

AMX Rail Asset Management Software

SERVICE DEFINITION

Lot 2b: Software as a Service (SaaS)| G-Cloud 15

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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

AMX Rail Asset Management solution is a one-stop solution for the management of an organisation's rail infrastructure assets.

In one powerful, flexible, scalable solution, AMX combines all the expected functionality of an asset management solution with a customisable interface empowering the customer to tailor their solution to meet business operations both now and for the future; whether they need to add new attributes, tailor data capture forms, or even add automated workflow to enforce business processes.

Streamline your operations and empower your users.

1.3 What the Service Provides

AMX Rail Asset Management is a comprehensive database solution which can hold a complete asset register across disciplines, underpin inspection and maintenance programmes, manage defect and fault responses, support rail splitting and merging challenges, generate comprehensive reports and provide an inbuilt integration suite for routine or ad-hoc data imports/exports.

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

1.4 Overview of the G-Cloud Service

AMX Rail Asset Management solution includes the following:

Element	Standard / Optional
FUNCTIONALITY	
Full Asset Register (Customisable and includes components)	Standard
Integrated Maps (Open Source Street Maps for Internet maps)	Standard
Customisable Dashboards	Standard
Corporate GIS Integration (base and optional map layers)	Standard
Inspection and Maintenance Management	Standard
Defect and Fault Recording including GPS location, Milepost or Kilometricpost assignment and image capture	Standard
Works Scheduling Tools, including prioritisation and approvals	Standard

Element	Standard / Optional
Complete Reporting Capability	Standard
Integrated Print Templates	Standard
Data Export / Import	Standard
Dynamic Rail Splitting and Merging	Standard
Lifecycle Planning	Optional
Stock Control	Optional
DELIVERY	
Customer Setup/Onboarding	Standard
Database updates (unlimited)	Standard
AMX Support	Standard
OPTIONAL	
AMX Mobile Application	Optional
Database Hosting	Optional
User Training	Optional
Configuration Services (per day)	Optional

Full Asset Register (Customisable and includes components)

There are pre-installed asset classifications, attributes and data capture forms to meet the standard customer requirements, including asset breakdown into divisions and elements (e.g spans and components). Customers are advised to 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 the open source Open Street Map web map services.

Customisable Dashboards

Create multiple dashboards, to suit user roles, showing all critical data in instant view to support decision making and oversight.

Corporate GIS Integration

AMX can consume corporate GIS maps feeds such as WMS, WMTFS to provide accurate base map and feature layers to assist with data visualisation.

Inspection and Maintenance Management

AMX can be fully configured to meet all routine and ad-hoc 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 and Fault Recording including GPS location, Milepost or Kilometricpost assignment and image capture

Defects and faults can be recording on web or mobile including capturing details of the location (set using GPS, milepost or KP and offsets), priority, severity, minimum actions (MAC), descriptions and photographs which can include mark-ups to clearly identify the issue.

Works Scheduling Tools, including Prioritisation and Approvals

Defects/Faults 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.

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 be exported for consumption by third party systems as needed.

Integrated Print Templates

Design your own print templates within the system, for example; works orders for maintenance contractors or management reports. 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 or asset 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.

Dynamic Rail Splitting / Merging

For rail replacement works, AMX can dynamically segment and merge your rail assets (track/ballast/sleepers) including updating start and end milepost/KP data, adding rail joints at the start and finish of the split, archiving outstanding defects on the new rail length and updating the network on the map.

Lifecycle Planning

AMX has a variety of tools to support lifecycle management at asset and/or element level, taking into account condition, age or reliability ratings. Setup deterioration profiles and intervention strategies to run scenarios for comparison and review.

Stock Control

Manage consumables in AMX, including defining locations (depots and shelf locations) and minimum stock levels. Assign stock to work orders and set alerts when levels need replenishment.

OPTIONAL: AMX Mobile Application

Use the AMX Mobile application on iOS, Android or Windows handheld devices to capture inventory, complete inspections and maintenance in the field with or without an internet connection. AMX Mobile can be used online or offline and synchronises data when internet connectivity is available.

OPTIONAL: Database Hosting

AMX Solutions can provide a fully hosted solution for the AMX system using the Microsoft Azure Cloud platform. This includes managing updates, backups and system support.

OPTIONAL: User Training

It is recommended that Beginner training is taken-up as a minimum option for all users of the system. Intermediate and Advanced training can be completed to allow more autonomous use and evolution of the application to suit the unique needs of the organisation. Training can be delivered in person or online.

OPTIONAL: Configuration Services

AMX can provide support, guidance, system configuration and documentation to support your local implementation.

