Digital Signage as a Service

G Cloud 15

Service Definition Document

Presented by Ajar Technology

AJAR Technology

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AJAR Technology

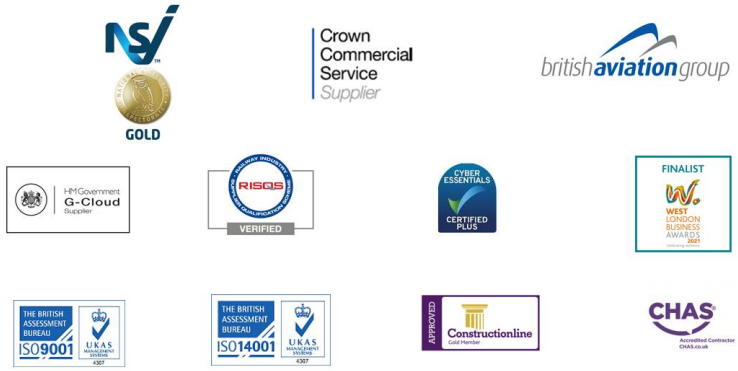
1. Introduction

Ajar Technology is an IP Security & Audio Visual Solutions System Integrator

The company mission is to apply agnostic, strategic thought leadership to identify and implement quality user-intuitive technologies that are appropriate for the use case and that deliver a value for our client organisations.

We have been working with clients and technology partners to deliver digital transformation projects across sectors since 2005. We are proud to have worked with a number of high profile clients that are recognised as critical national infrastructure ranging from the British Airport Authority, the Home Office, Ministry of Justice, and Network Rail, to the wider UK Police Service, and significant housing projects.

We are trusted by clients, partners and vendors, holding high levels of industry accreditations. In addition we invest heavily in our teams' professional development and ensure that they hold the right levels of certification to deliver and support the solutions we provide.



Our ability to work effectively alongside clients and partners and understand their agenda for change has resulted in long standing and successful relationships. The results are demonstrably innovative; technology supports the realisation of transformational business change.

- Technology solutions providing operational excellence, driving down the end to end cost of operations and service provision whilst maintaining and enhancing service quality
- Disaggregating, re-using, optimising, sharing and modernising technologies improves productivity and efficiency by leveraging open standards and system interoperability to deliver a common technology infrastructure
- Collaborative and communicative technology solutions to equip the workforce with the tools to operate

flexibly , work remotely and to rationalise legacy and diverse technology estates

- Technology solutions providing real time situational awareness and centralised system management reporting to ensure regulatory compliance is proven and evidential

Our approach aims to incorporate and address the key challenges and enablers in social and critical infrastructure and technology. In putting together this proposal, we have been informed not only by the need to incorporate the challenges and values above, but also through our fundamental principle of adding value through innovation.

Our objective is to ensure the technologies map effectively to the principles that underpin transformational service delivery and support the push for the desired outcomes and efficiencies. There is no one solution to all needs and no single emphasis on a single technology. We continue to deliver an integration approach and one that is infinitely adaptable to the challenges that operational excellence presents. Our approach is to provide a means to exploit these 'multiple channels' of service delivery and 'multimedia' to effectively and strategically deliver the reality of genuinely transformed services and working processes. – and the outcomes that result as a consequence of these.

Audio Visual	**Security**	**Specialised Integrated Solutions**
Control rooms	CCTV	Lidar technologies
Collaboration spaces	Access control	Automated public address (AI)
Boardrooms	Biometrics	Military training simulators
Auditoriums	Intruder alarms	Smart building design
Meeting rooms	ANPR	Custody suites

