



5 Challenges

Derailing Research in the Chemical Industry

(And How to Fix Them!)

The pandemic has been a tumultuous period for chemical companies across the globe, but today we're seeing chemical industry production growth poised for recovery.¹

Alongside increasing production volumes — despite supply chain and inflation woes — chemical companies are contending with evolving consumer preferences, increasing sustainability and decarbonization goals, record clean tech investments, and abounding new regulations.² Put all together, it means that in this fast-evolving environment, chemical employees need to stay on top of emerging market demands with access to the latest scientific information.

Deloitte's 2022 chemical industry outlook report suggests many chemical companies will increase R&D investments this year and look to accelerate business transformation through digital technologies.³ When looking at job functions like regulatory, product development, safety, engineering and marketing, this can mean better technologies to manage scientific research information. Without a strategy to manage this literature, barriers tend to emerge.

Here are some of the most common challenges related to content that we hear among chemical industry researchers, with our tips for how to solve them.

1

Challenge: No clear strategy for obtaining scientific articles

There's no doubt that there's a surplus of information out there — 2.5 million scientific articles are published annually. Accessing that content when it's needed isn't always easy. Whether bringing a new product to market, working with new regulatory standards amid changing legislation⁴, or dealing with a potential safety issue, time cannot be wasted.

From search engines like Google Scholar, to publisher websites and Open Access platforms, employees have a multitude of potential access points, but often hit an article paywall, even when a company subscription is in place.

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Without a clear strategy that points employees to subscriptions and gives them an easy process for buying unsubscribed articles, content-seekers may not get the information they need. When kept at a distance from vital content, whether due to licensing issues, navigating complex websites, or just a deficit in research skills, the net result is wasted time and money.



Solution: Introducing technology that provides a single content access point for everyone in your company can take away the confusion of not knowing where to go to find critical scientific literature. Technology solutions can provide access to subscriptions and enable purchasing of individual articles, all from one system. A single interface means everyone has fewer tools they have to learn.

An important consideration is to make sure your solution can integrate with the tools your team needs, like PubChem and SciFinder, so they can continue to discover content with their favorite tools and seamlessly and compliantly get access to the full text instead of hitting pay walls.

It's also important to look for a vendor with fast content turnaround times. Some solutions, including RightFind, can offer most articles instantly, so users gain access to content quickly, whether it is coming from subscriptions or if the document needs to be purchased.

2

Challenge: Researchers read and cite more abstracts than full-text documents

When employees hit a paywall, they sometimes decide to just use an article abstract. But that often means missing vital data and assertions that can lead to new discoveries.

Abstracts are an excellent way to determine whether you need to read the full text, but with only 250 words, they typically do not provide enough to be relied upon on their own.

Full-text articles — and the supplementary materials that sometimes accompany them — provide detailed descriptions of methods and protocols along with complete study results, which is often not present in the abstract. Searching over all of a given text provides richer information to potentially identify critical patterns and insights.⁵



Solution: Promote the need for searching, accessing and using full-text content sources. Provide an easy method for getting immediate access to subscribed articles and an easy ability to purchase — ideally through a centralized budget — articles that are not part of the company's subscriptions.



3

Challenge: Even following a merger or acquisition, no one is looking at content usage across the company

About five years ago, the chemical industry saw total M&A deal values reach record heights. While the pandemic may have slowed these transactions from the peak activity seen in 2016, many companies are still experiencing growth through these reorganizations. Ensuring a consistent process for accessing information across the legacy and acquired company doesn't always happen.

When no one is looking at content usage across the enterprise, it can be hard to understand why the high costs of scientific literature are worth the spend. Mergers and acquisitions aside, many chemical companies operate with a decentralized approach to literature management (each department or business unit managing its own content), so there often isn't a clear view into how employees use content, making it difficult to make the most out of your investments.



Solution: Supplementing subscriptions with centralized access to full text from open access and document delivery sources can further improve research efficiencies, and help identify usage trends for future subscription needs. Here are some questions you may want to consider to optimize your content spend:

- How much are we spending on document delivery across the company?
- What journals are being commonly used across the company and would benefit others to have access?
- Would subscriptions or tokens be a cost-effective option?
- Are we able to accurately predict our annual content spend and budget appropriately so everyone consistently has access to the content they need?
- Are siloed processes resulting in articles being purchased when subscriptions are already in place?

4

Challenge: Employees have minimal copyright knowledge

Non-compliance with copyright often occurs innocently. Despite efforts to educate employees about copyright, according to Outsell's 2020 research, 48% of respondents from chemical companies are either unaware of their organization's copyright policies or unsure of its details.⁷



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For example, most online college libraries restrict use to current students — even though their accounts are still active post-graduation. Because of this, many post-docs report routinely downloading journal articles from academic sources that do not authorize use for commercial purposes. Others turn to ResearchGate to download articles without realizing more than a dozen academic publishers took ResearchGate to court in 2018 charging ‘massive infringement of peer-reviewed published journal articles.’⁸ Use of unauthorized sources like these can create significant business, legal and reputational risk for the company.



