

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”

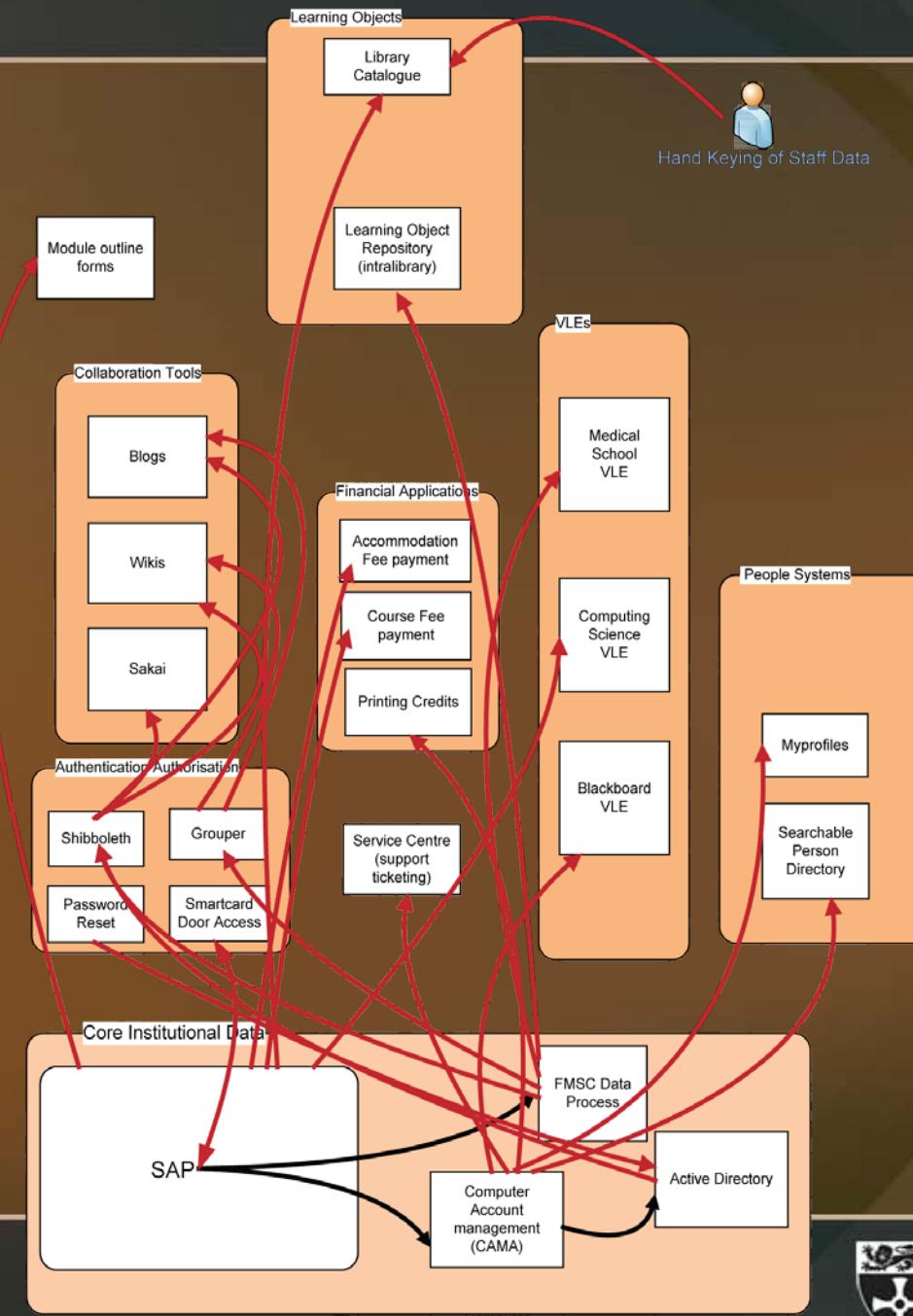
IDMAPS Overview

- 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...



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.

