

UCISA March 2012

transforming library systems in HE



Ken Chad

Ken Chad Consulting Ltd

@kenchad

ken@kenchadconsulting.com

Te: +44 (0)7788 727 845

www.kenchadconsulting.com

this is a very brief introduction, for
IT Directors in Higher Education, to
'next generation' library systems.

My perspective is based on my work
with individual HE institutions and
sector organisations like the JISC,
SCONUL and the RIN

agenda

transformation?

- some context

key challenges libraries are trying to address

- user experience
- resource management

some solutions

- new discovery services
- shared services
- new resource management system approaches

why transformation?

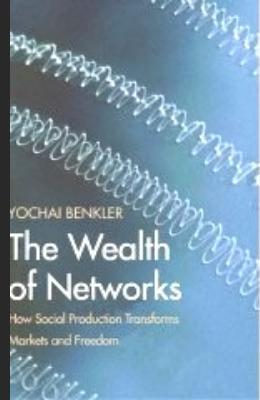
.....first some context



libraries face the challenge of relentless,
disruptive, technology-driven change and tough
economic times

'For more than 150 years, modern complex democracies have depended in large measure on an industrial information economy.....In the past decade and a half we have begun to see a radical change in the organisation of information production. **Enabled by technological change**, we are beginning to see a series of economic, social and cultural adaptations that make possible a **radical transformation** of how we make the information environment....'

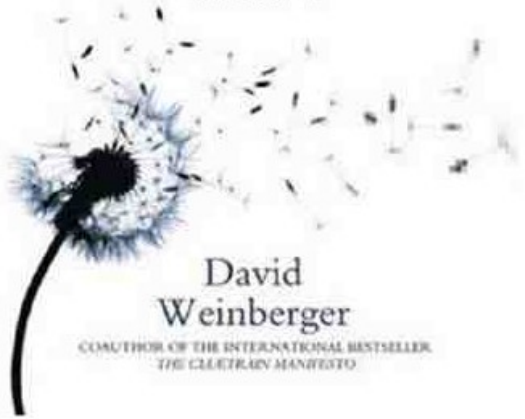
Yochai Benkler a Professor of Law at Yale Law School



Everything Is Miscellaneous

THE POWER OF THE
NEW DIGITAL DISORDER

"Perfectly placed to tell us what's really new
about the second-generation Web."
—*Los Angeles Times*



'Knowledge has been shackled to the physical. Now that the digitising of information is allowing us to go beyond the physical.....the shape of our knowledge is changing'. [P 71]

a librarian's view....

'The structures and practices of libraries will no more withstand the technological changes we are facing than the scribal culture withstood the changes brought on by the printing press. **Change will not be instantaneous, but it will be relentless.'**

