

Integrated Research Support Systems – Practical, Panacea or Pipe-Dream?

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Career History

- Joined the Research Councils (SERC) in 1990;
- Involved in a variety of IT systems projects including web developments, grant processing & MI systems
- Left EPSRC to join Warwick (Gamekeeper turned Poacher) in 2008 – business process review is a key priority for us;
- As an aside, involved as an Elected Member in Local Authority information management.








Research Support Structures?

Research Support Structures are a means to an end, not an end in themselves. They must be designed to support the objectives and capacity of your Institution. They should complement and support those activities which are required to support the conduct of the research by your research staff. Centralised services add value only when they out-perform or are more cost effective than those based directly in research groups or because they meet a central University need, for example to provide financial control or to meet quality assurance or governance requirements.

The Research Process

- Development of a research idea
- Generation of a research proposal /or plan
- Application for funding made (if required)
- Award of funding (if successful)
- Research is undertaken - monitoring and support may be required
- Research is completed, publications and outputs are generated;
- Research information informs future planning.

Where are Systems valuable?

- Development of a research idea; 
- Generation of a research proposal /or plan; 
- Application for funding made (if required); 
- Award of funding (if successful); 
- Research is undertaken - monitoring and support may be required; 
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Why Integrated Systems?

- Central management of information on a single system, avoiding duplicate data and data entry;
- “Cradle to Grave” support from inception to outputs, and consistent input of management information throughout;
- Integrated management and storage of all relevant information – costings, applications, approvals, contracts, outputs.

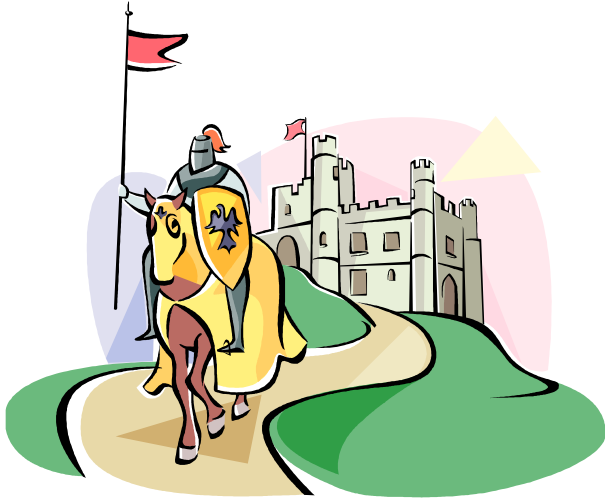
Why (Not) Integrated Systems?

- Lack of cost-effective, fully effective commercial systems;
- Complex and escalating requirements, and many potential applications of the information;
- Systems integration problems – e.g. grants management to finance systems, internal to external interfaces (e.g. JES);
- Lack of resource for development of bespoke and optimised solutions.

Why do we need improved Systems?

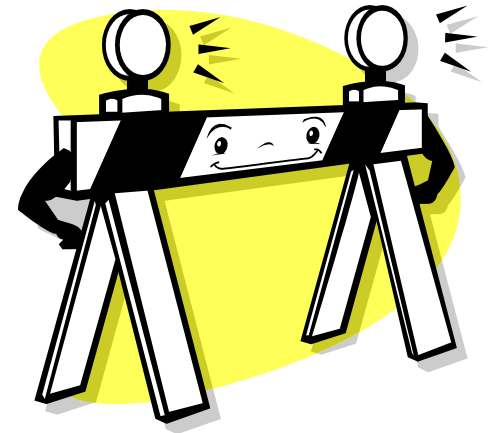
- To increase efficiency of internal processes – e.g. electronic not paper-based, improved work-flow management.
- Provision of improved management information for process management and University planning;
- Avoidance of duplicated (or multiplied) data capture, management & storage.

Perceptions of Research Support?



Knights in
Shining
Armour?

Villains?



...or just a
barrier?

Heroes or Villains?

- Ability to deliver a high quality service, meeting necessary deadlines and customer expectations;
- Provision of timely management information available quickly and easily to all staff;
- Provision of a seamless, one-stop-shop that ensures information is made available for different requirements – e.g. publications & grant data for REF.

EPSRC Grant System (NEXUS)

- All electronic management of approvals and document storage;
- Full electronic management of workflow;
- Common desktop for all staff providing easy access to information;
- Easy exchange of data for management information – e.g. EPSRC’s “Grants on the Web”

EPSRC Grant System (NEXUS)

- Bespoke system acquired at significant cost and requiring significant ongoing support and maintenance;
- Major issues and problems occurred during procurement, including the need to bring development back “in-house”;
- NEXUS will be replaced by the RCUK “Next Generation Back Office” – hence cost-benefit of the investment questionable.

