library systems: crossing the chasm
UKSG
April 2014
the chasm and next generation ‘library services platforms’

this is a small contribution to an understanding of what is currently going on in the library systems market
‘In this time of transition of the library automation industry, stakes are high for the vendors that are creating innovative—or even transformative—products and competing to bring these products first to the market. Establishing momentum early is essential .....’

'The emergence of a new genre of library services platforms that comprehensively manage library resources across all formats, based on service-oriented architecture with web-based interfaces designed for deployment through SaaS, stands to reshape the industry over the next decade. This transition, however, remains in its early phase, with development complete only on some of the new products. Yet the sales cycle has begun, and early successes in the short term can amplify long-term prospects.'

what’s the chasm?

Chasminstitute;
why do we need a *next* generation?

what was wrong with the *old* generation?
a consultant’s view (Carl Grant)

‘...we’re seeing the seeds of a new revolution being sewn [sic]. As the goal of some companies becomes once more attuned to trimming costs... libraries and their users suffer. In some cases, cost savings are being generated for the company by consolidating products... When this happens, it is short-term profit that is the objective rather than serving the long-term mission of libraries. These companies have become unresponsive to the collective goals of our profession and, like so much of our society these days, are no longer focused on the “we” but the “me”. It is a sad state of affairs and one that will not be tolerated’

www.care-affiliates.com/thoughts/archives/6
‘We feel that software companies have not designed Integrated Library Systems that meet the needs of academic libraries, and we don’t think those companies are likely to meet libraries’ needs in the future by making incremental changes to their products.”

Duke University Openlib project [now Kuali OLE]
"With the increasing dominance of electronic content and digital collections in academic libraries, the capabilities lacking in the current slate of automation systems has increasingly become an obstacle to progress."

a consultant’s view  (Marshall Breeding)

“These systems aren’t as integrated or comprehensive anymore as it takes maybe eight or nine or ten different applications ... to do the things that libraries do.”

a librarian’s view
(from Princeton University Libraries, and The College of New Jersey) Library,

.. the library automation system, also called the integrated library system (ILS), has not changed much for the past two decades. It finds itself uneasily handling the ever-changing library environment and workflow. Library staff becomes ever more frustrated with the ILS, noting its inadequacy in dealing with their daily jobs.

It is obvious that we are at the tipping point for a dramatic change in the area of library automation systems.”

‘We've only ourselves to blame for wanting & demanding standalone monolithic systems in libraries.

Thanks to these monolithic systems, it's difficult to move staff around the library as everyone has specialist skills.

The current situation is clearly unsustainable.’


(Thanks to Dave Pattern: UKSG presentation April 2013)
a librarian’s view

‘If it eventually delivers what it promises, full implementation ... should deliver staggering cost savings; “50 per cent of the total cost of ownership” according to Jo Rademakers of the Catholic University of Leuven’

‘Streamlining workflow—cutting costs’ By Elspeth Hyams CILIP Update May 2010
Universities will continue to increase efficiency and develop innovative ways of operating.

The most promising areas of reform, aside from improving procurement practice, include **process improvement**, more effective estates management, increased **collaboration** and **asset sharing**, developing **shared services**, and identifying **innovations** in teaching and academic practice.

Universities UK submission to the 2013 Spending Round

http://www.universitiesuk.ac.uk/highereducation/Documents/2013/UUKsubmissionToThe2013SpendingRound.pdf#page=1&zoom=auto,0,202
a student view.....

‘From my limited perspective, much of what is wrong with the system comes down to the fact that publishers and libraries have to plan well in advance and make changes slowly...

Students on the other hand are able to change direction quickly and easily.

The problem exists because the market has changed so radically in the past few years that students have been able to adopt the new technologies well before the industry and libraries were able to make changes to support these students.

So unless this disparity is tackled students will continue to receive sub par products and support. And pay through the nose if they want access to the best digital content.

Joshua Harding a second year medical student at Warwick Medical speaking at UKSG conference 2013
http://www.slideshare.net/UKSG/0930-harding
Historically, libraries enjoyed stability and a shared understanding of goals. This in turn favored a focus on managing and improving the means towards those goals - building the collection, providing reference service, creating efficiencies in technical processing, and so on. Much of this work is inherently bureaucratic. However, in an environment of change while overall mission and values may remain the same, new and shifting goals become the norm.