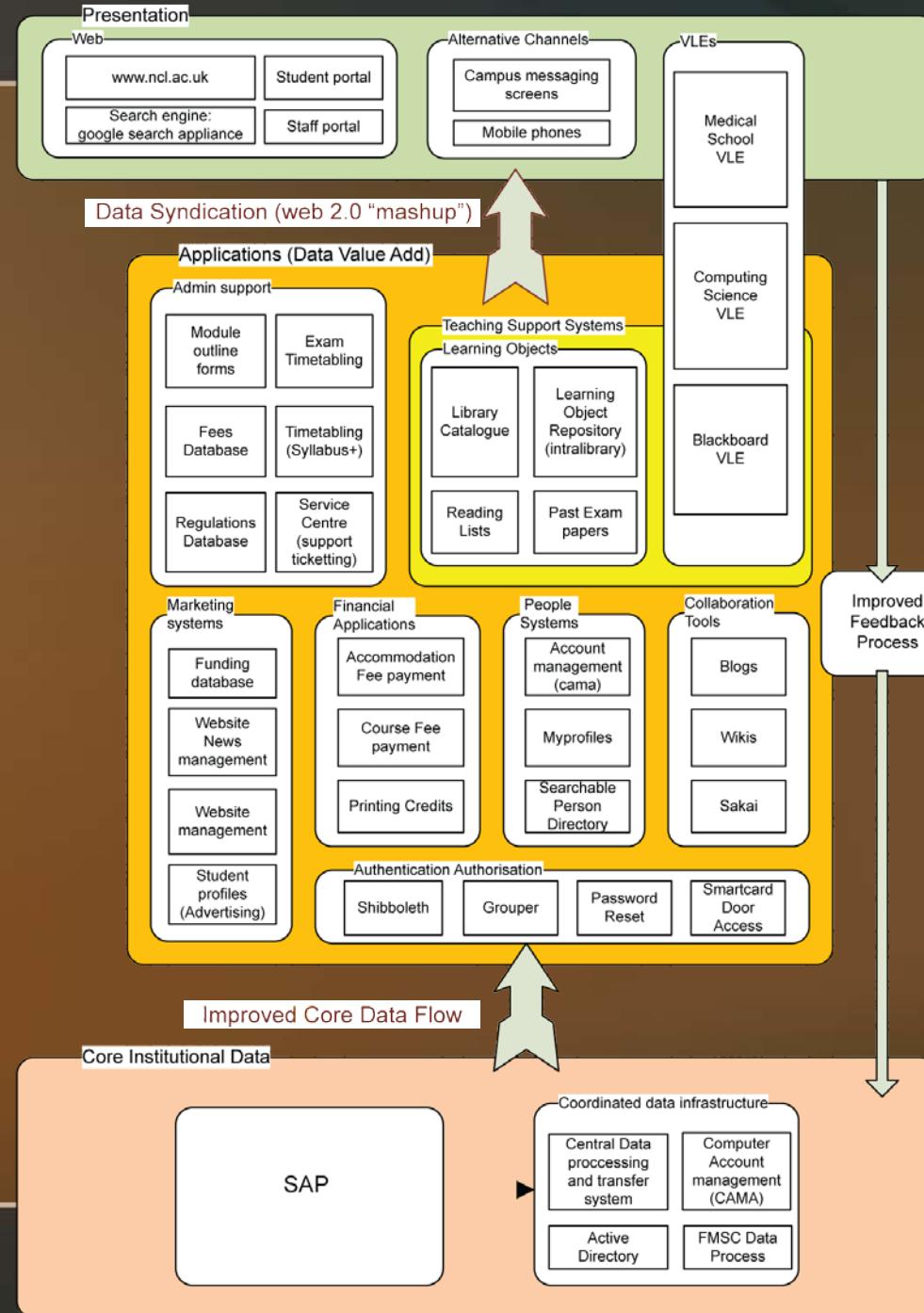
Standalone Systems, little integration

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...



Centralisation and definition of core data flows.

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

After...

