LETCHWORTH ARTS AND LEISURE GROUP

Information Technology Strategy

1 Introduction

This document is the strategy covering LALG's provision and use of information technology in support of its aims and objectives (as defined in its constitution) and for the benefit of its members. It is expected that use of online IT facilities will become more important to the organisation over the next decade. This strategy shall comply with the LALG Information Technology Policy.

1.1 Background

The current situation is the organisation has existing Facebook and Twitter accounts and an existing website which covers both the centrally organised activities and the activities of the many groups run by volunteers, for the membership to participate in. The organisation also has a monthly printed newsletter detailing the group and central activities and an offline system for managing membership.

The organisation is financially constrained, with income largely provided by a relatively low annual membership fee for its less than 2000 membership (of households). The bulk of this income is used to print and distribute a monthly paper newsletter. Historically some money has been spent on software licensing, but typically for personal productivity tools used in production of the newsletter, and the licences for the membership database.

The existing systems have been developed in house by volunteers in response to the perceived requirements of the organisation in an ad hoc manner as the need was recognised. This is the first point at which an attempt has been made to take a holistic view and to plan a strategy for the future.

There is a very limited number of people within the organisation with IT skills, who have developed, maintained and operated the IT. This has been identified as a significant risk for the organisation, as they are all retired and there isn't a lot of cover if a key resource becomes unavailable. Some steps have been taken to mitigate this risk with documentation and cross training, but it is still a significant risk. This is an organisation that would choose to be mainstream in its provision of IT, not leading edge.

The membership of the organisation is open to all, but the majority of members are in an age demographic of 50 plus. Historically this demographic has not been particularly IT literate. But over time this is slowly changing as the group of people now entering their 50s are much more comfortable with using IT in their daily lives. This trend can be expected to continue, and to speed up over the next decade.

2 Technology and social trends

The biggest changes over the past decade have been the explosion of mobile technology (mobile phones and tablets) and following rapidly behind this the rapid adoption of social media, and online retail via websites.

There have also been significant changes to the underpinning technologies, and the collaborative development of software. It used to be the case that a typical small-scale IT implementation would comprise of purchased hardware running a relatively expensive piece of packaged software with a dedicated function. If made now this would now be considered a surprising choice.

There is one technology that has been in use for decades and will continue to be used by this organisation for the next decade, and that is email. What may change is the degree of user control over what they chose to receive via this channel. The strategy in this area is to move to a subscription model where the member subscribes to those subjects they wish to hear about.

For online presence, the trend has now moved to cloud-based services to provide the platform to run an online presence such as a web site. Social media has moved further to a situation were the main channels such as Facebook and Twitter provide a whole eco system. It is the strategy to track these trends and exploit the benefits they provide.

Software development has also moved on significantly. Major functionality, such as web servers, content management, membership systems, payment systems etc. is provided by community collaborative open source development. These systems are typically ‘open source’ - freely available under free reasonable licence terms, with free community support. There is usually also an ecosystem around the major packages which will provide paid-for implementation and support services. The basic model is the “product” is free, but services cost.

The strategy is to reduce initial and ongoing costs by using mainstream open source software alongside commercial packages and customisation to provide solutions that meet LALG requirements.

3 Strategic goals

The goals listed below apply to all of the IT services (including platforms, software and other supporting services) provided for use by members and to support the internal operation of LALG.

3.1 Cost

The services will have low initial purchase costs and running costs (within the LALG IT budget agreed with the Committee). To achieve this, it is the strategy to make use of the major free services (such as Facebook and Twitter), community supported packages for web facilities, and low-cost hosting facilities.

3.2 Availability

None of the IT services are time critical to the organisation, the strategic goal is to provide a convenient service to members, with the services always being available but unscheduled unavailability for up to 24 hours would be an inconvenience rather than a threat to the existence of the organisation. Because the organisation is locally based normal waking hours (7 am to 11pm) would be typically when the IT services would be used.

3.3 Ease of use

The demographic of the members is as described above. The volunteers who run the IT services and the services supported by the IT are drawn from this membership. It is therefore the strategy that the IT services should be easy to use and easy to operate. It is expected that development, changes, and testing of the IT services will require higher skill levels, but resources of this type within the membership are limited, so it may be necessary to use professional resources for major implementations and changes, subject to the budget constraints.

