

G-CLOUD 15 SERVICE DEFINITION

SearchIn Azure AI Search for Umbraco

Software as a Service (SaaS)



SearchIn Azure AI Search for Umbraco

Overview

SearchIn is the integration layer that brings the full power of Microsoft Azure AI Search directly into Umbraco.

It replaces the limitations of Umbraco's built-in Examine/Lucene engine with a modern, scalable, AI enhanced search platform, without requiring teams to build complex pipelines, indexers, or APIs from scratch. SearchIn handles the plumbing, mapping, syncing, querying, security, and UI integration so you can offer the kind of search users expect: fast, relevant, contextual, and intelligent.

With SearchIn, Umbraco editors keep using Umbraco. Azure AI Search handles the heavy lifting. And your organisation gets an enterprise grade search experience designed for high-traffic, content-heavy, multi-site deployments.

Why SearchIn exists

Umbraco's built-in search is great for simple sites, but struggles when organisations need a search implementation that can handle:

- Multi-source indexes

- Typeahead and suggestions
- Faceted searching
- Large document libraries
- Multilingual content
- Advanced relevance tuning
- Enterprise grade scalability
- Multi-channel search delivery
- AI enrichment and skillsets (OCR, entity extraction)
- Vector searching

SearchIn solves this by giving Umbraco a first-class engineered, production-ready integration with Azure AI Search.

Indexing

We've implemented SearchIn indexes that index data from a huge variety of sources, including:

- Umbraco website
- Azure SQL Databases
- Azure Blob storage
- Azure Data Lake
- Azure Table Storage
- Azure Cosmos DB
- RSS Feeds
- Custom web crawlers

ID	Name	Fields	Suggesters	
1	website-dev-own-1	26	1	Edit Reindex Delete

Indexer Status				
Indexer ID	Index ID	Description	Start Time	Progress
✓ c0fa5793-f04f-48...	1	Indexing 1 saved content nodes(s)	3/7/2023 10:17:53	Complete
⚙ b7597068-f945-...	1	Indexing 60 published content nodes(s)	3/7/2023 10:18:3	Transforming content 11/60

custom front-end implementations by exposing a set of well defined search API endpoints, allowing complete control over search behaviour, form logic, and presentation. It also provides fine grained control over how custom data types are indexed and queried, alongside many other extension points.

Because SearchIn is built directly on Umbraco conventions and integrates natively with Azure AI Search, customisations feel like a natural extension of the platform rather than bolted-on enhancements.

Extensibility

SearchIn is designed to be highly extensible, ensuring it can be tailored to the specific needs of each organisation and implementation.

Nearly every aspect of SearchIn can be customised by developers, whether by our team or your in-house developers. SearchIn supports fully

Our clients



Arolygiaeth El Mawrhydi dros Addysg a Hyfforddiant yng Nghymru
Her Majesty's Inspectorate for Education and Training in Wales



Our approach

We believe that technology should enable business goals not drive them. That's why we offer services and support tailored to the way you work. We use best of breed processes and industry standards, combined with our own unique methodology to ensure you receive the very best in quality and value for money.

Experience

The extensive experience of our staff in real world application development means that we provide the right technology for your requirements, and our rigorous testing procedures ensure quality assurance throughout. Aspire Systems employs rigorous coding standards to facilitate the readability and maintainability of source code. All development is reviewed against these standards throughout the project lifecycle.

Methodology driven

Our agile approach to software combines commonly accepted best practices, such as an iterative, user-focused development process and use of industry standard design patterns. Aspire Systems has employed this approach successfully on many development projects.

Reuse

Our application development framework and suite of products allow us to increase productivity by spending more time on meeting the business requirements of our clients, rather than the low level nuts and bolts of the system.

The benefits

- Systems that reduce effort and increase the efficiency of processes
- More timely, accurate data from which valuable analysis and reporting can be conducted
- Cost savings by reducing the time taken to capture, validate and report on your organisations key data
- An agile collaborative approach to the design, delivery and management of your system implementation
- A highly qualified team with experience in delivering complex systems
- Lightweight, reusable components ensure cost effective rapid delivery

Our Services

- Innovative cloud solutions and cloud adoption consultancy
- Analysis, design, and development of bespoke applications
- Database development and integration
- Secure application delivery through web technology
- Multilingual applications including bilingual Welsh / English interfaces
- Business intelligence and flexible reporting solutions (Including Power BI)
- Automated data validation
- Systems integration
- Technical project management