2 DATA PROTECTION

2.1 Information Assurance

AMX is GDPR and Cyber Essentials compliant and has the ISO 9001 and ISO 27001 certification. 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

- For customers using AMX's hosted solution, all databases and web applications are securely hosted within Microsoft Azure.
- AMX Solutions manages the entire backup, restoration, and disaster recovery process using Microsoft SQL Server technologies, ensuring resilience and data integrity.
- Backups are automated and include full, differential, and transaction log backups, enabling point-in-time recovery (PITR) within a 35-day retention window.
- Transaction log backups typically occur every 5–10 minutes, with full backups taken weekly and differential backups every few hours. This allows AMX Solutions to restore a database to any specific point within the retention period in the event of accidental deletion or data corruption.
- Additionally, Long Term Retention (LTR) can be configured where required, allowing backups to be stored beyond the standard 35-day window for compliance or operational needs. These backups can be used to restore databases to a new server even if the original SQL server has been deleted. Please note, there is an additional cost for LTR backups.
- AMX Web Applications can also be redeployed in the event of an outage, although automated recovery and cross-region failover require prior configuration and agreement with the customer.
- Customers choosing to self-host are responsible for managing their own backup, restoration, and disaster recovery processes.

2.3 Privacy by Design

AMX uses the Role Based Access Control, along with the principle of least privilege to control what each user can 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 G Cloud Contract which covers all elements of service required prior to commencement.

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

On receipt of the Contract and agreed milestones (if applicable), AMX will submit Invoices as appropriate (with Purchase Order references if required), which will adhere to our terms of payment eg 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. A trial solution is not available due to the customisable nature of the system.

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 discovery meeting to discuss specific requirements, provide technical advice and review data import requirements where applicable. Data import can be 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 and contract signed
2. Initial discovery meeting to discuss delivery of any data import requirements as part of contract:
 - 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 Gazetteer 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 two 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 shape file export of Assets and Activities or a combination of these. Data will be available for a period of three 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 a minimum of every 6 months. These updates can be automatically applied to any AMX hosted solutions, upon agreement but are optional for application on locally hosted solutions. We strongly recommend that all implementations are updated at least once per year to ensure you have the latest tools, features, and security updates. 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.

AMX 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 (and other entities)
- Update all Schedules of Rate data
- Create and edit Forms for data capture on the main system and AMX Mobile
- Setup New Users and User Roles
- Create new Reports and Print Templates
- Manage lookup libraries
- Manage map layers
- Add or amend workflow (e.g. calculated fields)

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. 9am to 5pm 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' from Support Team 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 for all hosted clients (support to self-hosted clients may be slower depending upon the level of access available to the AMX Support team). 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	Support Team
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.

Software Updates: For self-hosted clients, the customer is required to maintain and update the AMX Web Application and associated components. The solution should be updated annually to the latest version to ensure it complies with security, legislation and has access to latest features and functionality.

4.2 Technical Requirements and Customer-Side Requirements

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

4.2.1 Dedicated Server (On Premise)

Web Application

Modern Browsers supported: Chrome, Edge, Microsoft Edge (Chromium), , Safari.

Web Application Server

Processor: x64 Processor 3.2 GHz +

- Memory: 8 GB +
- MS Windows 2016 Server or above
- IIS 10 or above
- .NET Framework 4.8

Microsoft SQL Server

- Processor: 3.2 GHz +
- Memory: 8 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 SQL Server 2016 or above (Also Express Versions)

AMX Web Service Server (Optional)

- Processor: 3.2 GHz +
- Memory: 8 GB +
- MS Windows 2016 Server or above
- IIS 10 or above
- .NET Framework 4.8 or higher

AMX Mobile Web Service Server (Optional)

- Processor: 3.2 GHz +
- Memory: 8 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 Server 2016 or above (Also Express Versions)
- IIS 10 or above
- .NET Framework 4.8 or higher

AMX Mobile Web Service Server (Optional)

- Processor: 3.2 GHz +
- Memory: 8 GB +

4.2.2 Azure Environment

Modern Browsers supported: Chrome, Edge, Microsoft Edge (Chromium), Safari.

App Service Plan (Web Application)

- P0V3
- P0V3 is the minimum service plan. (1vCPU, 4 GB RAM, 250 Remote Storage)
- NET Version ASP.NET 4.8

AMX Web Service Server (Optional)

- P0V3 is the minimum service plan. (1vCPU, 4 GB RAM, 250 Remote Storage)
- NET Version ASP.NET 4.8

AMX Mobile Web Service Server (Optional)

- P0V3 is the minimum service plan. (1vCPU, 4 GB RAM, 250 Remote Storage)
- NET Version ASP.NET 4.8

Note: The Web Application, Service Server and Mobile Web Server can be hosted in the same asp. The minimum requirement is P0V3, **but for some clients, they may need a separate dedicated ASP to host the Mobile API.**

Azure SQL Server

- Standard S3 (DTU 100) is minimum model but customers with complex workflows large database (typically over 50 GB) may require S4 (DTU 250)

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 shp formats. The data will be available via FTP (or alternative agreed method) for three 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.