

G-Cloud 15 - Service Definition

Research Information Management
System for Government and NGOs -
Symplectic Elements

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About Symplectic Elements

Symplectic Elements is a highly configurable, hosted Research Information Management System (RIMS), also known as a CRIS, designed to reduce administrative burden and provide a "single source of truth" for organisational data relating to research and researchers.

The core functionality is centred around the continuous, automated harvest of research output data from multiple internal and external sources, combined with data captured via integrations with other organisational systems to create a rich ecosystem of researcher-focussed information to support a number of essential government research use cases.

Symplectic Elements has been supporting research institutions in the UK for over 20 years, with over 30 universities relying on us to provide the tools and expertise necessary to manage the ever changing requirements of the REF, with dedicated workflows and features to make the data collection and submission process as painless as possible.

Globally, Symplectic Elements is used by over 130 research institutions, including six of the top ten ranked universities and a broad range of organisation types, such as government bodies, universities, specialised research institutes, think tanks and funding bodies.

Overview

Symplectic Elements is the most intuitive, user-friendly system of its type on the market, making use of automated routines, Persistent Unique IDs, and AI technologies to reduce the burden placed on researchers and administrators. Through integrations with a wide variety of internal and external systems, Elements collects and collates a multitude of research data objects, including:

- Outputs (including NTROs)
- Grants and Projects
- Activities and Esteem Measures
- Equipment and Assets
- Teaching and Student Data
- Impact

Linking together this rich collection of scholarly data creates a full view across the entire research lifecycle, enabling organisations to gain valuable insights, make informed decisions and plan for a successful future in a period beset with uncertainties.

A wide and varied UK community make use of the functionality provided in Symplectic Elements to support a number of different use cases:

- Reporting and analysis
- Creating rich researcher profiles for external expertise discovery
- Conducting researcher reviews and assessment exercises
- Capturing impact and supporting evidence
- Driving industrial collaboration
- Supporting and tracking compliance with Open Access policies
- Preparing for and managing REF submissions

Features and Functionalities

As a core offering, Symplectic Elements offers automatic data harvesting and the tools to internally manage and report on that data. The offering is expanded through a suite of functionality to support public discovery of researchers and research groups, tracking and reporting open access compliance, reporting on activities and outcomes, and assessment/review.

Activities and Outcomes

The Activities and Outcomes Solution is the core functionality and framework upon which Elements is based, and includes functionality for tracking publicly funded research from award through outputs. It supports consistent capture of funded activities, links those activities to resulting outputs, and provides standardized reporting.

Automated information harvesting

Symplectic Elements harvests data about researchers, scholarly outputs and activities from verified external sources and from your existing systems of record (such as HR, and grants management systems). The addition and update of data happens automatically and regularly - whether users log in or not. Data from external sources is deduplicated and can be claimed by researchers before being optionally added to public profiles, internal reports, or deposited into a connected repository. Research staff can also add data manually and edit, supplement or reject automatically harvested records, giving them control over their profile. The system uses intelligent data linking to support a 'single source of truth' approach to records management.

Symplectic Elements offers over 15 automated data integrations. The platform goes beyond just publications metadata, capturing citations, altmetrics, and other research metrics as well as direct links to open access files. A flexible data model is equipped to handle the unique needs of different departments and user groups.

Data completeness reports help administrators easily identify areas requiring user input or take action on their behalf. There is automated capture and appending of records from multiple data sources (including SSN, GRiD) to ensure consistency and completeness of data across all record sources.

Impact

Within Symplectic Elements, our Impact functionality provides an easy method for not only capturing evidence of impact - be that a document or web link - but also for authoring a narrative that explains the relevance and context of this evidence.

For many disciplines, citations and bibliometrics remain a well-used (albeit controversial) means of evaluating the academic 'impact' of research. However, evidence of the wider effects of impact cannot always be captured via traditional metrics. Researchers at Research institutions in particular are increasingly being asked to showcase this via impact case studies and qualitative statements since the 2014 REF.

Impact functionality offers a structured way to capture and connect qualitative evidence over time - enabling researchers and organisations to tell richer stories, track emerging impact, and meet growing expectations from funders, stakeholders and supervisory bodies.

