AMX Highways Asset Management Software

SERVICE DEFINITION

Lot 2 Cloud Software | G-Cloud 12

© AMX SOLUTIONS LTD 2020

1 INTRODUCTION 2
1.1 Company Overview 2
1.2 Value Proposition 2
1.3 What the Service Provides 2
1.4 Overview of the G-Cloud Service 3
2 DATA PROTECTION 6
2.1 Information Assurance 6
2.2 Data Back-Up, Data Restoration and Disaster Recovery 6
2.3 Privacy by Design 7
3 USING THE SERVICE 8
3.1 Ordering and Invoicing 8
3.2 Availability of Trial Service 8
3.3 On-Boarding, Off-Boarding, Service Migration, Scope etc 8
3.4 Training 9
3.5 Service Management 9
3.6 Service Levels 9
3.7 Financial Recompense Model for not Meeting Service Levels 10
4 PROVISION OF THE SERVICE 11
4.1 Customer Responsibilities 11
4.2 Technical Requirements and Customer-Side Requirements 11
4.3 Termination Process 12
5 OUR EXPERIENCE 13
5.1 Case Studies 13
5.2 Customers 13
5.3 Contact Details 13
6 APPENDIX 14
6.1 Case Study: City of Cardiff Council 14

1 INTRODUCTION

1.1 Company Overview

AMX Solutions Ltd is a leading provider of Infrastructure Asset Management software in the UK and to users worldwide, excelling in the delivery of high quality, flexible asset management software to support organisations' key aims and objectives.

1.2 Value Proposition

Local Authorities are constantly under pressure, not just to meet public expectations, but also manage budgets and ensure efficient use of resources whilst maintaining ageing stock. AMX Highways Asset Management software allows you to easily capture and visualise your assets on map interfaces including assets directly imported from your National Street Gazeteer (NSG). You will have an immediate view of your data, from asset status to KPI performance, long and short term planning and budgeting.

You will be able to manage all types of inspection with ease, recording defects including image-capture and location data to aid in timely repair. The AMX work scheduling tools will save you time and money with efficient programming and resouring. By supporting programme management and oversight of multiple teams, you will be able to stay on track with completion targets and Service Level Agreements (SLAs) as well as ensure compliance with EToN/Street Manager and NSG updates.

1.3 What the Service Provides

AMX for Highways Asset Management is a comprehensive database solution which can hold a complete asset inventory, inspection and maintenance programmes, incident management, comprehensive reporting and an inbuilt integration suite for routine or ad-hoc data imports/exports. Asset types include: carriageways; footways; public rights of way; car parks; signs and bollards; gullies and drains; street furniture; barriers and safety fencing; kerbs and verges; tunnels; bus shelters and stops; benches and bins; bridges and structures[1]; streetlighting[2]; and retaining walls.

AMX Mobile is available to support on-site working in on or offline mode to capture or update inventory, complete inspections and maintenance and record defect details including accurate location and photographs.

Examples of how the software can support common highways functional areas include:

Commented [SH1]: These are from the data sheet, but it seemed odd to include the Bridges and Streetlighting paragraphs.

- **Highways and Footways**: Inspectors in the field can use AMX Mobile to complete inspections efficiently and accurately. By synchronising data straight to the database, you can react quickly and accurately to requirements, rapidly sending out details to relevant staff/departments for action. Automatic scheduling of routine maintenance, integrated EToN notification tools and bulk management of resurfacing programmes all help to improve efficiency and save time and money.
- **Signs and Street Furniture**: Regardless of the asset type, AMX allows you to store a complete inventory including spatial data, condition scores, materials and dimensions, ownership records, and asset values. Use the automatic scheduling tools to plan routine inspections and maintenance works for individual assets, user-

[1] Note there is a separate G-Cloud Service for Bridges and Structures Asset Management Software listed on the Digital Marketplace.
[2] Note there is a separate G-Cloud Service for Streetlighting Asset Management Software listed on the Digital Marketplace.

defined groups of assets, or at a stock level for any asset type, including specifying default staff, resources, costs and priority.

