cluttered-looking site. This, in turn, will make it harder for visitors to find the content most relevant to them, whether that be a particular article or information for authors. Additionally, each auxiliary section or page you add to your website is another area you’ll need to maintain, using up some of your most precious resource of all — time.

So take care to ensure you’re not overloading your navigation and pages with unnecessary elements. Remember the Agile principle covered before, “simplicity — the art of maximizing the amount of work not done — is essential.”

Since 2016, mobile web browsing has consistently exceeded desktop worldwide, and the research and higher education sector is no exception. Scholars are increasingly doing research on the go and out in the field where they often don’t have access to desktop or laptop computers. Consequently, they’re using mobile devices more. Mobile devices also tend to be more accessible to researchers in developing countries. That’s why, if you haven’t already, it’s paramount to adopt a mobile-friendly journal website design by making your web pages responsive. Responsive pages use HTML and CSS code that automatically resizes or hides elements of the page as needed so that it renders properly on all devices (i.e., laptops, tablets, phones).

If you’re working with one or more journals that publish articles in PDF only, you’ll want to be mindful of that and check the mobile-friendliness of your article pages. Generally speaking, PDFs are not a mobile-friendly file type, so you may have a tougher time getting them indexed by search engines (more on this below).

You may be reading all of this and thinking — I’m actually not sure if the journal or journals I work with are mobile-friendly. In that case, now is the time to find out! You can easily do so by inputting your journal homepage and a few article URLs into Google’s mobile-friendliness tester.

Let’s take a closer look at how mobile-friendliness affects search as well as other SEO best practices and what to do if your website is not search optimized.
Examples of modern journal website design

Quantum journal website

Discrete Analysis journal website
Take search engine optimization seriously

If you want your journal to reach the broadest possible readership (which we imagine you do!), you must prioritize Search Engine Optimization (SEO). For OA journals, in particular, publishing content that is easily discoverable in not only subscription-based academic abstracting and indexing databases but also via free search engines like Google and Google Scholar is especially important. Remember, not all readers will have access to paid databases. This is where the needs of machine readers come into play.

To start, we cannot stress enough the importance of making journal websites mobile-friendly. Many search engines, including Google, now favor mobile-friendly content in indexing. Google officially enabled mobile-first indexing for all websites (i.e., prioritizing mobile-friendly content in its search review and rankings) in September 2020. So even if you don’t think scholars in your discipline are using mobile devices to search for articles, if they’re on Google and Google Scholar your mobile website performance matters.

In addition to ensuring your journal website pages (i.e., homepage, author instructions page) are built with responsive HTML, becoming truly mobile-friendly means moving to publishing all articles on responsive HTML pages also. Ideally, you should publish articles in full-text HTML in addition to or instead of PDF. Why? Let’s take a look at where PDFs tend to fall short.

While PDFs are ready for human consumption, they are not optimized for search engines (a.k.a. machine readers), primarily because PDFs are overwhelmingly incompatible with mobile devices. This can be detrimental to search rankings since, as noted, many search engines favor mobile-friendly content. Conversely, HTML article files are optimized for both machine and human readers making them more likely to be returned in search results. HTML articles can be crawled by all search engines and made responsive so they are accessible from mobile and desktop devices.

In addition to being better suited to mobile, HTML articles are also generally more conducive to digital reading. The PDF was designed to be the standard format for delivering final page layouts for print, not for rendering content online. As such, PDFs lack many of the content display opportunities of HTML, including the ability to support:

- Embedded images and videos
- Dynamic tables and graphics
- Convenient and comprehensive reference linking (more on this later!)
Finally, beyond being mobile-friendly, there’s another reason HTML articles are much more optimized for online search — it’s possible to add machine-readable metadata to them in the form of HTML meta tags. HTML meta tags are snippets of code that provide data about the content they are attached to in a format search engine crawlers (i.e., bots that “crawl” the web for new content to index) can understand. For crawlers to effectively parse journal articles, they need access to bibliographic metadata in HTML meta tags.

To optimize journals for search engines, all of their articles should be hosted on separate HTML web pages (i.e., unique subdomains) that include their own bibliographic HTML meta tag article-level metadata. This will help crawlers more quickly locate each article and the metadata associated with it. Some search engines, like Google Scholar, will only index articles hosted on their own webpage, so this is very important!

All of this is not to say that PDF publishing can’t work for mobile indexing and search optimization at all — it just depends on how you host your PDFs. We highly recommend that any journal publishing just via PDF host its articles in an in-browser PDF viewer embedded on responsive HTML web pages rather than linking out to PDF files for a few reasons. First, browsers will register the HTML web pages that house your PDF article viewers as mobile-friendly. Second, you’ll be able to add rich machine-readable HTML meta tag metadata to each of your articles’ web pages, which will make it much easier for search engines to find and index them.

Third, your articles will be on separate web pages with unique subdomains as required by Google Scholar.

Finally, another key to SEO is publication frequency, with the punchline being — the more often you put out new content, the better. That doesn’t mean you have to start producing more journal issues every year. Instead, you can begin publishing articles on a rolling basis as they’re ready.

