IDMAPS

Institutional Data Management

for

Personalisation & Syndication

IDMAPS

Introduction:	Steve Williams
Institutional Data:	Caleb Racey
Benefits:	Gary Davison

Introduction

Steve Williams
Director, ISS

Project Overview & Data Architecture

Caleb Racey
Middleware Team, ISS

Outline

- Bid context
- Overview of project
- Data Architecture
- Project phases
- Benefits

History

Recent surge in Data review activities

- Raw SAP data to FMSC computing science
- CAMA review
- Increased single sign on requirements
- Increased demands from internet applications.

Context - Bid

- JISC call for E-Administration & Web 2.0 bids
- £200-300k projects.
- Joint bid with FMSC support from Library, Registrar & VC
- Bid submitted in summer 2008
- Marked joint top out of 20 successful projects
- Builds on and enhances previous work

Identity Management

Newcastle University & JISC

IAMSECT £150k http://iamsect.ncl.ac.uk/

Institutional and Federated single sign on

G-FIV-O £100k http://gfivo.ncl.ac.uk/

Group Management, virtual organisation tools

ID-MAPS £300k http://research.ncl.ac.uk/idmaps

Data management, web2.0 exploitation

The Project Team

Steve Williams	Principal Investigator
Janet Wheeler	Project manager
Alan Cecchini	Liaison with Business Applications; Data and policy requirements.
Gary Davison	Project management assist; Data & policy; Web 2.0 integration.
Jonathan Noble	Implementation of data requirements, technical infrastructure, integration
Cal Racey	Overall technical coordination & direction.
John Snowdon	Liaison for Faculty of Medicine data systems; Data & policy requirements
Rob Booth	Data and policy requirements.
Jon Dowland	Data management implementation; Stakeholder engagement.
Clare Johnson	Liaison with Business Applications.
Andrew Martin	Implementation of SOA approaches to data-driven integration.
John Moss	Liaison with Medical Sciences administration; System & support req.
Paul Thompson	Implementation of Web 2.0 integration; Data and policy requirements.
Dave Wolfendale	Stakeholder engagement.

The Project Team

JISC Funding covers 3 new 18 month posts.

1 Middleware Team, ISS
1 Information Applications and Delivery, ISS
1 Faculty of Medical Sciences Computing

IDMAPS Overview

IDMAPS:

"Will provide the data you want, more simply and more securely - and provide clarity about where the master copy of every piece of information is"

