ELSEVIER

Research Intelligence

G-Cloud 14 Service Definition

Elsevier Pure

May 2024

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1. Introduction

This document highlights the key modules of Pure, Elsevier's market-leading Research Information Management System. It also provides a description of our implementation process, available support, security, and data extraction.

For more details about Pure, please reach out to the contact person listed on the main page of our G-Cloud submission.

1.1 About Elsevier

Elsevier is a global information analytics business that helps institutions and professionals advance healthcare, open science and improve performance for the benefit of humanity. Our vision and work strongly support easy access to research data as a cornerstone of success in modern science, and we help individuals and institutions use data to its fullest potential across the researcher workflow.

Elsevier solutions are used at more than 25,000 Academic and Government Institutions around the world. We have a long history of collecting, structuring and delivering research information to a global audience, and we continue to invest in technology to further enhance our ability to do so. For example, we employ 1,000 technologists and invest $400m annually in technology. We also have an intense focus on hiring and training next-generation data scientists to help us evolve with our customers.

Our **Research Intelligence portfolio** provides solutions for each stage of the research lifecycle. This portfolio spans research workflow tools, information management, repositories, research data management, and extends to powerful tools for open educational resources, open access publishing, and support for the full spectrum of scholarly and creative works.

1.2 About Pure

Pure is part of Elsevier's Research Intelligence portfolio. It is the world's leading Research Information Management System (RIMS), helping universities and research institutions to manage data about their research and other related content. Using this high-quality data, institutions can create reports, showcase their research, analyse and track research progress and impact, and monitor the grant lifecycle.

2. Service overview

As a versatile, interoperable software solution, Pure can be configured to the growing requirements of your institution. Pure's industry-proven data model unearths multifaceted insights about the overall research lifecycle, supporting both fact-based decision making and industrial-strength expertise discovery.

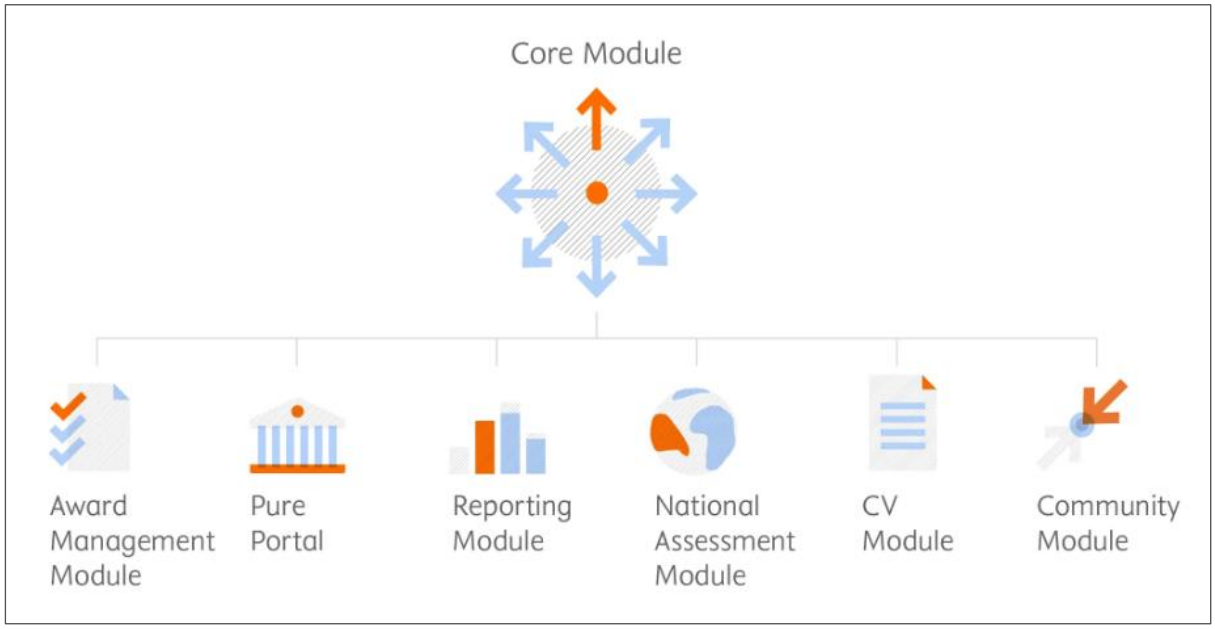

Figure 1: Pure provides seven feature-rich modules that can be combined to optimize results for your institution's specific research requirements.