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

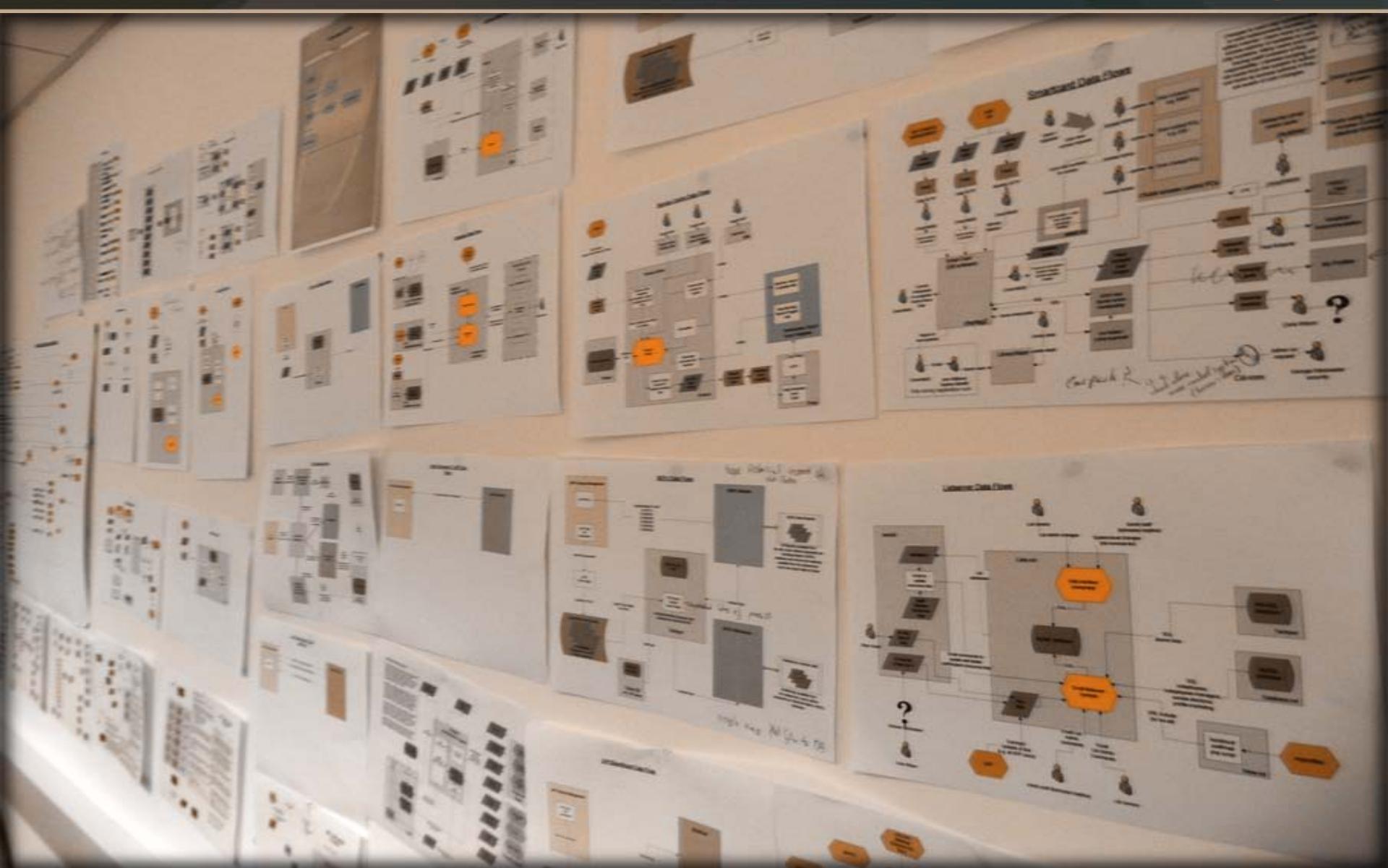
Produce a clear overview of institutional data flows.