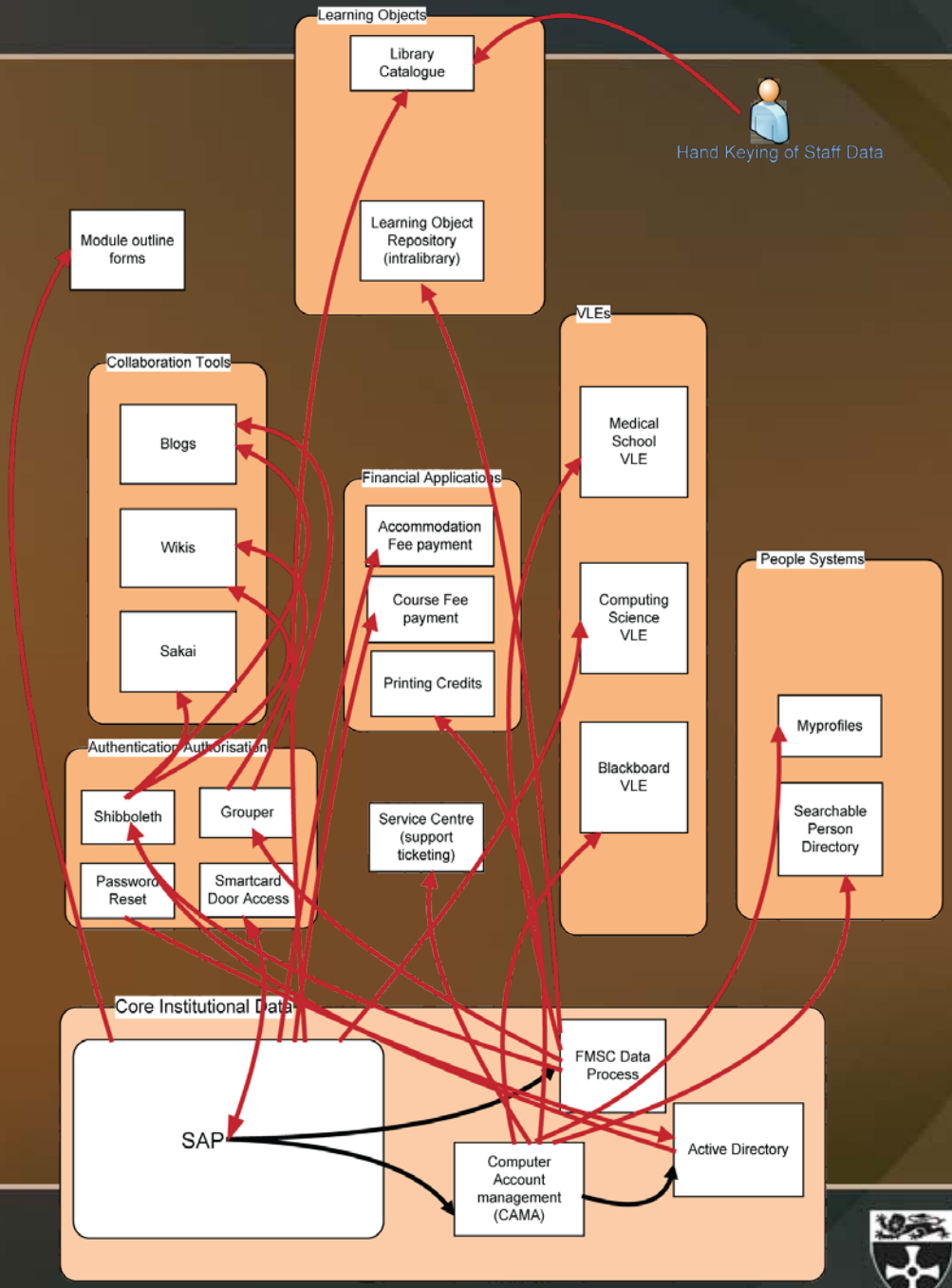
IDMAPS Overview

- Investigate existing structures, requirements, and the fitness for purpose of existing solutions
- Specify a flexible information architecture of core user data which can be adapted and extended to meet changing needs
- Specify & deploy interfaces to enable data exchange and reuse across a range of systems

The problem

- Incremental deployment of new systems has resulted in a large legacy of different data flows into applications
- This results in an inconsistent patchy user experience
- Systems are spread across departmental boundaries (ISS, Library, FMSC, Comp Sci, Estates etc)
- Integrating different systems into cohesive user experience currently impossible

Before...


Learning Objects
Library Catalogue
Learning Object Repository (intralibrary)
Hand Keying of Staff Data
Module outline forms
VLEs
Collaboration Tools
Blogs
Wikis
Sakai
Financial Applications
Accommodation Fee payment
Course Fee payment
Printing Credits
Medical School VLE
Computing Science VLE
Blackboard VLE
People Systems
Myprofiles
Searchable Person Directory
Authentication Authorisation
Shibboleth
Grouper
Password Reset
Smartcard Door Access
Service Centre (support ticketing)
Core Institutional Data
SAP
FMSC Data Process
Active Directory
Computer Account management (CAMA)

Before…

The strategic core data requirement of the system as a whole has not been captured.

Feedback mechanisms are inadequate leading to data inaccuracies.

Policy implications of data ownership are not embedded in consumers.

Many applications don't have access to core data, so either obtain data 'downstream', or create their own version.

Changes to core data can have unforeseen circumstances to dependant systems.