As goals shift in a changing environment, so does the need to think about how to marshall the means to meet them. This may need reorganization, new staff skills, changing priorities, reallocation of staff and resources, and so on.

It requires a shift from bureaucracy to enterprise, an adaptive organization that reviews and reshapes what it does in light of changing requirements.

‘sometimes you just have to start over’

“Sometimes you just have to start over. Systems that follow this approach include WorldShare Management Services by OCLC, Alma by Ex Libris, and Intota by Serials Solutions. The shared view of these organizations incorporates a line of thinking that says the amount of change we’ve seen, both in computer technology and in library management/operations, is so substantial that the best way to accommodate the change is to start with a fresh design that can take advantage of all of these changes”.

‘sometimes you just have to start over’

‘the amount of change we’ve seen, both in computer technology and in library management/operations, is so substantial that the best way to accommodate the change is to start with a fresh design that can take advantage of all of these changes.


.....what changes are we talking about?
technology changes
..some context..........
Businesses are forced to operate at a new pace as they contend with informed customers, smart competitors, and employees who choose to use their own technology for work.

This year's top technology trends take a customer-oriented, outside-in view of information technology changes using the themes of engaged, smart, nimble, and secure.

......strategists must understand these trends and how specific emerging technologies can be employed to position their firms ahead of the changes.

including libraries

in summary the key trends are..

Mobile
Cloud
Big Data/analytics
Social
Ecosystems

(not a complete list)

http://www.gartner.com/newsroom/id/2209615
The Cloud

in 2012, we will see the beginning of the dawn of **infrastructure irrelevance** as the unstoppable forces of consumerization shift enterprise spending priority away from the purely mechanical pieces of the data center into areas that help address the **surging demand from a new, savvy and empowered user base**

Christian Reilly @reillyusa Manager of Global Systems Engineering, Bechtel

‘the future of cloud computing: industry predictions for 2012’. By Jeremy Geelan.
Cloud Computing Journal. 10 November 2011
http://cloudcomputing.sys-con.com/node/2040343
‘companies begin to understand that collecting and using massive amounts of data isn’t so hard any more. The cloud makes processing all this information possible without having to build the infrastructure permanently in your data center. And it’s pretty useful in making smart business choices’.

Jay Fry  @jayfry3  Vice President, Marketing at Stealthy Cloud/Mobility Start-up
Social media is changing the way people interact, present ideas and information, and judge the quality of content and contributions. Educators, students, alumni, and even the general public routinely use social media to share news about scientific and other developments. Likewise, scientists and researchers use social media to keep their communities informed of new developments. The fact that all of these various groups are using social media speaks to its effectiveness in engaging people. The impact of these changes in scholarly communication and on the credibility of information remains to be seen, but it is clear that social media has found significant traction in almost every education sector.
The market is undergoing a shift to more integrated systems ... Driving this trend is the user desire for lower cost, simplicity...

In the mobile world, vendors including Apple, Google and Microsoft drive varying degrees of control across an end-to-end ecosystem extending the client through the apps.
The big picture is this. There are three companies competing to be the internet platform of the future—Apple, Google and Facebook.

http://www.newstatesman.com/
“Google’s approach is based on its near monopoly over advertising and its drive to feed this by a rapid expansion of its ability to acquire and control information.

Facebook pursues a massive expansion of the idea of the social network.

Apple aims at the tightest possible integration of hardware and software that ties users into its systems.

At the moment Google is favourite for gold....”

Consumerization is the reorientation of product and service designs around the individual end user. The emergence of the individual consumer as the primary driver of product and service design originated from and is most commonly seen as a major IT industry shift.

The primary impact of consumerization is that it is forcing businesses to rethink the way they procure and manage IT equipment and services.

Products have become easier to use, and cloud-based, software-as-a-service offerings are addressing an ever-widening range of business needs.
The attribute most valued by consumers, assuming a product is at least in the general vicinity of a need, is ease-of-use. All things being equal, consumers prefer a superior user experience.