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

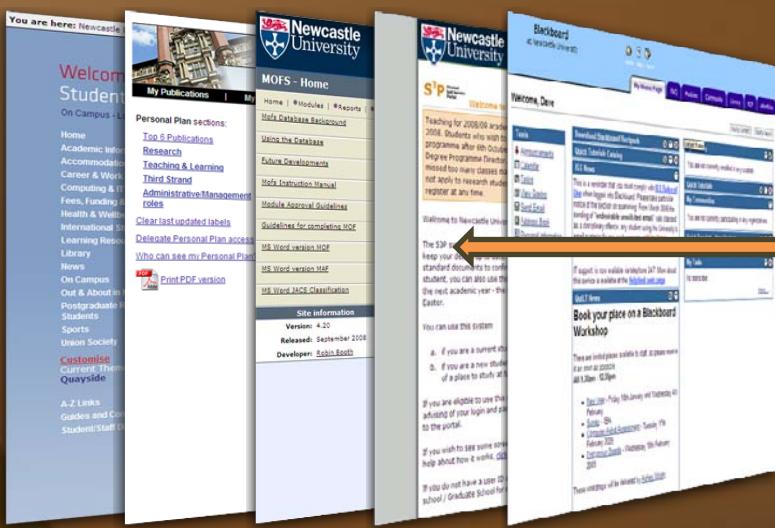
- Flexible responsive architecture
- Improved support processes
- Clear understanding of system interaction
- Clear defined system boundaries
- Increased Stakeholder knowledge
- Improved processes
- Increased security
- Risk reduction mitigation
- Quicker higher quality focussed collaboration with internal 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

You are here: Newcastle University »

Welcome to Student Services

On Campus - Log In

Home
Academic Information
Accommodation
Career & Work
Computing & IT
Fees, Funding & Finance
Health & Wellbeing
International Students
Learning Resources
Library
News
On Campus
Out & About in Newcastle
Postgraduate Research Students
Sports
Union Society
Customise
Current Theme: Quayside

A-Z Links
Guides and Contact Info
Student/Staff Directory

My Bookmarks
Congregations (Graduation)
Course timetables
Email (OWA)
Faculties and schools
Feedback Form
Going out
Term and semester dates
The region
Useful contact numbers

My Events
Jan 14th: Work and Organisation Seminar
Jan 19th: Cafe Scientifique: Standing Up for Fatigue: The Biological Basis of CFS/ME
Jan 29th: **MY BRAIN AND I**

University Announcements
New Service for Creating Web Forms
Closure of King's Walk from 17 January
+ more announcements

My News
Jan 20th: **MY BRAIN AND I**
Lecture one: Where am I?
Jan 21st: Physical Activity Workshop
Jan 21st: Interim Recitals
Ten steps to help boost the economy
Andrew Heaton interview
Working your way to 5-a-day
Christmas Card Recycling
BBC News

Campus developments
Entertainment
Find a flatmate
Healthy campus
Tell us about you