Pure is a modular solution, comprising the below modules. Institutions can select the modules required to suit their needs; only the Core Module is obligatory.

2.1 Core Module

The Core Module is the heart of Pure and allows for the import, entry and maintenance of high-quality data about your research and other related content. Pure's concise and connected data model ensures that this linked data is the source of truth about your institution's research output, impact and capabilities.

Using this module Pure administrators can:

- Import content from both internal and external sources. Internal data from Finance and HR systems can be readily synchronized into Pure, and a growing list of external research data sources such as Scopus, Mendeley, Web of Science, Web of Science and PubMed can be easily connected to populate data.
- Access all content types including organizational units, research output, grants, datasets, prizes, courses taught, media coverage and more.
- Edit content using dedicated tools.
- Configure roles and rights, for fine-grained control over who can view and access content.
- Ensure high-quality data through search and filtering, workflows, and duplicate merging.

The Core Module is designed and developed to ensure your data is complete, correct, interconnected, current and compliant.

2.2 Award Management Module

The Award Management module is designed to streamline and automate the management of research projects, as well as provide an overview for researchers and research administrators.

The module supports the development, approvals and compliance requirements for funding applications using a suite of powerful and customisable features. These include support for internal funding and competitions, process orchestration, project team communications, budgetary management, templated data collection and review, and task management/milestone support.

In addition, the module post award functionality allows stakeholders to monitor and report on the progress of awarded grants, contracts and projects for internal and external compliance with funder requirements. With Pure's Award Management module, institutions have a complete view over the lifecycle of pre- and post-grant awards.

2.3 Pure Portal

The Pure Portal is a publicly accessible website which opens up the curated content in your Pure to the outside world. As the voice of your research, it helps collaborators, funders and your other internal and external stakeholders discover your academic activities and key research assets, maximizing their impact. It is fully optimized for indexing in all major search engines.

2.4 Reporting Module

The Reporting Module allows users to create reports on all data in Pure: they can export static reports (CSV, Excel and PDF format) to send to stakeholders or prepare dynamic linked reports accessible in Pure which give direct access to visualizations and the underlying data. The module is comprehensive, flexible and intuitive, enabling you to switch between aggregate and detailed views of your data, supporting data-driven decision making and providing a view on the integrity of the data you have collected.

2.5 National Assessment Module

Pure ensures effective compliance with national assessments in many countries. With dedicated assessment modules, it captures national assessment-specific information for the UK's REF, the Australian ERA, and the Dutch SEP/KUOZ. Depending on the submission format, Pure can be integrated with different national assessment systems allowing direct submission from Pure.

2.5.1 REF Module

Pure's REF module provides full support to institutions with their REF preparations and submissions. All aspects of a submission can be done in Pure, which integrates directly with the REF submission system. This means that if an institution prefers, their users can perform all preparations within Pure, and only engage with the REF Submission System for final submission.

We work with the UK Pure User Group to ensure our REF module is up to date and relevant for the latest iteration of the REF. We have released the first iteration of the REF2029 module.

More functionality will be added to the REF2029 module once more requirements are released.

2.6 CV Module

The CV module provides an efficient way for researchers to create Curriculum Vitae (CVs) by leveraging the data captured in Pure. This module uses existing data to generate CVs in various standard formats which may be required for annual reviews, grant and project applications. It also allows for customisation based on the types of content in Pure, by choosing citation formats such as Harvard and APA, and adding custom text. This saves your researchers time and ensures they represent themselves the best way possible.