It is impossible for a user experience to be too good. Competitors can only hope to match or surpass the original product when it comes to the user experience... (has anyone turned to an “inferior” product because the better one was too enjoyable?).

‘What Clayton Christensen Got Wrong’. By Ben Thompson. Stratechery [blog]. 22 September 2013
http://stratechery.com/2013/clayton-christensen-got-wrong/
it’s all about the customer experience. we say we care about customers but do our systems really reflect that?

“The business [library?] buyer famously, does not care about the user experience. They are not the user, and so items that change how a product feels or that eliminate small annoyances simply don’t make it into their rational decision making process”

‘What Clayton Christensen Got Wrong’. By Ben Thompson. Stratechery [blog]. 22 September 2013  
http://stratechery.com/2013/clayton-christensen-got-wrong/
the student’s experience of ebooks

Ebooks Guide

A guide on how to find and use the Ebook collections at the University of York

Last Updated: Jan 20, 2014  |  URL: http://subjectguides.york.ac.uk/ebooks  |  Print Guide  |  RSS Updates

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We subscribe to individual electronic books and also to several collections which are only available to University of York staff and students.

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a ‘consumer’s’ experience of ebooks

‘I bought the first iPad and quickly realised it was the solution to my problems, I recognised its potential to revolutionise how students access information and I adopted it early.’

‘I am now a completely paperless student. Everything I need to study medicine is in my hand’

Joshua Harding a second year medical student at Warwick Medical speaking at UKSG conference 2013
http://www.slideshare.net/UKSG/0930-harding
just give me the answer….

the ‘knowledge graph’ --‘things not strings’

‘With the Knowledge Graph, Google has taken a different step towards the future of search: providing answers, not links.’
John Galt
Fictional Character

John Galt is a character in Ayn Rand's novel Atlas Shrugged (1957). Although he is not identified by name until the last third of the novel, he is the object of its...
No search results found.
Here are some suggestions:

- Try refining your search using different keywords. See the Help pages for searching tips
- If you are looking for a specific item not held by the Library why not suggest the Library purchase the item
- Submit an Interlending request
- Try Google Scholar
- Contact us for help
....what are the characteristic of next generation library systems?'
'next generation' systems

HELibTech defines the characteristic of the new generation of library systems as follows: (http://helibtech.com/Next+Generation)

Search and discovery (Discovery services) for end users is 'de-coupled' from 'back-end' resource management although some Library Service Platforms may only work with a single discovery service (e.g. Alma will only work with Primo)

The management of print and electronic (digital) resources is integrated (or 'unified')

The library system elements interoperate easily with other systems. This is facilitated by a (web-based) Service Oriented Architecture (SOA) model to allow easier, lower cost integration with 'admin' systems such as student registry and finance. This can be viewed as a move from a library system to what has been called a 'library services platform' approach where various components and sub systems are 'loosely coupled’ (SOA) to provide an overall solution

Related to the above is more attention to improved workflows leading to saving in staff effort and consequently lower cost of ownership
HELibTech defines the characteristic of the new generation of library systems as follows: http://helibtech.com/Next+Generation

**Systems are typically 'cloud' based.** This is a move away from more conventional 'hosting' to a system that is, in effect, a single entity that is shared by many separate and distinct libraries. Such 'multi-tenant' systems offer economies of scale and the opportunity to better share data (bibliographic, data on suppliers, licences etc) across the libraries.

Related to the above is **a move from 'management information' to 'analytics' or 'business intelligence'**. This is characterised by not simply providing statistics on transactions recorded by a single library system (number of loans, items catalogued, orders placed etc), to an approach where all activity (including clickstreams) is potentially recorded and might be analysed to deliver new business insights. A cloud environment offers opportunities to collect and analyse data and detect trends across, what is in effect, a global network of systems.
....a new generation of solutions:
‘sometimes you just have to start over’
The Early Market consists of two kinds of customers:

**Technology enthusiasts** (techies) can be found in most every organization. They are always looking for state-of-the-art technology, but they typically don't have the money to fund further development. Techies provide a good test ground for a new technology. They are also gatekeepers to the rest of the TALC. Impress the technology enthusiasts, and you can get the attention of visionaries. If the techies are unimpressed, visionaries will look to another way of gaining competitive advantage.

