iShare in the Cloud

Service Definition v5.0
An overview of iShare in the Cloud

iShare is an end to end Enterprise GIS for public sector comprising a spatial data warehouse, rich functionality browser based GIS including editing and spatial querying for internal users and an award winning public facing mapping application and API that enables organisations to share data with citizens and customers while reducing interaction costs. iShare is used by over 50 Local Authorities, Government Departments and Agencies, Emergency Services and Housing Associations.

iShare in the Cloud (iSiC) is a cloud hosted and managed version of iShare that frees users from the costs and complexity of managing Geographic Information infrastructure (servers, networks, bandwidth) allowing GI managers and analysts to focus on delivering Geographic Intelligence to staff and stakeholders.

iShare in the cloud is available either as a full enterprise deployment or as a public facing only deployment, more details are provided below.
iShare in the Cloud is hosted on Amazon Web Services (AWS). For iSIC Enterprise version, iShare SDW and iShare GIS are hosted in a virtual private cloud which can be accessed from the client’s network via a VPN or using IP restriction. iShare Maps is hosted within Astun’s multi-tenanted iShare Maps instance on AWS, client data is pushed to this instance either directly from internal systems or via iShare SDW if the Enterprise version is deployed.
**iShare in the Cloud**

**iSiC Public and Enterprise**

iShare in the Cloud is available in two versions **iSiC Public** for public facing web mapping and spatial information services and **iSiC Enterprise** which adds a spatial data warehouse and intranet GIS to iSiC Public.

**Choosing between iSiC Public and Enterprise**

<table>
<thead>
<tr>
<th>Feature</th>
<th>iSiC Public</th>
<th>iSiC Enterprise</th>
</tr>
</thead>
<tbody>
<tr>
<td>iShare Maps - public facing mapping portal and developer API</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>iShare GIS - intranet GIS</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Astun Data Services (subject to PSMA license)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>iShare Spatial Data Warehouse</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Connections for desktop GIS clients (ArcMap, MapInfo, QGIS)</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Manage user access via Active Directory</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Access to local systems by secure VPN</td>
<td>x</td>
<td>✓</td>
</tr>
</tbody>
</table>
iSiC Public delivers location content to public facing services and promotes channel shift

iSiC Public has been used by local authorities and other public sector bodies to provide maps, spatial searches and location sensitive content to public facing web pages, examples can be seen at http://j.mp/astuncustomers. iShare customers have won plaudits and awards from eGovernment, National Land and Property and AGI Awards to name a few. Many have realised substantial savings by shifting customer interactions from face to face and telephone to the web e.g. http://j.mp/c-shift.

iSiC is deployed as series of modules which can be combined to meet many use cases.

My Maps

My Maps is a highly configurable maps portal providing intuitive access to spatial data including:

- Gazetteer search with location stored for subsequent reuse in My House and My Nearest
- Layer control and legend
- Find my nearest
- Base map selector

iShare Maps Surrey County Council
My House

My House provides information related to an address and its surrounding area enhanced with a small embedded map. The service is configured from a combination of spatial searches, ‘back office’ system data and XML feeds and web services.

- Smart hyperlinks to other web content
- Printable as a report/profile
- Can be adapted to produce ward report for a councillor

![My House for West Oxfordshire](image-url)

*My House for West Oxfordshire*
My Nearest

My Nearest provides information related to services, events or entities close to the user’s location. The service can be configured to show nearest planning applications, GP surgeries, parks and open spaces or recycling points (limited by radius or count).

My Nearest for Huntingdonshire
Embedded Maps

The iShare Maps API allows a developer to embed interactive and static web maps within a web page with full control over map size, centre, zoom and layers displayed e.g. to display schools and libraries around a user's location on an education page.

Embedded Map at Cambridgeshire County
LocalInfo

The iShare Maps API allows a developer to embed textual content based upon a spatial search e.g. Bin Collection day, Council Tax charge, elected members or nearest planning applications within the relevant service page.