- Secure data exchange
- Comprehensive support and maintenance
- Social media integration
- Mobile Web and Apps
- Azure App Service, Azure Functions, Azure AI Search
- Responsive web design and user experience (UX) design
- Geographical and mapping solutions (including Google and Bing maps integration)

Technologies

Web and Windows based solutions

- Microsoft .NET
- Microsoft Azure
- Web services and API (REST, SOAP, OAuth authorisation)
- XML, XSLT, JSON
- React, Angular, HTML5 , CSS, JavaScript, JQuery, AJAX
- Microsoft SQL Server

Business Intelligence

- Microsoft Power Platform (Power BI, Power Apps)
- Business Objects
- Microsoft SQL Server Analysis Services (SSAS)

- Microsoft SQL Server Reporting Services (SSRS)

Content and Collaboration Platforms

- Microsoft (Office) 365
- Umbraco
- Microsoft SharePoint Online

Government and Industry Standards

- Government Open Standards principles
- W3C Web Content Accessibility Guidelines (WCAG 2.2)

Standards and accreditations

ISO

Aspire Systems operates to the ISO 9001:2015 standard as a business and on individual projects. The project manager and team members have all worked within ISO 9001 accredited environments and have had individual projects audited as part of accreditation renewal. Aspire Systems first acquired accreditation in September 2006.

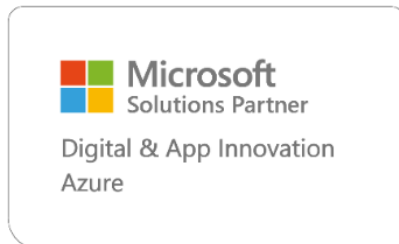
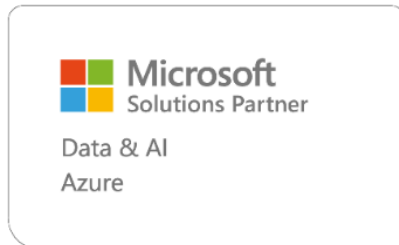
Aspire Systems operate in accordance with the ISO 27001:2022 standard and first acquired accreditation in March 2015. A number of our systems process sensitive data and frequently undergo penetration testing by external security experts. We have a solid understanding of security in web applications and develop all of our systems according to the recommendations of OWASP (open web application security project) and other industry best practise.

Cyber Essentials Plus

Cyber Essentials is a Government-backed and industry supported scheme to guide businesses in protecting themselves against cyber threats. Aspire Systems is fully accredited against the Cyber Essentials and Cyber Essentials Plus schemes.

Technical Accreditation

The following Microsoft accreditations are held by Aspire Systems and its staff:



The following Umbraco accreditations are held by Aspire Systems and its staff:



Umbraco Partner



The following Scrum accreditations are held by Aspire Systems and its staff:



Experience

The following is a small selection of Aspire Systems' comprehensive experience in offering this service. For more of our work please take a look at our website <https://www.aspiresys.com/uk/insights>

Education Scotland

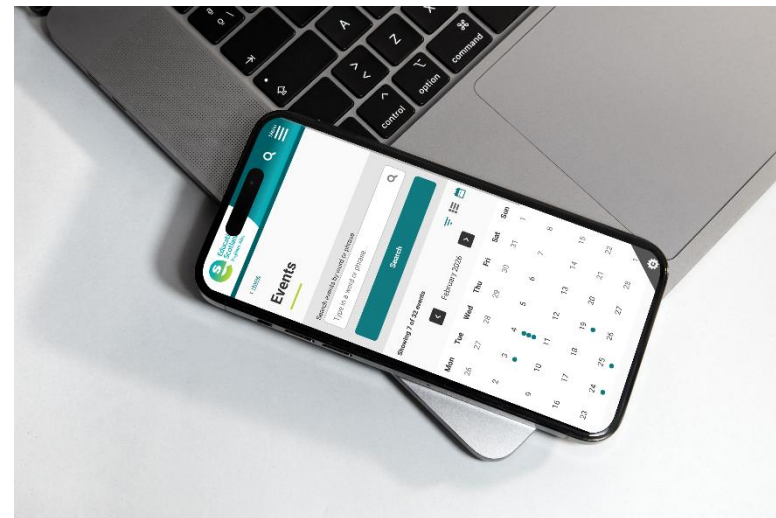
Education Scotland are charged with supporting and improving education for learners of all ages in Scotland: from early learning, child care and schools to community learning and development. Their website was no longer supporting their needs, so they asked us to build them a new site with improved reliability and responsiveness, and an updated search experience.