2.7 Community Module

The Pure Community Module is designed to overcome the challenge of multi-institutional discoverability and management of research projects.

Groupings of institutions, which can be based on geographic region, an academic consortium or a focused research area, can use the Community Module to track and manage processes and to demonstrate impact to funding agencies and government bodies. By adding a Community Portal, you can provide direct access to your combined resources and expertise from one location.

2.8 Impact AI Module

Pure Impact AI enables research institutions to understand, articulate and communicate their societal impact by transforming complex data into compelling narratives. Recognising that impact is often described through key characteristics (academic significance, collaboration, engagement, applicability, transferability, novelty, and reach) the tool combines the university's Pure data with other information from trusted sources like Scopus, SciVal, as well as social media data, news, patents, and policy documents.

By synthesising this rich dataset, Pure Impact AI crafts evidence-based stories that highlight an institution's contributions to societal challenges through each characteristic's lens.

These narratives serve diverse purposes:

- They can be used as input to REF case studies
- To support grant applications
- For communicating impactful work to stakeholders
- Building robust impact profiles for researchers.

Designed for ease of use, Pure Impact AI delivers clearly written impact narratives, empowering institutions to engage funders, policymakers, and the public effectively.

2.9 Configuration

Pure is an off-the-shelf system that can be configured to suit the needs of your institution. Our configuration capabilities are extensive and include (but are not limited to):

- Fully configurable workflows.
- The ability to add custom classifications to facilitate additional data you want to add in Pure.
- Text resources to change labels.
- Configurable classifications which allow configurable naming conventions.

2.10 Integrations with other Elsevier Research Intelligence solutions

Pure integrates with other Research Intelligence solutions, including:

- **Digital Commons:** Pure integrates with Digital Commons to help institutions save, share, showcase, publish and promote research, scholarship and collections.
- **Digital Commons Data:** Pure integrates with Digital Commons Data (formerly Mendeley Data) to support an institution's research data management goals. This integration enables researchers to sync datasets stored in Digital Commons Data into Pure.
- **Funding Institutional:** Pure integrates with Funding Institutional to support the full funding project lifecycle. It allows you to push opportunities that are relevant to your institution into your Pure workflows.
- **Interfolio:** Pure integrates with the innovative Faculty Information System (FIS) to streamlines academic career processes, enabling your institution to achieve strategic goals while empowering faculty for success.

Pure also integrates with Scopus, SciVal, Plum Analytics, and NewsFlo.

2.10.1 Pure and Interfolio

Implemented in combination, Pure and Interfolio enable you to gain clarity for academic development and research innovation, by bringing together research insights with academic staff insights to foster excellence in academic development and research innovation.

Our academic information solutions offer interconnected data, and an evidence-based approach to research management.

Creating efficiencies in data management and workflows, these tools connect you with the optimum collaboration partners to showcase your research internationally – increasing your long-term award viability.

With an added, holistic framework for managing the staff lifecycle, from recruitment, to review, promotion and activity tracking, universities are equipped to look beyond the bibliometrics in their portfolios, measuring impact and diversity through quantifiable outputs.

Universities face unique challenges managing their own research enterprises

There are countless challenges impacting the success of research efforts at the university or institute level. There are people to manage, workflows to oversee, promotion needs to focus on, and funder demands to meet:

- Performing research assessments
- Illustrating impact
- Compliance reporting
- Accelerating grant success
- Identifying and connecting internal experts
- Verifying academic staff performance

2.11 Customer references and testimonials

Universities and institutions around the world trust Pure to solve research management challenges, and streamline processes to unlock their full research potential. To learn more how some of our clients are benefiting from Pure, see: https://www.elsevier.com/products/pure/in-action#2-client-stories.