LocalInfo search embedded at South Tyneside

iShare Studio

iShare Maps is configured and controlled from iShare Studio accessing live data (or ‘near to live’ data from appropriate back office systems) from the iShare Spatial Data Warehouse (when available as part of iSiC Enterprise). Alternatively iShare Maps can connect directly to most standard geographic file format data which can be refreshed automatically as a scheduled process.
iSiC Enterprise

iSiC Enterprise combines iSiC Public with iShare GIS, a full functionality browser based GIS, and iShare SDW, a cloud hosted spatial data warehouse which supports connections from QGIS, ArcGIS and MapInfo Professional.

iShare GIS - rich intranet GIS will support migration from desktop and encourage data sharing

iShare GIS promotes a data sharing culture across an organisation and with its partners. It delivers ‘Business Intelligence’ across the organisation, by providing easy access to data from back office systems.

iShare GIS offers the 20% of desktop functionality that most users require and will encourage a migration from desktop to the browser for existing lite users and will also enable wider spread usage of spatial data throughout the organisation.

iShare GIS - Local Development Framework at Surrey Heath Borough Council
iShare in the Cloud

iShare GIS uses “Profiles” to determine which data and functionality are available to a user, e.g. one user may have access to limited data, a gazetteer search and printing functionality while a planning officer may have access to detailed data, several historic base maps, editing, annotation and analysis tools. A user can be assigned more than one profile and has the option to switch between them while logged into a session.

*Polygon selection*

iShare GIS standard functionality includes:

- An intuitive Google style interface, navigation and controls
- A layer control that incorporates a legend and allows manual selection of layers
- A search feature which can be configured to search against NLPG, AddressBase or internal datasets (e.g. assets, planning)
- Selection and feature info tool by point, radius or polygon
- The ability to run spatial and textual queries against layers and display the results on a map or export to standard formats
- Measurement tools (linear and area)
- Annotations including polygons, lines, points, text. Annotations can be styled, saved and shared with other users
- Scale printing via templates and exporting images with OS required watermarks
- Full editing of features and attributes (subject to permissions) including node level editing and correction
- Multiple base maps
- Thematic mapping
- Time series analysis
- Scale dependent symbology and clustering
- Online help system

iShare GIS is designed with a plugin framework that allows additional custom functionality to be added when required.

iShare GIS is built on open source foundations which include MapServer, Open Layers and PostGIS and utilises OGC standards including WMS, WFS, WFS-T and CSW.
**iShare SDW - master spatial data management and warehousing**

iShare SDW comprises four components:

- A PostgreSQL spatial database utilising the PostGIS extension.
- PGAdmin for low level database management and writing/testing SQL
- DataShare for managing connections to other systems and databases
- iShare Studio for day to day administration, the creation and scheduling of jobs and workflows. iShare Studio also manages iShare Maps, My Nearest, My Area and iShare GIS.

iShare SDW can be deployed as the master data repository for all spatial data - iShare GIS and desktop clients (e.g. QGIS, MapInfo Professional, CadCorp and ArcGIS) reading and writing from the same database.

Additionally iShare SDW can use DataShare to harvest tabular and spatial data from other back office systems and external sources and where necessary process that data for presentation to desktop and web clients (e.g. spatialise by joining with AddressBase, BoundaryLine or ONS boundaries).

If a client prefers to store master spatial data in a different repository (Oracle or SQL Server) iShare SDW can be used as a data warehouse with DataShare managing real time synchronised connections to the master system allowing desktop clients, using role based security, to write directly to the master and web clients to read views on the master data from the data warehouse.
iShare in the Cloud

iShare SDW as the master data repository

In this example, the iShare SDW is the master data repository (i.e., the definitive version of all corporate spatial data is stored within the SDW). Subject to authentication, users are able to connect to the SDW as read only or read/write users via desktop clients and the iShare GIS intranet browser application. Public users can access a read only subset of corporate data determined by robust role-based security.
iShare SDW synchronising data with another spatial database

In this example desktop clients maintain master data within a SQL Server Spatial database and the iShare SDW maintains a synchronised version of the master data which is served to intranet and public web clients.
iShare SDW Key Benefits

iShare SDW sits at the heart of an enterprise Geographic Information system bringing all spatial (and spatialised) data together in a single repository, managing access rights for all clients and feeding spatial data to other back office systems.

- Extends PostGIS to a full Spatial Data Warehouse
- Manage data access for desktop and web clients
- Build and schedule advanced workflows to extract, transform and load data from external sources including back office systems, standard file formats (tab, shape, csv and many others), external web services and feeds (e.g. Open Data crime and health feeds or WFS) and other databases (e.g. Oracle and SQLServer)
- Transformations can include anonymisation, aggregation, filtering, aliasing and geocoding
- Publish data to back office systems, standard file formats (tab, shape, csv and many others) and other databases (e.g. Oracle and SQLServer)
- Audit usage and changes to datasets with option to roll back
- Fine grain role based security
- Reporting functionality i.e. valid features, users with access, tables with auditing applied
- Best practice guidance on building a Spatial Data Warehouse ensuring support from Astun Technology
Astun Data Services - trouble free access to Ordnance Survey mapping

iSiC Public and Enterprise subscriptions include access to Astun Data Services for the provision of Ordnance Survey PSMA data (subject to OS licensing conditions).