We overhauled the search experience from top to bottom using SearchIn and Azure AI Search, implementing such features as:

- Real time typeahead and suggested searches
- Search history
- Full telemetry and monitoring to visualise how users are searching
- Configurable searches to reduce the cost and time required to make minor changes
- Advanced indexing techniques to improve the quality of indexed data

Following the success of the SearchIn-powered overhaul, we were able to rapidly create further search pages including a learning resources search, events search, and professional learning programme search.

Weeks of work was reduced to days, or in some cases, hours, by the configurable nature of SearchIn and the power of true Azure AI Search integration.



Senedd / Welsh Government

In support of the Senedd's strategy to modernise the production, management and use of Senedd business information, Aspire Systems was commissioned to design and deliver the new Senedd website, including a significantly enhanced search experience.

The challenge centred on making a large and diverse set of parliamentary information easily discoverable by the public. Content was distributed across multiple internal business systems and storage platforms, each with different data structures, formats, and update cycles. A traditional, single source website search would not have been sufficient.

SearchIn was used as the central integration layer, providing a unified search experience powered by Azure AI Search while remaining fully embedded within Umbraco.

Using SearchIn, we indexed and combined content from a wide range of systems, including:

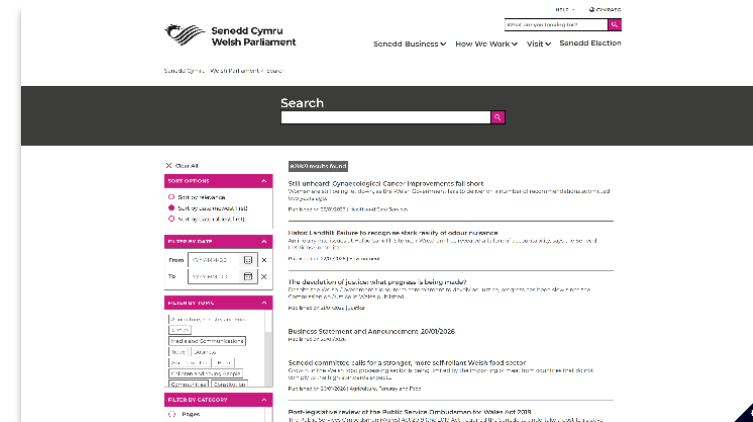
- Azure SQL databases containing structured parliamentary and business data
- Blob storage holding documents, with full text extraction and enrichment
- Website content managed directly within Umbraco
- RSS feeds and external APIs
- Pages from a separate website, indexed using a custom web crawler

SearchIn handled the mapping, enrichment, indexing, and synchronisation of this content, delivering search results that were fast,

relevant, and consistently presented regardless of their source. Incremental indexing ensured that updates to Senedd content were reflected in search results quickly and reliably.

Beyond the sitewide search, SearchIn and Azure AI Search were also used to deliver a number of contextual and discovery-focused features, including:

- Related content recommendations based on shared tags and metadata
- Surfacing popular and frequently accessed content
- A map-based 'Member of the Senedd' search, allowing users to explore representatives geographically



By using SearchIn, the Senedd gained an enterprise grade, scalable search capability that supports complex information needs, improves public access to parliamentary content, and provides a flexible foundation for future enhancements as data sources and user expectations continue to evolve.

G-Cloud details

Information Assurance

Since we offer specialist consultancy, development and support services we are able to comply with any Impact Level accreditation required when developing the solution.

Backup / Restore / Disaster Recovery

A robust backup and maintenance plan will be supplied where required. Should a failure occur the plan will set out the series of steps that must be taken to restore the service in accordance with the agreed SLAs.

Our approach to project management allows us to evaluate and identify suitable responses to risks, set tolerances for risks and ultimately select risk responses that will ensure project delivery is achieved. We have experience of creating many varied and tailored plans for our existing SharePoint customers.

On-boarding and Off-boarding processes/scope

On-boarding and Off-boarding process will be discussed and confirmed with a Aspire Systems Account Director during initial engagement. Typically there would be no cost associated with entry to the service.

Pricing

Please see pricing document.

Service management details

For Support projects or projects that contain a support element the following service management procedures will be followed.

Enquiries will be received via email or telephone.

All communication and associated actions will be logged in the Issue Log, which will be accessible 24/7 via the project Extranet (SharePoint).

Enquiries that result in changes to the system will be communicated to the client prior to work commencing. Changes to systems will be transferred to the live and/or staging environment by Aspire Systems (as applicable) directly upon acceptance and all relevant documentation will be updated. Aspire Systems will advise the client of completed changes to the live environment.

