**ALA EXECUTIVE BOARD**
**SPRING 2016 MEETING**

**TOPIC:**              External IT Review

**ACTION REQUESTED:**   Discussion

**DRAFT MOTION:**       NA

**REQUESTED BY:**       Keith Michael Fiels, ALA Executive Director
                        Mary W. Ghikas, ALA Senior Associate Executive Director

**DATE:**               7 April 2016

## BACKGROUND:

In late fall  2016, ALA Management contracted with two individuals to work together on an external review of ALA's ITTS systems:  Brian Schottlaender, University Librarian, University of California-San Diego, and Margo Pecoulas, Director of IT, American Academy of Periodontology.  Together, they brought both knowledge of the association IT environment, including specific product knowledge, and deep knowledge of ALA – its structure, values and culture.

At the same time, ITTS Director Sherri Vanyek and ALCTS Executive Director Keri Cascio led an internal review involving meetings with staff.  The results of this process, along with internal IT reports, the ITTS budget and budget trend data were provided to Pecoulas and Schottlaender for their review prior to onsite meetings.

Onsite interviews with staff were set for January 28-29, 2016.  Working with Sherri Vanyek, the consultants developed an intensive two-day schedule of individual and group staff meetings.  In advance of these face-to-face meetings, the consultants provided a pre-interview questionnaire, which participating staff were asked to complete and send in advance, enabling the consultants to move quickly to the issues of most concern to various stakeholders.  Careful notes were taken during the meetings, for later review.

The attached report is the result, then, of extensive pre-reading, on-site interviews with staff in a wide range of specialty areas, external perspective, and the careful analysis required to extract and articulate clear, understandable recommendations.

**MANAGEMENT RESPONSE AND STATUS:**

The FY2017 proposed budget is responsive to these recommendations, while recognizing that it is not possible to respond to all of them in a single budget year. In a budget year where other General Fund spending is essentially flat, the proposed FY2017 budget adds an additional $300,000 to the IT-related budget. ITTS staffing is increased by 1.5 positions.

- **ITTS** will implement the E-Commerce application for Dues & Donations (phase 1) in late FY 2016 and the E-Commerce application for E-Learning (phase 1) in late FY2016 and early Fy2017. The discovery and initial design phase for the E-Commerce application for products (ALA Store) will begin in late FY2016 and continue well into FY2017. All E-Commerce applications will be on the same platform and share fundamental information. This will enable ALA – for the first time – to provide a unified experience to members. Project development relied on collaborative work across ALA and the Divisions, as well as member input. Phase 2 development on the Dues & Donations and the E-Learning applications will also begin in FY2017.
- **ITTS** selected a new (external) "ALA Connect" in FY2016, working with the supplier through FY2016 to integrate those ALA-specific requirement necessary to accommodate ALA's unique structure. Implementation will begin at the end of FY2016/beginning of FY2017. Phase two will be in FY 2018.
- Other work on the **ITTS** FY2017 agenda includes:
    - iMIS upgrade (from 20.1.13 to 20.2.24)
    - iMIS data cleanup with iMerge
    - continued enterprise-wide search improvements
- **ITTS** will replace ALA's 16 year-old telephone system in FY2017. The new Voice-Over-IP system will also increase staff efficiency by providing integrated access to messages (voice/email).
- **ITTS** will add a Data/Business Analyst* to improve utilization of data needed for appropriate member engagement; the position will report to the Director, ITTS, and the Director, ALA Marketing, and will work closely with ALA Divisions and ALA Member and Customer Service.
- **ITTS and Publishing** will add an eStore Project Manager* for an Association-wide e-Store. The position will be funded through Publishing (50%) and ITTS (50%) and will report jointly.

ALA Management also agrees with the recommendation to create an internal ITTS Advisory Committee and, based on earlier experience, will work with stakeholders to charge, appoint and structure a group likely to succeed in the collaborative decision-making needed within the ALA environment.

