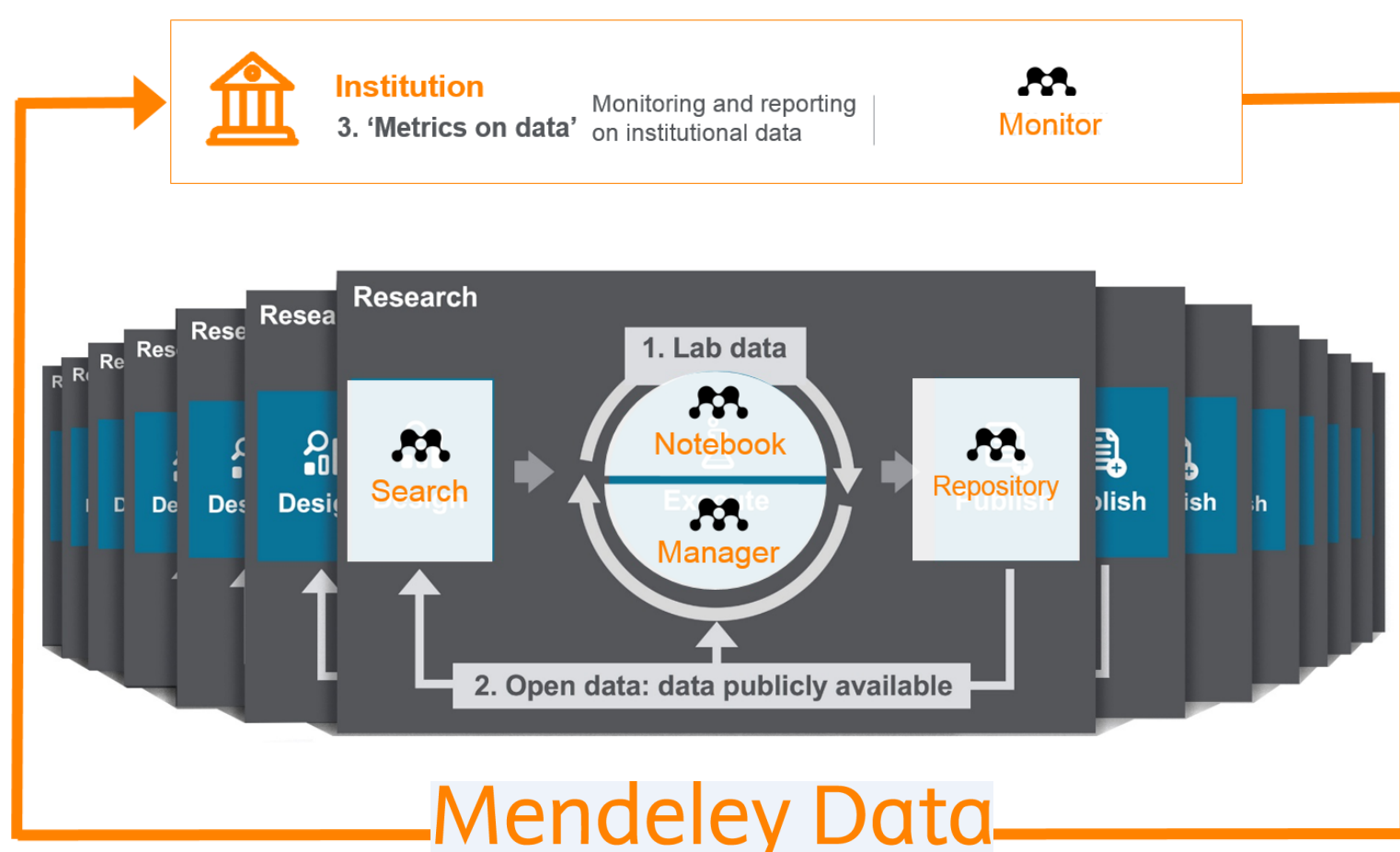


# Towards 'end-to-end' research data management support with the Mendeley Data Platform

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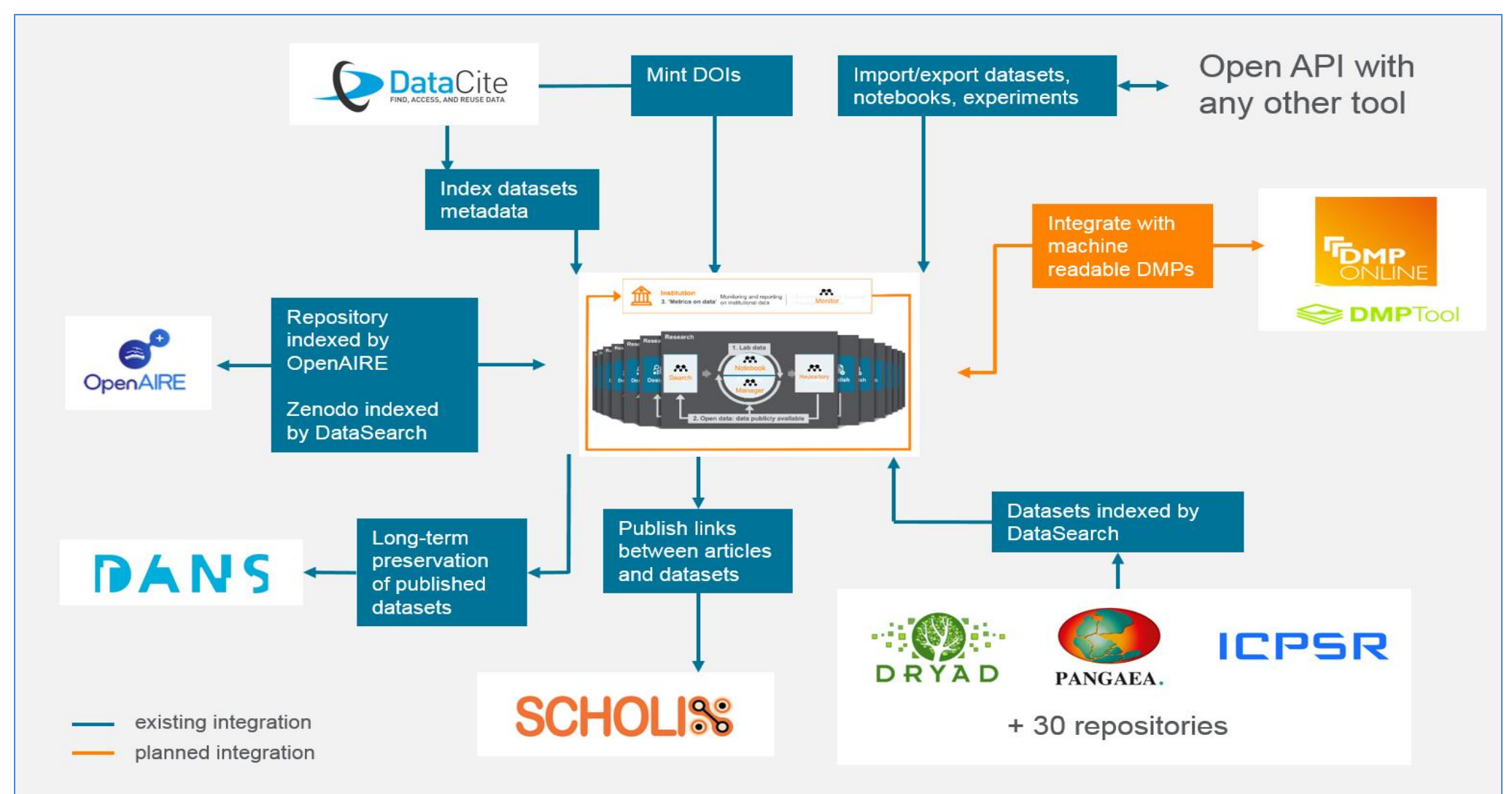


**Mendeley Data is a modular, cloud-based platform designed for research institutes to manage the entire lifecycle of research data**

**Mendeley Data** is designed to facilitate the comprehensive utilization of data. Consisting of five modules, this open, cloud-based platform helps research institutions to manage the entire lifecycle of research data and enables researchers to safely access and share information wherever they are. These modules help institutions and researchers to collaborate, more easily tap into the broader world of shared data, increase research exposure and support compliance.

**Mendeley Data** integrates through open APIs with the global ecosystem for research data management. We link to DANS for long-term data set preservation, DataCite for DOIs and indexed metadata to support data publication, Scholix for links between published articles and datasets, and over 30 data repositories, including Dryad, Pangaea and ICPSR.

We won't stop here: we already have planned future integration with machine-readable data management plans and other electronic lab notebook software, just to name a few developments.



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Annual precipitation regulates spatial and temporal drivers of lake water clarity: (Article)

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Abstract

Understanding how and why lakes vary and respond to different drivers through time and space is needed to understand, predict, and manage freshwater quality in an era of rapidly changing land use and climate. Water clarity regulates many characteristics of aquatic ecosystems and is responsive to watershed features, making it a sentinel of environmental change. However, whether precipitation alters the relative importance of features that influence lake water clarity or the spatial scales at which they operate is unknown. We used a data set of thousands of northern temperate lakes and asked (1) How does water clarity differ between a very wet vs. dry year? (2) Does the relative importance of different watershed features, or the spatial extent at which they are measured, vary between wet and dry years? (3) What lake and watershed characteristics