Service Levels

All calls will be categorised by Aspire Systems as follows:

- Category 1
These are problems with the system for which there are no workarounds and have a serious impact on the processes of the system and the ability of the users to perform essential tasks. The problems may relate to data or the software itself.

- Category 2

These are problems which affect part of the system but do not prevent continued use but do limit the effectiveness of the system. Processes can continue and workarounds are available.

- Category 3

User generated queries requiring no modifications to the system or data, but will require guidance to arrive at a satisfactory conclusion.

The SLAs offered would depend on the type of support being provided and would be agreed at the start of the support period. The following response times would typically be offered:

Category	Response time	Investigation time
1	30 minutes	3 hours
2	1 hour	7 hours
3	7 hours	15 hours

Under our existing frameworks, 100% of calls have been actioned within the agreed SLA.

Change control

Issues that result in changes to the system will be subject to formal change control and communicated to the client for agreement prior to work commencing. Changes to the system will be transferred to the live environment directly upon acceptance and all relevant documentation

will be updated. We will advise the client of completed changes to the live environment.

System monitoring

During a busy support period, system performance and activity would be monitored to identify any potential problems before they occur. This typically includes:

- Monitoring event logs
- Checking that backups have completed successfully
- Monitoring storage space

We recognise that at critical times such as the day new functionality goes live, additional system monitoring should take place. This will ensure that unexpected issues can be identified and resolved with minimum impact to users.

Resources

The support service team will partly be provided by the same consultants who undertake project work. All consultancy staff will be trained in the implementation of the helpdesk service to ensure a uniform service is provided.

We will establish and maintain a test environment to allow support requests to be identified and resolved in an efficient manner.

Financial recompense model for not meeting service levels

The details of any financial recompense model would be determined based upon the size and scope of the project and the level of technical or

organisational uncertainty on the side of the client. This will be decided during final contract negotiations.

Training

Our approach is one of flexibility and we seek to work in an integrated collaborative manner with the client, fostering an environment that promotes knowledge transfer throughout the project.

In order for the client staff to support software applications it is important for us to pass on knowledge of the systems and technologies used. We always aim to develop software that can be administered as far as possible by the client.

Both formal and informal tailored training and mentoring can be provided maximising the benefits of training time.

Examples of training could include:

- Navigating the Umbraco backoffice and managing content
- Working with Blocks, media, and structured content types
- Understanding multilingual and variant content workflows
- Best practice approaches for maintaining a clean and accessible content structure
- Editor tips, publishing workflows, and avoiding common pitfalls
- Deep-dives into new features introduced during upgrades

Ordering and invoicing process

Ordering

The ordering process generally constitutes the client accepting a written proposal for the work, which details the project deliverables, costs and timescales.

Invoicing

Aspire Systems payment terms are 30 calendar days from the date of invoice. Invoicing will be based on the type of the project. For development projects this is typically 10% on specification signoff, 70% on delivery for User Acceptance and 20% on final signoff.

Termination terms

By consumers (i.e. consumption)

- Time and Materials projects

Termination terms will vary depending on the service offered, and will be agreed at the time of service commencement. Our termination notice for consulting, development and deployment activities is 2 calendar weeks (Termination Period). Any actual days worked, (according to timesheets) up to the end of the Termination Period will become immediately payable by the client. Any finalisation of deliverables will need to be performed at that time.

- Fixed Price projects

For fixed price/fixed scope projects the client will be liable for the full cost of the fixed price projects if it is terminated early. Aspire Systems will be prepared to examine whether / how clients' costs can be minimized if larger / longer term projects are terminated early.

- Resale of 3rd party Cloud services

Where Aspire Systems is reselling 3rd party services to the client as part of our cloud services, clients will be required to comply with the standard terms of service offered by 3rd party suppliers. These will be clearly communicated prior to service commencement. Should early termination by the Consumer attract contract penalties from any 3rd party, Aspire Systems will pass these penalties to the Consumer. Any such penalties will be payable in accordance with any terms expressed by the 3rd party.

By the Supplier (removal of the G-Cloud Service)

The G-Cloud termination terms are agreed within the framework agreement. In general, all services purchased under this framework can continue to be supplied to consumers should the framework be withdrawn by the Supplier.

Consumer responsibilities

The proposal from Aspire Systems to the client will make clear the contribution required from the client. Generally this will include providing business knowledge during workshops, reviewing outputs and involvement in user acceptance testing.