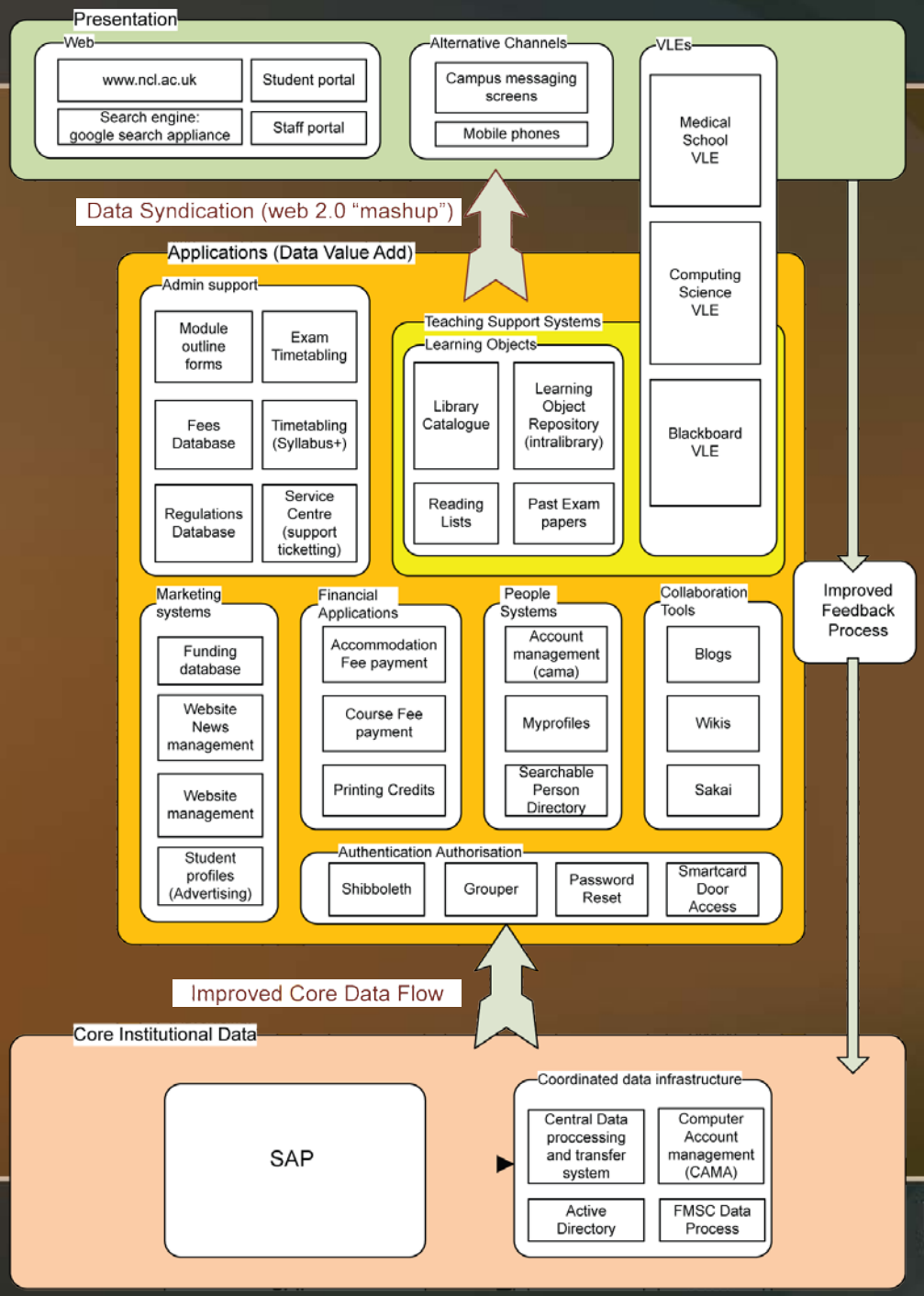
Standalone Systems, little integration

The solution

System integration requires user facing systems to use common set of usernames, course codes, module codes.

Data needs to be updated in a consistent, timely manner and needs to be performed to a common set of Business rules.

After...


Presentation
Web
www.ncl.ac.uk
Student portal
Search engine: google search appliance
Staff portal
Alternative Channels
Campus messaging screens
Mobile phones
VLEs
Medical School VLE
Computing Science VLE
Blackboard VLE
Data Syndication (web 2.0 "mashup")
Applications (Data Value Add)
Admin support
Module outline forms
Exam Timetabling
Fees Database
Timetabling (Syllabus+)
Regulations Database
Service Centre (support ticketting)
Teaching Support Systems
Learning Objects
Library Catalogue
Learning Object Repository (intralibrary)
Reading Lists
Past Exam papers
Marketing systems
Funding database
Website News management
Website management
Student profiles (Advertising)
Financial Applications
Accommodation Fee payment
Course Fee payment
Printing Credits
People Systems
Account management (cama)
Myprofiles
Searchable Person Directory
Collaboration Tools
Blogs
Wikis
Sakai
Authentication Authorisation
Shibboleth
Grouper
Password Reset
Smartcard Door Access
Improved Feedback Process
Improved Core Data Flow
Core Institutional Data
SAP
Coordinated data infrastructure
Central Data proccessing and transfer system
Computer Account management (CAMA)
Active Directory
FMSC Data Process

After…

Centralisation and definition of core data flows.