regulate long-term water clarity trends? Among lakes, water clarity was reduced and less variable in the wet year than in the dry year; furthermore, water clarity was reduced much more in high-clarity lakes during the wet year than in low-clarity lakes. Climate, land use/land cover, and lake morphometry explained most variance in clarity among lakes in both years, but the spatial scales at which some features were important differed between the dry and wet years. Watershed percent agriculture was most important in the dry year, whereas riparian zone percent agriculture (around each lake and upstream features) was most important in the wet year. Between 1991 and 2012, water clarity declined in 23% of lakes and increased in only 6% of lakes. Conductance influenced the direction of temporal trend (clarity declined in lakes with low conductance), whereas the proportion of watershed wetlands, catchment-to-lake-area ratio, and lake maximum depth interacted with antecedent precipitation. Many predictors of water clarity, such as lake depth and landscape position, are features that cannot be readily managed. Given trends of increasing precipitation, eliminating riparian zone agriculture or keeping it <10% of area may be an effective option to maintain or improve water clarity. © 2016 by the Ecological Society of America.

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## Data Inventory & Data Sharing Services

- Two new services developed to assist University Libraries keep track of their research data.
- Services are integrated with Scholix and DataCite.
- The research data availability for each article is first checked automatically.
- If no data is automatically found, researchers get emails and asked to share their data or provide information about its location.
- Information is accumulated via the dashboards.
- New links between articles and datasets are deposited to Scholix and appear on Scopus.

## Results of User Tests

- The Data Inventory and Data Sharing services were tested with 217 Rensselaer faculty members and 140 Monash researchers.
- ~1000 research articles were checked for data availability.
- The open and response rates were very high: up to 60% (Monash) and 19% (Rensselaer), respectively.
- Based on results of the automatic checks and researcher responses: 5-6% articles have associated open research data.
- Most popular repositories: CCDC, Figshare, NCBI/GEO, Dryad, and Mendeley Data.