Think about it: while compiling journal issues was necessary for print publishing — as it wouldn’t be practical to print articles individually — in online publishing, the wait time between accepting articles and publishing them in issues is generally self-imposed. In most cases, a journal could just as easily publish individual articles on a rolling basis and then retroactively compile them into issues if they choose.

The benefits of rolling publishing are twofold. First, it’s a way to get the latest research out into the world faster, which will help establish your journal as a timely publication and incentivize authors to submit to it so they can start accruing citations and impact sooner. Second, it’s a way to publish new content more frequently, which will ensure your website always appears current and also help improve its search rankings. Browsers like Google favor fresh content and will come back to index your site more often if you’re regularly putting forth new articles.
Tips for creating and maintaining modern journal websites at any scale

If you need to make substantive updates to your journal website to optimize it for human and machine readers, such as transitioning to responsive HTML publishing to support mobile and search, bring it up at your next publishing meeting. You'll want to start developing an action plan by first evaluating where you stand.

Are you publishing on a custom-built website? If so, consider the logistics of updating it. If your website is well-coded and you have tech-savvy team members or access to a dedicated web developer, you may find that you're able to make the changes you need with relative ease.

If you're publishing via a content management system, like WordPress or Drupal, does the version you're on include website template upgrade options? Or does it support plugins that will address your needs? And do you have team members with the necessary skills and time to manage system upgrades or add-on projects?

If you find that updating your current website isn't feasible due to technical or time constraints, you still have options. You can always move to a new mobile-friendly publishing platform designed specifically for scholarly journal publishing. The process is a lot easier than you might think. For example, Scholastica’s OA journal hosting platform features a responsive website template journal teams can easily set up in a few clicks using a simple editor tool. And we help journals quickly move their back issues over to our platform.

A primary benefit of using a journal website template is that everything needed for an
optimal reading experience is handled for you.

With a **website template built for journal publishing**, you can get the benefits of modern design, like mobile-friendly pages, descriptive HTML meta tags, and site-wide search without needing someone to update your website code or a content management system. You’ll also be in a better position to test new publishing approaches such as rolling publishing because your team will be able to upload and edit content easily without needing to bring in an expert.

There are also countless behind-the-scenes aspects of maintaining a functional website a quality template can take care of, such as:

- **Search engine optimization (SEO):** A website template can help ensure that journal pages and articles are search-engine-friendly with clean code structures and rich machine-readable metadata.

- **Security standards and data compliance:** You may have noticed that many website URLs now start with “https” instead of “http” — the “https” signals that the website is secure. You may have also noticed data policy popups on many websites, which have been enabled to ensure the sites comply with **General Data Protection Regulation (GDPR)** standards. These are just two of the many security and data standards that a quality journal website template can handle.

- **Continuous backups:** Another step that should not be forgotten is backing up content. When you use a hosted journal website template, you can be sure your content is continuously being saved.

---

**Quick Tip: Let readership data be your guide**

Effectively assessing any journal’s performance to determine how to draw more readers to it requires at least some basic data to support publication analysis and decision making. That’s why tracking readership analytics is a must.

Learn more about the analytics areas all journals should focus on and how to find the best tools for your team in this [blog post](#).

- **Indexing:** Many scholarly indexes like Google Scholar and the Directory of Open Access Journals (DOAJ) have website specifications for inclusion that a template made specifically for academic journals can take care of for you.

Unlike print, digital publications are in no way static mediums. It’s essential to think of your journal website as a living resource that will require maintenance for everything from complying with data standards to indexing requirements — all areas subject to change. As such, make sure you’re in a position to regularly assess your website and make updates as needed, whether working with in-house developers, tech-savvy team members, or a ready-to-go publishing platform from a trusted service provider.
Harkening back to the section on Agile project management, remember to take an incremental approach to website updates and optimizations. And remember to develop a plan for tracking your progress along the way (i.e., are the SEO updates you’re making resulting in more article page views?).

When making website updates, having access to publishing analytics is key. We recommend tracking:

• The number of new visitors coming to your journal websites
• Article pageview and download counts
• Readers by country
• Referring websites (to know where readers are coming from)

Start with low-hanging fruit improvement opportunities like adding images/brief descriptions to article listings. Then work your way up to initiatives like producing articles in responsive HTML. We’ll talk about how to adopt a digital-first production approach to enable your team to affordably and efficiently publish in machine-readable article formats in a subsequent section.

First, let’s look at article indexing expansion.
Prioritize indexing expansion and enhancement
Take stock of your current indexing strategy

When it comes to improving the discoverability and reputation of OA journals (and any journal for that matter), in addition to search engine optimization, getting added to relevant scholarly indexes is paramount. According to the 2021 "How Readers Discover Content in Scholarly Publications" report by Renew Publishing Consultants, abstracting and indexing databases (A&Is) remain the top search starting point for researchers, closely followed by Google Scholar.