Create a reusable core data set with defined technical interfaces & procedural support.

Create the necessary common identifiers in systems.

Enable greater syndication & personalisation of data.

Fully exploit existing systems to give greater value.

Project Phases

0: Project Setup

1: Audit

2: Information architecture

3: Implementation

4: Pilot

5: Integration

Audit

Define Scope:

User data, not financial

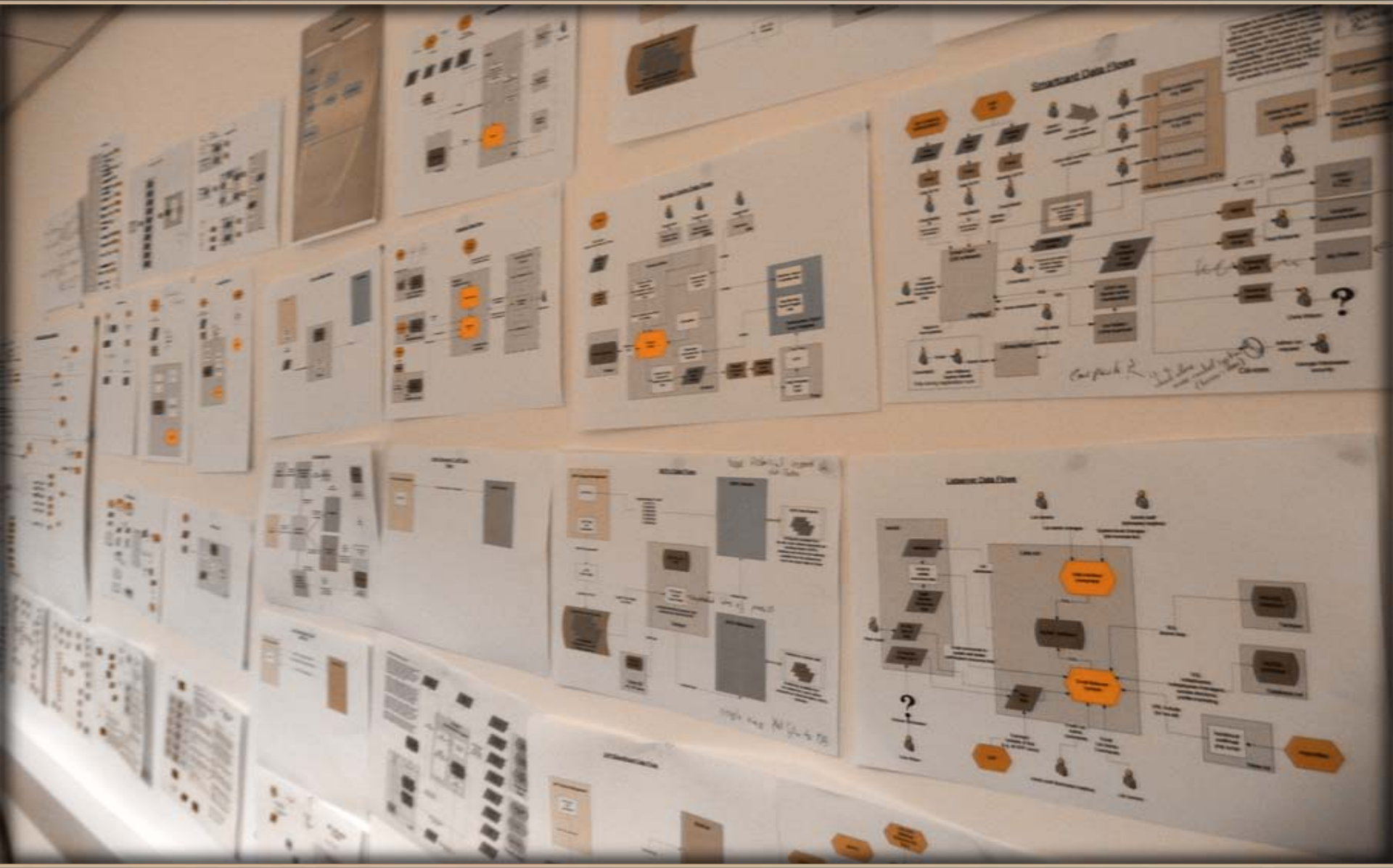
Produce a clear overview of institutional data flows.

