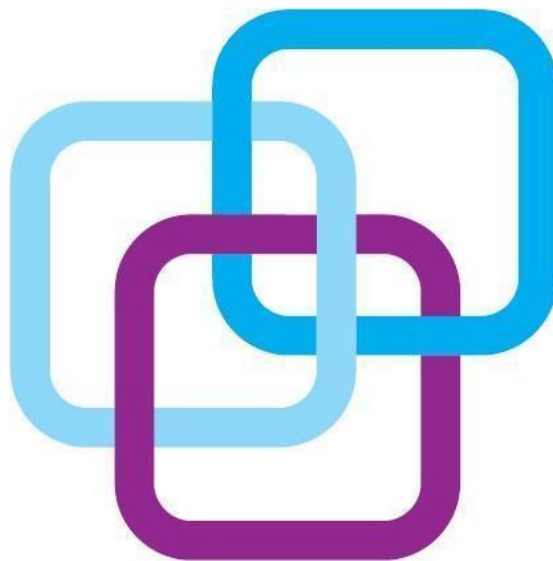


G-Cloud 15 Service Description

CIIM

Implementation and Support

Knowledge Integration Ltd



About us

Knowledge Integration was incorporated in 1999, giving us many years of unrivalled experience in the provision of software services. We have a team of highly skilled, qualified developers and consultants to ensure our services meet and exceed customer requirements. As of 2026 we work in excess of 50 customers across the UK and worldwide with our CIIM solution being used for the publication and management of over 150 million items.

We traditionally focus on the problems of information extraction, description, indexing and searching with skills in ETL, GIS workflows for converting legacy metadata repositories into modern information retrieval and discovery solutions. We use our experience and skills to support a wide range of customers and solution requirements.

We have extensive skills in enterprise and semantic search (including Elasticsearch and SOLR), AI, vector data stores, data graphs, data modelling and standards-based data syndication.

What the CIIM is

The CIIM framework is a suite of open-source (AGPL v3) middleware and API components and was originally created in 2009 for the London Museum (formerly Museum of London). Since that time it has been continuously evolving and developing and now provides a reference middleware implementation for the cultural sector, and is in use at a wide range of institutions worldwide.

This highly scalable, fully automated ingest framework comfortably handles over 80 million rich records and seamlessly integrates with 30+ collection, archive, library and digital asset management systems.

CIIM features a schemaless data model and is ingest format agnostic, with a flexible processing workflow and field level data enrichment.

AI integrations, deep zoom/IIIF media and manifest handling, automated publication, media artifact creation/watermarking and optimized search and retrieval across large datasets are only some of the areas in which the CIIM excels. A comprehensive data auditing strategy is also built in, ensuring data integrity across all aspects of ingest, processing and data/media publication.

Request time, codeless, data transformations deliver on-demand Linked Art, LIDO, CIDOC, EDM, Skos, Marc, IIIF and many more. Require a different format, no problem, the required configuration is in your hands.

Who uses CIIM

Although originally developed for the cultural heritage sector - e.g Galleries, Libraries, Archives, Museums and Cultural Aggregators - it is also applicable across a wide range of other sectors wherever making sense of large amounts of disparate data is required.

Our existing customers include:

- Museums - British Museum, National Maritime Museum, ACNMMW (National Museum of Wales).
- Archives - The National Archives, Archives Hub and Lloyds Register Foundation.
- Libraries - The British Library, Morgan Library (New York)
- Galleries - The National Gallery, National Gallery of Ireland, Manchester Art Gallery, Whitworth Gallery.
- Aggregators - The Museum Data Service, The Estonian National Cultural aggregator, Archives Hub.

Why choose us and CIIM

An apparently 'simple' problem to solve, CIIM answers the data integration, audit and sharing questions that most other solutions/frameworks haven't even thought of asking yet.

First and foremost CIIM is not a bespoke solution, but a versatile framework using plugins and extension points to make customisation easy.

It is built on over 16 years of data analysis, use-cases and differing institutional requirements and data models. As an open source product, it continuously evolves based both on user requirements and emerging technologies, with all new features accessible to all users.

As well as helping you support and implement a new enterprise architecture based on CIIM, we can provide expert consultancy in all elements of the CIIM stack, from enterprise and semantic search strategies (Elasticsearch and SOLR), to advice on

ELT,, microservice architectures, data modelling, AI strategies and integrations, data standards and sharing, IIIF and cloud resource planning/creation pipelines.

