ALMs are also a powerful way to navigate and discover others’ work based on real-time recommendation and collaborative filtering systems synchronized to the custom needs of each individual, whether you are a researcher, publisher, institutional decision-maker, or funder.

The uses of ALMs are limited only by our awareness of the insight they bring to the research artifact—the published article. In this nascent stage of implementation across publishers, we continue to build the conceptual and technical infrastructure for data generation, display, and maintenance. PLoS continues to develop evaluation and collaboration tools for scientific communication, which incorporate ALMs as a fundamental part of their features in PLOS journals. The PLOS ALMs application is freely available as open source software for other publishers and platforms with similar technology infrastructures. And the application is available for the public to build third-party applications from it. PLoS also includes an API that makes this data available for anyone to re-use and mash-up. All of these offerings further extend the potential for ALMs to impact scholarly research.

Myriad challenges exist in gathering, storing, and making ALMs data available. Third-party data sources are not always consistent or reliable. In addition, significant processing power is needed to churn through these data sources on a daily basis. Understanding and handling possible methods of gaming ALMs data is another challenge that PLoS is undertaking. PLoS is collaborating with other publishers and data providers to establish best practices in these areas and will report on progress regularly through our website and at industry events.

PLoS and its fellow alternative and new metrics advocates continue to expand the understanding of the value of metrics beyond just usage data, establish such measures across all scholarly publications, and develop the supporting technologies. We have seen consistent, steady progress with our own ALMs implementation. The benefits of this system will be increasingly realized in equal measure to the degree of its adoption across the research ecosystem.