Reporting and Analytic Dashboards

Symplectic Elements provides comprehensive analytics through its dashboard functionality turning research data and analytics into strategic decisions. Reporting and analytics can be carried out at an individual, departmental, office, or organisation-wide level.

There are a core set of stock administrative and data-driven dashboards available immediately upon implementation, offering out-of-the-box access to key insights. These pre-built dashboards can be copied, edited, and shared to suit specific needs.

Authorised users can create custom visualisations and actionable insights from scratch using the embedded dashboard designer. This tool allows full access to the Symplectic Elements Reporting Database, incorporating a wide range of data, including object metadata (such as publications, grants, and professional activities) and metadata from other areas of the system.

Organisations can create custom report templates to register within Symplectic Elements, or Symplectic can create them on your behalf. Individuals can export their annual activity report in the format(s) designated by your organisation. Symplectic Elements includes a dedicated, continuously updated SQL Reporting Database. This database supports direct SQL querying and enables users to analyze their data with their preferred Business Intelligence (BI) tool.

AI Profile Curation

With AI-assisted Data Entry, users at Symplectic-hosted organisations can create items quickly by copying plain text directly into Symplectic Elements. AI then works quickly to extract structured metadata, which can be reviewed and saved in seconds, significantly reducing the effort required for traditional manual entry. This feature is available for four categories of data: Publications, Grants, Professional activities, and Teaching activities.

At any time, users may choose to enter item metadata manually using the standard web form instead of the AI-assisted data entry process.

Open Access Engagement Solution

As the OA movement continues to evolve, so too does the complexity of managing compliance. We continuously develop functionality in our Open Access Engagement Solution, a core part of Symplectic Elements for our UK community, to manage compliance with a variety of OA mandates from funders, governments, and internal bodies. This is made possible through an industry leading bi-directional repository integration protocol with supported repositories, and dedicated functionality in Symplectic Elements called OA Monitor.

Repository Integrations

Symplectic Elements can be integrated with one or more organisational repositories. This enables streamlined open access repository deposits to comply with department or external open access policies. Symplectic Elements will also harvest data from the connected repositories to create richer and more complete research profiles.

When integrated, Symplectic Elements serves as the interface between researchers and the organisational repository, providing a quicker and more intuitive method of full-text deposit. The publication metadata that Symplectic Elements has harvested in the background is

pushed to the repository on deposit, so all researchers need to do is provide the full-text file(s). Supported repositories include Figshare, DSpace, EPrints.

Symplectic Elements highlights research suitable for open access deposit and actively prompts your researchers to do so, guiding them through the process with just a few clicks. Open Policy Finder (Sherpa/RoMEO) advice is embedded as standard, and you can provide your own internal guidance at an organisational, publisher or journal level.

Once populated, the repository itself then serves as a data source: Symplectic Elements harvests publications data from the repository including any unique metadata records, such as for datasets or non-traditional outputs deposited directly in the repository. These are then used to further populate researcher profiles with publications and information, ensuring consistency and completeness of data.

OA Monitor

The Open Access Monitor used in conjunction with a connected repository enables open access compliance tracking, flexible workflows and powerful reporting. Organisations define the open access policies their researchers work under and use the resulting reporting options to inform open access workflows and communications. Institutions use this module to:

- Visualise gaps in repository engagement in a central space, so administrators can take informed actions like depositing on behalf of the researcher.
- Monitor and track who has deposited publications to ensure work meets policy requirements.
- Build reports on the level of engagement: by researcher, department, or research group.
- Filter articles by funder to identify those which fall within a funders' policy.
- Recognise individual departments or researchers who exhibit high levels of engagement.

The OA Monitor also offers a range of report templates. Using the OAMonitor in combination with an integrated repository enables powerful open access reporting.