Methodology:

- Interviews with stakeholders
- System reviews
- Combine Existing documentation

Outputs:

- Systems integration descriptions
  - Easy to understand
  - Maintained by ISS and stakeholders
- Clear map of Institutional data flows



Stakeholders

- Business Development Directorate
- Central Administration (Records Management)
- Computing Science
- Data Protection & Freedom of Information
- Estates
- Examinations office
- Finance Office
- HR
- INTO
- ISS
- Library
- Marketing & Communications Directorate
- QUILT
- School of Medical Sciences Education Development
- Student Progress Service

Affected Systems

- Accommodation
- Active Directory
- Blackboard
- CAMA
- Dspace
- ePortfolios
- ePrints
- Estates ticketing system
- Exam papers
- FMSC VLEs
- Grouper
- Individuals project (DMS)
- Intralibrary
- MOFS
- Myprofiles
- NESS
- NUcontacts
- Print credits
- Recap
- S3P
- Service centre
- Shibboleth
- Sitemanager
- Smartcard
- Student homepage
- Regulations
- Telecoms
- Timetabling
- UNIX
- www.ncl.ac.uk

Information Architecture

Goals:

- Robust
- Coherent
- More responsive
- Increased Future proofing
- Increased traceability, improved audit
- Define different user types

- Will support legacy
- Incorporate best of breed
- Informed by Gartner and Butler analyses

Information architecture

Technical architecture

- Single point of contact for data
- Defined technologies
- Defined common processes
- Robust, Improved Governance

Support architecture

- Defined support process
- Clear Documentation
- Ongoing needs gathering
- Review processes

Outputs

- Institutional data model
- Fully documented exemplar service descriptions & policy framework
- Data management policies published as reusable templates
- Integrated systems architecture using Web 2.0 technologies
- Best practice models for undertaking an institutional data infrastructure review

Security / Risk

What data we have

- Where “top copy” resides
- Who we send it to
- How important it is
- What standards we expect for handling the data
- How when we delete data
- What FOI/Data protection responsibilities are

Benefits

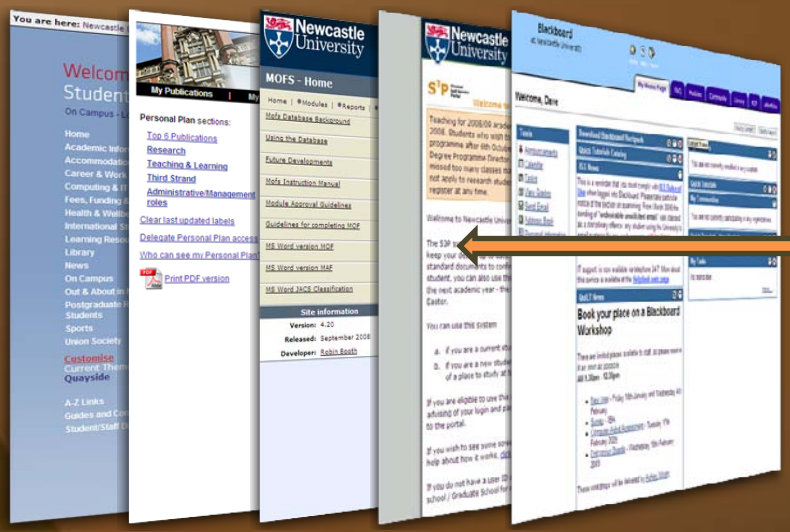
- Flexible responsive architecture
- Improved support processes
- Clear understanding of system interaction
- Clear defined system boundaries
- Increased Stakeholder knowledge
- Improved processes
- Increased security
- Risk reduction mitigation
- Quicker higher quality focussed collaboration with internal partners
- Enhanced user experience *……more later*

Personalisation, Benefits & Project Outcomes

Gary Davison
Information Applications & Delivery Team, ISS

Single Sign On

Systems access a single improved core of relevant university data:



Shibboleth

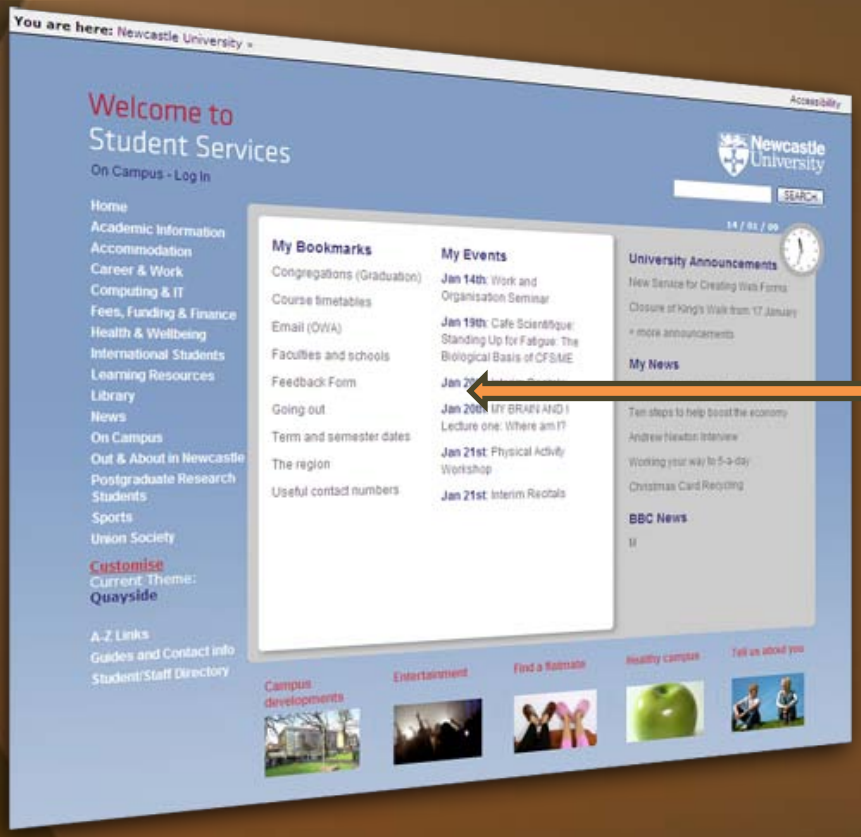
- Name
- Email Address
- School or Service
- Course & Modules

Personalisation & Integration

- Student homepage
- Staff homepage
- Blackboard & other VLEs

- Systems present relevant information to users (and to each other)

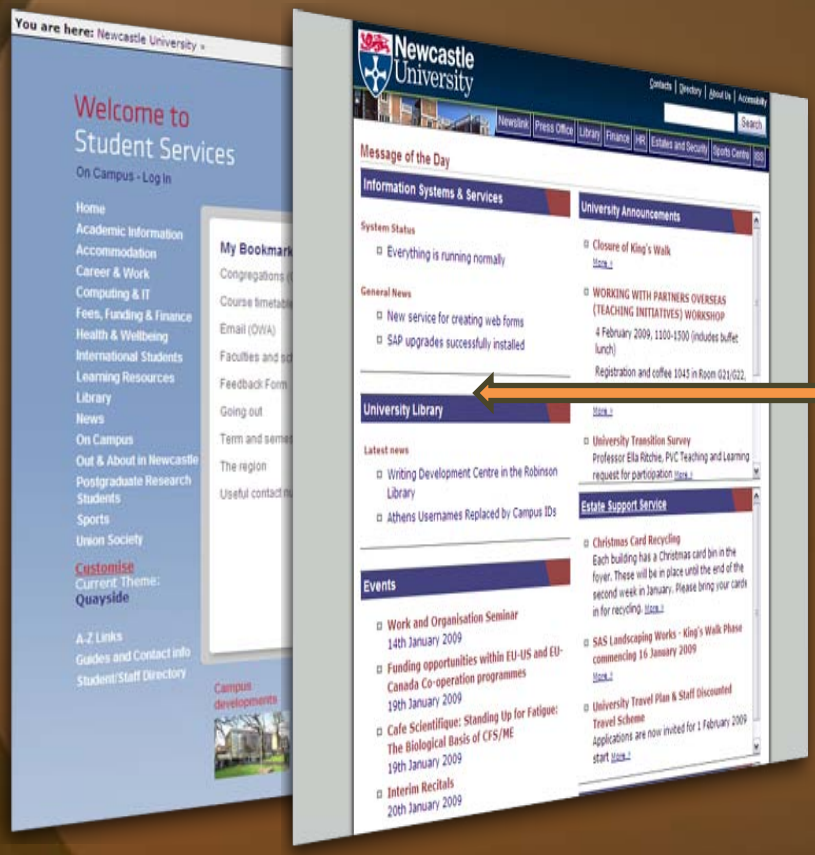
Teaching Materials



My Course

- Blackboard / VLE's
- MOFs
- Reading Lists
- ReCap
- Exam Papers

News and Events



My News

- School & Faculty Websites
- Central Services Websites
- Blogs, Wikis & Repositories

