# BANDMASTER

*Shared Technology Platform Proposal*

# OVERVIEW

The Bandmaster system will allow for a cross-organisation common approach to digital systems and services, greater enhancing the digital skills and portfolios of each organisation and allowing for greater interoperability.

# APPROACH

This system will follow the “KISS” approach – Keep It Simple, Stupid! Taking the simplest approach possible ensures that the system makes sense to all users across all organisations, and also means that it will be easier to hand over when the time comes.

Each organisation will receive an allocation of web hosting, a copy of the Bandmaster system, and a database configured for the system. This will all be managed by the Bandmaster administration team, so no technical knowledge is required by these organisations.

# FEATURES

The system will be able to offer “core” and “additional” modules to allow for customisation and flexibility for each organisation.

## CORE

* Public-facing website, including News, Events, List of Membership (+ map), Results (+ League Table)
* Membership Registration
* Bandmaster Forum
* Events System – to cater for physical and virtual events
* Bulk Emailer (+ GDPR preferences)
* Emails

## ADDITIONAL

* Misc. band admin tools (e.g. digital registers, rehearsal planners)
* E-tickets
* News Archive (digital newspaper clippings)
* “Archive” site (organisation history)
* Event Media System
* Digital judges tapes/scores/tabulation (using CompetitionSuite?)

Documentation for each module will be drawn up after approval of the system.

# SYSTEM SPECIFICATION

The Bandmaster system will consist of 4 main components

## PUBLIC-FACING WEBSITE

The first component is the public-facing website. This is essentially a shop window for the organisation, allowing them to market the services they provide. This must be fully customisable and should align with the organisation’s branding.

This component will make use of a modified version of the Wordpress platform. Wordpress is a free content management system (CMS) that powers over 400 million websites (including the current BYBA website) and gives non-coders the ability to modify pages or publish news articles on their website. The modifications will come in the form of custom plugins that allow for integration with the rest of the systems.

This may also require a custom theme(s) to be written.

## MEMBER ADMIN

The next component is the band admin site. This will allow members of the organisation (i.e. the bands) to log in and carry out administrative tasks – for example register for membership or view the Bandmaster Forum. This will be password-protected so only approved users are able to access it.

## ORGANISATION ADMIN

This component will allow members of the organisation (e.g. BYBA Council) to log in and carry out administrative tasks on behalf of the organisation – for example send a bulk email to the membership. This will be password-protected so only approved users are able to access it.

## BANDMASTER ADMIN

This last component will be the most important of all. It will allow the Bandmaster administrators to deploy new versions of the system for new organisations, and to perform updates or any other administrative tasks that may be required.

# COSTS

## DEVELOPMENT COSTS

Developing a system like this will require a significant amount of development time and effort. Hiring external developers would cost at least £1000-£2500.

## SERVER

Due to the digital nature of the system, one or more servers will be required. Full access to the server is also required, so shared hosting is not an option. This will cost between £15 (virtual server) and £100 (physical server) per month.

# DEVELOPMENT APPROACH

The system will be written in an interpreted language (such as PHP). An interpreted language will support the modular nature of the system, allowing modules to be added to the existing file structure instead of requiring the system to be recompiled after each change.

When the system is deployed for a new organisation, the entire code and database structure will be copied into their hosting space. This reduces the complexity of the system as there will be no need to ensure specific modules are installed either in the code or in any queries. It also prevents most issues with installing/uninstalling and modules. Modules will be able to be enabled and disabled via the Organisation Admin section, as well as any other configuration that may be required.

When a new organisation is signed up via the Bandmaster Admin system, the web server will not be responsible for most of the process. Instead, the web server will write to a text file, which a daemon will pick up and carry out the necessary tasks. This is because deploying the system for the organisation requires superuser privileges, which is dangerous to give to the web server.

Each module will have its own git repo and database. This means that work can be carried out on each module independently of the others, with little to no risk of changes breaking something in a different module.

Deployment tasks for new organisations will include:

* Creating new directories for each of the copied components
* Creating databases for the modules (prefixed with the organisation’s name – for example, BYBA’s copy of the Event table would be BYBA\_Event)
* Creating a database user for the organisation and giving it access to their tables
* Creating virtual hosts for each of the components (either pointing to ports on the server, or to an organisation’s domain name) and entering the DB credentials
* Ping the URL(s) that the system has been published to, to ensure it is functioning correctly