My Course

Blackboard / VLE's

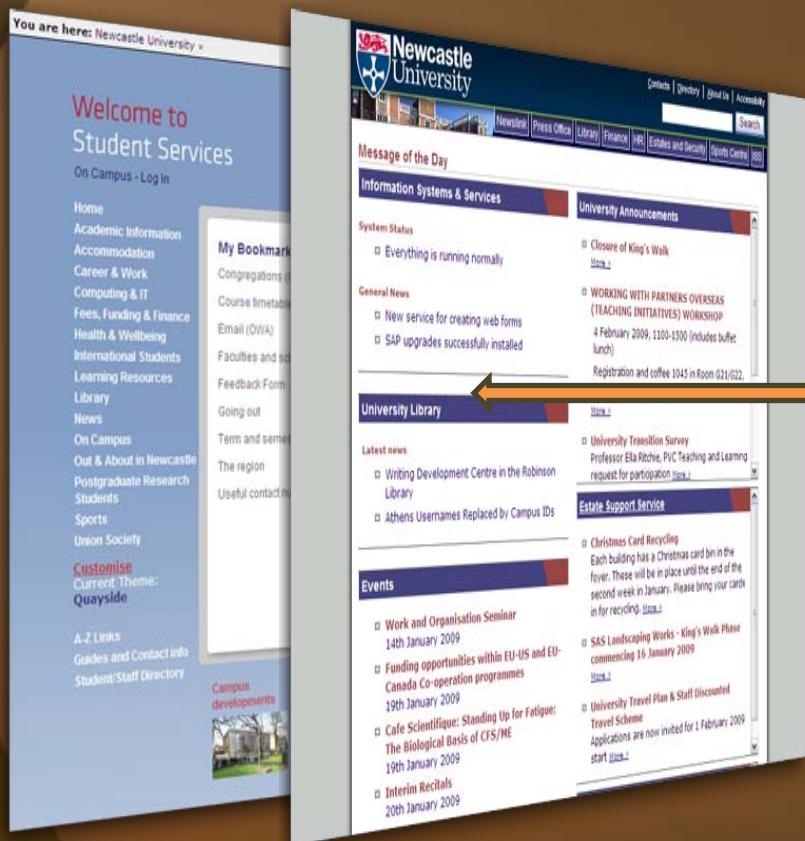
MOFs

Reading Lists

ReCap

Exam Papers

News and Events



You are here: Newcastle University >

Welcome to Student Services

On Campus - Log in

- Home
- Academic Information
- Accommodation
- Career & Work
- Computing & IT
- Fees, Funding & Finance
- Health & Wellbeing
- International Students
- Learning Resources
- Library
- News
- On Campus
- Out & About in Newcastle
- Postgraduate Research
- Students
- Sports
- Union Society

Customise Current Theme: Quayside

A-Z Links

Guides and Contact Info

Student/Staff Directory

Campus developments

Newcastle University

Message of the Day

Information Systems & Services

System Status

- Everything is running normally

University Announcements

Closure of King's Walk

WORKING WITH PARTNERS OVERSEAS (TEACHING INITIATIVES) WORKSHOP

4 February 2009, 1200-1500 (includes buffet lunch)

Registration and coffee 1045 in Room 021/022.

My Bookmarks

Congregations

Course timetables

Email (OWA)

Faculties and schools

Feedback Form

Going out

Term and semester

The region

Useful contacts

University Library

Latest news

- Writing Development Centre in the Robinson Library
- Athens Usernames Replaced by Campus IDs

Events

- Work and Organisation Seminar
- Funding opportunities within EU-US and EU-Canada Co-operative programmes
- Cafe Scientifique: Standing Up for Fatigue: The Biological Basis of CFS/ME
- Interim Recitals

My News

School & Faculty Websites

Central Services Websites

Blogs, Wikis & Repositories

Academic Information



My Timetable

Syllabus +

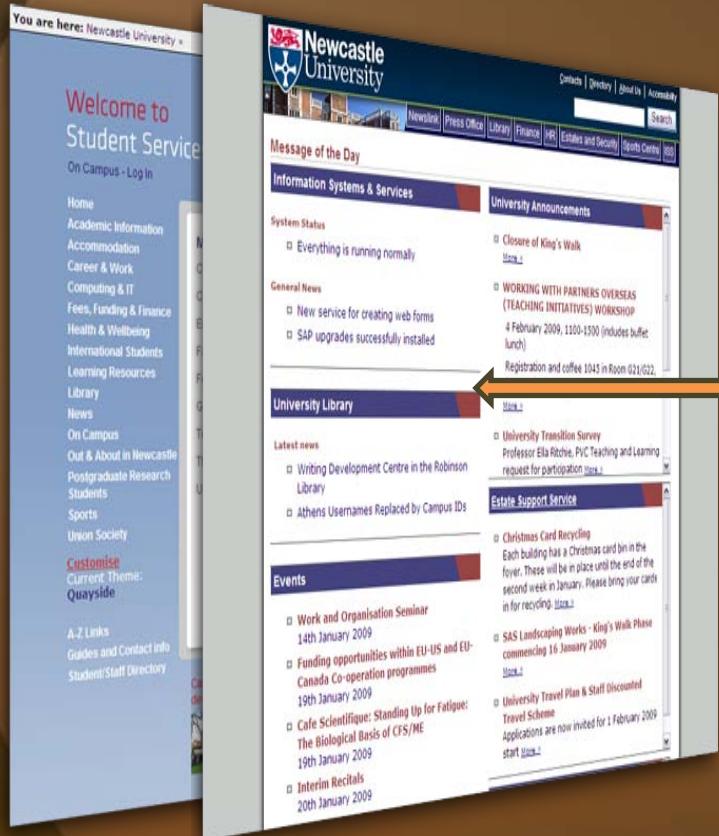
Business Diary

My Contacts

NUContacts

CAMA

Administrative Systems



The screenshot shows the Newcastle University homepage with a sidebar and a main content area. The sidebar includes links for Welcome to Student Services, On Campus - Log In, Home, Academic Information, Accommodation, Career & Work, Computing & IT, Fees, Funding & Finance, Health & Wellbeing, International Students, Learning Resources, Library, News, On Campus, Out & About in Newcastle, Postgraduate Research, Students, Sports, Union Society, and A-Z Links. The main content area features a 'Message of the Day' and sections for Information Systems & Services, University Announcements, University Library, and Events. An orange arrow points from the 'Events' section towards the 'My Queries' box on the right.