Academic Information

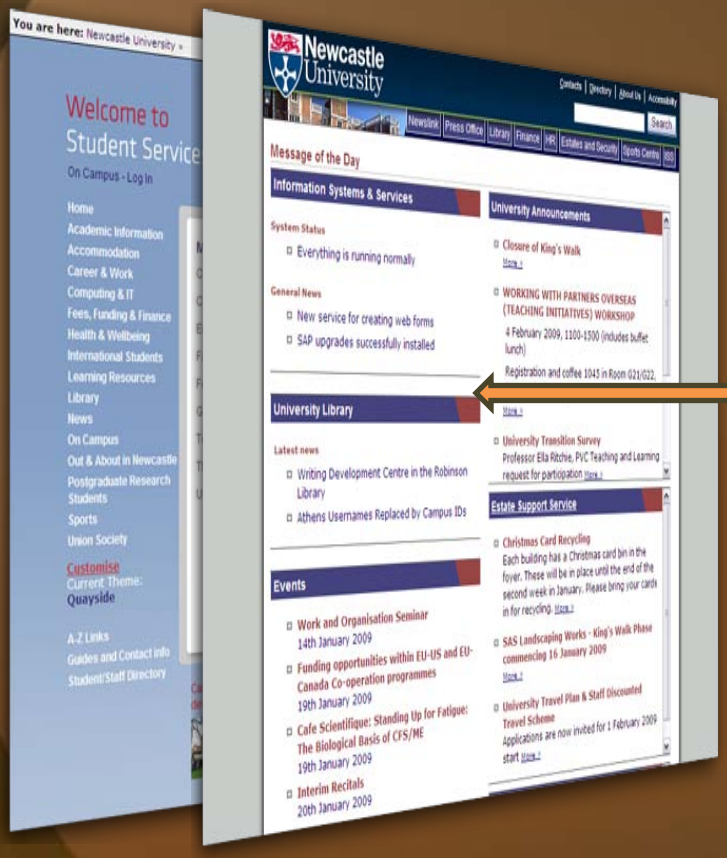
My Timetable

- Syllabus +
- Business Diary

My Contacts

- NUContacts
- CAMA

Administrative Systems



My Queries

- Student Services CRM
- ISS Service Centre
- Other Helpdesk Software
- Print Credits