# AMERICAN LIBRARY ASSOCIATION

# EXTERNAL IT REVIEW

# FINAL REPORT

## MARGO PECOULAS

### AMERICAN ACADEMY OF PERIODONTOLOGY

## BRIAN E. C. SCHOTTLAENDER

### UNIVERSITY OF CALIFORNIA, SAN DIEGO

## 2 APRIL 2016

**Executive Summary**

In FY2015, ALA Information Technology and Telecommunications Services (ITTS) produced "ALA Strategic Technology Directions Update: 2016-2017." This document revealed questions of long-term direction and trajectory in the following areas:

- Web Content Management System, to manage http://www.ala.org
- Association Management System (AMS)
- Cloud Computing, specifically remote access to internal system
- Voice-Over-IP Implementation, to replace aging Telephone Switch and Voicemail Systems

Keith Michael Fiels and Mary Ghikas, Executive Director and Senior Associate Executive Director of the American Library Association, respectively, commissioned the External IT Review Team to:

> "… take a high-level look at the overall landscape into which each of these major areas must fit. The review should take into account the following factors:
> 1. Organizational context, including structure and procedures
> 2. Resources – including both financial and human resources
> 3. Management and oversight of systems
> 4. Adoption capacity, both in ITTS and in the larger Association
>
> … aiming to discover opportunities for collective decisions that would lead to increased efficiency and flexibility, new perspectives on application of organizational resources, and new understanding of essential skills and aptitudes for the IT future (both in IT[TS] and in units utilizing IT services)."

In its two-day on-site visit, the Review Team met with Fiels and Ghikas; seven of the eleven Division Executive Directors (ACRL, ALCTS, ALSC, LLAMA, LITA, PLA, and YALSA); the CFO; the Conference Coordinator; the Acting Director of Development; the Marketing Director; the Membership Director; the Associate Executive Director of Publishing; the Director and Assistant Director of ITTS; and more than 15 additional ALA and Division staff. In addition, interviewees were given an opportunity to complete a pre-interview questionnaire and forward it to the Review Team through Mary Ghikas, which more than a dozen did.

Like most organizations, ALA has strengths and weaknesses.

On the plus side, ALA staff and management share a real commitment to "putting members first." There is distributed throughout the organization considerable functional expertise and an eagerness to see that expertise well deployed in service to members.

On the minus side, ALA is an intensely distributed organization. The ambitions of its respective Divisions can be at odds with each other and with those of the ALA central organization. As a consequence, there are "silos" within ALA whose lines of demarcation can be very bright indeed. Finally, the resources—financial and staffing—currently devoted to IT are insufficient to achieve the Association's IT goals.

The following report explores the ALA IT landscape through the lens of its organization and resources. While the recommendations it includes are enumerated in the remainder of this Executive Summary, readers are encouraged to delve into the full report for context and explication.

## Recommendations
1. Do not pursue replacing iMIS in the immediate future. Instead:
    a. keep it updated (routinely);
    b. devote resources to de-duplicating the records in it;
    c. devote resources to improving the quality of the data in the remaining, de-duplicated records; and
    d. devote resources to improving its report-generation capabilities.
2. Maintain the plan and timetable for implementing a new, Association-wide e-Commerce platform.
3. Recruit Content Management System Administrator.
4. Temporarily: migrate e-Learning content from the Association's Moodle instance to ALA Publishing's instance.
5. Longer term: select and implement an Association-wide e-Learning platform.
6. Pursue a phased transition to Office 365.
7. Conduct a business process review of the payment approval process in order to identify bottlenecks and to evaluate whether adjustments can be made to the software and/or approval process itself.
8. Commit, explicitly, to building/implementing web assets that are responsive.
9. Implement new responsive design template for ALA.org
10. Convene a working group of ITTS and divisional staff to review and draft guidelines/activities for moving divisional sites to responsive template.
11. Implement ALA Connect on the Higher Logic community platform.
12. Continue to fund community manager staff position and budget for Higher Logic annual educational forum.
13. Develop a training program for staff committee liaisons to champion and promote use of the platform for collaboration.
14. Utilize ITTS Advisory Committee (see below) to explore the feasibility of adopting Volunteer Central.
15. Explore the possibility of using HL microsites as the primary application for building grant sites.