CIIM Features

CIIM is a middleware application that connects people to content. It can be used to help you:

- Deliver a modern, scalable and extensible enterprise architecture information architecture
- Fully automate, API/file format agnostic integrations, cross-system auditing/reporting.
- Simplify your IIIF and media delivery requirements with its automated media processing pipeline
- Model any type of data using its schemaless data model with internal graph representation
- Deliver flexible processing workflows with field-level enrichment, validation and privacy
- Provide a coherent enterprise/semantic search strategy (including Elasticsearch and SOLR)
- Integrate a codeless API building framework (including IIIF, LinkedArt, LIDO, EDM, Marc)
- Merge analytics with your data, to help drive 'insight led' planning
- Deliver a platform for repeatable, flexible and extensible AI integrations/data enrichment incorporating RAG, LLMs, Named Entity recognition, image analysis and audio to text.
- View cross system cross-system data visualisations and data audits via the flexible, accessible user-interface
- Share, search and syndicate your content via the configurable APIs. Providing graduated access for records, fields and media (including delivering different image renditions for different audiences)

User Interface

The CIIM user interface provides a role-based view across all of your data and syndication endpoints. It enables viewing of performance metrics, system activity, auditing and facilitates the management, configuration and scheduling of data integrations. The interface can integrate with your centralised identity management systems and provide access levels based on memberships set within that system. It has configurable search access points and data partitioning which can be set per-user or cross organisation and user-customisable filtering which can be set at the same granularity. Simple searching and targeted searching using Lucene syntax is also supported.

API

All of the features of CIIM are accessible via an API which is also role-based. The CIIM has additional APIs for data delivery, searching, extraction, submission and configuration. All of these APIs can be used to help configure CIIM and to customise delivery frameworks and data processing pipelines. The mechanisms for configuration are split between APIs which are used to setup and configure integrations, schedules, and configuration which is used to drive pipeline transformations, publication endpoint configuration, syndications and dissemination formats. The common API tasks are also surfaced via the user interface and this can also be used to schedule, suspend, run on demand and search/filter across all content. This also extends to UI customisations for filters, search access points and data display templates.

Customisation

CIIM can be customised via the user interface and also via our flexible data manipulation language (Proteus) - this allows users to configure their own data delivery formats and standards, data transformations, validation rules and processing pipelines. Via the user-interface, end users can set up their own data display templates, search access points and data partitioning. These customisations can be for a specific user only or application wide. Analytics integrations can also be customised.

More complex customisation can be configured at code level via plugins that use prescriptive interface definitions to be loaded at runtime within the application.

Accessibility

The CIIM administrative interface is WCAG 2.2A compliant.

Support

Support is available UK working days (Monday- Friday excluding weekends and bank holidays) and working hours (09:00 - 17:00). Our service level agreements (SLAs) include criteria for prioritising issues according to severity and agreed response

times for services outside the normal scope of support. This can include minor customisations, consultancy, and training. Support requests can be raised as tickets via Zendesk outside of these hours and will be actioned when working hours resume.

Calls logged on the helpdesk are triaged and initial reply sent within two working hours. Further responses are dependent on nature and tier of the now triaged call, with Critical Tier 1 tickets taking priority

Frontline Support: We have a dedicated front-line support function where staff receive support requests and will respond within agreed service levels. Support requests can be raised via email and directly from the Zendesk portal. Front line support staff have expertise across the full range of our products and are often able to resolve an issue themselves. If this is not the case, the issue is referred to the appropriate development team for a response.

Zendesk and Support Portal: We use Zendesk as our issue management system with users able to log support requests by email or via a simple web portal. The web portal allows customers to track the progress of support requests. The support portal also includes a help centre which contains product-specific user guides and more detailed technical documentation.

User Group: CIIM has a user group. The user group is managed by the user community and involves twice yearly meetings where Knowledge Integration provides information on current and planned developments and users are able to raise any queries and concerns. The user group also provides a useful opportunity for the user community to influence the future development of the product.

Support SLA covers business hours of 09:00-17:00 weekdays and excludes weekends and bank holidays. Support requests can be raised as tickets via Zendesk outside of these hours and will be actioned when working hours resume.

Operational Security

Our core components, implementation code and configuration are managed/ tested within our CI/CD pipeline for all commits, with weekly large scale integration tests as part of this framework, to allow us to capture any potential issues which only surface for large data sets. The potential security impact of any change is always reviewed in terms of changing the threat landscape, attack surface and whether our existing controls mitigate the change. If there is deemed an impact on security, then these threats are documented and mitigation is put in place. This is always validated by vulnerability and/or penetration testing as required.

We utilise OWASP dependency Check within our CI/CD build pipeline. Scanning of new and existing components happens at verify time as part of the build process. We utilise a central database, updating from the NVD database daily and all our builds

use this database. We utilise Intruder.io to check external vulnerabilities daily and to email a report and these are also responded to within a 48 hour window.

Documentation

CIIM has detailed documentation available online covering system requirements, how it works, glossary and a 'how to' section containing click-through videos.

Please see (<https://docs.ciim.k-int.com/>)

All APIs are documented using OpenAPI/Swagger.

Hosting options

Any cloud platform is supported as the system is cloud agnostic.

Security

We hold Cyber Essentials Plus and we have a Cyber Security Compliance Group which meets monthly to review and discuss security issues.

Standing agenda points:

- Recording of policy breaches, remediation, staff training
- Continuous policy review
- Upcoming maintenance schedules and action planning
- Infrastructure and internal service upgrades, updates
- Review of standing actions from the previous meeting

All cross system data communication is secure.