- **Drainage:** AMX allows you to manage all drainage components such as gullies and pipes, recording both adopted and non-adopted elements, along with ownership details for a complete picture. You can schedule routine and reactive inspection and maintenance actions, including checks prior to weather warning, all carried out using AMX mobile on handheld devices for swift reactions to issues identified.

1.4 Overview of the G-Cloud Service

AMX for Highways Asset Management includes the following:

Commented [SH2]: Not sure how to amend this table or the listings below it for the Highways software.

Element	Standard / Optional
FUNCTIONALITY	
Full Asset Register (Customisable)	Standard
Integrated Maps (Open Source Street Maps for Internet maps)	Standard
Corporate GIS Integration	Standard
Inspection and Maintenance Management	Standard
Defect Recording including GPS location and image capture	Standard
Works Scheduling Tools, including prioritisation and approvals	Standard
Street Gazetteer Management (import, create and update)	Standard
Incident Management Functionality	Standard
Complete Reporting Capability	Standard
Integrated Print Templates	Standard
Data Export / Import	Standard
DELIVERY	
Customer Onboarding	Standard
Database updates (unlimited)	Standard
AMX Support	Standard
OPTIONAL	
AMX Mobile Application	Optional

Element	Standard / Optional
Database Hosting	Optional
User Training (per user) at AMX Offices	Optional
User Training (1-4 users) at Customer Site	Optional
User Training (5-8 users) at Customer Site	Optional
System Configuration (per day) at Customer Site	Optional
System Configuration (per day) Remote delivery	Optional

Full Asset Register (Customisable)

There are pre-installed asset classifications, attributes and data capture forms to meet the standard customer requirements. However, customers can identify user(s) who they wish to act as 'System Administrators'. These users will have advanced permissions and be able to add additional asset classifications, new data attributes and design forms to meet local requirements.

Integrated Maps (Open Source Street Maps for Internet maps)

AMX comes with integrated Internet maps which can be used to locate assets using point, line and polygon details. These maps are provided using Open Source StreetMap.

Corporate GIS Integration

AMX can integrate with most corporate GIS maps, including .shp, .tab, wmf and .wms feeds to provide more accurate and useful map layers, such as Wards, Zones or Flood Areas.

Inspection and Maintenance Management

AMX can be fully configured to meet all routine and reactive inspection and maintenance regimes, including risk-based approaches. The Auto scheduling tools enables users to define their planned maintenance for any period, including assigning staff and resources to aid in forecasting and reporting.

Defect Recording including GPS Location and Image Capture

Defects can be recording on desktop, web and mobile including capturing details of the defect location (set using GPS or manual adjustment), priority, severity, descriptions and photographs.

Works Scheduling Tools, including Prioritisation and Approvals

Defects that are recorded can be scheduled into works orders based on priority, work type, asset, organisation and a variety of other factors to meet customer needs. Once scheduled the work can be assigned to teams for completion and subsequent approval.

Street Gazetteer Integration

There are standard imports to allow users to import their LSG and LLPG files to support defect allocation (e.g. highway drainage assigned to the correct USRN). Furthermore, AMX is compliant with NSG for the creation, update and submission of your NSG.

Incident Management Functionality,

Capture details of incidents such as crash, strike, flood or pollution, including details of your response, and any parties involved such as fire or police. Review incidents on map interfaces to identify areas in need of further action.

Complete Reporting Capability

Report on any attribute in the AMX database to support analysis, planning and business case support. Reports can include filters, sort orders and charts for ease of display and review.

Integrated Print Templates

Design your own print templates within the system to support customer notifications, works orders for third parties, claim responses and stock reports for management. Include logos, text, data from the system, images and maps.

Data Export / Import

Whether as a one-off or as part of a routine programme to import inspection data from a third party, use the inbuilt import / export tools to pull in data quickly and easily. AMX will manage imports and exports in a variety of formats including Excel, CSV, Access and GIS files.

OPTIONAL: AMX Mobile Application

Use the AMX Mobile application on iOS, Android or Windows handheld devices to capture inventory and complete inspections and maintenance on-site. AMX Mobile works in offline mode, so does not require the internet for completion. Simply synchronise data once Internet connectivity is available.