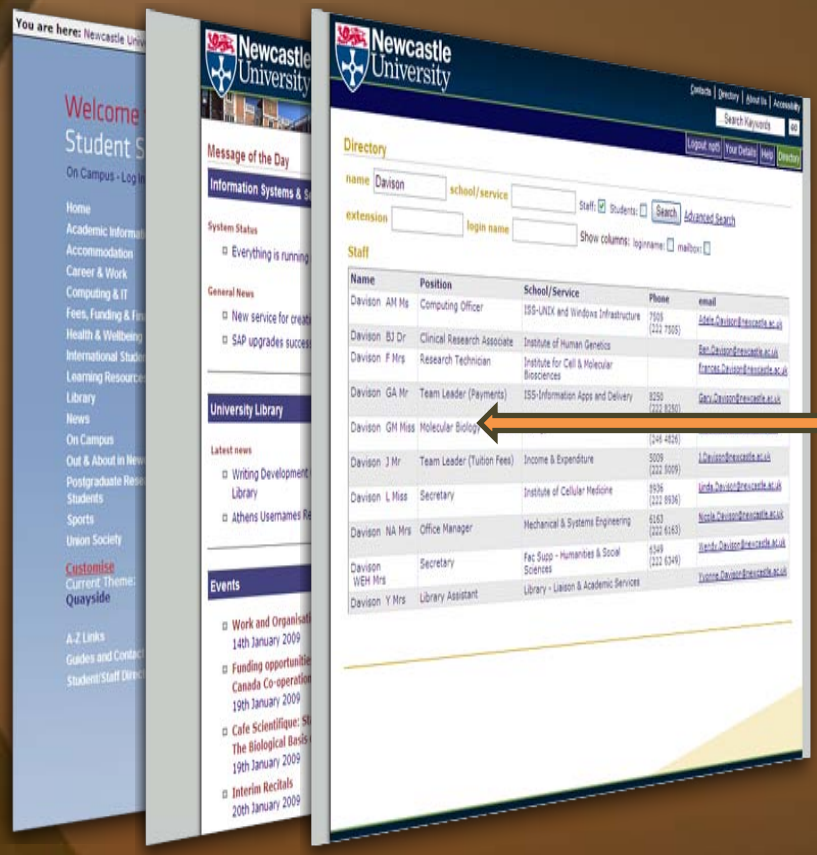
Research Community

My Project A

My Project B

- Website
- Blog
- Wiki
- Repository

Data Visibility



- My Details
  - CAMA
  - MyProfiles
  - ISS Accounts
  - Student Profile

Data Visibility & Administration

Improved visibility of Staff & Student's own data

- Easier to spot errors
- Processes in place to feedback and correct

Benefits for:

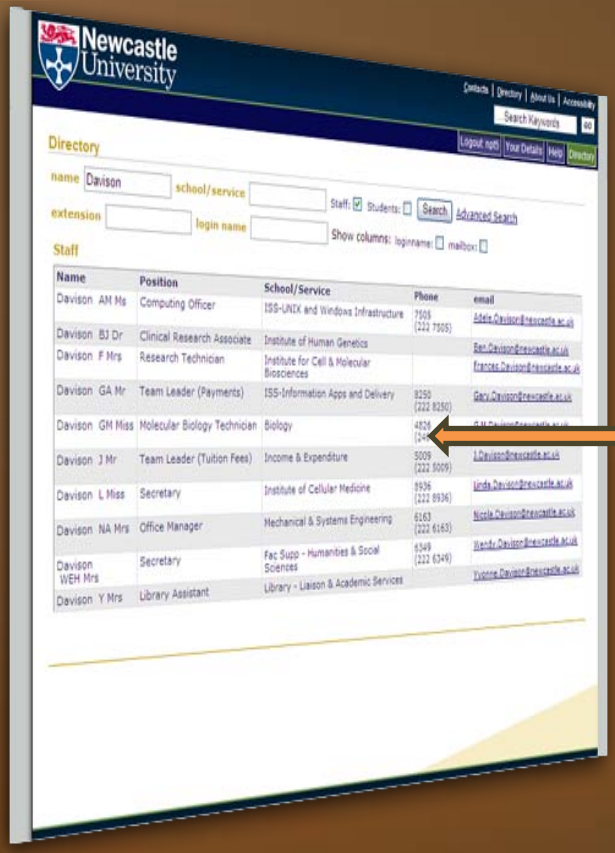
- Marketing and Publicity
- Recruitment of Staff and Students
- Attraction of Researchers
- Community, Collaboration & Third Strand
- Internal Communications

Third Strand, Research & Marketing Sites

Community Tools

- Blogs
- Wikis
- Repositories
- Staff & Student Web Profiles

Improved Staff Directory



Richer Staff Data

- Course & Modules
- Research Interests
- Building & Room
- Informal Names
- Social Networking?

Flexibility & Sustainability

For future generations…

- Platform Agnostic
- Standards Compliant
- Emphasis on Policy not Technology

Conclusion

- Project Timeframes
- What's Next
- Questions

Project Timeframes

0: Project Setup	Oct 08 – Feb 08
1: Audit	Oct. 08 – Mar. 09
2: Information architecture	Jan. 09 – Jul. 09
3: Implementation	Apr. 09 – Jul. 09
4: Pilot	Aug. 09 – Dec. 09
5: Integration	Sep. 09 – Feb. 10

- Ongoing Reporting, embedding and dissemination.

What's Next

- Quarterly updates (watch project website for more!)
- Next Dissemination event in summer 2009
- Non-technical briefing paper for University management available (very) soon
- Mailing list

Question Time

Are we missing any…

- Stakeholders?
- Benefits?
- Governance issues?

Jon Dowland
Unix Team, ISS

IDMAPS

Institutional Data Management *for* Personalisation & Syndication

- Project Manager: Janet Wheeler
- Email: idmaps@ncl.ac.uk
- Website: http://research.ncl.ac.uk/idmaps