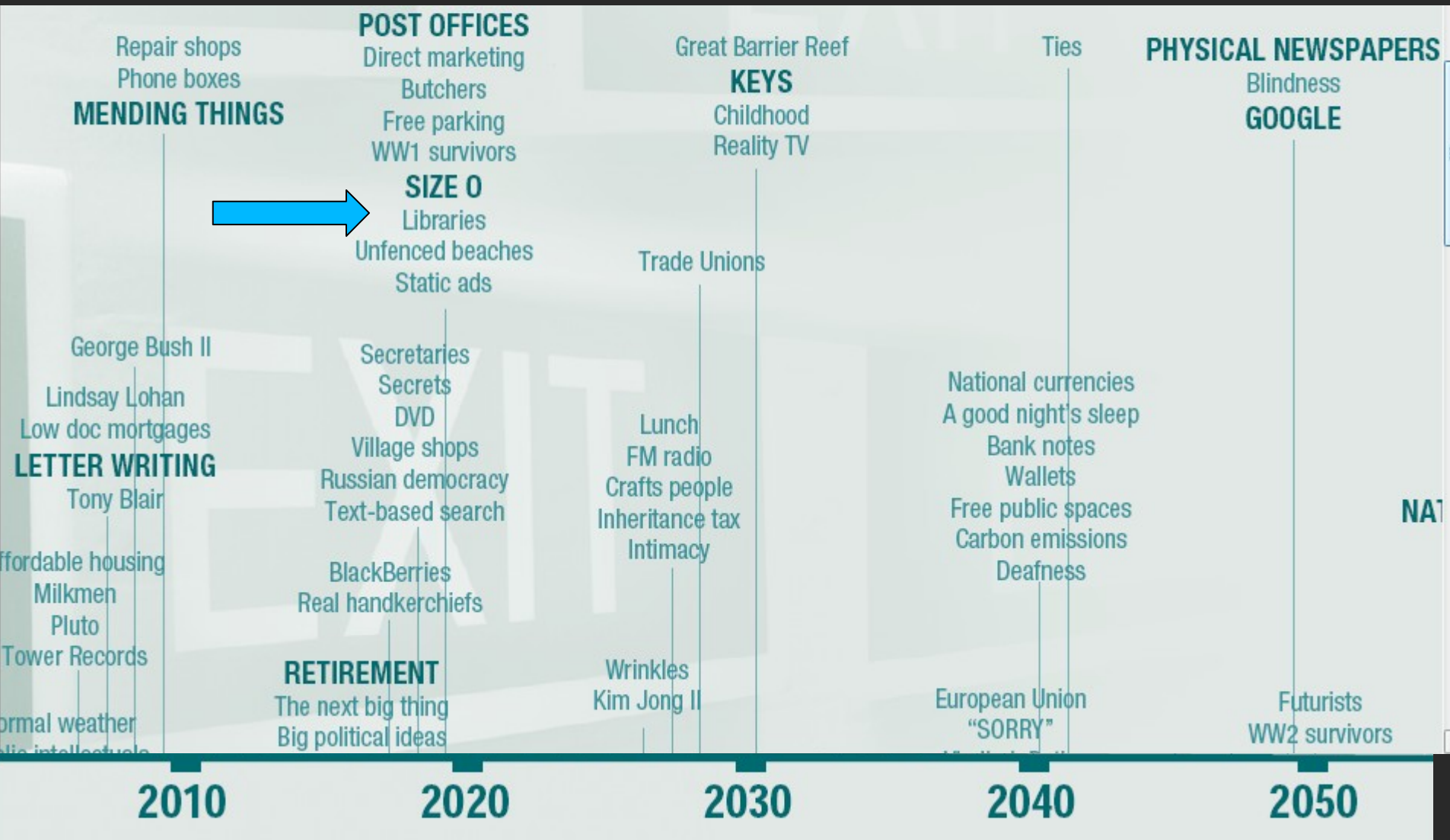
A Model for Academic Libraries 2005 to 2025. By David W. Lewis. Paper to be presented at "Visions of Change," California State University at Sacramento, January 26, 2007

a librarian's view....

'In the end, libraries may be serving only a small number of ...customers without any significant decline in the cost of services. **This is not a sustainable position**, and when this happens, **library services will either collapse or need to be radically restructured**'.

'The Innovator's Dilemma: Disruptive Change and Academic Libraries.' By David W. Lewis. Library Administration & Management 18(2):68-74 Spring 2004.

libraries extinct? (Extinction timeline -libraries by 2020)



http://www.nowandnext.com/PDF/extinction_timeline.pdf Richard Watson: 'As usual this is partly a bit of fun so don't take it too seriously! '

competition

some 'library' organizations *are* thriving...

2011

Google revenues up 32%

'Apple annihilates Wall Street performance estimates.
Third fiscal quarter results 'best quarter ever' (again)'

Amazon 'sales have soared by 51 per cent compared
to 2010'



'We're good now at cataloguing and indexing stuff.'