In this section of the guide, we'll dig into how to get your articles added to relevant indexes with less work and optimize the deposits you make to indexes once admitted.

Before diving into specific indexing expansion steps, your team should first take stock of where you are in terms of indexing coverage and where you want to go.

Among key questions to discuss are: What indexes are you in right now? Are your articles consistently showing up in those indexes (it’s always a good idea to do some test searches!)? Where do your articles rank in relevant index searches (i.e., are they at the top of the list or three pages down)? Are your article listings correct and complete, or is some information garbled or missing (this could indicate areas of metadata in need of improvement)? Where else should your journals be indexed, or have you covered all of your bases?

If your journal is already in all relevant indexes — kudos, that’s a big feat! In that case, skip down to "How indexes process content and why it matters for publishing at any stage," where we focus on indexing optimization. We’ll cover steps to automate article deposits and enrich your metadata to improve the quality of your indexing and help you save time and costs.

If you're still applying to indexes, keep the Agile principles previously covered in mind, and approach the process as a graduated endeavor to avoid becoming overwhelmed.
Quick Tip: Put the DOAJ at the top of your index list

Every OA journal should apply to be included in the Directory of Open Access Journals (DOAJ). With over 1.2 million visitors every month, and a continually updating stream of metadata that’s ingested by major discovery services, the DOAJ is a powerful platform for awareness. Additionally, DOAJ indexing indicates journal quality.

For more info on DOAJ indexing and how Scholastica can help, check out:

- A Platform for OA Journal Discovery: Interview with DOAJ
- Automatically index articles in DOAJ with Scholastica

If you want additional support finding top indexes in your field, we recommend reaching out directly to university librarians who are subject-matter experts. You can also search the internet for things like "top political science article indexes," and you'll likely find research guides that librarians have compiled like the Berkeley Library “Political Science Research Guide: Article Databases” page.

You should, of course, aim to have your journals added to leading indexes. But early in your publishing history, you may not meet the criteria for the most selective index options. It's best to come up with a list of various reputable, relevant indexes for each journal you publish — not just top ones — and apply to those indexes as you're able. In this way, you'll continually improve your journals' indexing standing.

As you develop your journal indexing strategy, be sure to also account for application review timelines. While some indexes consider journals on a rolling basis, others only review applications at certain times throughout the year. Also, keep in mind, while all indexes will allow you to reapply, many require a waiting period after a title is rejected (e.g., DOAJ has a 6-month wait), so it pays to take some extra time to get your application right the first time.

Where should you index your journals? Some top general indexes to consider include:

- Academic Search (EBSCO)
- Directory of Open Access Journals (DOAJ)
- Google Scholar
- JSTOR
- Proquest
- SciELO
- ScienceOpen
- Scopus
- Web of Science
- WorldCat

Wikipedia also has a comprehensive list of academic databases and search engines that includes both general and discipline-specific options to choose from.
Basic indexing application standards all journals should fulfill

If you're still applying to indexes, keep in mind that each will have its own set of editorial and technical inclusion criteria beyond publication scope (i.e., general indexes like Scopus vs. discipline-specific ones like MEDLINE), with some being stricter than others. So be sure to research individual indexing requirements. As noted in the section on Agile planning, since index requirements are subject to change, we recommend first surveying your options and then taking it one index at a time. If you try to map out and work through implementing the technical criteria for every index you're interested in, there's a good chance some may change before you even apply.

Basic journal indexing selection criteria to look out and prepare for are:

- **Journal publication history and standing:** Many indexes only accept journals from publishers that have been active for a certain number of years or have published a certain number of peer-reviewed articles. This is to ensure that the journal has staying power. For example, MEDLINE only accepts applications from publishers that have been around for a minimum of two years. Some indexes like Scopus also require journals to demonstrate article citedness (i.e., evidence of articles being cited in the index).

- **Editorial board information and policies:** In addition to the full names and affiliations of journal editors, to check their credentials, indexes will also often require information about journals' editorial processes and policies, such as a publicly available publication ethics statement. You can find guides for developing comprehensive publication ethics statements from bodies like the Committee on Publication Ethics (COPE) and International Committee of Medical Journal Editors (ICMJE). If you're in the process of forming a new journal, be mindful of requirements around editorial board activity and structure. For example, the DOAJ requires that journals have an active editorial board with at least two members.

- **Peer review process and article quality:** Many indexes require journals to confirm that all of the articles they publish are peer reviewed and to provide publicly accessible peer review policies on their website that clearly outline the type of peer review the journal follows (i.e., single-anonymized, double-anonymized, open review) and the stages of its peer review process. Indexes may also look at journals’ article selection criteria and the quality of articles’ research methods and outcomes.

- **Level of publishing professionalization:** Some indexes look for markers of publishing professionalization, including article readability (i.e., correct spelling, grammar, appropriate sentence structure, etc.), journal website usability, and article production quality (i.e., formatting of figures and tables).
• **Publishing schedule**: Many indexes require journals to have established publishing schedules before applying to ensure active and consistent publication, whether a rolling article publication schedule or a traditional issue-based schedule.