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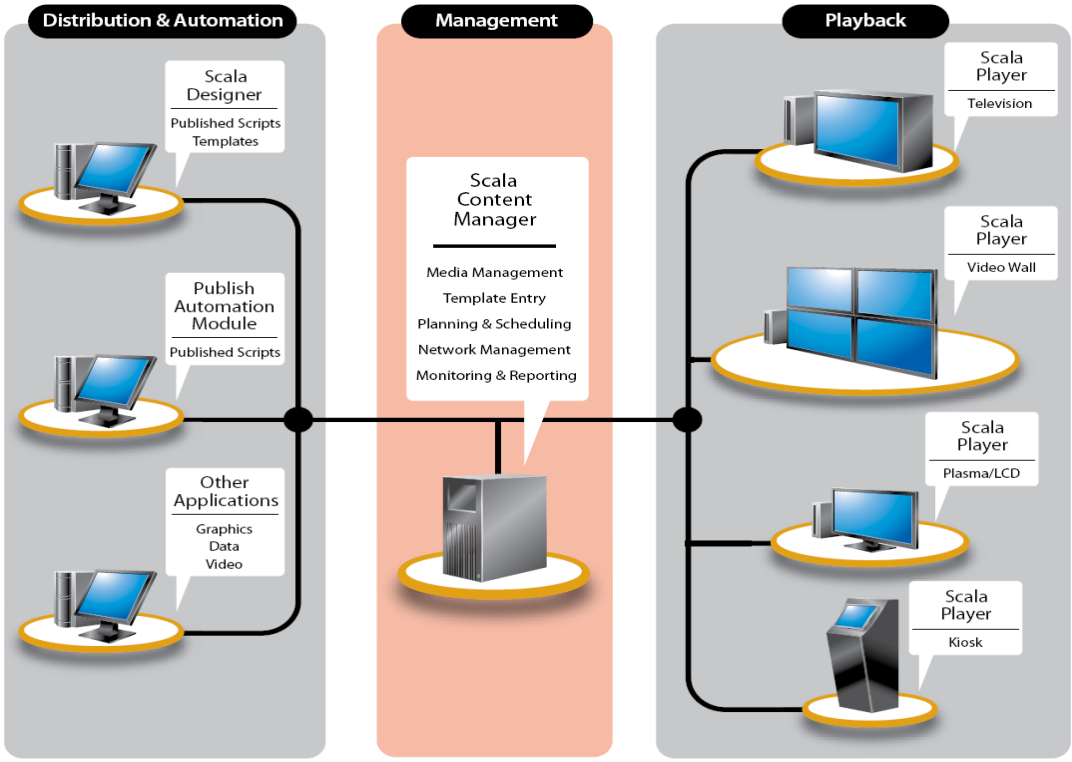
2. Digital Signage as a Service

Digital signage is a network of customisable endpoints that can be controlled using a computer, allowing content to be changed remotely to provide for highly targeted and focused messaging, grabbing attention with dynamically changing content.

Our cloud-based Signage as a Service offering is a hosted version of an established digital signage platform allowing organisations to centrally manage their digital signage network online. This service requires no server software installation nor server hardware on a client site thus providing a simple and cost-effective entry point into the benefits of a digital signage platform.

This online service, in keeping with other SaaS models, allows access to cutting edge software for a subscription fee, the frequency of which can be defined in accordance with customer needs.

This inherently scalable cloud-based solution enables organisations to provide digital signage services to one or many sites across a Public Sector estate, securely and simply managing multiple end points across many locations. The content is seen and accessed by your organisation only and Ajar Technology organises all of the back-end server work for you, including implementation, setup monitoring, updates, backups, hardware maintenance and system recovery; Ajar can even assist with content creation should you wish in addition to the provision and installation of all associated endpoint hardware. Ajar's Digital Signage as a Service offering – a true end to end solution to build the digital signage network you need.



Typical Use Case

Public Sector organisations increasingly need to communicate with tens of thousands of staff working directly and indirectly in offices and sites across the county. The messages range from strategic to tactical, but all contribute to engaging your people and building your desired culture.

A priority is to develop channels that support the majority of your organisational communication needs. Having the right channels in place means you can communicate with your staff in a more engaging, timely and cost-effective way.

Within Internal Communications teams, a mix of channels are required that:

- Have a clear, defined purpose for each with limited overlap
- Meet the needs of the business today and in the future
- Meet the geographic-spread and diversity of roles within the workforce
- Support different types of messages and formats
- Cover both 'push' and 'pull' messaging
- Are readily accessible by the majority of personnel
- Support incident alerts and crisis communications, including quick dissemination
- Enable localised messages
- Support two-way communications and feedback
- Can be effectively managed internally and/or externally
- Is cost-effective and represents value for money

Content managed, Digital Signage displays are the answer as an effective method of reaching geographically-spread staff, not all of whom will have access to IT networks and/or email as the more traditional method of communication. They also allow the targeting of specific geographical audiences with particular messages and, due to their dynamic nature and strategic placement in high footfall, high dwell areas, provide a far more attention grabbing and thus effective communication channel.

3. Functionality & Components

Support of various types of media: design and display Text, images or HD video content can be displayed* (subject to Wi-Fi and/or network bandwidth availability) along with sound to broadcast both live or recorded messages to staff. The software platform comprises an established and full API to enable full data integration without necessarily requiring 3rd party development. All standard image formats, all standard video formats including MP4 & H.264, Adobe Flash including interactive flash, fonts including Unicode fonts to display foreign language content.

Timely 'push' messages, rapidly update or add messages to the screens that are displayed within seconds, an important feature for disseminating safety messages and emergency alarm notifications. Playback audit reports can be generated; filter media items and players based upon user filter criteria and generate pdf reports that show what media items played on what screens during what time period.