Eric Schmidt, Google CEO

'Inside Google. The Man with all the answers'. By David Rowan. Wired [UK edition] August 2009



*"... organize the world's information
and make it universally accessible and
useful"*

Future visions. JISC/SCONUL Library Systems workshop January 2012

2020: Director of learning and teaching

'We shut the library and outsourced the activities' we needed a few years back as part of the move to online learning. The old library building is now our campus LearningSpace. That also means of course **we got rid of all our library systems and the VLE**. The P____xxx 'ShareLearn' cloud based platform does it all. In effect it's a commercial shared service used by universities round the world. It also provides content and infrastructure for schools so we've been able to save money by working a lot more closely with our 'feeder' secondary schools. **The 'Library' is now simply another app** on the student's PD (personal device). **The content is much more integrated with the courses** now. We have a pay-per-use model for content and paid for resources are mixed with free OER. The world-wide 'collective intelligence' of ShareLearn means we have data to judge the quality and effectiveness of content measured by learning outcomes and cost. **We can see not only what resources get used but what resources have the biggest GPA impact**. Now the creation and selection of learning content is done based on proper metrics. It's a shared activity in a sense between students and academics'.

http://www.kenchadconsulting.com/wp-content/uploads/2012/02/Library_Systems_vision2020_Disruptive_Innovation_challenge_Jan2012.pdf

JISC Digital Infrastructure Team
Toiling on the digital infrastructure...

The Squeezed Middle: Exploring the Future of Library Systems

<http://infteam.jiscinvolve.org/wp/2012/01/30/exploring-the-future-of-library-systems-2/>

what key
challenges are
libraries trying to
address?

the user experience

discovering resources

the challenges

- libraries have historically done well in adapting to the needs of the user
- however, there are now many competitors and the absence of a user based approach and user intelligence beginning to tell
- threat from a combination of search engines, social network sites and publishers

'How users behave (and what libraries should do)'. David Nicholas. CIBER, UCL Centre for Publishing, School of Library, Archive and Information Studies University College London. (Presented at Sustaining the Digital Library Symposium. Edinburgh University 2007)

'In a focus group for one of my research studies, a college freshman bemoaned:

“Why is Google so easy and the library so hard?”

Visualize the Perfect Search.' By Carol Tenopir. Library Journal. 1 March 2009.
<http://www.libraryjournal.com/article/CA6639354.html?industryid=47130>

are library systems getting better the more people use them?

One of the key lessons of the Web 2.0 era is this: **Users add value**. But only a small percentage of users will go to the trouble of adding value to your application via explicit means. Therefore, Web 2.0 companies set inclusive defaults for **aggregating user data** and building value as a side-effect ordinary use of the application. As noted above, they **build systems that get better the more people use them**.

'What Is Web 2.0. Design Patterns and Business Models for the Next Generation of Software.' By Tim O'Reilly 30th September 2005 <http://oreilly.com/pub/a/web2/archive/what-is-web-20.html?page=3>



a better degree the more library resources you use?

'There is a statistically significant correlation across a number of universities between library activity data and student attainment'

'Looking for the Link between Library Usage and Student Attainment.' By Graham Stone, Bryony Ramsden, Dave Pattern Ariadne Issue 67. 4th July 2011
<http://www.ariadne.ac.uk/issue67/stone-et-al/>

we need a new generation of library discovery services

'A casual Google search may well be good enough for a daily task. But if you are a college student conducting his or her first search for peer-reviewed content, or an established scholar taking up a new line of inquiry, then the stakes are a lot higher. **The challenge for academic libraries**, caught in the seismic shift from print to electronic resources, **is to offer an experience that has the simplicity of Google**—which users expect—while searching the library's rich digital and print collections—which users need. Increasingly, they are turning to a new generation of search tools, called discovery, for help'

'The Next Generation of Discovery The stage is set for a simpler search for users, but choosing a product is much more complex.' By Judy Luther & Maureen C. Kelly Library Journal. 15th March 2011
http://www.libraryjournal.com/lj/ljinprintcurrentissue/889250-403/the_next_generation_of_discovery.html.csp

the user experience

discovering resources

some solutions

library discovery services are already moving to the cloud infrastructure, data and service