Solution: First, create a copyright policy. This is a document that provides guidelines for the use of your organization’s copyright materials and identifies the steps employees should take to determine if copyright permissions are needed and how to request and obtain them.

Second, keep that policy front of mind with onboarding new employees and providing refreshers to current employees. It’s not enough to simply create a policy that sits in a drawer. Too often, organizations have a policy, but employees have no idea what the policy entails or where to find it. Keep your policy front of mind with these steps:

- Include your copyright policy in onboarding and training programs that are required when employees join the company.
- Create periodic reminders on your company intranet that the policy exists and where it can be found.
- Share information about new copyright laws, regulations or court decisions. (If you’re looking for a place to start, CCC issues these regularly on The Velocity of Content blog.)
- Enlist support from your company to provide enterprise-wide training on issues related to copyright as part of its overall compliance program.

5

Challenge: There are no company guidelines on information sharing

Outsell’s 2020 Information Consumption Study suggests employees at chemical companies share work-related content on average **17 times per week with 10 other people**, nearly three times as much as in 2016 (5.3 times per week with 10 people). Considering that 45% of that content is sourced from external providers, such as scientific journals, news sources, and other publications, there is the potential **for more than 75.7 instances of unlicensed sharing per employee per week**.

Sharing information with colleagues should be encouraged, but chemical companies often operate in department or geographic silos, which creates inefficient research processes.



Exploring CCC's solutions for chemical companies

With the intense race to find new uses and applications for existing molecules to meet the demands of industrial and consumer markets as quickly and efficiently as possible, it is essential for chemists, scientists, and engineers to collaborate using published content from standards, journals, toxicology reports, regulatory updates, and other information sources.

RightFind Enterprise is an award-winning content workflow solution used by top global chemical companies to streamline access to scientific information, support regulatory filings, and drive research. By consolidating multiple content workflows, centralizing content purchases and reporting, and leveraging flexible cost controls in a scalable solution, organizations can save time and increase efficiency.

RightFind Enterprise also integrates seamlessly with CCC's copyright licenses to make copyright-compliant collaboration easier. The result? You accelerate the flow of research, minimize copyright infringement, and drive research to power innovation.

Some of the causes are:

- Employees don't know the rules for sharing information compliantly, so they keep everything to themselves.
- Colleagues don't know what their peers are working on. In these cases, similar tasks might be duplicated.

It's best to reframe thinking about sharing from "Who needs to know?" — which is hard to define — to "Who's not permitted to know this information?" With this approach, people eligible to know certain information can access it, even if person managing information didn't know they need it.



Solution: Licenses from individual publishers can vary and leave gaps in your coverage. That's why it's important to look at individual rights licenses for content usage from each publisher, and make sure you know the answers to the following questions:

- Do our licenses offer consistent usage rights for colleagues to share published material?
- Do our licenses cover sharing of the many different information sources colleagues rely on?
- If employees are based in multiple countries, do our licenses allow cross-border content sharing?

¹ <https://www.americanchemistry.com/chemistry-in-america/news-trends/press-release/2021/chemical-industry-outlook-navigating-the-post-covid-global-adjustment>

² <https://cen.acs.org/policy/CENs-World-Chemical-Outlook-2022/100/i2>

³ <https://www2.deloitte.com/us/en/pages/energy-and-resources/articles/chemical-industry-outlook.html>

⁴ <https://cefic.org/media-corner/newsroom/upcoming-eu-chemical-legislation-puts-europes-fourth-largest-manufacturing-industry-at-crucial-crossroads/>

⁵ <https://jamanetwork.com/journals/jama/fullarticle/187740>

⁶ <https://www.mckinsey.com/industries/chemicals/our-insights/managing-m-and-a-in-chemicals-meeting-the-new-challenges>

⁷ <https://www.copyright.com/industry-landing/information-seeking-and-consumption-study-ccc/>

⁸ <https://www.insidehighered.com/news/2018/10/04/publishers-accuse-researchgate-mass-copyright-infringement>

About CCC

A pioneer in voluntary collective licensing, Copyright Clearance Center (CCC) helps organizations integrate, access, and share information through licensing, content, software, and professional services. With expertise in copyright and information management, CCC and its subsidiary RightsDirect collaborate with stakeholders to design and deliver innovative information solutions that power decision-making by helping people integrate and navigate data sources and content assets.



Learn more about our licensing, content, and data solutions:

U.S. organizations:

copyright.com

solutions@copyright.com

Outside U.S. organizations:

rightsdirect.com

solutions@rightsdirect.com