3.4 Wider options for user access

Support for access from mobile devices will be a key part of the approach. It is expected that amongst the LALG demographic the use of mobile devices will increase from a low base to be a widely used option over the medium term.

3.5 Integration

Historically it has been the case that LALG's IT systems were not integrated. In the future it is the strategy that they should wherever possible be integrated. It is expected that the membership system will be an integrated part of the website, and that members will to a large extent be able to control their own data and preferences.

3.6 Information Management

Information should be generated and collected only once then distributed through multiple channels to the members (and optionally the wider public). The website, social media feeds and the newsletter are all examples of channels. There will need to be some intervention in the form of editorial control for all channels, but where possible this should be via workflows that allow the information to be available as soon as practical. For example, this may mean that information is available via the website or subscribed email immediately, rather than once a month as in the case of the newsletter.

3.7 Flexibility

Some of the design and implementation choices will be by their nature difficult to change without significant investments of time and effort (an example being the content management component). However, it is the strategy to allow for maximum flexibility in other areas by choosing main stream options. This. This particularly applies to hosting for web services, where a standard Linux, Apache, MySQL, PHP (LAMP stack) should be used. Care should be taken to avoid vendor tie-in through using proprietary extensions. There is an implementation choice to be made as to how the hosting is structured. Strategically the simpler it is the more flexibility there is. The critical element is the LALG

domain name, which should not be locked into a specific hosting facility (Dynamic DNS breaks this lock-in).

3.8 Version currency

In choosing which versions of software to use to provide the services, the strategy will be to keep on versions that are maintained from a security patch perspective and to avoid pre-release versions such as alpha and beta releases. Long Term Support (LTS) versions are preferred. It is not necessary to be on the latest version of software, but when a major change of functionality is planned it should be targeted at the releases current at that time so as to extend the stable period of the service until a further upgrade is necessary. Upgrades should be undertaken to avoid being on an unmaintained release, or if a newer release offers significant benefits to the service provided.

3.9 Functionality

The major change from the past is the integration of the membership system with the website. This unlocks significant benefits for the services in the future. The strategy will be to take advantage of this opportunity in the following ways:

1. Online membership renewal
2. Members updating their own data and preferences online (for those members not wanting to do this an administrator will do this on their behalf).
3. Customisation for members using a subscription model for information, which could be delivered as emails or a customised web interface as appropriate.
4. Support for communities of members with shared interests
5. Access controls to permit extended functionality to officers and volunteers supporting the organisation such as newsletter editors, group contacts etc.

3.10 Internal operations

There is a need to support document production and records management for work within the organisation. Typically, documents will be produced using personal productivity tools such as MS Office and its open source equivalents. There is a need for support of sharing, reviewing, approving and storing such documents, i.e. document / records management facilities. Ideally this would be achieved using closed groups of users, and document management extensions to the existing content management facilities, but failing that, the fall-back position is to continue using Dropbox and similar facilities along with email.

4 Resourcing

Given the background described above, obtaining resources to implement the strategy is expected to be a factor that constrains the rate of development. It is also necessary to keep the skills required as simple as possible, and to avoid the situation were too much is dependent on single individuals. It may be necessary to contract specialist skills for parts of the development, and for the development of major changes, but the financial constraints will mean that the majority of resource has to be provided by volunteers. It may be that collaborating with other voluntary organisations may ease the burden.

5 Phasing

The phasing specified below is not strictly sequential, in that a later phase may start before an earlier one has completed, the precise timing is to be defined in project planning.

5.1 Phase 1- Improvements to the current infrastructure

There is a register being produced of changes required to the existing website, these changes are relatively minor, and need not be delayed unless they depend on the major changes listed below.

5.2 Phase 2 – Define the new architecture

This phase will finalise the choices of the major components required to implement the new architecture and define how these components will interact with each other. It is expected that this process may be iterative and experimental with key elements being tried out in a development environment in order to more fully understand the impact of the choices being made.

5.3 Phase 3 – Implementation and testing

With the major components selected and their interactions defined, work will proceed to implement a new website with an integrated membership system, which provide at least the same information as the current website, but with some additional functionality as defined above. It is not expected that all of the future functionality will be available in this phase.