Key features and benefits include:

- **Compliance Tracking and Efficiency:** It helps research facilities drive compliance, increase repository deposits, and reduce administrative burden. For example, one academic institution saw the rate of deposit increase by 1000% within 12 months after switching on the publication prompt in Elements. Another institution increased policy-driven institutional repository deposits by over 350% by leveraging the interoperability between Symplectic Elements and DSpace.
- **Researcher Engagement:** The OA Monitor is designed to engage researchers and align with the unique needs of the organisation. Homepage prompts guide users to deposit outputs in just a few clicks, with messaging tailored by department or role.
- **Flexible Support:** It offers flexible support and tracking for a range of Open Access pathways, including Gold, DOAJ-indexed outputs, and Green or repository-based routes. Policies can be targeted by funder, publication type, or user group.
- **Simplified Monitoring:** It simplifies the challenge of tracking and reporting against multiple concurrent policies with real-time visibility and granular control.

- **Workflow Management:** Non-compliant or incomplete outputs are automatically flagged, and administrators can record exceptions and opt-outs in bulk. Role-based access allows dedicated OA Managers to manage workflows and take action.
- **Integration:** It connects seamlessly to existing systems and workflows, such as institutional repositories (e.g., Figshare, DSpace, EPrints), publisher APIs (e.g., DOAJ, PubMed Central), and researcher identifiers (e.g., ORCID, CrossRef, Dimensions).
- **Reporting Confidence:** It ensures the right data reaches the right people for reporting mandates.

Evaluation & Review Solution

Streamlining research evaluation at every level, Symplectic Elements gives you the flexibility to support both person-level and item-level evaluation workflows, enabling structured assessment of researchers, publications, impact case studies, and other research outcomes. It supports a wide range of use cases, from individual annual review processes, to peer review of outputs for external frameworks.

Key Capabilities and Benefits:

- **Comprehensive Research Evaluation:** It helps organisations collect, assess, and report on the full spectrum of research by managing all evaluation activity in one system.
- **Flexible Workflows:** The platform supports both person-level (e.g., annual staff reviews, promotion reviews) and item-level (e.g., peer review of outputs) evaluation workflows.
- **Reduced Manual Work:** By reusing comprehensive data already captured, it eliminates the need for fragmented systems and manual workarounds, drastically reducing time spent re-keying or duplicate entry.
- **Supports Review Cycles:** It can support both continuous (real-time, rolling workflows) and cyclical reviews.
- **Strategic Insight:** The platform's flexible workflows, subject-based reviewer assignment, and deep integrations turn research data into strategic insight, while increasing transparency and consistency

Staff & Researcher Annual Reviews

Staff Annual Reviews are vital for professional development, recognition, and strategic planning. Symplectic Elements reduces the burden on both researcher staff and administrators by bringing together verified data, intuitive workflows, and tailored evaluation forms in one place.

If your review process includes peer assessment of publications, Symplectic Elements supports that too - enabling discipline-appropriate peer reviews of individual research outputs, with scores and insights automatically feeding into the individual's Annual Review.

Symplectic Elements supports both person-level and item-level evaluation workflows for assessing researchers, publications, impact case studies, and other research outcomes. Dashboards make it easy for administrators to monitor researcher's progress through the review process, and provide a suite of tools for management submissions.

The assessment workflow is completely configurable, allowing administrators to choose how the exercise should be designed. For each exercise, administrators can design stages where:

- Researchers can select specific outputs or activities (e.g. publications, grants, impact and professional or teaching activities), and provide supporting information.
- Reviewers can assess the submissions, providing scores and comments.
- Exercise managers can review and optimise the data collected before submission.

The flexibility of this module means organisations can choose whether they want a simple one-step submission or a more complex assessment with multiple rounds of review.

Item Level Evaluation

Recently added functionality supports item-centric evaluation, specifically designed for the peer review of individual research outputs, such as publications, impact statements, and professional activities. It offers several critical strategic advantages for enhancing organisation's research evaluation processes, providing transparency, efficiency, and insight-driven evaluations, tailored to the needs of researchers, reviewers, managers, and administrators. It also enables an improved, more flexible reviewer allocation process, options for increased automation / bulk actions, increased transparency (where desired), rolling reviews year-round, not just at peaks, and support for multi-disciplinary work with cross-field reviews.