Keele University

Middlesex University

Northumbria University

Royal Holloway

Sheffield Hallam

University of Huddersfield

University of Leicester

University of London Research Library
Services

University of Surrey

University of Wolverhampton

Abertay Dundee

Glasgow Caledonian

University of Dundee

University of Edinburgh

Imperial College London

University of Nottingham

Loughborough University

University of Manchester

The University of Sheffield

University of Kingston

UCL

University of Salford

University of Birmingham

York St John

Discovery system procurements from SCONUL's Higher Education Library Technology wiki
(HELIBTECH.com)



Welcome to Discovery

Towards a thriving metadata ecosystem

In 2010, the JISC and RLUK Resource Discovery Taskforce (RDTF) worked with stakeholders from the libraries, archives and museums to set out a Vision for making the most of our resources by effectively positioning their metadata for discovery and reuse within the global information ecosystem.

Our aim is that **Discovery** will help to mobilise and energise the community, engaging stakeholders to create a critical mass of open and reusable data, and explore what open data makes possible through real-world exemplars and case studies.

making efficiencies

managing resources

making efficiencies the challenges

'One of the main issues facing libraries is the complexity of their systems environment.'

'The network reconfigures the library systems environment' Locan Dempsey's weblog. 6th July 2007
<http://orweblog.oclc.org/archives/001379.html>

'..we can think of three classes of systems - (1) the classic ILS focused on 'bought' materials, (2) the emerging systems framework around licensed collections, and (3) potentially several repository systems for 'digital' resources. Of course, there are other pieces

'In each case what we see is a backend apparatus for managing collections, each with its own workflow, systems and organizational support.'

'The network reconfigures the library systems environment' Locan Dempsey's weblog.6th July 2007
<http://orweblog.oclc.org/archives/001379.html>

collection acquisition and management at the network level

As library collections are increasingly shared, there may be significant advantages (in terms of both cost and efficiency) in **moving more acquisitions and licensing data and processes to the network level where they can be shared** among the ILS, ERM and repositories and with other libraries.

Moving data to the network, thereby enabling shared network services, is one solution.

'The Networked Library Service Layer: Sharing Data for More Effective Management and Co-operation'. By Janifer Gatenby. 30-July-2008 Publication: Ariadne Issue 56
<http://www.ariadne.ac.uk/issue56/gatenby/>

[the] future of library systems is 'toward libraries collaborating, cooperating, sharing resources among different libraries. And we see that in things like consortia, state-wide library systems, all kinds of ways that libraries have right now of working together for economic reasons, and it just makes so much sense in today's environment.'

Quoted in: 'The Future of the ILS.' By David Rapp. Library Journal 1st April 2011
http://www.libraryjournal.com/lj/home/889595-264/the_future_of_the_ils.html.csp

making efficiencies

some solutions

`conventional' shared services..

Thanks to \$385,000 from the Andrew W. Mellon Foundation, the libraries at Columbia University in New York City and Cornell University in Ithaca, NY, will begin

“the most expansive collaboration to date between major research libraries,” notably collaborative collection development. The libraries aim to develop “a joint program for identifying, purchasing, and managing world class collections of global resources,” said Anne Kenney, Cornell’s university librarian.

Columbia, Cornell Libraries To Partner on Collection Development, Acquisitions, Preservation.
\$385,000 Mellon grant supports joint project called 2CUL
Norman Oder -- Library Journal, 10/15/2009
<http://www.libraryjournal.com/article/CA6701530.html>

'conventional' shared services..



Copac National, Academic, & Specialist Library Catalogue

Copac National, Academic, and Specialist Library Catalogue

Search over 38 million bibliographic records from over 66 National, Academic and Specialist libraries



shared data

Knowledge Base+

Over the course of 2011-2012 HEFCE will be investing £600,000 in the creation of a shared service knowledge base for UK academic libraries to support the management of e-resources by the UK academic community.

<http://www.jisc-collections.ac.uk/knowledgebaseplus/>



a new generation of library system solutions

A new generation of **digital services platforms for libraries is emerging**, designed to provide a more comprehensive approach to the **management and access to all formats of library materials: print, electronic and digital**. These new systems involve a modernization of technology, embracing **service-oriented architectures**, availability for **APIs to facilitate interoperability** with external systems, **support for task workflows** more aligned with current operational realities, and more tightly coupled discovery interfaces that deliver access to library collections and services in a more unified and comprehensive manner. These new products, emerging in this era of **cloud computing**, have been designed for deployment through **software as a service** and rely on **highly shared data** models.