• **Copyright policy**: Many indexes require journals to have clearly stated and accessible copyright policies on their websites and article pages. And some indexes require that journals include copyright information in their article-level metadata. OA indexes may also have specifications around acceptable copyright licenses. For example, the DOAJ only admits journals that publish all of their articles under a Creative Commons or equivalent open copyright license.

• **Open access publishing statement**: In addition to copyright details, some indexes also require journals to provide details about the OA publishing options they offer. For example, Scopus requires journals to list details of their OA publishing options if applicable, including criteria/costs, and DOAJ requires that journals include a “confirmation of OA publishing and OA statement” on their website.

• **Archiving policy**: Some indexes require journals, particularly those that publish online-only, to show that their articles are archived to ensure they’ll remain available even if the journal ceases publication.

• **Publication language**: It’s also worth noting that some indexes can only support select publication languages. For example, while MEDLINE can accept non-English journals, PubMed Central can only accept English-language journals at this time.

• **Geographic diversity**: Some indexes look to see that journals have geographically diverse editorial boards and authors and/or that they publish content relevant to an international readership. For example, Scopus lists “geographical distribution” of editors and authors among its inclusion criteria and requires that published content appeal to a global audience.

Virtually all indexes also expect journals to follow certain core technical publishing standards. As you’re developing an indexing strategy, make sure all your journals have:

• An **International Standard Serial Number** (ISSN)

• Digital Object Identifiers for all articles (DOIs) — you can learn more about applying for DOIs from Crossref [here](#).

• At least basic article-level metadata

That last point, article-level metadata, is VERY important for indexing! As noted, metadata is data applied to a digital object that provides information about the object's contents (i.e., "date published"). When you think of metadata fields, you can think of anything that someone might use to organize or look for particular articles online — from basics like article title to more specifics like authors' ORCIDs. Both mainstream scholarly search engines and A&I databases require at least basic metadata to process journal articles and return them in search results.

In indexing, you’ll often hear the term “rich metadata.” Here "rich" means having detailed and consistent metadata for all articles.
As explained by Crossref’s head of metadata Patricia Feeney, all metadata should be “clean, correct, and complete.” Publishers should at least provide the basic information required for citations, including:

- Journal ISSN
- Journal title
- Publisher name
- Article title
- Article DOI or internal ID
- Publication date
- Publication volume and/or issue
- Authors’ names

Depending on the index you’re applying to, you may need to produce and upload XML metadata files or full-text XML article files (with metadata) to be admitted. XML is the standard markup language used by academic journal indexes. For example, PubMed Central (PMC) requires full-text XML article deposits. We cover the different ways that indexes ingest metadata in more detail below.

How indexes process content and why it matters for publishing at any stage

This may be stating the obvious, but when an index admits a journal, it doesn't suddenly know about all of its articles (wouldn't that be nice?!). The index must be alerted to articles — both old and new. And the index has to be able to process article information in a format that it can "understand." As noted in the previous section, indexes process content using descriptive metadata available in machine-readable markup languages or computer code. There are two main models for how indexes collect and process information about articles:

1. **Web crawlers:** Like mainstream search engines, some scholarly indexes gather information about articles on their own via web crawlers, which are automated internet programs that systematically “crawl” websites to find and index content. For crawlers to identify new content, publishers must apply machine-readable metadata to all article web pages via HTML meta tags and maintain a consistent website structure that complies with crawler requirements. For example, Google Scholar uses crawlers to gather information and has specific inclusion guidelines, including publishing all articles on separate web pages that have unique subdomains and HTML meta tags.

2. **Metadata/content deposits:** Many indexes do not have crawlers and instead need to have information submitted to them in machine-readable formats. In this case, metadata must be deposited into the index by the publisher (via a metadata form, CSV file upload, or machine-readable XML) so the index can process article information and store it to return in future search results. There are also indexes that ingest metadata deposited into other indexes, like the DOAJ, or discovery services, like Crossref. Metadata ingested from other systems is often referred to as “cascaded” metadata, as DOAJ founder Lars Bjørnshauge explains in this interview.
Crawler-based indexes, like Google Scholar, tend to require less maintenance once a journal has been admitted to them/met their technical criteria as they do the work of finding and ingesting new content. However, with that said, it’s important not to become too lax and assume once crawled, always crawled. You still need to keep track of changes to crawler-based index inclusion criteria and ensure your articles all have rich HTML meta tags. As noted before, make sure you’re able to easily update your website to make any changes needed or that you’re working with a service provider that will take care of crawler-based indexing requirements for you. For example, Scholastica’s OA publishing platform includes Google Scholar indexing.

Many abstracting and indexing databases (A&Is) require article-level metadata to be deposited into them or the discovery services they rely on to ingest content, such as Crossref. Any updates made to articles also have to be submitted to these types of indexes or the discovery services they use. For example, if you submit an article to an index but later change its contents, such as by modifying the title, the index won’t “know” unless you send it an update.