Corporate and local messages; Each screen can be allocated individually, and/or to one or more groups to enable dissemination of targeted messages to staff (e.g. by office, by floor), whilst also enabling the broadcasting of corporate messages to all screens. Individual screens can also display different content from one another if desired. The displays are suitable for us in public reception areas, busy corridors, break out

areas and canteens. Hierarchical playlists based on the organisational structure can be configured according to designation and location. Playlists can be pre-scheduled based on screen location and targeting requirements.

Cloud based solution - Scalable and flexible. The organisation can add as many screens as required over time, allowing the solution to adapt as the requirements grows and the number of sites increase. Equally, the screens can be easily moved and transferred elsewhere if relocation is required. The cloud based solution also ensures that the organisation does not have to procure the core management server hardware for each and every site which will significantly reduce cost as all core infrastructure is hosted in the cloud.

Inherent capability for devolving content management. Editing permissions can be allocated to various user levels for various locations; for example, grant some editing permissions to local teams whilst granting centralised editing permissions for all screens to certain administrators/user groups. As the screens are able to display different content on any number of different zones including overlapping or layered zones each with its own set of playlists scheduled into them, correspondingly editing permissions also have the capacity to be allocated by screen zone/area. Any content uploaded or modified by the user can require approval by a manager before it gets published before it gets published to the media players, to prevent unauthorised content from being shown on screens.

Remote Maintenance - there are several remote maintenance features inbuilt into the cloud content manager platform that allow remote error fixing and maintenance tasks on the remote media players:

- Ability to switch a player from normal playback mode to debug mode. In this mode additional information is logged into the log files and these log files can be downloaded and analysed via the Content Manager.
- Can remote delete unwanted files
- Can install files into the player from the Content Manager. This feature is used to remotely install software and tools on the players
- Can install software updates remotely. This is used to install software upgrades on the remote players.
- Reboot a player
- Retrieve content from a remote player
- Retrieve files from a remote player
- Run a System Command on a remote player

All the above tasks can be scheduled onto all or selected players by

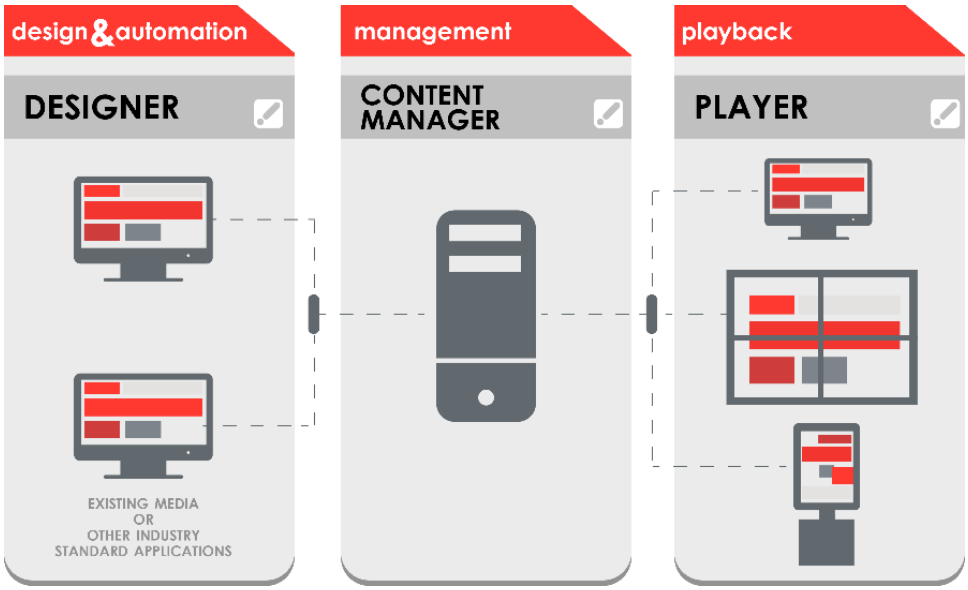
- As Soon As Possible
- Once at a given time
- Weekly recurrence
- Monthly recurrence

Network Monitoring - An email alert mechanism where emails are sent out to designated network admins whenever a Player has issues. The status of the Players on the network is clearly shown when the last heartbeat was received and also the content download status of each player.

Bandwidth Management: The screens can be connected to the corporate wi-fi network or structured cabling infrastructure and as such can be managed from anywhere across the corporate network as required.

The players comprise a bandwidth throttling feature to ensure the network is not flooded with data. The scheduler within the Content Manager ensures that content can be uploaded at specific time periods outside of normal working hours when network use is assumed to be less and thus more bandwidth is available.