5.4 Phase 4 – Live service with new architecture

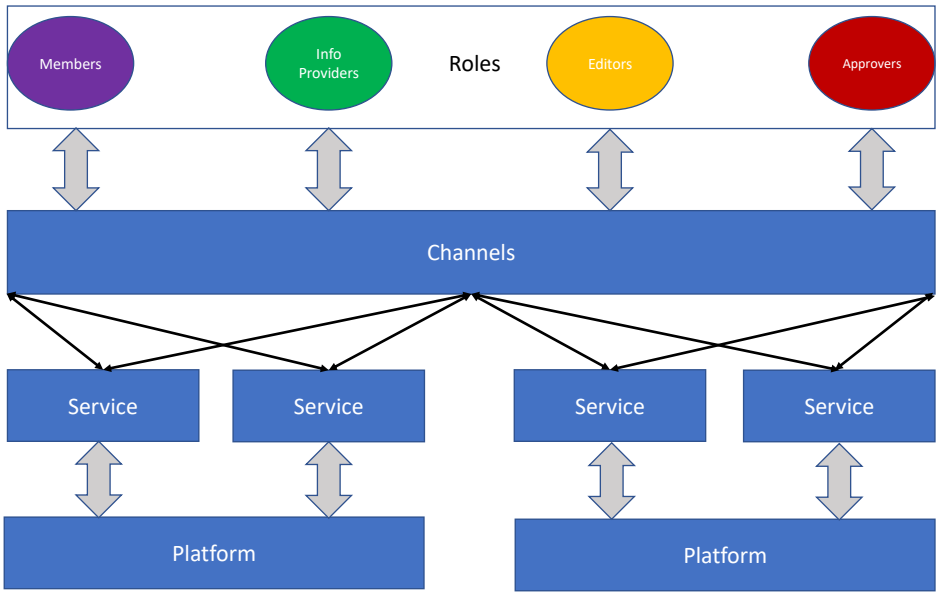
This phase will be the changeover between the old world and the new, with the real membership data being uploaded, and the new site going live. It is expected that a lot of the effort in this phase will be around communication to the membership about the change, and the handling of any issues that arise from live use.

5.5 Phase 5 – Enhanced services

This phase, which may be divided into several sub-phases will aim to exploit the benefits of the new architecture, by providing full functionality discussed above.

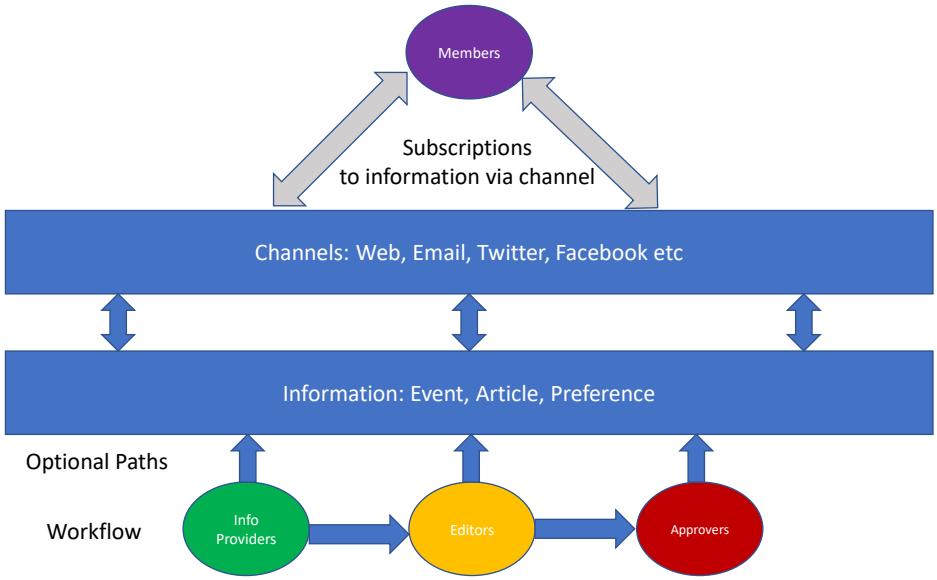
6 Target Architecture

6.1 Overall Context



- Roles - ovals represent the roles that can be taken to interact with the IT systems, this is illustrative rather than an exhaustive list
- Channels – multiple channels may be available to access the same or multiple information services. A channel could be online such as via a website, decoupled such as email, or offline such as the printed newsletter.
- Services – are coherent collections of functions to deliver some benefit to the users.
- Platforms – are those computing elements that host one or more services, this could be cloud hosting of elements described in the model, or a complete vertical slice encompassing service and channel in a commercial ecosystem such as Facebook or Twitter.