Breeding, Marshall. "Current and future trends in information technologies for information units". El profesional de la información, 2011, v. 21, n. 1, pp. 9-15

<http://www.elprofesionaldelainformacion.com/breeding-english.pdf>

characteristics of 'next generation' approaches

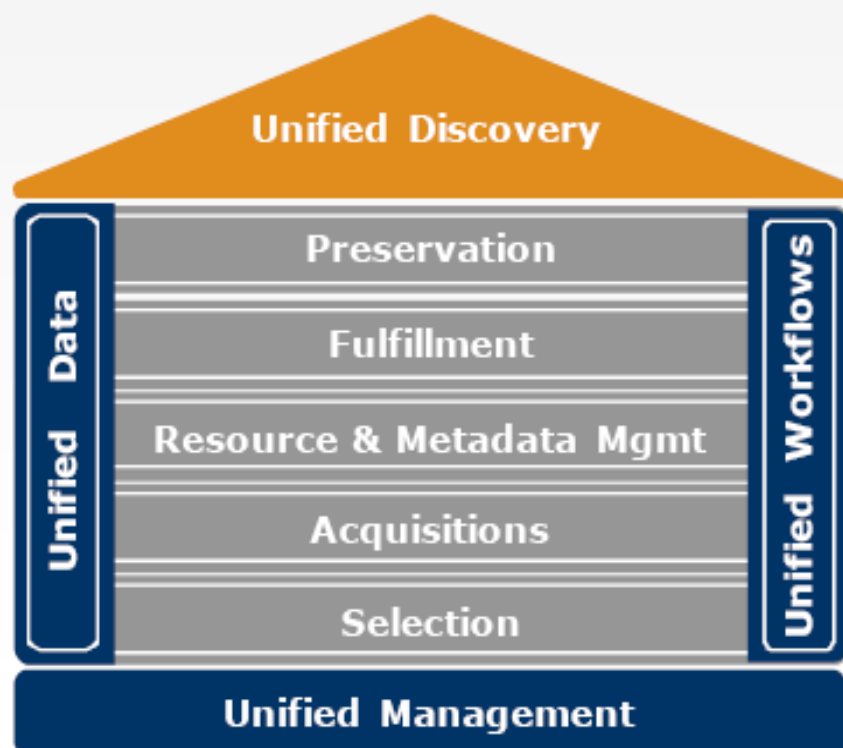
Search and discovery for end users is clearly 'de-coupled' 'from back-end' resource management

The overall architecture of the system is based around a (web based) **Service Oriented Architecture (SOA)** model to allow easier integration with 'admin' systems such as student registry and finance.

Systems are typically **'cloud' based**. Such 'multi-tenant' systems offer economies of scale and the opportunity to better share data (bibliographic, data on suppliers, licences etc) across the organisations that share the system. The management of print and electronic (digital) resources are integrated (or 'unified')

Related to the above is more attention to improved **workflows** leading to a lower cost of ownership

Turn format-based **vertical silos**
to service-based **horizontal workflows**



'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

Subscriptions: £90 (UK); £98 (World); \$195 (N. America)

June 2010

LIBRARY&INFORMATION UPDATE

The essential briefing for the sector • www.cilip.org.uk/update

'The University Library is seeking to procure a unified library management system '