**Visionaries** are industry revolutionaries looking for a breakthrough application that will give them a competitive business advantage. They see discontinuous innovations for the potential advantage offered, especially if the technology can give them a clear edge over the competition.

Technology Adoption Life Cycle
“The library did not so much purchase a product or suite of products but rather a vision to move towards a state-of-the-art library infrastructure. **The ability of the chosen solution to deliver on that vision was a higher priority than matching the detailed functionality of the old system.** The library didn't want to simply replicate what they already had. So the ‘requirement’ communicated to staff was a high level one to utilize the new systems’ capability and capacity to maximise return on investment”.

are you a early market buyer?

“Being an early adopter—or what the library prefers to call a development partner- has engaged members of library staff with their international peers in other institutions around the world. There has been a lot of interest in the UEL experience from libraries around the world and this has had a positive impact on staff”.

“Innovators and the Early Adopters form the early market. But the strategies that worked to acquire innovators and early adopters no longer work with the early majority”.

“Crossing the chasm revisited” Fastfedora blog 14 May 2013 http://blog.fastfedora.com/2013/05/crossing-the-chasm-revisited.html

....so what if you are not an innovator or early adopter?
....so what if you are not an innovator or early adopter?
Are you more like this?....

**Early Majority**
Pragmatists who want .. proof that a technology has value before adopting it.

**Late Majority**
Conservatives who prefer old technology until its clear a new technology dominates.

**Laggards**
Skeptics who avoid adopting new technologies at all costs.

“Crossing the chasm revisited” Fastfedora blog 14 May 2013
[http://blog.fastfedora.com/2013/05/crossing-the-chasm-revisited.html](http://blog.fastfedora.com/2013/05/crossing-the-chasm-revisited.html)
....so what if you are not an innovator or early adopter?

Are you more like this?......

“Unlike the visionaries and early adopters, the early majority decide whether to buy based on information from their peers. They constantly ping their peers to find out what’s being talked about. When there’s enough validation for a new technology, they make the jump.”

“Crossing the chasm revisited” Fastfedora blog 14 May 2013
http://blog.fastfedora.com/2013/05/crossing-the-chasm-revisited.html
.... can the chasm be avoided?

start here
...so what if you are not an innovator or early adopter?

‘The future of the ILS

Despite the attention gained by the new library services platforms, it seems clear that the ILS will persist, though in ever evolving forms, as a parallel thread in the industry. The library services platforms appeal especially to those libraries, such as academic and research libraries, that have increasingly complex collections of print, electronic, and digital components that demand a unified platform for management and access.

There remains a large number of libraries that continue to find the basic model of the ILS well suited to their needs’.

DON'T THROW THE BABY OUT WITH THE BATH WATER

System vendors that follow this approach re-utilize a substantial portion of their previous generation of technology and couple it with new technology in various ways to bring new services and capabilities to end users. Realizing the difficulty inherent in recreating products from the ground up, these vendors take the approach that change in libraries will be more evolutionary than revolutionary and that redesigning workflows doesn’t supply enough gains to offset the costs. Products taking this approach include Innovative’s Sierra and VTLS’s Open Skies.
in conclusion.....do we need to look beyond the LMS/ILS, beyond the library services platforms and look at a wider library systems ecosystem?
it’s complicated!
not even a library services platform does all this.....
finally...some resources to help
The aim of HELibTech is to provide a starting point for anyone interested in library technology in Higher Education. The focus is UK but most of the issues will be relevant elsewhere.

This is a free and open community resource. Anyone can view and download the content (though bear in...
LMS Change

Summary

Based on a 3-phase work plan, the LMS Change project will develop and disseminate a vision for the future of library systems and a delivery ‘roadmap’.

Working with the companion Pathfinder projects, the project will explore the potential for new approaches to library systems infrastructure, taking account of considerations beyond the traditional LMS to include other business critical and curatorial systems, both within and above campus.

The findings will be delivered in a single report, published in a highly navigable web format.

http://www.jisc.ac.uk/whatwedo/programmes/di_informationandlibraries/emergingopportunities/lmschange.aspx
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We help make sense of a confusing landscape....

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