6.2 Subscription Model



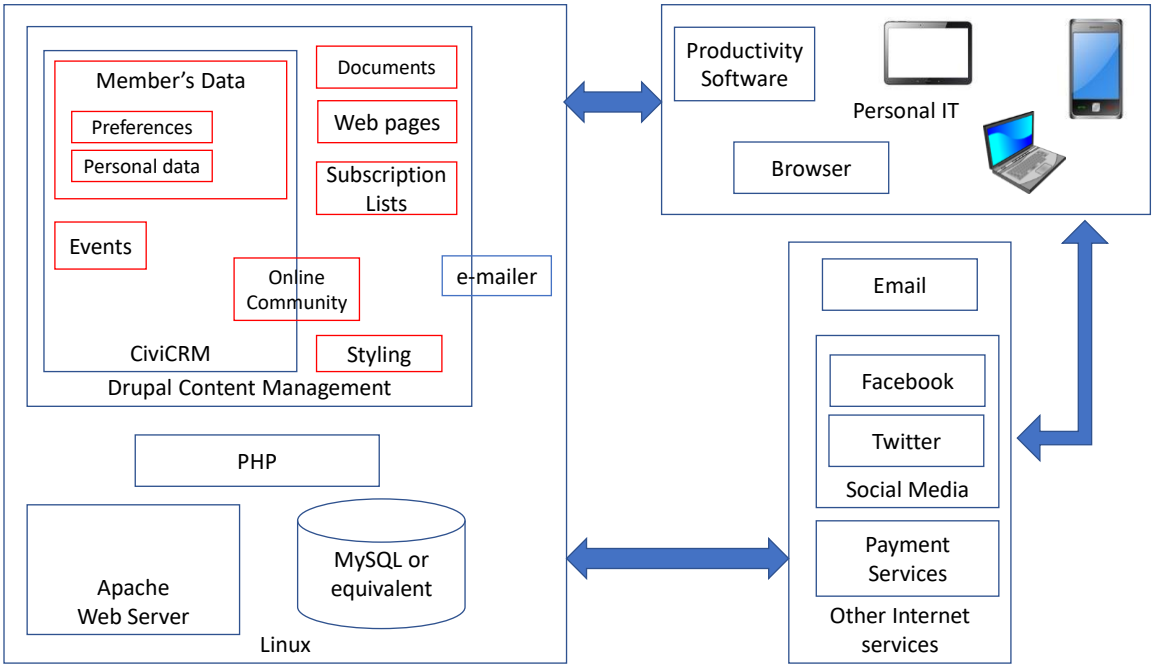
This diagram describes the structure for delivery of the Information Management goal. An item of information such as: an article, the details of an event, a user preference is processed and made available to people who are interested in it. The key is that the person choses what they receive, and the channel they receive it through by subscribing to the information.

This subscription may be achieved in a number of different ways such as:

- Information required to be given by dint of membership, all members are subscribed and cannot unsubscribe except by ceasing to be members.
- Tick box on a paper or online.
- By joining a discussion in an online forum.
- By signing up for an event or trip.
- By joining a group.

There may be channel options to select, such as a preference to receive the information via email, or post, or a customised web view.

6.3 Architectural model



Blue elements describe packaged components.
Red elements describe data managed by service functions delivered by appropriate combination and configuration of the components.

6.4 Packaged Components

Initial component choices are:

1. Linux 18.04 LTS edition
2. MySQL 8 or Maria-DB equivalent
3. Apache 2.4
4. PHP 7.2
5. Drupal 8.6
6. CiviCRM 5.1.2

This document was considered by the Committee, and deemed approved, at its meeting on 31 July 2018