OPTIONAL: Database Hosting

We can host your database for you, managing all updates, backups and security.

2 DATA PROTECTION

Commented [SH3]: From here onwards, no changes until Appendix 6 – Case Studies

2.1 Information Assurance

AMX is GDPR and Cyber Essentials compliant and has the ISO 9001 and ISO 27001 accreditation. The following details our current overall policy for Information Security.

AMX's business activities are critically dependent on information and information systems. Consequently, AMX has a continual commitment to protect AMX and customer information. To this end, the application of Information Security across AMX is founded upon the following guiding principles:

- Information is a critical asset. All storage and transmission of information processed or controlled by AMX must only be carried out for the lawful purposes for which it is held.
- Information will be classified and protected in a manner commensurate with its sensitivity, value, and criticality.
- Information will be protected from loss of confidentiality, integrity and availability.
- AMX information should only be provided on a need to know basis and disclosed only to those people who have a legitimate need for that information.
- Information security requirements will be identified by assessment of risks to determine the balance of investment in information security against the risk to AMX.
- A process of continual review and improvement will be implemented.
- Users, resources or processes that store, transmit or process information will have no more privileges than necessary to be able to fulfil their function.
- All relevant regulatory and legislative Information Security requirements will be met.
- All incidents and losses, regarding Information Security, actual or suspected, must be reported following the guidelines and timescales defined in the AMX Information Security Data Breach/ Incident Policy.
- All systems must be reviewed, prior to implementation, and undergo a rigorous security assessment as part of that process.
- All AMX managers are responsible for the implementation of Information Security Policies within their areas.
- Disregard for these Security Policies may be regarded as misconduct to which the AMX Dismissal and Disciplinary Procedure applies and a serious breach of any policy may be treated as gross misconduct and may lead to dismissal.
- All staff are responsible for upholding this policy, under the guidance and with the assistance of the Product Manager and or GDPR Advisor.
- AMX will provide appropriate security awareness training to all staff and provide specific security training where required, thereby developing and supporting a security and risk aware culture throughout our organisation.

2.2 Data Back-Up, Data Restoration and Disaster Recovery

Customers hosting their own databases will be responsible for all aspects of database backup, restoration and disaster recovery.

For hosted solutions, Microsoft's Azure cloud services are used to provide hosting of AMX databases and web applications to customers.

We use Microsoft's SQL Server technology to facilitate the AMX database backup. The backup types performed include full, differential and transaction log backups to allow a Point-in-time restore (PITR). In the event of corruption or deletion, AMX Solutions can restore the AMX database to a specific point in time

AMX database backups can be used for the following purposes:

- Restore a database to a point in time
- Restore a deleted database or any time within the database backup retention period

In the event of data loss or corruption regarding the data hosted, AMX Solutions will restore the AMX database to the desired date within the retention period as detailed below:

SQL Database backup frequency

The frequency in which the AMX SQL database is backed up is dependent on the performance level and database activity however generally transaction log backups occur between 5 and 10 minutes.

Full database backups occur weekly with the first full backup performed immediately when the database, and differential database backups occur every few hours.

SQL Database backup retention

The retention period for SQL Database backups is 35 days meaning that databases can only be restored to a point in time with the past 35-day period.

It is important to note that if the SQL Server that hosts the SQL database is deleted then the database is not able to be recovered. It is also not possible to recover the deleted SQL Server.

Information regarding AMX Web Application backups

In the event of an application outage on Azure, AMX Solutions will provision another web application and web service and will inform the customer of alternative web application connection details.

For more information regarding SQL Server database backups, please see Microsoft's Azures information website.

Customers hosting their own databases will be responsible for all aspects of database backup, restoration and disaster recovery.

2.3 Privacy by Design

AMX uses the Role Based Access Control, along with the principle of least privilege to control what each user and view, edit or delete. Furthermore, AMX has been designed such that data fields can be flagged as 'Data Protected' or 'Financially Protected'. Additionally, they can be permitted to go to AMX Mobile or not. User roles are used to identify those staff with permission to view and edit Data protected and financially protected fields. Users without these permissions will see a redacted field on any forms and will be unable to display, sort or filter reports using these fields.