There are two primary ways to deposit metadata into indexes and discovery services:

1. Manually entering article-level metadata into a form on the index website
2. Submitting machine-readable metadata files to the index (usually in XML format)

If you don’t produce machine-readable XML, manual data entry is your only option. In this case, the web form acts as a conduit to convert the article data you enter into machine-readable metadata that the index can understand.

From the outset, the manual approach is limited as not all indexes offer the option of manual metadata entry. Many indexes, like MEDLINE, will only accept articles submitted as XML files. When indexes do allow for manual data entry, it’s a tedious process for publishers. You have to copy and paste the abstract, the DOI, each author and their institutional affiliation, the article copyright license, and any other essential data, which can sometimes include dozens of discrete pieces of information. Even for publishers that can carve out the time and resources for this level of manual work, manual data entry can be prone to error. And the amount of data fields publishers can complete for each article is often limited.

The second option, depositing machine-readable article files into indexes, is better for publishers, A&Is, and discovery service partners. First, it’s a lot faster for publishers because it eliminates the need for manual data entry. Indexes can ingest and “understand” machine-readable article files as they are. Machine-readable article files also result in higher-quality indexing when they contain richer metadata.

Let’s take a closer look at XML and how it can help you automate aspects of metadata production, enrich your metadata, and directly integrate with indexes and discovery services.
As previously noted, XML is the standard markup or coding language used by academic journal indexes and discovery services like Crossref. Journals that produce full-text or front-matter XML article files with rich metadata can automate their indexing processes by depositing that machine-readable metadata into indexes in one go rather than having to enter each metadata element manually.

As the name suggests, full-text XML article files contain the complete text of articles in a machine-readable format. Full-text XML files include formatted front-matter article metadata and machine-readable article text (e.g., introduction, methods, findings, etc.). Whereas front-matter XML files only include front-matter article-level metadata.

At a minimum, journal publishers should produce front-matter XML files with rich metadata for all of their articles. However, full-text XML files are preferable to allow for text and data mining. Producing articles in full-text XML is also becoming a publishing best practice. For example, Plan S lists having full-text machine-readable article files in its strongly recommended technical criteria. Many academic archives also require or prefer to have articles submitted to them in machine-readable formats. So there is a dual benefit to XML article production. We’ll cover archiving best practices in a later section.
Often indexes will also have strict formatting requirements for XML files. For example, some indexes, like MEDLINE, require XML that meets the JATS DTD standard. When applying to indexes, it’s important to look at their article formatting requirements to ensure you’re preparing submissions properly.

In conversations and documentation regarding indexing, you’ve likely come across the terms “DTD” and “JATS,” and you may be wondering what they mean exactly. Here’s the lowdown: DTD stands for Document Type Definition. A DTD is a set of markup declarations that define a document type for a markup language (i.e., XML). Whereas XML is a language, a DTD is a type of syntax. JATS, which stands for “Journal Article Tag Suite,” is a DTD used to describe scientific literature published online developed by the National Information Standards Organization (NISO).

JATS is considered the technical standard for journal articles and is preferred or required by many academic indexes, including all National Library of Medicine (NLM) indexes and search engines (i.e., PubMed, PubMed Central, and MEDLINE). Most index schemas conform with JATS tags and formatting, so formatting articles in JATS XML will enable you to add them to indexes more quickly and easily.

Many indexes also have their own metadata schema or article tags that they require JATS XML files to include. For example, the Directory of Open Access Journals (DOAJ) provides a list of required article tags for indexing. For a quick analogy, you can think of XML as ice cream and index schemas as flavors. All index schemas use the same base — XML — but they change the flavor based on their preferences or requirements.

Quick Tip: Get caught up on Plan S

Plan S is an initiative launched by Science Europe to make research fully and immediately OA that officially went into effect on the 1st of January 2021.

To learn more about Plan S’ latest technical requirements and recommendations, check out Scholastica’s Plan S Roadmap.

Once machine-readable XML article files are properly formatted to be deposited into an index, publishers can usually submit them in one of two ways:

1. Uploading XML files to the index in batches (usually via an FTP server)
2. Setting up automatic article deposits via an API content deposit feed

API stands for “Application Programming Interface” and is essentially a channel that different software applications can use to communicate with each other. Be sure to check each index to see the submission methods it accepts! If API integration is an option that is overall the preferable route, because once an API integration is set up it will run in the background without additional steps required — apart from, of course, monitoring its performance for any issues.
With so many different requirements to consider, as noted, approaching indexing in an Agile way is essential. You’ll need to work through the specifications of each index individually. Of course, working with service providers that have built-in indexing support can speed up the process significantly.

For example, Scholastica’s OA Publishing platform includes integrations with major indexes and discovery services like DOAJ, PubMed Central (PMC), and Crossref that journals can enable in a few clicks once admitted to those databases.

If you’re not yet producing XML article files, you’ll also want to start exploring your options. If you have production staff or support (i.e., from a library publishing program), you may be able to produce XML in-house. If you don’t have dedicated production resources, you can seek a production service instead.