Discovery

Discovery is the external expert profiles layer of Symplectic Elements, enabling the automatic population of public profiles for individuals and research groups that showcase an organisation's greatest assets: the expertise and experience of researchers, fellows and staff. This module can also be used for facility equipment and services.

Researcher profiles

Discovery uses the rich and often unique data already collected within Symplectic Elements to populate fully rounded and branded profiles that showcase researcher publications, activities and accomplishments. The profiles bring together biographical information, linked publications, grants, professional & teaching activities, along with custom fields (such as availability, settings or location), and bibliometrics. Videos and media content can be embedded within profiles to bring research to life. Profiles can indicate availability for collaboration, consultancy or media and industry appearances. An interactive Collaboration Network helps users visualise connections across the organisation – surfacing new partnerships, peer reviewers, and shared research interests.

Discovery is accessibility compliant, search engine optimised, and built with mobile-responsive design in mind, ensuring that public profiles are available to the widest audience.

Research group and research centre profiles

Discovery also supports creating public landing pages for departments, labs, and special interest groups – bringing together people, projects, outputs, and equipment in one curated space. These pages reflect the organisational structure and make it easy to explore research communities at a glance.

AI summaries in public profiles

An AI tool is available to generate on-demand, easy-to-digest summaries, key highlights, and keywords for profiles to help visitors and non-specialists understand research at a glance. This feature relies on Dimensions as the primary data source and only publications with available abstracts will display this additional information. Supported publication types include journal articles, books, book chapters, and conference proceedings. To have access to this functionality, your organisation must have the Discovery module and an agreement which includes an appropriate Dimensions API subscription. Organisations must opt in for access to this functionality.

Integrations

Symplectic Elements offers many automated data integrations, covering databases, bibliometrics, and identifiers. The integration with Dimensions is particularly useful because it includes fully searchable grants data source and can take advantage of the automatic linking between publications and grants from Dimensions. Symplectic Elements also provides a two-way ORCID integration which gives users the option of sending publications from Symplectic Elements to their ORCID record.

	Data	Automated Search	Automatic Claiming	Auto-Link Publications & Grants	Research Metrics	Full-Text Links
Altmetric	Publications				Yes	
ARXIC	Publications	Yes	Yes			Yes
CINII	Publications	Yes				
Crossref	Publications	Yes				
Dimensions*/**	Publications & Grants	Yes	Yes	Yes	Yes	
DBLP	Publications	Yes				
Europe-PMC	Publications	Yes	Yes		Yes	Yes
Figshare	Publications	Yes				
Google Books	Publications	Yes				
MLA*	Publications	Yes				
ORCID*	Publications	Yes	Yes			
PubMed	Publications	Yes	Yes			
REPEC	Publications	Yes				
SSRN	Publications	Yes	Yes			

	Data	Automated Search	Automatic Claiming	Auto-Link Publications & Grants	Research Metrics	Full-Text Links
Scopus*	Publications	Yes	Yes		Yes	
Web of Science*	Publications	Yes	Yes		Yes	

*Subject to license/membership.

****Dimensions as a data source for Symplectic Elements (also referred to as "Hosted Data Sources") enables the automated harvesting of data from the Dimensions database into Symplectic Elements to be associated with affiliated researchers. At the time of writing this currently includes publications and awarded grant data. Future iterations could include additional data types captured in Dimensions.**

API and database access

We provide a robust API supporting both data input and export functions. Symplectic Elements also has a dedicated SQL Reporting Database which powers much of the embedded reporting and supports the use of Symplectic Elements data in BI tools and data warehouse.

Security, Backup, Recovery and Disaster Recovery

Symplectic Elements provides a secure, interoperable, and scalable environment for your research data:

- Secure and scalable hosting with ISO 27001, SOC 2, and NIST compliance, encryption, disaster recovery, and uptime monitoring.
- Automated, comprehensive data collection from the widest range of integrations in the industry, with support for identifiers like ISSN, GRID, ROR, and Dimensions grants.
- Flexible and interoperable through a REST-based API and SQL Reporting Database for integration with data lakes and BI tools.