3. Implementation

Elsevier's specialist resources and experience allow us to move quickly and with confidence when implementing Pure for new customers. We have two clear objectives for our implementation projects:

- To ensure the highest quality system is operational as quickly as possible, within the timeline and budget agreed.
- To ensure the post-launch phase is successful.

Our Agile delivery approach helps us to achieve these objectives. It allows us to minimise and manage risks through appropriate control points and clear escalation paths.

3.1 Implementation phases

A Pure implementation project has four phases. Phases one to three are focused on the actual implementation - we configure your instance of Pure and get your initial data into it. The fourth phase is a post-launch production phase that takes place after implementation is finished and Pure runs in production, providing value as designed.

One of our Pure Implementation Managers will lead the project, in collaboration with your own project manager. In our experience, critical factors that determine the success of your project include well-defined roles and responsibilities, expertise and clear ownership, and engagement from both your side and ours.

3.2 Training

During implementation, your Pure Implementation Manager will hold an on-site workshop, which is tailored to your needs and provides in-depth training about the implementation and configuration of Pure. We take a "train-the-trainer" approach to end-user training. You will be sufficiently skilled in Pure to a level that allows fully independent work.

Once implementation is nearing the launch phase, your dedicated Pure Customer Consultant will deliver additional training (a combination of onsite and online), helping you explore the additional functionality in Pure and will remain as your go-to person for training-related enquiries after launch.

3.3 Documentation and help resources

We make the following sources of documentation and help resources available to you:

- **Online help:** You can access the Pure online help from within your instance of Pure from the start of the project. The online help provides instructions for Technical

Administrators, Editors and Administrators, and Personal Users on using Pure. We also provide API documentation for users of the Pure API.

- **Release notes:** New features and bug fixes are released on a regular basis. We provide documentation to help you learn about the different types of releases and the cycle in which releases are available to you. In addition, when a new major or minor release is available you can read about what it contains in the Pure release notes.
- **Pure Help Center:** You can access additional online help covering our cloud hosting, security, installation, and operations for Pure: https://helpcenter.pure.elsevier.com/.
- **Pure Academy**: All Pure customers have access to on-demand online training from the Pure Academy. The Pure Academy offers a combination of regularly scheduled live webinar classes, as well as a library of recorded sessions available for offline viewing. Classes are available for all levels of user, from advanced to foundation level.

4. Support

Our Pure Support team provides ongoing technical support to clients. The primary aim of the Pure Support team is to make sure you are using Pure efficiently and having the best possible experience with it. Our Support team handle any issues you encounter quickly and efficiently. This could be assistance with configuring a particular report, adding another data source or any other issue you encounter.

4.1 Hours of service

Our help desk is based in the USA, Denmark and Singapore, allowing us to provide the best possible service and response times. We provide support by telephone, email and online. We use Jira as our online ticketing system, which allows detailed tracking, reporting and analysis of all issues raised, and helps us to continuously improve service.

4.2 Upgrades

Pure provides regular version upgrades and updates as part of its standard maintenance service. To keep up to date with the evolving needs of academic research management, we have 12 releases of Pure per year:

- **Major releases (3 per year):** These include new and improved functionality and system improvements in Pure. The release cycle for major releases is usually February, June, and October of each year.
- **Minor releases (9 per year):** These include minor improvements and bug-fixes. We schedule minor releases for the first week of every month, excluding months with a major release.

4.3 Maintenance windows

Upgrades to Pure are usually performed within the following service windows:

Region	Service window for upgrades
EU	Wednesdays 19:00-23:00 UTC
US	Thursdays 03:00-07:00 EDT / 07:00-11:00 UTC
APAC	Wednesdays 21:00-01:00 SGT / 13:00-17:00 UTC

Table 1: Regular version upgrades done within defined maintenance windows ensure that you are taking advantage of the latest features of Pure with minimal disruption and intervention.

4.4 User community

Elsevier has a very active customer base and to encourage the exchange of ideas and experiences with Pure, both the Pure Conference and your local Pure user group are available to you.