Of course, not all production processes are created equal. Production is another area where operating in a digital-first manner is vital to avoid unnecessary costs and delays. We discuss how to take a digital-first approach to production in the next section.
Take a digital-first approach to article production
Skip multi-step file conversion processes

As noted, producing at least front-matter XML metadata article files is essential for inclusion in most major academic indexes. Yet many smaller-sized publishers struggle to do this. One of the main reasons is that they are not operating in a “digital-first” manner. Let’s overview what digital-first production is and how it can help you reach your article reading experience and dissemination goals.

What does it mean to take a “digital-first” approach to article production? Perhaps the best way to answer that question is to start with what it means to not be digital-first.

The article production process, including layout, composition, typesetting, and citation normalization, has long been one of the most arduous parts of publishing an academic journal. After copyediting an accepted manuscript, many journals follow a production workflow, either internally or via a service provider, that looks something like this:

1. Typeset article (usually from a Word doc) into a formatted printable PDF using a desktop publishing system like InDesign
2. Convert article into partial (front-matter) or full-text XML for scholarly indexes — depending on if the publisher has the technical resources to do so
3. Convert XML article file into responsive HTML for the journal’s website — or skip HTML because it’s too much additional work

Look familiar? Journals are formatting their articles upwards of 3 times before being able to publish them! This kind of production process can take anywhere from 6 to 10+ hours per article depending on the journal’s workflow — and when paying professionals to do the work, the costs can really add up. The inherent problem with this process is that it is print-based, with publishers starting by manually formatting articles into PDFs and then separately formatting them into XML and HTML, or just publishing in PDF and missing out on the benefits of more digitally compatible mediums.

Becoming “digital-first” means flipping the order and producing articles in computer formats from the beginning.
Digital-first production processes are code-based, meaning that production starts with a machine-readable file type. The machine-readable file is then converted into PDF, HTML, and JATS XML (as well as other necessary index-specific schemas), generally without multiple manual formatting steps for each output type. The idea of digital-first production is a relatively newer concept, first popularized in the mid-2000s, with the potential to save publishers significant time and costs.

You may have heard of using LaTeX manuscript submission templates or XML-based publishing workflows. These are both types of code-based production approaches developed in recent years. Code-based processes show a lot of potential, but a primary challenge with many is that they require authors or journal editors to work within code, which most non-developers are not familiar with. For example, LaTeX templates require authors to have access to and work within LaTeX software. And many XML production workflows still require journals to create XML manually. Some publishers and service providers have develop “Word-processor-like” tools for XML editing with varying learning curves and levels of adoption.

At Scholastica, we’ve developed a digital-first production approach that doesn’t require authors or editors to format code or work in special text editing or Word processing systems. Instead, we use advanced software to generate HTML, PDF, and XML articles straight from DOCX or LaTeX manuscript files and accompanying media and figures. So journals get all the article types they need at the same time without having to format code or learn new editing systems.

Among the benefits of Scholastica’s digital-first production process include that:

- Article files always stay in sync throughout proofing because they are automatically generated from the same code base
- Authors and editors have the choice to review proofs in either PDF or HTML
- Figures and tables are properly formatted across file types automatically
- Citation normalization is automated and we’re able to enrich article citations using data available from third-party services via machine learning

Journals that use Scholastica’s peer review system can also have metadata submitted by authors automatically imported into our production service so they don’t have to re-enter it.

Whatever production approach you choose to take, if you’re outsourcing the process, make sure you’re getting articles in all three necessary formats (PDFs readers can print, HTML for online reading, XML for indexes). Ideally, you’ll also want the option for authors and editors to review proofs in either PDF or HTML (some people prefer one format over the other). Also, be mindful of the costs and complexities associated with your PDF styling. Clean PDF styling, much like website design, will lead to a more enjoyable modern reading experience, faster production time, and lower costs. And, of course, get price quotes from multiple vendors.
Make rich metadata your top priority

As exhibited in the previous sections, metadata — in the form of HTML meta tags and XML files — is essentially the backbone of search engine optimization and indexing. As such, you should prioritize it above all else.

To better support the needs of stakeholders across the scholarly communication ecosystem (think archives, indexes, library databases, etc.), journals should add as many descriptive elements to their metadata as possible. Of course, only once they’ve built out a foundation of basic metadata in the JATS XML standard.

Rich metadata elements to prioritize include:

**Persistent Identifiers (PIIDs) beyond the DOI:** Most journal publishers are familiar with registering DOIs for articles to ensure readers can always find the version of record, but there are other PIIDs publishers should adopt to have more robust metadata. These include ORCID identifiers for primary and contributing authors and grant/funder identifiers such as those in The Open Funder Registry.

**Copyright licenses:** To comply with new OA initiatives like Plan S, including copyright license information in metadata is becoming essential for publishers. It can also make articles more discoverable. Many discovery services, like Creative Commons search, support search and filtering by copyright license to make it easier to find OA content.