Symplectic provides access to instances of Symplectic Elements initially configured to meet the security standards of this document where this is under the control of Symplectic. Suitably authorised users can alter or ask Symplectic to alter security-related configuration within Symplectic Elements at any time. It is the responsibility of the client to ensure any such alterations are compliant with the client's security policy.

The secure use of Symplectic Elements relies on following the advice provided by Symplectic in product documentation and given in support of the service, including setup advice provided during the initial implementation phase and in-application guidelines.

Secure access to Symplectic Elements also requires the use of secure tools to connect to service interfaces, including:

- For web applications, use of documented supported browsers
- For programmatic service interfaces such as the Elements API and reporting database, use of client-authorised secure interface connection tools.

Devices used to access Elements must also be secure.

Hosting

Symplectic chooses both the hosting infrastructure provider and the geographic region of the provider's data centre used to host instances of Symplectic Elements in consultation with the client during the implementation phase of the Symplectic Elements hosting service. This is typically the hosting infrastructure provider's geographically closest available hosting region to the client's site, or other similar location chosen for legal jurisdictional reasons.

As far as Symplectic is aware, none of its approved infrastructure providers is located in places associated with high-impact environmental risks such as flooding.

We use AWS as our hosting provider in a mutually-agreed region to host instances of Symplectic Elements. Regions currently in use by Symplectic include Europe (Frankfurt), Europe (Ireland), Europe (London), Canada (Central), Middle East (Bahrain), Asia-Pacific (Singapore), Asia-Pacific (Sydney), US East (N. Virginia), and US West (Oregon)

Storage, Backup, and Preservation

Backups of the data required to fully restore an instance of Symplectic Elements are stored separately in AWS S3 buckets in the same jurisdictional region as the instance of Symplectic Elements itself. S3 replicates data across a minimum of three physically isolated locations, separated by miles to protect against local events like fires, floods etc.

A secondary AWS data centre location is used for disaster recovery purposes, regardless of the provider of the primary location. The secondary location is chosen to be in the same jurisdictional region as the primary location, and where possible is geographically separated.

Legacy clients hosting their own instance of Symplectic Elements are responsible for implementing the security of their hosting infrastructure, including but not limited to any recommendations in the Symplectic Elements Security document.

Onboarding and Offboarding Support

Onboarding

During your Symplectic Elements implementation (described in detail in the next section) you will be provided with 16 hours of Knowledge Transfer sessions, which can be tailored to suit your requirements.

Training is delivered via webinar sessions that last 1-1.5 hours.

By default Symplectic Elements includes a quick start guide for your users. You can also annotate the help pages to include your own guides, or reuse the content of the Symplectic support site for training materials.

Offboarding

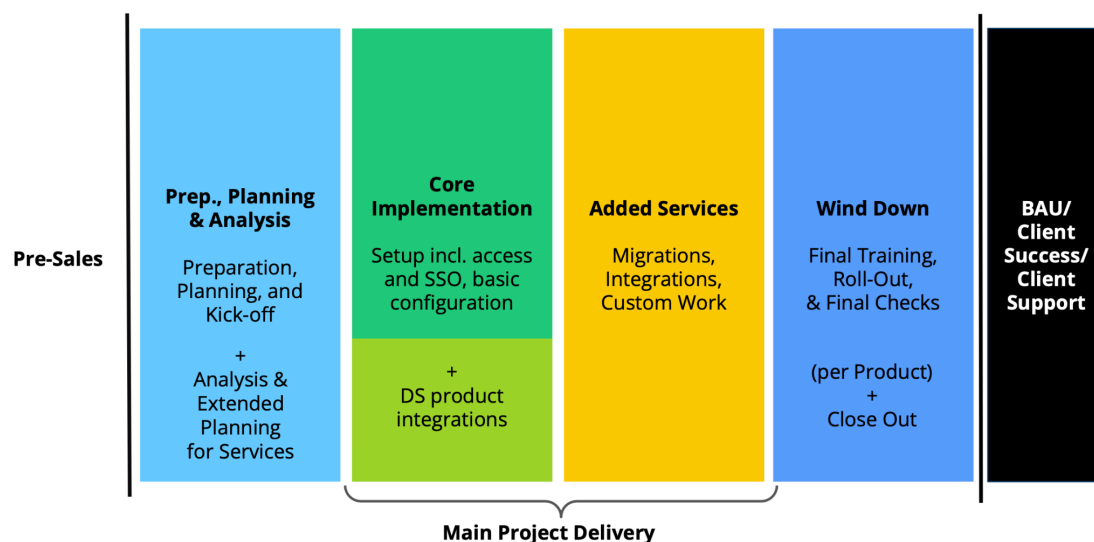
Upon termination of contract for Symplectic-hosted instances of Elements, access to all interfaces of Elements is terminated.