My Queries

Student Services CRM

ISS Service Centre

Other Helpdesk Software

Print Credits

Research Community

The image shows a composite screenshot of two web pages. On the left is the 'Welcome' page of the Newcastle University intranet, featuring a sidebar with links for 'Student Services', 'Academic Information', 'Accommodation', 'Career & Work', 'Computing & IT', 'Fees, Funding & Finance', 'Health & Wellbeing', 'International Students', 'Learning Resources', 'Library', 'News', 'On Campus', 'Out & About in Newcastle', 'Postgraduate Research', 'Students', 'Sports', 'Union Society', 'Customise', 'Events', and 'A-Z Links'. The main content area displays 'Message of the Day', 'Information Systems & Services', 'System Status', 'General News', 'Announcements', 'Preferences', 'Account', 'Help', and 'Events'. On the right is the 'My Workspace' page of the TREAT-NMD Intranet, which includes a 'Message of the Day' (about an upgrade), a 'Calendar' for January 2009, and a 'My Workspace Information' section. A red arrow points from the 'My Workspace' section of the TREAT-NMD page to the 'My Workspace' section of the Newcastle University page.

My Project A

My Project B

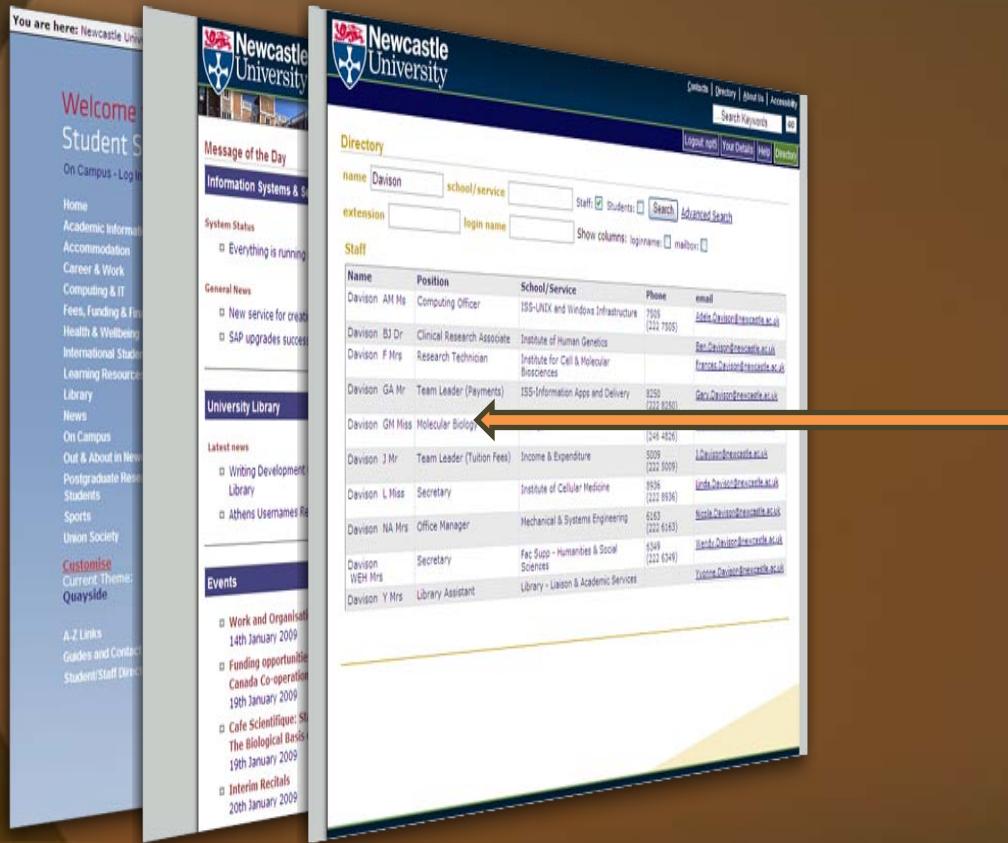
Website

Blog

Wiki

Repository

Data Visibility



The screenshot shows the Newcastle University website with a search results page for 'Davidson'. The results are filtered for 'Staff' and 'Students'. One result, 'Davidson GH Miss Molecular Biology', is highlighted with a red arrow pointing to it. The page includes a header with the Newcastle University logo and a search bar, and a sidebar with various links like 'Welcome', 'Student Services', and 'Events'.