16. Replace the telephone system, whether with a VOIP-based system or with some other technology that is fit for contemporary purpose.
17. Utilize the ITTS Advisory Committee (see below) to review and define to which staff and under what circumstances remote access to business systems can be extended.
18. Utilize the ITTS Advisory Committee (see below) to review and rationalize the various email marketing platforms currently in use within the Association.
19. Create an internal ITTS Advisory Committee to facilitate decision-making and communication.
20. Regularize—and increase the frequency of—implementation updates.
21. Create and implement a system of Help Desk support tiers that is quantitative and time-based, not narrative.
22. Institute mandatory ticketing.
23. Recruit:
    a. A Project Manager.
    b. A Web Developer.
24. Allocate additional funding to development.
25. Consider relocating some training from ITTS to HR.

# I. GENERAL FINDINGS

There was consensus amongst stakeholders as to the high-priority nature of initiatives outlined in the ALA Strategic Technology Directions Update: 2016-2017 ("Technology Update"). Topping the list were:

- Ongoing issues with iMIS, ALA's Association Management System;
- the new responsive website design for ala.org;
- the introduction of a new e-Commerce website to handle membership joins/renewals, contributions, and small-event registrations;
- the release of a new e-Learning portal that will consolidate all of ALA's online learning opportunities in one place; and
- the debut of the ALA Connect community on the Higher Logic platform.

The ability to offer members/consumers a unified e-shopping and e-Learning experience across the organization was a common theme amongst stakeholders.

The internal review and external interviews brought additional priorities to light including:

- the need for a single email marketing system;
- enhancements to the e-Commerce system for handling group student memberships;
- improvements to the Grants & Awards web interface and better integration with iMIS; and
- the need to expand remote access for staff to internal systems, to name a few.

Both the Plan and the Internal IT Review acknowledged the complexities and competing priorities associated with ALA's multi-layered organizational structure when attempting to implement standard technology solutions across the macro organization. These complexities introduce additional costs, longer project implementation timelines, and increased maintenance overhead. Also noted is ALA's commitment to accessibility to all its resources and the additional challenges that adds when selecting and implementing technology solutions.

Deficiencies in ITTS internal operations in the area of project implementations, communications, training, and help desk surfaced in the course of this review. At the same time, there was acknowledgement that with current limited ITTS staffing, it is very difficult to keep pace with demand.

Finally, both the interview process and responses to the pre-interview questionnaire revealed that the Association has substantial organizational and business process/workflow issues. Organizationally, stakeholders observed that there is no Association-wide consideration of what systems to invest in ("Publishing does its thing. Finance does its thing.") As a consequence, it can be very difficult to "connect the dots" between all the systems in use within ALA. "Staff do not know what door to come in." The lack of common approaches to process is pervasive. When asked why there were no internal system User Groups, a member of one stakeholder group replied: "because of

competition between the Divisions." It was observed more than once that there are opportunities to leverage activities inside ALA for the benefit of the larger organization.

At the same time, business rules were described as complex, and sometimes conflicting. Handoffs are "not smooth at all." Data are dispersed throughout the organization and while many stakeholders expressed a wish for direct access to data, especially for report writing purposes, another noted that direct access alone insufficient. Rather, what is needed is "coordinated access." Another noted that there is so much manual manipulation of data from system to system that the risk of error is introduced, as is inefficiency. Many agreed that there needs to be some general education around the costs of complexity, and the benefits that accrue to collective decision-making.

The initiatives outlined in the Technology Update are very ambitious. Unfortunately, accomplishing them successfully may be threatened by both their number and their range, and by internal operational issues.

## II.    ıMIS

### Context and Challenges
The fundamental starting point within the Association's business processes is that all systems must be ADA compliant, must accommodate ALA's pricing structure, and must integrate w iMIS, ALA's Association Management System (AMS). iMIS is the lynchpin. That said, there are such a multitude of iMIS issues the Association faces, the Plan contemplates the possibility of replacing it with another AMS.

These issues extend beyond data quality, though it is at the head of the list. Stakeholder opinions on the quality of data housed in iMIS ranged from acceptable to "really bad." It is full of duplicate records, and the data contained in those records are sometimes missing, inconsistent, or incorrect..