Upon termination of the contract, whether due to the lack of an agreed renewal or at an earlier time mutually agreed upon with the client, Symplectic commits to providing the client with a complete backup copy of the Elements reporting database. This backup, delivered as

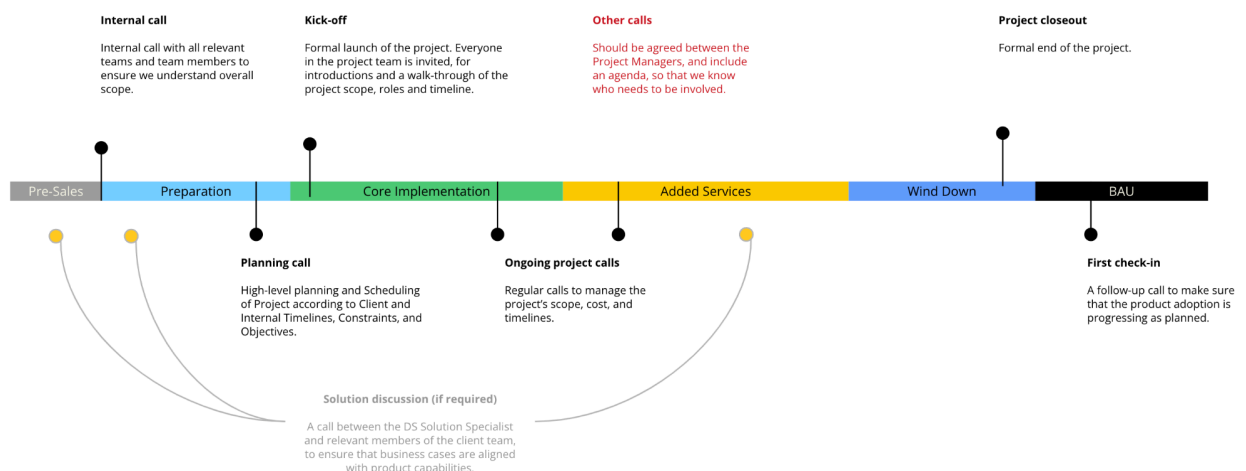
a SQL Server full database backup file, to be located on a secure FTP server for retrieval at the client's convenience (within 30 days), is intended to facilitate the client's data migration to an alternative system. Once restored, the backup provides full access to all client data within Elements, including custom fields and types, and detailing all relationships between all data types in the system. It is a technically straightforward exercise to transform the data in the SQL backup file to any other desired format. Having taken the snapshot and confirmed with the client that they have successfully retrieved the file from the FTP site, Symplectic will either decommission or securely erase the Elements server(s) on which the client's data had been residing, thereby irretrievably destroying it. AWS S3 buckets containing (encrypted) client data backups are deleted, permanently deleting all objects they contain; and finally, the backup file on the FTP server is itself deleted.

Implementation Plan

The figure below shows the typical Stages of Implementation:



High-level overview of implementation services:



Preparation, Planning & Analysis

As soon as your project contracts have been countersigned, we move to the Preparation, Planning & Analysis phase, which starts the clock on the set of tasks that we need to complete before a project is kicked-off.

In this phase the ownership of the project passes to the Head of Projects, and we begin the preparation in earnest.

We identify the project team, we request provisioning of environments, we start communicating directly with you, and help you complete the Implementation Questionnaire/Survey, if required.