Using reports, any Users with the Data Protection flag are able to search for names/addresses etc for removal on request.

3 USING THE SERVICE

3.1 Ordering and Invoicing

Customers wishing to order will need to submit a valid Purchase Order which covers all elements of service required prior to commencement of the service.

Should any support be required for this process, users can contact AMX at gcloud@amxsolutions.co.uk for help.

On receipt of the Purchase Order, AMX will return an Invoice, which will adhere to our terms of payment required within 30 days of receipt.

3.2 Availability of Trial Service

Customers are able to request a demo of the AMX system prior to ordering to confirm it will meet their requirements. This can be arranged by contacting the team at gcloud@amxsolutions.co.uk.

3.3 On-Boarding, Off-Boarding, Service Migration, Scope etc.

On-boarding will be managed by a dedicated AMX Account Manager who will conduct an initial site visit to discuss specific requirements, provide technical advice and review data import requirements. Data import is achieved either using AMX supplied Excel templates, or where agreed, using direct data import from an existing system.

As a guide the on-boarding will proceed as follows:

1. Order placed
2. Site visit to determine data import requirements:
    a. Customer to provide Registered user details (name, email, user role)
    b. Customer to provide initial data for import in agreed format (optional – additional cost) to include:
        i. Asset Register
        ii. Historic Action records
        iii. Street Gazetteer and/or Property Gazeteer for import if required
        iv. Financial data such as Schedule of Rates.
        v. Lookup/Picklist setup
3. AMX perform database setup and initial data import
4. Database uploaded to customer site/AMX hosting site
5. Users provided with login details
6. User training provided if selected
7. Initial Testing of system
8. AMX window for changes of 1 month – for any minor changes/bug fixes
9. Customer Go Live.
    a. AMX provide User Manuals
    b. AMX provide User access to Support site

It should be noted that user training is not included as standard but is available as an optional extra, and that all data in the database remains the property of the customer and can be exported in Excel, csv or shape format at any stage, including in the case of termination.

In the case of termination, Customers will be required to provide 2 months written notice to agree a schedule and plan for data migrations. Customers will be provided with a full copy of their data in a format of their choosing. They can select an SQL database, Excel, CSV or

shp file export of Assets and Activities or a combination of these. Data will be available for a period of 3 months after termination, then it will be deleted from the AMX systems for data protection.

3.4 Training

Training is available for AMX at three levels: Beginner, Intermediate and Advanced. It is recommended that all users complete the Beginner training, which includes orientation on the system, options for defining inspection and maintenance regimes and beginner reporting.

Support is provided through a dedicated support site, which all users are given access to. The support site includes a ticketed support system to put you in touch with the AMX support team directly. There you will be able to gain assistance when troubleshooting, get answers to questions and help solve known problems. Also available on the support site is an ever-growing library of searchable support articles.

Support is also available via email and telephone during normal working hours.

3.5 Service Management

AMX is constantly improving, and to ensure customers have access to the latest functionality, there will be updates released to the customer every 3 – 6 months. These updates will be automatically applied to any AMX hosted solutions but are optional for application on locally hosted solutions. Details of the contents of these update packages are posted on a dedicated download site, and Newsletters are used to notify customers of the availability of the update.

The updates are a combination of bug fixes and responses to customer Requests for Change. Customers may submit Requests for Change through the support portal ticket system. Following the ITIL Service Management process, change requests are reviewed at a periodic board and where they are considered to be of value to all customers, the changes are incorporated into the main AMX solution. Once tested, these are released as part of an update package to ensure all customers have access to the best possible solution.

Customer databases are fully customisable by the customer, so as part of the setup 'System Administrator(s)' will be identified who will be awarded permissions to customise the system. They will be able to:

- Add new data fields (attributes) for Assets, Actions and Defects
- Update all Schedules of Rate data.
- Create new Forms for data capture on the main system and AMX Mobile
- Setup New Users and User Roles
- Create new Reports and Print Templates.

3.6 Service Levels

Service Levels may be negotiated where required, however the standard AMX SLA outlines our service level as follows:

Normal Working Hours

Services support will be available during Normal Working Hours, i.e. 8.30am to 5.30pm Monday to Friday, excluding UK Public Holidays.