Name	Position	School/Service	Phone	email
Davison AM Ms	Computing Officer	ISS-UNIX and Windows Infrastructure	7509 (222 7509)	Andy.Davison@newcastle.ac.uk
Davison BJ Dr	Clinical Research Associate	Institute of Human Genetics		Ben.Paisley@newcastle.ac.uk
Davison FMrs	Research Technician	Institute for Cell & Molecular Biosciences		Frances.Davison@newcastle.ac.uk
Davison GA Mr	Team Leader (Payments)	ISS-Information Apps and Delivery	8259 (222 8259)	Gary.Davison@newcastle.ac.uk
Davison GH Miss	Molecular Biology		(248 4254)	
Davison J Mr	Team Leader (Tuition Fees)	Income & Expenditure	5009 (222 5009)	Laura.Davison@newcastle.ac.uk
Davison L Miss	Secretary	Institute of Cellular Medicine	9356 (222 9356)	Linda.Davison@newcastle.ac.uk
Davison NA Mrs	Office Manager	Mechanical & Systems Engineering	6153 (222 6153)	Nicola.Davison@newcastle.ac.uk
Davison WEH Mrs	Secretary	Fat Supp - Humanities & Social Sciences	6349 (222 6349)	Wendy.Davison@newcastle.ac.uk
Davison YMrs	Library Assistant	Library - Liaison & Academic Services		Yvonne.Davison@newcastle.ac.uk

My Details

CAMA

MyProfiles

ISS Accounts

Student Profile

Data Visibility & Administration

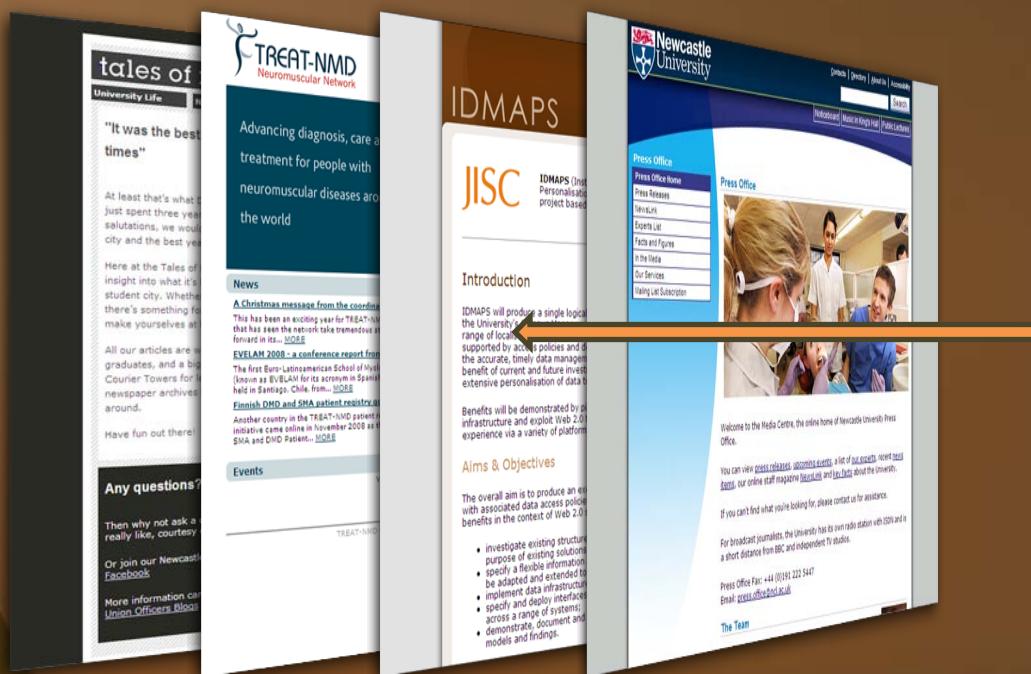
Improved visibility of Staff & Student's own data