Kicking off the project

In advance of kicking off your project, we need the following in place:

- A countersigned Statement of Work
- A high-level Project plan
- A Project brief
- A Resource plan

Core implementation

Once a project kick-off has taken place, the ownership of the project passes from Head of Projects to the allocated Digital Science Project Manager.

At this point, we give you access to the Asana project that we have set up for you. This is where we meet to collaborate on the detailed tasks involved with the project.

Protecting the project (and your use case)

In order to protect the project and its corresponding business case, we need to formally manage the Project Scope and Project End Date.

To help with this, we will ask you to approve the agreed Project Scope or Project End Date, at the start of the project, and whenever these need to change.

Escalation pathways

If there are concerns that you want to raise the profile of, we have an escalation pathway as follows:

Project Manager > Head of Project > VP Client Service > SVP Client Solutions

Added Services

As the project progresses, we regularly update the overall timeline, and we only extend the project with task lists when the work needs to start.

Each added service is considered a project-within-a-project that needs to be resourced and scheduled (who does what, and when), alongside all other commitments.

Added Services include:

- Symplectic Elements Data Feed/Migration
- Symplectic Elements RT2 Repository integration

Where Elements implementations require bespoke configuration, complex data migration, advanced reporting, or custom integrations beyond standard setup, these activities will be scoped and delivered under a mutually agreed Statement of Work and may incur additional charges.

Wind Down

At some point the project will wind down, and the Project Manager will request Project Closure.

The project phase is set to 'Closing' and the ownership of the project passes from the allocated Project Manager back to the Head of Projects.

This is when any retrospectives take place, and Client Success re-engages with you to assist with the transition to Business as Usual.

When all relevant tasks have been completed the project status and project phase are set to 'Complete'.

BAU

If you are running a multi-phased project, with more than one go-live, we will ask you to engage with our helpdesk for any request that concerns the live system.

Service Constraints

As described in our SLA (see below), environments have a regular weekly 2-hour maintenance window. This window is necessary for the proper maintenance of security, availability and disaster recovery procedures. For clients in EMEA this is Wednesdays 06.00-08.00 (UK time). Any custom API integrations, SSRS Reports, Dashboards, Custom Reporting Database indexes, views or tables are the responsibility of the client to maintain.

Service-Level Agreement

The comprehensive Symplectic Elements Service Level Agreement (SLA) is available from: <https://support.symplectic.co.uk/support/solutions/articles/6000050152-symplectic-elements-service-level-agreement> (you may need to register on the support site).

In summary the Symplectic Elements SLA establishes clear accountability and standards for service delivery, ensuring clients receive reliable support for the Figshare platform, API, and widgets. Key advantages for customers include:

- Comprehensive Support Categories: Assistance covers Product Support for resolving bugs and documentation errors.
- High Reliability: Symplectic Elements commits to a 99.5% yearly uptime percentage, backed by 24/7 automated monitoring from multiple global locations.
- Data Security and Recovery: The service ensures data safety through automated backups and a robust Disaster Recovery Plan featuring specific Recovery Time and Point Objectives (RTO/RPO).
- Guaranteed Response Times: Support incidents are prioritized based on business impact. Figshare commits to initial response times ranging from 4 hours for urgent, critical errors to 24 hours for low-priority requests.

- **Structured Management:** The SLA provides a clear escalation path to senior management and ensures tickets remain open until a mutually agreed resolution is reached. After Sales Support

We have highly-trained, senior support personnel located in the UK, Germany, US and Australia. Our Head of Support is based in our London office and manages the support team and our technical help desk. Our support team is also responsible for maintaining our product documentation and is available to conduct expert training for our clients.

Other Digital Science Government and NGO Services Listed on G-Cloud

Digital Science is a technology company working to make research more efficient. We invest in, nurture and support innovative businesses and technologies that make all parts of the research process more open and effective.

Research Repository for Government, Non-Government, and Intergovernmental organisations - Figshare

Figshare is a cloud-based, next-generation repository system. Any file format can be uploaded and published, subject to approval by client administrators. Figshare includes file previews for common formats, an open API, private collaborative spaces, automatic DOIs or handles, and reporting dashboards.