**Base Map** data services available include national cover of:

- **Ordnance Survey Premium Data** (MasterMap, VectorMap Local, Meridian and Strategi)
  - PSMA or other Ordnance Survey license required
  - Available as contemporary web cartography or in a black and white style
  - Optionally watermarked with organisational logo when required
  - Service can be restricted to a licensed area defined by a polygon

- **Ordnance Survey OpenData** (VectorMap District, Meridian and Strategi)
- **OpenStreetMap** (GB coverage in British National Grid)

Map data is available in British National Grid (BNG) as an Open Geospatial Consortium Web Map Service (OGC WMS) or Web Map Tile Service (WMTS) or a Tiled Map Service (TMS) with 15
iShare in the Cloud

levels of zoom. Please see pricing below for details of services available and volumes included within pricing.

Information assurance

Operational customer data is stored or processed within iShare in the Cloud. Information assurance accreditation has not yet been sought for iShare in the Cloud, however we consider that iShare in the Cloud would be classified as BIL0 or BIL1, users should make appropriate decisions regarding what data to deploy within iShare in the Cloud. Integration with back office systems can support the dynamic spatialisation of data sets that are not hosted within the iShare SDW for added security.

Backup and Retrieval processes

iShare in the Cloud is hosted within the Amazon Elastic Compute Cloud (Amazon EC2). Client metadata and data are backed up on a nightly basis, the iShare in the Cloud application software is backed up at each update cycle. Backups are replicated to a further instance located within a different geographic region for disaster recovery. Clients can request that their datasets and metadata are only replicated within the EU.

Backup and Retrieval process will be managed at both a Server and Database / Configuration level. Astun retain at least 5 daily backups of each and implement some automated tests to ensure their validity at least once a week.

Server backups (snapshots) will be backed up to a different geographical zone on Amazon Web Services. Astun run a series of scripts that will start the snapshot to ensure that it runs and perform tasks to ensure that the GIS services are available.

Database backups are FTP’d to a different server and then have an automated restore process run against them with validity checks on the resulting restored database.

Customers should ensure that their own backup procedures are applied in addition to those provided by Astun Technology as part of the iShare in the Cloud service.
### Pricing

**iShare in the Cloud “Public”**

Pricing is based on the population served by the organisation based upon the 2011 census, examples of organisation are indicative only.

If this metric is considered inapplicable for any reason please contact Astun.

<table>
<thead>
<tr>
<th>Example of type of Public Sector organisation</th>
<th>Population</th>
<th>Quarterly Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Organisation</td>
<td>up to 50,000</td>
<td>£2,000.00</td>
</tr>
<tr>
<td>Small Local Authority</td>
<td>50,001 to 125,000</td>
<td>£2,437.50</td>
</tr>
<tr>
<td>Medium Local Authority</td>
<td>125,001 to 250,000</td>
<td>£3,112.50</td>
</tr>
<tr>
<td>Large Local Authority or Small/Medium County</td>
<td>250,001 to 500,000</td>
<td>£4,350.00</td>
</tr>
<tr>
<td>Large County</td>
<td>500,001 to 1,000,000</td>
<td>£5,475.00</td>
</tr>
<tr>
<td>Largest Counties or Regional Authority</td>
<td>1,000,001 to 5,000,000</td>
<td>£7,050.00</td>
</tr>
<tr>
<td>Greater London or National Organisation</td>
<td>over 5,000,000</td>
<td>£13,000.00</td>
</tr>
</tbody>
</table>

**iShare in the Cloud “Enterprise”**

Pricing is based on the population served by the organisation based upon the 2011 census, examples of organisation are indicative only. Additionally a number of desktop and intranet GIS connections to the iShare SDW are provided with each population band for Enterprise customers. If an organisation requires more connections than are included within their population band the appropriate higher user number band should be selected.

If this metric is considered inapplicable for any reason please contact Astun.