- 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

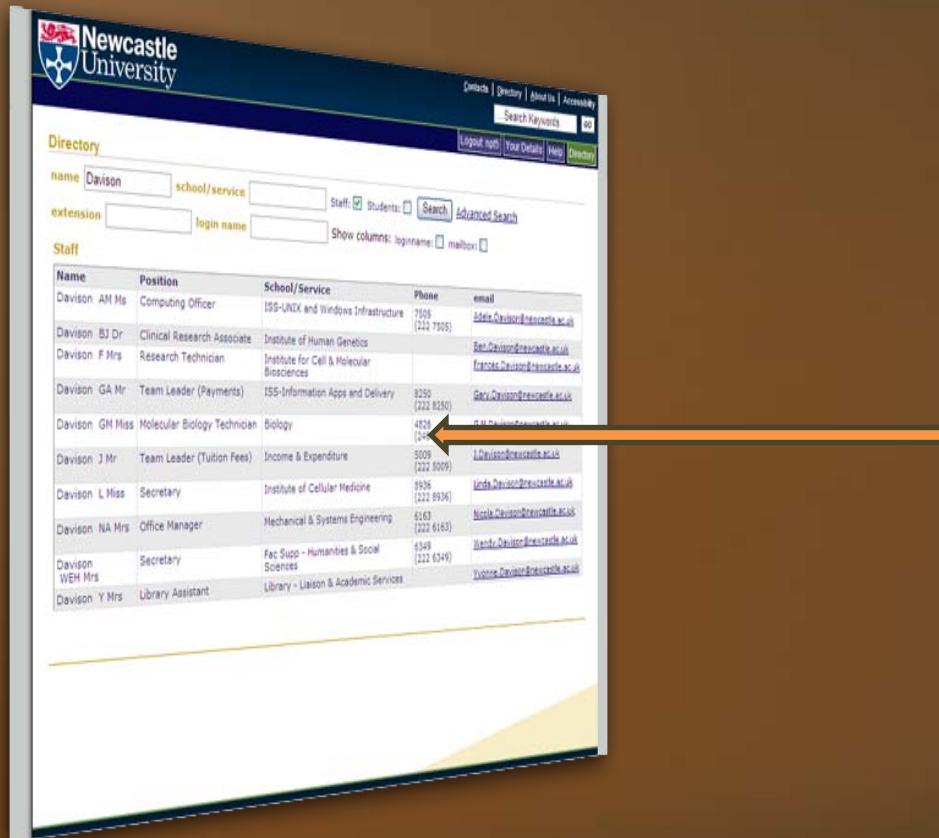
Blogs

Wikis

Repositories

Staff & Student Web Profiles

Improved Staff Directory



Name	Position	School/Service	Phone	email
Davison AM Ms	Computing Officer	ISS-UNIX and Windows Infrastructure	7505 (222 7505)	Adrian.Davison@newcastle.ac.uk
Davison BJ Dr	Clinical Research Associate	Institute of Human Genetics		Ben.Davison@newcastle.ac.uk
Davison F Mrs	Research Technician	Institute for Cell & Molecular Biosciences		Frances.Davison@newcastle.ac.uk
Davison GA Mr	Team Leader (Payments)	ISS-Information Apps and Delivery	8259 (222 8259)	Gary.Davison@newcastle.ac.uk
Davison GM Miss	Molecular Biology Technician	Biology	4826 (222 4826)	GM.Davison@newcastle.ac.uk
Davison J Mr	Team Leader (Tuition Fees)	Income & Expenditure	5009 (222 5009)	J.Davison@newcastle.ac.uk
Davison L Miss	Secretary	Institute of Cellular Medicine	9336 (222 9336)	Linda.Davison@newcastle.ac.uk
Davison NA Mrs	Office Manager	Mechanical & Systems Engineering	6163 (222 6163)	Nicole.Davison@newcastle.ac.uk
Davison WEH Mrs	Secretary	Fat Supp - Humanities & Social Sciences	6349 (222 6349)	Wendy.Davison@newcastle.ac.uk
Davison Y Mrs	Library Assistant	Library - Liaison & Academic Services		Yvonne.Davison@newcastle.ac.uk

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>