**Article Abstracts:** Another way to increase the discoverability of articles is by including open abstracts in metadata. There has been mounting support for publishers to do this since the launch of the “Initiative for Open Abstracts” (I4OA).

**Open citations:** Like abstracts, including open citations in machine-readable metadata can also expand the discoverability and use of journal articles. There is also an “Initiative for Open Citations” (I4OC).

**Link your references!**

Finally, it’s important to link the references in your journal articles. Reference linking refers to linking the citations in the “works cited” or “bibliography” of an article to their source.

For example, publishers can link all works cited in an article to their DOIs, as explained in this Crossref overview. As noted, the benefit of linking works cited to their DOIs is that DOIs always point to the most current version of a research output because they are persistent identifiers that publishers update if/when its location changes. Reference linking isn’t just for linking to cited articles. Publishers can also link out to datasets, figures, graphs, and preprints referenced in articles.

Reference links enable readers to find the works cited in journal articles more quickly. They also help discovery services recognize how articles relate to other content online, making it more likely for them to display those articles in search results.
Case Study: SMRJ uses Scholastica to modernize its publishing workflows and produce full-text XML

The Challenge:

Since 2016, the Spartan Medical Research Journal (SMRJ) has served as a formal publication for research completed by students, residents, and faculty at the Michigan State University College of Osteopathic Medicine (MSUCOM). When SMRJ first started, the editors used email and spreadsheets to track peer review, and they published all articles in PDF format.

However, over time, the editors realized they needed an easier way to track peer review and that they would have to start producing machine-readable article files to be eligible for inclusion in major indexes. So Chief Editor William Corser and Assistant Editor Sam Wisniewski began searching for a new publishing platform.

Finding an end-to-end solution:

After exploring multiple options, the SMRJ team chose to use Scholastica’s peer review system, OA publishing platform, and digital-first production service to produce articles in PDF, HTML, and full-text JATS XML.

“We started talking about ways to streamline [our peer review] process. At the same time, we were getting our application ready to submit to PubMed for indexing, and that’s when we realized we needed XML. So it was really good timing when we found Scholastica and realized it could help us with both of those things,” said Wisniewski.

New publishing and indexing opportunities and plans for the future:

Since transitioning to Scholastica, SMRJ has a more streamlined peer review process, better indexing, and a more modern reading experience.

SMRJ has been admitted to PubMed Central and PubMed search and now uses Scholastica’s PMC integration to automate its full-text XML article deposits. “XML formatting is pretty much required for that, and that’s one thing that we weren’t going to be able to do ourselves,” Said Corser. “With Scholastica’s formatting, articles are also looking fancier, and they are more interactive for readers than before. You can click on citations, and they pull up the reference, you have nicer graphics, and the journal looks more polished overall.”

The editors hope to keep attracting new readers and more quality submissions. “We’re hoping that publishing on Scholastica will help us expose the journal to even more authors and readers as an OA publishing option,” said Corser.
Spartan Medical Research Journal (SMRJ) Articles page and example HTML article

If you’re interested in learning more about how Scholastica helps journals produce PDF, HTML, and full-text XML article files check out this behind the scenes tour of our production service.
Archive content for preservation AND discovery
Establishing an archiving process for your journals

We’ve talked a lot about journal indexing. But what about the world of archiving? The word archive may conjure up images of dusty bookshelves and filing cabinets full of old papers. But archives are so much more than storage centers! For OA journals archiving has two key purposes and benefits:

1. Archives help guarantee that your articles will remain accessible online even if one of your journals is discontinued
2. Archives can help you disseminate your articles to a wider audience

There are two sides to archiving to consider — how you will archive your journals’ content, and how authors can archive their articles and any accompanying data. Let’s take a look at how to first establish an archiving process for your journals.

All OA publishers should establish a process for depositing their articles into an archive. There are two main archiving options — “dark” archives and public ones.

Dark archives are private, so they are not publicly accessible. The purpose of a dark archive is to secure access to content in the event of a title being lost or discontinued. Dark archives only release content if there is a “trigger event,” like confirmation that a journal is no longer in publication. Commonly used dark archives are Portico and CLOCKSS.

Public archiving options include archive databases, institutional repositories, and preprint servers. It’s important to note that while the name “preprint” has a pre-publication connotation, preprints can and do house many final versions of articles. Some journals even publish via preprint servers using what’s known as a preprint overlay model. Examples of preprint servers include the social sciences preprint SocArxiv and the STEM preprint arXiv.

Which archiving option should you choose? You can get the most benefits from archiving if you use a combination of public and dark archiving systems. Dark archives are the most secure option because they guarantee access to content in perpetuity, and public archives...
will, of course, help expand the reach of your published articles because anyone can browse them.

Once you’ve found one or more archives to add your articles to, as in indexing, you’ll need to review their content deposit processes and formatting requirements. For example, here are Portico’s journal submission guidelines. Like indexes, archives ingest article details in machine-readable formats via either manual data entry or machine-readable XML files.