The software solution proposed is the Scala software platform, recognised as the industry leading digital signage solution. It comprises 3 core components that make up a typical corporate communication network as shown below:



The Content Manager is the central command centre, located in the cloud to reduce client implementation and hardware costs, which manages all the screens, the media items, the scheduling, content distribution, users etc. It is a web-based server and can be accessed using a web browser remotely; users can log in using a registered account using just a web browser on any PC or Laptop. Multiple users can log in at the same time doing their own designated tasks. A typical network will have a single Content Manager for any number of screens accessed to complete the following actions:

- Uploading new media
- Managing media access, users, roles, work groups etc Scheduling the content
- Monitoring the network Generating playback audit reports
- Managing players, channels, player groups, media distribution etc Remote software upgrade on players and server
- Remote maintenance tasks like reboot, file install, file management, system commands etc

The Player is the software that resides on the media player fixed behind the display device. This is the client to the Content Manager. The Player is managed by the Content Manager and no manual intervention is required once setup and configured. It downloads content and instructions from the Content Manager and plays back the content as per the user-defined schedule. It stores the content and plan in the local storage on the player and does not depend on network connectivity for playback once downloaded. It is capable of playing back content to any resolution including ultra large video walls of resolutions in the range of 6000 x 2000 pixels, limited only by the hardware used to run the Player.

The Designer is the software used to author content and templates. It has Photoshop like capabilities to create multi layers, Chroma key transparency etc. It also has more than 100 cinematic wipes in 2D and 3D like After Effects and other tools. It is also multi slide and multi-language capable like PowerPoint. It also has programming capabilities using Windows Scripting tools like VB Script, Python Script and Java script. In short, Designer is a tool with which you can create content that is as attractive as videos created using other professional tools and at the same time ability to dynamically change parts of this content at playback time using programming logic which other tools cannot do. This is listed as an option in the pricing rate card as it is an optional product.

Shared vs Dedicated Cloud Hosting

We offer a two hosting models in the provision of a shared cloud environment or a dedicated cloud environment with different price points for each option.

The shared environment provides for basic content hosting in the cloud on a multi tenanted basis.

The dedicated environment provides for a dedicated cloud server instance specific to the customer organisation to meet enhanced data security and privacy needs.

99% Cloud Service Availability

The proposed signage software solution is a cloud based digital signage solution with a guaranteed, contractual 99% system availability clause to provide assurance of the cloud element service availability.

Unlike other hosted signage solutions, this system does not require constant access to the network to operate; should the network fail, the content on the screens will continue to run as it is downloaded and stored directly onto the player, rather than constantly streamed.

Once the network is back online, the content will automatically be updated to incorporate any changes made during downtime. In simple terms, even if the network is “down”, screens will not be blank/show error messages because of this.

The signage software content management system comprises the capability to provide system management information on both a real time and scheduled/administrator request service performance report basis (this can be configured as per reporting requirements but will be monthly by default as per the requirement). The reports are generated by the software and are **not** subject to additional charges.

The real time centralised system monitoring function provides for:

- System Status
- Endpoint Status
- Endpoint Heartbeats
- Endpoint Inventory
- Problem reports

This functionality ensures the automatic real time notification of any issues, whether software or hardware related, to the users without reliance on human intervention, thus speeding up the issue reporting process.

4. Solution Dependencies

Standard Solution Assumptions

All required power, structured cabling, containment & networking provisions will be provided by others. Any required network and power points are to be within 1m of the proposed solution installation locations.

If Wifi connectivity is to be used, it is the end user's responsibility to connect any player hardware devices to the Gov Wifi network. AJAR Technology can provide assistance on a day rate basis according to the SFIA pricing schedule.

Digital media displays, players and associated hardware can be provided on a lease basis should the customer organisation not already have access to these assets to provide for the end to end digital signage solution.

It is assumed that the customer will provide for the appropriate networking and port connections in addition to the internet connection to access the cloud.

It is assumed that any existing cabling to be reutilised is in full working order.

All strengthening works for any mounting walls will be provided by others.

All required ground and/or civil works will be provided by others unless otherwise stated.

All required specialist plant and/or access equipment will be provided to AJAR Technology on a free of charge basis unless otherwise stated.

Free and unrestricted access will be provided to all required installation locations prior to and during installation works via the use of a goods lift as required. Any specialist access accreditations will be issued free of charge to AJAR Technology personnel.

All installation works will be conducted during normal hours working (Mon-Fri 09:00-17:30) unless otherwise specified. Out of hours works can be quoted upon request

All installation works are concurrent unless otherwise stated

All proposed installation locations are to be provided by/agreed with the client prior to any installation commencing unless otherwise agreed

On-site parking will be provided free of charge to AJAR Technology

All installation works will take place at a single client site unless otherwise stated

It is assumed that any existing client equipment to be repurposed for the project is in full working order and is provided to AJAR Technology free of charge

It is assumed that any third party equipment supplied by others is in full working order and is provided to AJAR Technology free of charge

It is assumed that all making good/post completion decorative works are to be completed by others.