For more information on the 2023 Pure conference, including speaker presentations, see: https://www.youtube.com/playlist?list=PLO_aItZ7W08-3FjkZuZJ9t1xggdFJmKX5.

5. Hosting

We host Pure as a full Software as a Service (SaaS) cloud solution on the Amazon Web Services (AWS/EC2) platform. By allowing us to manage their hosting, clients benefit from the following advantages:

- **Guaranteed uptime:** We ensure that Pure runs as expected for clients and is available according to our Service Level Agreements.
- **Simplified upgrade process:** We manage all upgrades of our clients' Pure installation.
- **Server monitoring:** Our infrastructure team continuously monitors our clients' installations to ensure stability and performance.
- **Strong security:** AWS is the market leader in cloud infrastructure – Pure clients benefit from their secure-by-design infrastructure and built-in protection. In addition, AWS offers a broad set of policies, technologies and controls to help protect clients' data from potential threats.
- **Reduced infrastructure costs:** Clients do not need to buy and maintain local server infrastructure, database licenses etc. As the hardware requirements for Pure evolve, clients will not need to invest in new hardware as this is covered by us.
- **Backups:** We perform daily backups of important system data, ensuring system availability can easily be restored.

5.1 Hosting locations

Elsevier supports hosting of Pure in the following AWS Regions:

- Asia Pacific (Singapore)
- Asia Pacific (Sydney)*
- EU (Ireland)
- US East (N. Virginia)

*We do not support hosting of the Pure Portal in Sydney, only hosting of Pure.

Each AWS Region has at least three physically separated and isolated Availability Zones which are connected with low latency, high throughput, and highly redundant networking.

You can host Pure in the AWS Region of your choice. Elsevier will not move data between Regions without your express consent or upon your request.

6. Security

Elsevier understands that integrity, confidentiality, and availability of our customers' critical data is vital to their business operations. We take user privacy, data security and system performance very seriously and never take for granted the trust our customers have put in us. In keeping with this mission, Pure provides customers with:

- **Advanced software architecture:** Pure is built on a modern enterprise architecture, ensuring stability, reliability and responsiveness.
- **Reliable hosting services:** We host Pure on the Amazon Web Services (AWS) platform, which provides a highly resilient service and saves you cost and effort.
- **Privacy of data:** Pure adheres to industry-leading standards in data security and privacy.
- **Availability:** We guarantee a 99.5% system uptime.
- **Backup and recovery:** Elsevier has well-defined and secure set of data management processes including: Business Continuity, Disaster Recovery and Backup Recovery.

6.1 ISO 27001: 2013 certification

Elsevier is certified in the ISO 27001 management system. This covers the management of information security arrangements and activities that support the delivery of information services for Institutional Products and Clinical Solutions Globally.

View our certificate: https://elsevier.widen.net/s/9rjzbjdfvn/acad_rl_pure_iso_certification.

Pure is hosted on AWS which is accredited with several industry standards, including ISO 27001. You can read more on Amazon's extensive compliance here: http://aws.amazon.com/compliance/.

6.2 Access control

Your data in Pure is stored and processed at physically secure AWS data centres that are protected by perimeter controls including walls, fencing, security staff, video surveillance, intrusion detection systems, as well as other electronic means. Physical access to data centres is strictly controlled by additional security staff, intrusion alarms, video surveillance and two-factor authentications to access data centre floors.

Only authorized Elsevier employees can access the AWS infrastructure. All access control is reviewed regularly, and system access is audited. Our Central Security and Operations teams continuously monitor server access for suspicious activity 24/7.

6.3 Shared responsibility

Security of your data in AWS is a shared responsibility.