Make archiving policies easily accessible to authors

Research funders are increasingly requiring authors to archive their articles and/or datasets, and archiving is encouraged by many academic institutions. As a result, many authors want to know about journals’ archiving policies, both in terms of what archiving steps journal publishers are taking and what steps they can take as an author to preserve their research.

Many journals are now requiring authors to share their data also to promote research transparency and reproducibility. To make article metadata and datasets as widely available as possible, which supports research linking and interoperability broadly, publishers should adhere to the FAIR data principles as closely as they’re able.

Whether you make data archiving optional or required, authors will appreciate it if you provide detailed research data policy guidelines on your website (i.e., author instruction page). “Developing a Research Data Policy Framework for All Journals and Publishers,” an article from Data Science Journal, provides a helpful overview of what to include.

It’s worth noting that even if you publish under a CC BY 4.0 license, you should still provide a self-archiving policy. You should also register a copyright policy and self-archiving policy for all of your journals via the SHERPA RoMEO publisher copyright policies and self-archiving database. Researchers use this database to check publisher and journal policies.
Scale more sustainably with digital tools and services
The new service-based publishing landscape

When print dominated, only select publishers had access to the tools and specialized knowledge needed to run academic journals. But in the digital publishing landscape, that’s all changing. Today there’s a new wave of learned societies, research institutions, and libraries publishing OA journals online via a variety of available tools and services. There is no longer one way to publish academic journals. You can pick your own path based on your particular publishing goals and needs.

Online academic organizations of any size can develop service-based journal publishing models. In these models, the publishing organization uses tools and services to manage the different phases of the journal publishing process — peer review, copyediting, article production, hosting, indexing, and archiving — rather than contracting out to a corporate publisher as many organizations have had to in the past. Among the benefits of service-based publishing is that it allows for:

- **Greater academic ownership of journals**: The ability to publish journals via tools and services has fostered many academic-led publishing programs and models, wherein non-profit academic institutions control all decisions pertaining to research copyright, distribution, and publishing infrastructure.
- **Control over costs**: With service-based publishing, the academic community can ensure journals are being produced as economically as possible by choosing affordable peer review and publishing tools and systems (no publisher contracts).
- **Diversified funding and publishing models**: Serviced-based OA publishing programs can be sustainably run via a variety of funding models such as institutional subsidies/grants or cooperative infrastructure.

There are countless examples of OA journals being published by academic organizations at a fraction of the cost of corporate titles using tools and services. Many university libraries have publishing programs, such as The Emory Center for Digital Scholarship, which publishes journals using different software, including Readux, an open source software platform developed at Emory University, and Open Journal Systems (OJS). There are also examples of societies publishing journals via tools and services like Survey Practice, the American Association for Public Opinion Research’s e-journal, which uses Scholastica’s OA publishing platform.
Exploring different service-based OA publishing solutions

It's possible to produce a modern OA journal at a fraction of the cost of traditional publishers using tools and services. For example, using Scholastica's software for one year, a journal that receives 50 papers via Scholastica’s peer review system, typesets 16 for publication as PDF, HTML, and full-text JATS XML, and publishes via Scholastica's OA journal hosting platform would cost ~$4,338.

If the journal also paid for a Crossref membership ($275), purchased DOIs for all of its articles ($1 each), and then paid $200 per article for copyediting ($3,200), it would cost around $7,829 per year to run the entire journal, or ~$489 per article. That's less than a fourth of the cost of Elsevier's self-reported average APC of $1,980.

It’s important to keep in mind that the level of work involved in running a service-based publishing program will depend on the tools and services you use. Publishers should choose tools and systems that their team can easily manage. When reviewing different software options, publishers should consider the following key areas: the level of setup each system requires, the level of technical support each system offers, and the amount of technical work required to configure and maintain it.
Conclusion

Digitally-driven open access the way forward

Now is the time for academic institutions and associations to transition to digitally-driven OA publishing models. The introduction of Plan S and other recent mandates promises a more open research future, but it also begs the question — who will be able to have their voices heard in the OA publishing landscape?

In the current predominantly corporate-run and print-based publishing system, article processing charges to fund OA research are reaching record heights limiting the publishing potential of scholars who lack access to substantial research funding. It’s up to small academic publishers to develop affordable modern publishing models and introduce much-needed competition to the corporate-dominated journal publishing landscape.

By implementing the digital strategies outlined in this guide, you can publish high-quality OA journals affordably and sustainably and disseminate new articles to the broadest possible readership. You now have the foundational knowledge you need to go forth and publish digital-first!

Use the contents of this guide and the accompanying Digital OA Journal Publishing Professionalization Checklist to know where your publishing program stands and what to do next to take your journals to the next level.
Scholastica is a scholarly publishing technology solutions provider with easy-to-integrate software and services for every aspect of publishing academic journals — from peer review to production to hosting and discovery support. Our mission is to empower publishers of any size to make quality research available more efficiently and affordably in order to facilitate a sustainable research future. Over 1,000 journals across disciplines use Scholastica.

Learn more at: scholasticahq.com

You can also find additional journal publishing reports and resources from Scholastica here.