EPSRC Management Information System (MIS)

- Relational database (SQL) for all EPSRC grants data;
- Data made available to all staff through MS Access for bespoke queries and (relatively) user friendly interfaces for standard queries;
- Flexible and easy to use, available to all, and has proved an invaluable tool for analysis of grants information.

EPSRC Management Information System (MIS)

- Bespoke system developed in-house based on commercial SQL-Server platforms;
- Initial user requirements drawn up “on a fag packet” for a specific purpose, but proved to be very flexible;
- Improved management information has increasingly informed and changed the way EPSRC operates – e.g. in understanding grant funding success rates.

IT Systems in a Local Authority

- IT Services were contracted out, and in my experience were poor quality;
- Management information was often very detailed for external reporting, but in my experience of limited value;
- The move to electronic systems (even e-mail) was fraught with problems , expensive, and very slow.

Potential lessons for the HEI Sector

- Bespoke systems may be necessary - there is no “preferred model” for research support and UK Universities structure their support offices in different ways;
- Cost vs. benefit must be a key determinant – e.g. systems must meet the business need but be affordable;
- “Smart” and appropriate development of commercial systems can be very effective

Research Support at Warwick

- Who are we?
- What do we do?
- Why is it important?
- How do we help our staff?

Who are we?

- c.50 administrative, clerical and IT support staff within the University Academic Office
- With research funding, financial, legal, IT, project management (and more) skills;
- Working closely with academic and departmental support staff (located in departments/regular surgeries held);
- Work closely with the Pro Vice Chancellors for Research;
- Administer activities such as the Research Development Fund (RDF);
- Work closely with colleagues in Management Information & Planning

Warwick's External Sources of Funding – Awards 08/09

Research Councils	£29.6m
Central Govt, Local Auth. & Public Corps	£47.8m
Industry & Commerce	£9.4m
Charities	£4.9m
European Union	£3.3m
Overseas & other	£0.8m
Total 2008-09	£ 95.8m

What do we do?

- Source/create research funding opportunities;
- Develop applications, bids, proposals, tenders, business plans and negotiate legal agreements to secure funding for research (1,467 applications worth £309m in 2008-09);
- Formally accept funding awards (655 new awards of value ~£97m in 2008-09); and financially manage projects (invoicing and expenditure claims management) (~£73m income in 2008-09);
- Support the InfoEd Software suite underpinning research support operations and MI;
- Statutory role – the Administrative Authority i.e. the legal entity.

Warwick's Vision 2015 is to...

- Double Warwick's turnover;
- Double Postgraduate research students;
- Establish new multidisciplinary research centres;
- Support 45 ISI Highly Cited researchers
- Develop new international research collaborations.

How do we help our staff?

- Finding funding (*e.g. ResearchResearch*);
- Making successful grant applications;
- Training & support (*e.g. for new applicants*);
- Raising academic profiles, finding partners and providing information on Warwick's research (*Warwick's Research Web pages and Expertise*)
- Support for Research planning at various levels.

Current developments of Research Support and Information Systems

- Implementation of InfoEd “Proposal Development” alongside “Proposal Tracker” module for all-electronic grant (& contract) approvals;
- Improved interface between InfoEd and SAP;
- Further exploration of “Expertise” module;
- Use of InfoEd data in our “Research Dashboard” the underpins research planning.

Research Dashboards (1/2)

- Vision 2015 inspired
- Multi-phase project led by Management Information & Planning Office
- Collaboration between RSS, Graduate School, Finance Office, IT Services and HR
- Data warehouse fed by numerous Corporate systems

Research Dashboards (2/2)

- IBM Analytics used to create dashboard reports on departmental performance
- Data embedded into Annual Research Assessment and Planning Group meeting process

Support Systems – Panacea?

- Research support systems must support high volumes of transactions, deliver high customer satisfaction; and integrate with other core systems (e.g. finance systems);
- Systems can be designed to deliver optimum support where resources allow;
- Quality management information can increase efficiency, assist the development of best practice, and critically underpin planning.

Support Systems – Pipe-Dream?

- Current systems are sub-optimal, and the sector is too segmented to offer a strong market to commercial suppliers;
- Financial constraints in the sector are likely to severely restrict the ability to develop high quality, bespoke systems;
- Quality management information can only inform, and cannot in itself overcome our constraints.

Support Systems – Practical!

- Current systems “do the job” – although most research offices are dissatisfied to some degree with functionality/cost/flexibility;
- Bespoke systems seem to deliver higher satisfaction, but at what additional cost?;
- There is huge scope to improve the quality and utility of management information from work flow to strategic planning.

Thank you!

Questions?