6.3.1 Our responsibility

Elsevier is responsible for security in AWS. This includes your applications, your data, and access to the virtual servers and databases. We use a defence in depth strategy which includes:

- **Network security:** The AWS infrastructure is protected by several layers of network security controls which are aligned with internal infrastructure best practices.
- **Application security:** Application design and secure coding best practices are followed throughout the software development lifecycle of Pure.
- **Encryption:** Industry standard encryption technologies for data at rest and data in transit.
- **Access management:** Tightly controlled access, limited to key people. Robust procedures for provisioning, removing, and reviewing access to systems and applications. Central audit trail of all server access.
- **Authentication:** Two-factor authentication requirements for server and console access.
- **Log management:** In-depth logging which captures usage data, application, and system logs.

6.3.2 Your responsibility

Customers retain ownership of their data in Pure and are responsible for data stewardship. As a Pure customer, you are responsible for:

- **User access:** Approving user access to Pure and preventing misuse or unauthorized access.
- **Compliancy:** Ensuring that data going into Pure complies with all applicable laws.

We encourage customers to report any unauthorized access or malicious behaviour to our Elsevier Information Security & Data Protection (ISDP) team. Full details about your responsibility will be outlined in the Pure Master Software and Services Agreement.

7. Backup and disaster recovery

7.1 Backups

We carry out backup procedures once every 24 hours, all year round. Backups are placed in Amazon AWS S3 buckets, with data extending 2 weeks back. Once data is older than 2 weeks, it is pushed to AWS Glacier and remains there for 26 weeks.

We perform a backup of all data stored in Pure's database, file system and configurations, this covers all modifiable data in Pure. Our monitoring software checks that backups have run correctly and creates an alert if there is any issue. We test our backups at least monthly, in connection with release testing of Major and Minor Pure releases.

Copies of all data uploaded to Amazon S3 and Amazon Glacier are stored on at least three devices in a single AWS Region to ensure recovery in case an Availability Zone drops out. Each AWS Region has three multiple, isolated locations known as Availability Zones.

7.2 Disaster recovery

Our disaster recovery procedures ensure that, in the event of a disaster, servers will be restored in the same data center as before, and all data will be restored from the latest backups. We keep clients informed throughout the process.

Elsevier also has a business continuity plan in place for more global emergencies (e.g., total loss of the Elsevier Hosting Environment).

7.3 Business continuity

Elsevier has ensured business continuity is owned and fully integrated into the company and business units globally as an embedded management process. We maintain a mature Business Continuity program that is certified to the international Business Continuity Standard – ISO 22301. The program is rigorously audited by an external firm twice a year in order to maintain the accreditation.

You can view our ISO 22301 certificate here:
https://cvs.babcert.com/babcert.asp?c=231366&v=98f1h33suq

8. Data extraction and API

Once your contract with Elsevier comes to an end, all data and backups are deleted. We will notify you well in advance of your contract end date, so you have enough time to extract and transfer data. You can use the Pure API to retrieve your data at any time during your Pure contract. The API allows you to extract both metadata and file data in JSON format.

AWS uses the techniques detailed in NIST 800-88 (“Guidelines for Media Sanitization”) to destroy data as part of the decommissioning process for their storage hardware.

8.1 API and webservices

The Pure API is available as a REST service and allows authorized users to query and extract data from Pure in JSON and XML format. The extracted data is typically used in data analytics services or for providing dynamic content to university CMS systems.

The API has endpoints available for most content types in Pure. Access is controlled using API keys; the endpoints available are tied to your API key, which is managed in the Administrator tab of Pure. Note that not all endpoints will be available — the number of endpoints available depends on your API key and how Pure is configured.

With each new major version of Pure, we also release a corresponding new version of the Pure API which includes support for any new additions to the data model in that release.

Elsevier is currently completing a write API for populating Pure with content from external sources. This is an evolution of the existing REST web services, to support a backward-compatible read and write REST JSON endpoint for using and managing research information data in Pure. With each Pure release, we add more content types to the write API, and we currently cover the most commonly used content types.

For an overview of available endpoints, see https://helpcenter.pure.elsevier.com/pure-api/resource-catalog-roadmap?from_search=134827865.