In addition, it is difficult to retrieve data from iMIS, as it is to retrieve consistent data across reports. Data from other systems are not being written back to iMIS (e.g., the ALA Store), which is compounded by the use of multiple stand-alone databases to manage various business processes.

Finally, the ALA instance of iMIS has fallen prey to what one individual referred to as "the curse of customization." As a consequence, it took ITTS almost a year to upgrade from iMIS15 to iMIS20.

### *Recommendation*
1. *Do not pursue replacing iMIS in the immediate future. Instead:*
   - *keep it updated (routinely);*
   - *devote resources to de-duplicating the records in it;*
   - *devote resources to improving the quality of the data in the remaining, de-duplicated records; and*
   - *devote resources to improving its report-generation capabilities.*

The upgrade to version 20.2 planned for 2016, which will allow for a Web-based interface and set the stage for remote access for telecommuting staff, should remain a very high priority. However, any thought of replacing iMIS should be put off well into the future. Previous consideration of replacing it revealed that any new system selected would also require customizations to accommodate ALA's membership and pricing structures, and that iMIS remains the best solution for ALA's needs. That is no less true today.

Instead, resources should be devoted to record de-duplication and clean-up. The Association is encouraged, moreover, to outsource this work to a third party, such as N.W. Database Services http://www.nwdatabase.com/deduplication-service or Business Advantage http://www.business-advantage.com/cleaning.php.

In addition, a complete review and audit is recommended of existing reports, archiving of those no longer used, and documenting for end-users the purpose of each report. Another possibility would be to consider sunsetting use of those reports altogether in favor of licensing a business intelligence tool like Microsoft's Power BI (https://powerbi.microsoft.com/en-us/desktop/), which would allow end-users to manipulate and analyze their own data. ITTS could then focus its attention on rendering data in a standardized export format.

## III.    E-COMMERCE

### Context and Challenges
Plans for updating ALA's e-Commerce capabilities are in keeping with ALA's vision to provide constituents with a convenient way to purchase goods and services while providing a common interface to do so.  Phase 1, slated for 2016, is intended to accommodate membership joins, renewals, and donations using a single shopping cart, and to include enhancements to accommodate promotional coupons and special offers. The Plan expects this system to be expanded to include registration for e-Learning products such as webinars and web courses and, in Phase 2, small events and continuing education courses. Exploring options to bring the current ALA Store under the same e-Commerce site are planned for 2017.

It is our understanding that the new e-Commerce application is being built using Drupal's e-Commerce framework. Drupal's content management system is also used to manage ALA.org, so it's expected that e-Commerce components and widgets should mesh well within the ALA site. With ALA's major Web assets built on Drupal open source technologies, the Content Management System Administrator—funding for which is requested in the Technology Update—becomes a critically important position to the ongoing functioning of these Web assets.

### *Recommendations*
2. *Maintain the plan and timetable for implementing a new, Association-wide e-Commerce platform.*
3. *Recruit Content Management System Administrator.*


## IV.  LEARNING MANAGEMENT SYSTEM (LMS)

### Context and Challenges
ALA relies on an outdated Moodle learning platform for its online courses (v.1.9). That system must be upgraded in order to offer features required in online courses (e.g., wikis, forums). The Technology Update suggests either that the Moodle platform be upgraded or that a new learning management system (LMS) be selected and implemented by the end of 2016.

An interim solution would be to move all ALA-offered courses onto the Moodle platform used for courses offered by ALA Publishing. This Moodle platform is up-to-date (v.3.0) and is externally hosted. According to ALA Publishing staff, there are no technical reasons that would prevent this arrangement.

With this interim solution in place, a search for a new learning management system can proceed. The onsite interviews revealed that both ALA and the Divisions are interested in having a centralized LMS solution that integrates back to the AMS. Therefore, having an agreed-upon commitment to a specific AMS (i.e., iMIS) is important when researching LMS platforms because AMS providers typically have recommended partner solutions in which standard integrations are already in place—and which, therefore, result in faster implementation and the need for fewer customizations.