Services Outside Normal Working Hours

Services outside normal working hours will not usually be required but occasional out-of-hours support can be arranged.

Service Levels

Requests for improvement or fault reporting should initially be made by telephone, Email or via the AMX support site.

Calls are given a priority based on incident description, subject and overall impact to the business e.g. impact on individual, site or organisation. This is determined at the point of call and is reasonably assigned a priority.

A 'Response' is a response which will result in one or more of:

- A fix to the problem or completion of a service request.
- A recommendation to implement a temporary workaround.
- A request for further information regarding the problem or further investigative procedures to be carried out.

Following a call being logged either by telephone, email or via the website the Service Desk will update support records of resolutions of faults in order that any recurrence of the fault is avoided.

Description of support service for service requests

The following description demonstrates the minimum level of Service that will be delivered. In all cases we will endeavour to provide support as soon as possible in order to meet the business needs of the customer.

	SLA	Response	Response[1]
Incident Class	Aim to fix	Service Desk	Systems Manager
Low	2 weeks	Immediate	48 hours
Med	72 hours	Immediate	24 hours
High	24 hours	Immediate	2 hours
Critical	same day	Immediate	30 minutes

Incident Classes:

- *Critical* (e.g. AMX inoperable to all users). Options for resolution: Site Visit, Database Script, System Patch.
- *High* (e.g. One AMX module inoperable to all users). Options for resolution: Site Visit, Database Script, System Patch.
- *Medium* (e.g. System behaving in an unexpected way/Bug). Options for resolution: System Patch.
  Low (e.g. System behaving in an unexpected (non-critical) way/Bug but work around possible). Options for resolution: System Patch.

3.7 Financial Recompense Model for not Meeting Service Levels

We will endeavour to achieve the Service Levels described. There is no financial compensation for failure to meet these levels.

4 PROVISION OF THE SERVICE

4.1 Customer Responsibilities

The following outlines the responsibilities of the Customer:

Training: It is expected that all users accessing AMX and requesting support have completed the Beginner AMX training course so that they have a good basic understanding of the operation of the system.

User Contact Details: It is expected that customers will provide full and unique details for all registered users, including email addresses. These details will be used to provide access to the AMX system and the AMX Support Portal.

System Administrator: All customers should identify at least one System Administrator who will be responsible for review, approval and implementation of local customisations on AMX. This user should complete the Intermediate training course and be a more experienced user of the system. This user should have the Data Protection User Role assigned and be approved to manage sensitive data within AMX.

Contract Manager: Customers are required to identify at least one Contract Manager who will act as the Primary contact for all contract related queries. This individual should have the rights and permissions to discuss and agree contractual matters on behalf of the organisation.

Database Management: It is expected that, where the customer is hosting their database locally, they are responsible for routine backups, database restoration, application of all updates and data security. It is strongly recommended that the Database Administrator creates a second test copy of the database which can be used for customer development and testing of updates prior to release to a Live environment. Where the solution is hosted by AMX, these duties will be the responsibility of AMX.

4.2 Technical Requirements and Customer-Side Requirements

The following outlines the minimum specification required to support AMX operations:

Desktop Web Application (all user machines)

Modern Browsers supported: Chrome, Firefox and Internet Explorer 11+

SQL Server (for locally hosted solution only)

Processor: 2.0 GHz +

Memory: 1 GB +

HDD: As a guide a new installation with initial data import is approximately 200Mb and standard usage increases this by less than 1 GB per annum

MS Windows 2008 Server or above

MS SQL Database Server 2008R2 or above (Also Express Versions)

AMX Web Service Server (for locally hosted solution only)

Processor: 2.0 GHz +

Memory: 1 GB +

MS Windows 2008 Server or above

IIS 6 or above

ASP.NET 4.5 or higher

AMX Mobile Web Service Server (only required when using AMX Mobile and a locally hosted solution)

Processor: 2.0 GHz +

Memory: 1 GB +

HDD: Size of the webservice is approximately 100MB plus additional storage for mobile data storage. Mobile files are generally 1-5MB per inspection recorded

MS SQL Database Server 2008R2 or above (Also Express Versions)

IIS 6 or above

ASP.NET 4.5 or higher

4.3 Termination Process

The AMX Account Manager will work closely with customers to support a successful migration of data from AMX in the case of termination.