<table>
<thead>
<tr>
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<th>Population</th>
<th>Desktop and intranet connections</th>
<th>Quarterly Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Organisation</td>
<td>up to 50,000</td>
<td>up to 50</td>
<td>£3,125.00</td>
</tr>
<tr>
<td>Small Local Authority</td>
<td>50,001 to 125,000</td>
<td>up to 125</td>
<td>£4,050.00</td>
</tr>
<tr>
<td>Medium Local Authority</td>
<td>125,001 to 250,000</td>
<td>up to 250</td>
<td>£5,200.00</td>
</tr>
<tr>
<td>Large Local Authority or Small/Medium County</td>
<td>250,001 to 500,000</td>
<td>up to 500</td>
<td>£6,425.00</td>
</tr>
<tr>
<td>Large County</td>
<td>500,001 to 1,000,000</td>
<td>up to 1,000</td>
<td>£7,987.50</td>
</tr>
<tr>
<td>Largest Counties or Regional Authority</td>
<td>1,000,001 to 5,000,000</td>
<td>up to 2,500</td>
<td>£10,150.00</td>
</tr>
<tr>
<td>Greater London or National Organisation</td>
<td>over 5,000,000</td>
<td>over 2,500</td>
<td>£18,350.00</td>
</tr>
</tbody>
</table>
Pricing conditions

iShare in the Cloud will be invoiced quarterly in advance.
Prices are subject to VAT
Prices assume a “fair use” of iShare in the Cloud

Ordering and invoicing process

On receipt of an initial enquiry and details of the number of users a fixed price offer for iSiC will be provided along with an estimate of the consultancy services required for implementation and any back office systems integration (see Astun’s Geospatial Cloud Consultancy Services for detailed rates and conditions)

The customer should provide by email:

- A purchase order
- Signed acceptance of our Conditions of Service

Astun will provide:

- An invoice for the 1st quarter’s service fee and 50% of the estimated implementation charge
- A checklist for standard configuration settings
- Access to a customer specific upload location for uploading data
- A configured instance of the requested modules
- Customer administrator training dates
- A login to access maintenance and support service
- An invoice for the remaining 50% of implementation charges to be paid on completion of implementation

On-boarding and Off-boarding processes

Onboarding

On receipt of a purchase order Astun Technology will

- Provide access to a customer specific iShare in the Cloud FTP site for the initial upload of data

Offboarding

On receipt of a written request to terminate the iShare in the Cloud service and subject to there

1 See Terms and Conditions
being no unpaid charges outstanding, Astun will

- Delete all datasets stored within iShare in the Cloud (customers should check that they have an up to date internal copy of the datasets before requesting termination of the service)

**Service management details**

iShare in the Cloud is available 24 x 7

The support desk is available during normal business hours (Monday to Friday 8.30am to 5.30pm)

**Service constraints**

Most planned maintenance will be undertaken without interrupting service availability however in the event that this is not possible downtime will be scheduled and notified in advance.

**Service Levels**

iShare in the Cloud is hosted on a high availability cloud infrastructure with a failover backup hosted in a different geographic region for maximum resilience.

Internal availability testing indicates availability in excess of 99.6%

Response times for map rendering are typically less than 1 second at the server.

The services are continually monitored with automated messages sent to several staff in the event of a deterioration or failure.

**Financial recompense for not meeting service levels**

No financial recompense is offered for iShare in the Cloud. A user may cancel the service at any time and receive a refund for any unused quarterly periods.

**Training**

Astun Technology will provide on site consultancy/training at an additional cost to assist customers with configuration and administration of iShare modules (see Astun’s Geospatial Cloud Consultancy Services for detailed rates and conditions)

**Termination**

**By customers**

A customer can cancel their subscription to iShare in the Cloud at any time by giving 3 months notice.
iShare in the Cloud

By the Supplier

Astun Technology may terminate the provision of the service by giving a minimum of 3 months notice.

In exceptional circumstances (such as repeated breach of the Conditions of Service by the customer which has not been remedied after notification) Astun reserves the right to terminate the service without notice and to refund any unused portion of the service fee.

Data restoration / service migration

In the event that the customer terminates the service they can download their data from the service in a standard geographic file format (MapInfo tab or ESRI shp) or as a database export.

Customer responsibilities

- Customers accept the Terms & Conditions for Astun Digital Services by using the iShare in the Cloud service
- Customers must ensure that their service access details are not disclosed outside of their organisation
- Customers are responsible for ongoing administration of iShare in the Cloud

Technical requirements

- Remote desktop connection to the administrative console - iShare Studio
- Automated FTP or Secure FTP (depending on VPN)
- Optional Virtual Private Network (for Enterprise)
- Optional Active Directory Federated Services
- Firewall port rule changes for access
- Internet Explorer 8 or above, current versions of Firefox, Chrome, Safari etc
- Web development experience for optional integration with Content Management Systems etc

Trial service

A free 30 day trial of iShare in the Cloud is available on request, however the consultancy costs of implementation, configuration and administrator training (plus expenses) are chargeable.