### *Recommendations*
4. *Temporarily: migrate e-Learning content from the Association's Moodle instance to ALA Publishing's instance.*
5. *Longer term: select and implement an Association-wide e-Learning platform.*

## V.  OFFICE 365 MIGRATION

### Context and Challenges

The Technology Update includes an initiative to move applications to the cloud, both for accessibility and for business-continuity reasons. Such a move would also eliminate some overhead costs associated with maintenance, the facility, and utilities. Part of the initiative calls for moving the current on-premises Microsoft Exchange email infrastructure and the Microsoft Office desktop applications and files to a hosted solution using MS Office 365. This so-called "SaaS (Software as a Service) model" would replace hardware, maintenance, and licensing costs with a pay-as-you-go subscription fee.

### *Recommendation*

*6.  Pursue a phased transition to Office 365.*

This initiative is likely to be the one that most affects end-users and the ways in which they work day to day. Migrating email, automation tools, and documents to a new environment at the same time is risky. Dealing with email configuration (including virus and spam protections), active directory, and the moving of mailboxes is itself a major project, let alone moving documents to the cloud simultaneously. Additional security and permissions considerations come into play and configuration becomes even more critical.

The Technology Update only makes reference to the current fileserver environment once, and that is to say "Remote access to internal shared drives is offered to all staff through NetStorage, which is difficult to use" (ITTS Internal Review, p. 5). The urgency of abandoning NetStorage in favor of remote access using Office 365 should be evaluated to see if moving shared files can wait until a second phase.

## VI.  FINANCIAL MANAGEMENT SYSTEMS

### Context and Challenges

In the onsite interviews, frustrations were expressed by the Divisions and by the Finance and Accounting Office about the systems in use within ALA for managing accounting functions, particularly the Prophix budgeting and reporting application and the Sharepoint bill payment workflow tool. Complaints related to Prophix ranged from lack of training and documentation to inconsistencies, repetitive functions, and delays in entering new grant budgets. Complaints related to Sharepoint seemed focused on the approvals workflow and how its complexity can slow or stall the payment process.

Finance and Accounting staff expressed concerns about:
- the lack of seamless integration between systems;
- the amount of manual intervention required; and
- remote access, or lack thereof.

They worry whether systems are best-of-breed.

The Technology Update doesn't address these specific issues, although an upgrade to Microsoft GP Dynamics is planned in 2016. The ITTS Internal Review conducted in November 2015 does make mention of integration problems between GP and Prophix after upgrades, and the need for some staff to have to rely on separate databases to track and analyze restricted funds.

### *Recommendation*
7. *Conduct a business process review of the payment approval process in order to identify bottlenecks and to evaluate whether adjustments can be made to the software and/or approval process itself.*

Currently, only 40% of ALA's expenses are managed through the financial management systems. Problems related to Prophix may, in turn, be tied directly to ALA's organizational complexities (as described on p. 12 of the Technology Update). The recent attention paid to reducing the number of pricing rules in effect within ALA should now be directed to similarly reducing the number of unit-grant/project combinations the Prophix system is expected to accommodate. These and other accounting complexities—which are unlikely to go away overnight—will benefit from an in- or external business process review, if not both.

## VII.   ALA.ORG RESPONSIVE DESIGN

### Context and Challenges
The rapid proliferation of devices now used to access web content (desktops, laptops, tablets, phones) demands that websites be designed in such a way as to present content for optimal viewing and interaction, irrespective of the device being used. ALA plans on launching a responsive design template for *ala.org* in Spring 2016 with divisional sites following afterward. While interviewees welcomed plans for a responsive site, they were uncertain as to what would be required to make divisional sites responsive.

The Technology Update includes no specific commitment to making new web assets— including e-Commerce, e-Learning, and ALA Connect—responsive. While this may have been an oversight, it needs to be corrected because it is important that any new web development factor in responsiveness and all the design decisions that need accompany a responsive design approach.

### *Recommendations*
8. *Commit, explicitly, to building/implementing web assets that are responsive.*
9. *Implement new responsive design template for ALA.org*
10. *Convene a working group of ITTS and divisional staff to review and draft guidelines/activities for moving divisional sites to responsive template.*

# VIII. ALA CONNECT

## Context and Challenges
The new version of ALA Connect, implemented using the Higher Logic community platform and expected to launch in Spring 2016, is promoted within the Technology Update as providing additional desired functionality and an opportunity to replace some existing and disparate applications developed over the years.