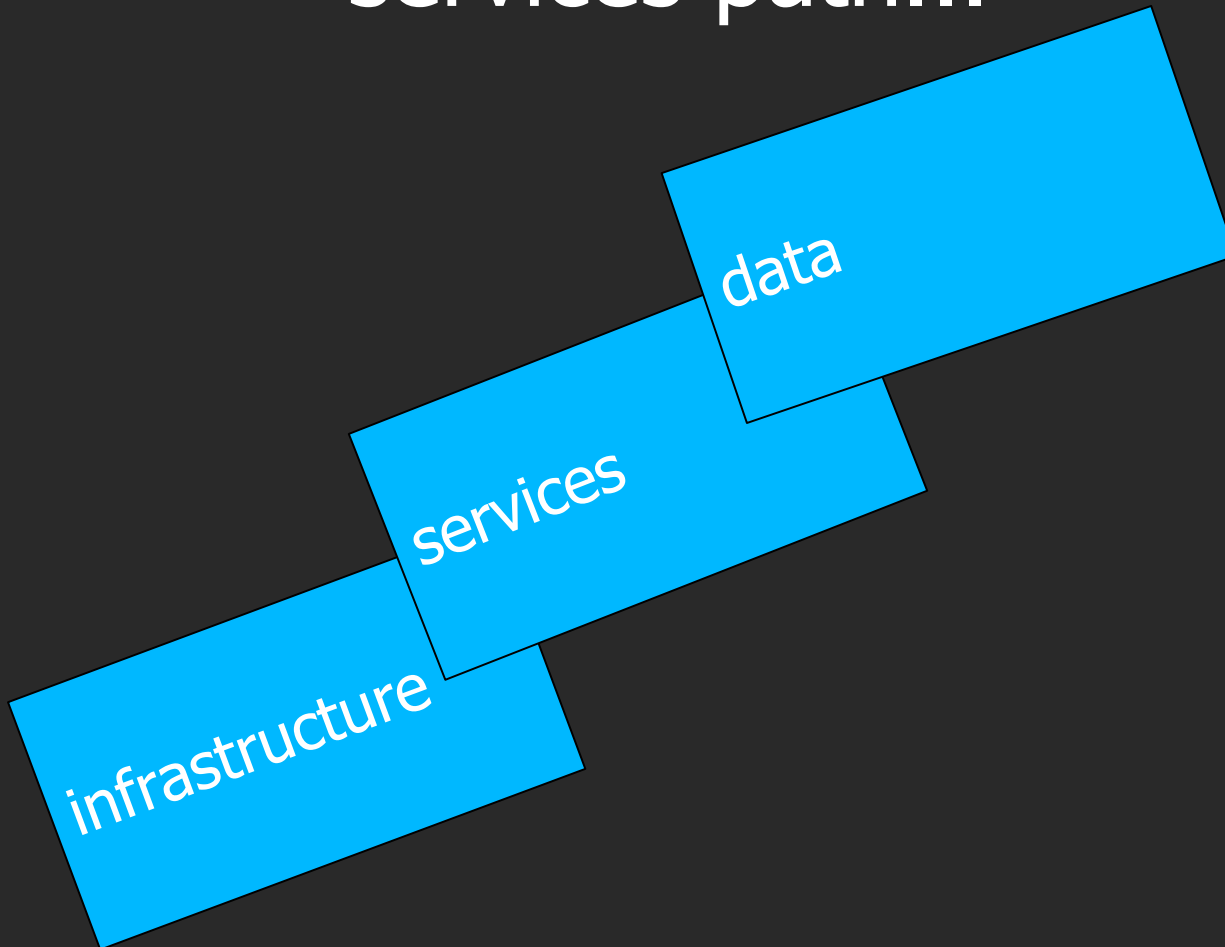
'work in concert with a vendor and other interested research library stakeholders to contribute towards the design, development and delivery of a next generation library system which will produce a **unified resource management approach to the full spectrum of library collections.**'

And

'The University Library has a **strategic preference and a clear business requirement for a born cloud based system.** The library places the utmost importance on the architecture for any new system being modern, fit for purpose & designed specifically to operate within a cloud environment'.

<http://www.publictenders.net/tender/103132>

some UK HE libraries have already
selected this cloud-based shared
services path...



UCISA March 2012

transforming library systems in HE



Ken Chad

Ken Chad Consulting Ltd

@kenchad

ken@kenchadconsulting.com

Te: +44 (0)7788 727 845

www.kenchadconsulting.com