On providing written notice of termination, or at the end of the contract period, the Account Manager will liaise with the Contact Manager to agree timescales and data extraction process. Data can be provided in SQL, Excel, CSV or GIS formats. The data will be available via FTP (or alternative agreed method) for 3 months from termination. After this period all data will be deleted.

As per AMX terms of service, there are no refunds for early termination of the contract.

5 OUR EXPERIENCE

5.1 Case Studies

AMX Solutions Ltd have worked with public sector organisations for over 15 years to deliver an effective solution to meet their changing needs. Through understanding the challenges of budgeting and supporting the operational efficiencies of team leaders in the public sector, AMX scales with the organisation to deliver comprehensive accurate, relevant and information.

The success of AMX has also attracted private sector customers whose prime contracts are often public-sector organisations both in the UK and overseas. Private sector consulting firms tend to see AMX as a best practice tool that facilitates the operational and technical requirements of the contract while empowering the customer, in addition to managing their own delivery and accountability.

See our case studies in the appendix for real examples.

5.2 Customers

5.3 Contact Details

All G-Cloud enquiries should be sent to gcloud@amxsolutions.co.uk. The Primary contact at AMX Solutions for all matters pertaining to this solution is Karen King.

6 APPENDIX

6.1 Case Study: City of Cardiff Council

Commented [SH4]: Taken off website

CASE STUDY

The City of Cardiff Council takes full control of Highways Asset Management

Introduction

The City of Cardiff Council Highways department, as within all councils across the UK, was feeling the pressure to deliver. Whether it was practical solutions for deteriorating stock, managing shrinking budgets or controlling works to meet customer service requirements; they needed an effective software solution to manage their stock of nearly 5,000 roads and over 100,000 associated assets that allowed them to make best use of resources, and give them the flexibility to meet changing requirements.

The Cardiff Bridge team were already successfully using AMX Solutions' Bridge Management eXpert (BMX) to manage their stock of bridges, embankments and retaining walls; so they recommended that the Highways team take a closer look at AMX Solutions' new product, Asset Management eXpert (AMX).

Why change?

The Highways team were being asked to provide information that they couldn't extract from their existing data within the current system's capabilities and it was leaving them tied to old working practices and unable to adapt to new requirements such as Whole of Government Accounts reporting. With limited scope to quickly change the existing system to provide the reports needed and unable to capitalise on the quality of the data already collected, they were open to change.

Why AMX?

After the initial demonstration of AMX, it was clear that it presented a real opportunity to develop a solution that incorporated all the standard features you would expect from a Highways Asset and Maintenance Management software solution, with the ability to define their own business processes, giving them complete control of their information.

"It's been a refreshing change working with Will. I wish all 3rd parties were as helpful and as easy to get along with as AMX Solutions has been. Certainly bodes well for the future of AMX."

Dave Shields, Contact Services Development Team, City of Cardiff Council

CASE STUDY

Delivering results

- Mobile working – No more clipboards and time-consuming data entry at the end of the day, has significantly increased the productivity of the field workers. And with data immediately available to the main desktop, urgent actions can be swiftly addressed.
- Automated Processes – Supported by AMX Solutions' responsive team, they have been able to stipulate and apply their own business processes within the software, defining data flows and automated notifications to support rapid and accurate decision-making.
- Integration – AMX's open standards integration tools, has allowed data to be shared with other systems and departments, including the Call Centre to display defects, their status and any planned works.

The Future

The City of Cardiff Council has grasped the opportunity to take control and define their own system, combining all the benefits of a bespoke solution with the reliability and robustness of an established asset management solution. They already have plans to roll-out the solution across other departments within highways, including street lighting.

Images © Andrew Hazard, courtesy of www.visitcardiff.com

To arrange a demonstration of AMX and find out how it can benefit your organisation, contact us on ***0333 456 0768*** or email ***gcloud@amxsolutions.co.uk.***