Topping the list is the integrated member profile feature that will allow the flow of information back and forth between iMIS (the central repository of member data) and the ALA Connect platform, which will be used to collect additional demographic information about members.  Of equal benefit is the integration feature between the ALA Connect community and committee rosters housed and maintained within the iMIS system. It is expected that this automated integration will keep committee communities updated with the latest information on their members. In addition, the discussion feature within each committee community is expected to replace committee email lists now managed in the Sympa mailing list management system, which currently requires constant manual updating by staff.

The Technology Update also anticipates replacing the current in-house-developed Committee Volunteer Form and Opportunities Exchange with the more robust Higher Logic platform module, Volunteer Central. Similarly, MentorConnect might be supplanted by Higher Logic's Mentor Match module.

Although expectations are high for the new ALA Connect, concerns expressed during interviews included:
- Content migration from the current platform to the new platform;
- Data integration with iMIS;
- Customizations of the Higher Logic platform required to accommodate the multi-level divisional structure of ALA;
- Staff and member training; and
- Member adoption of the new platform as the preferred collaboration site (vs. Google Apps).

## Recommendations
11. *Implement ALA Connect on the Higher Logic community platform.*
12. *Continue to fund community manager staff position and budget for Higher Logic annual educational forum.*
13. *Develop a training program for staff committee liaisons to champion and promote use of the platform for collaboration.*
14. *Utilize the ITTS Advisory Committee (see below) to explore the feasibility of adopting Volunteer Central.*
15. *Explore the possibility of using HL microsites as the primary application for building grant sites.*

# IX. ENTERPRISE SYSTEMS

## Context and Challenges

Both the reports provided the external reviewers in advance and the onsite interviews conducted by the reviewers confirmed frustration with three very basic enterprise systems:

- the telephone system, which is antiquated;
- the remote access system, which is restrictive; and
- the email marketing system, of which several different varieties are in use.

## *Recommendations*

16. *Replace the telephone system, whether with a VOIP-based system or with some other technology that is fit for contemporary purpose.*
17. *Utilize the ITTS Advisory Committee (see below) to review and define to which staff and under what circumstances remote access to business systems can be extended.*
18. *Utilize the ITTS Advisory Committee (see below) to review and rationalize the various email marketing platforms currently in use within the Association.*

# X. ITTS

## Context and Challenges

Not surprisingly, the onsite interviews revealed a mix of support for and concerns about ITTS, its practices, and its resources.

On the support side, there is recognition that ITTS needs additional resources, because as currently resourced, there is "absolutely no way [for ITTS] to meet expectations." It is particularly recognized as needing additional developer support because "fires always have to be forestalled or fought." Finance and Accounting, especially, credits ITTS with being a good sounding board for how financial systems interact with other ALA systems, for implementation, for user acceptance training, and for middleware software development as necessary.

On the concern side, communication is not considered to be timely. Training is thought to be inconsistent and not provided on an ongoing basis. The designations used to describe the level of Help Desk support requested are considered inadequate. By its own admission, ITTS lacks an intake mechanism for input like: "I need X." Report writing, as noted elsewhere in this Report, is seen as requiring far too much ITTS intervention (see Recommendation 1d above).

The situation in which ITTS finds itself—and, indeed, in which ALA finds itself—is perhaps best seen in these telling statements made during the interviews:

- "ITTS is inundated and everything they're working on is top priority, so when we need something, we just go outside."
- "People in ALA don't like to hear 'no' and when they do, they go outside. So, ITTS tries hard not to say 'no'."

We trust the reader will agree that these require no additional comment.

### *Recommendations*
19. *Create an internal ITTS Advisory Committee to facilitate collective decision-making and communication.*
20. *Regularize—and increase the frequency of—implementation updates.*
21. *Create and implement a system of Help Desk support tiers that is quantitative and time-based, not narrative. Institute mandatory ticketing.*
22. *Recruit:*
    a. *A Project Manager.*
    b. *A Web Developer.*
23. *Allocate additional funding to development.*
24. *Consider relocating some training from ITTS to HR.*