UCD RESEARCH IT SERVICE NEEDS

September 2013

Addressing the future IT needs of the UCD Research Community

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SUMMARY OF RECOMMENDATIONS

Recommendation 1. IT should redefine its service offering in terms of user needs and provide multiple ways for users to access information about how and where to avail of services. The presentation of services should be decoupled from organisation structures such that a user can locate a service without knowing the IT organisation structure.

Recommendation 2. In redefining those services, IT should clearly define those services which it fulfills directly, those services to which it provides gateways to (i.e. IT services act as a broker to a third party (internal or external) for service fulfillment) and services to which it can signpost users (i.e. service is outside the remit of IT but it can usefully point users to that service provider).

Recommendation 3. The IT services website should be reorganised so as to reflect and communicate the above.

Recommendation 4. The IT service organisation would benefit from realigning its structures such that they move to an advisory research service aligned to university domains (e.g. colleges). These advisors would work with researchers in their specified domain. Advisors will be au fait with best practice for IT relevant to the domain area and will maintain service relationships with service provides (internal and external) with a view to ensuring delivery for researchers. As part of the IT strategic planning process, this recommendation should be addressed in the context of the full set of university needs for IT service delivery.

Recommendation 5. The provision of expert advisory services would impact a range of research areas and should be implemented immediately. Three areas of need have been identified – GIS, Digital Arts and Humanities and Personalised Medicine. Since these skills would be new to the organisation, they should be sourced independently to the advisors appointed as part of the IT strategy implementation.

Recommendation 6. IT services should include the provision of web design, development, hosting and maintenance as part of its portfolio of service offerings. The service should be paid for via research grants.

Recommendation 7. – Video conferencing and podcasting supports need to be provided as a service to meet the needs of the community rather than the current ad hoc approach.

Recommendation 8. Given the relatively small number of universities in Ireland, it is recommended that UCD advocate for a centralised policy approach and the creation of national data repositories rather than each university having to undertake the burden of creating its own solution. Ireland could follow a fully centralised model as per the Australia or the devolved hub and spoke model similar to the UK, where individual Universities run specialist repositories as part of the national system.

Recommendation 9. The advisors appointed within the IT services structures will, as part of their role, provide a service to researchers to create data plans at the proposal stage of projects and advise on implementation as necessary.

INTRODUCTION

The University Research Strategy Board (URSB), on recommendation of the Research IT Steering Group, created a working group to undertake a foresight exercise, which would inform the structure and service offering from UCD IT Services to the UCD research community.

The working group was interested in understanding the impact that drivers of change would have on the research IT services to be provided to the community over the next 5 years. These drivers were identified as

- The emergence of New Technology Platforms - Mobile, Cloud, Safe, Simple, BYOD
- Dramatically increased Scale - High-scale & Grid Computing
- New IT Methods - Agile, Flexible, Collaborative, Social, Easy, Visual
- Increased levels of expectation from users - reliable, responsive, relevant, cost-effective services
- New Funder Requirements – treating Data as a research output in its own right rather than an input.
- Enabling New ways of working and collaborating

The working group known as the **Research IT Foresight Working Group**, chaired by Professor Zorica Nedovic-Budic, established a small project team to work with it. In preparation for the next IT strategic planning cycle, this group set out to define the next stage of development of Research IT infrastructure and services to support researcher requirements. The focus was on the next 5 years so as to ensure the delivery of a service that will be relevant, reliable and responsive to the changing needs of the research community.

Project Objectives:

- Identify existing strengths and areas for development;
- Identify changes in how research is conducted and the impact that this will have on IT needs; and
- Identify the supports needed to manage and share research data.

This report represents the output of that process and is structured as follows

- **Introduction** – sets out the background and structure of the report.
- **Approach** – sets out the approach taken to the project and provides an overview of the project governance.

- **Findings and Recommendations** – sets out the project findings and associated recommendations to be implemented.

- **Appendices** – Details the output of the research focus groups.

APPROACH

Governance

The project consisted of a small project team, reporting to the URSB working group – **Research IT Foresight Working Group.**

The governance structure for this project is illustrated hereunder

Scope of Review

Scope of Services included in Review

The project team found it useful to consider the taxonomy of IT systems for Research as proposed in The Leadership Foundation for Higher Education, "Getting to Grips with…" series, when determining the scope of this exercise.

1. ***Generic support for researchers:*** this is part of mainstream ICT services
2. ***Provision of specialist applications:*** much research requires specialist software to provide specific functionality (such as statistical analysis and mathematical modelling); or to support appliances and specialist equipment running in laboratories; or to allow researchers to develop their own applications. In addition, researchers may create, use or modify specific datasets. Some of these are in the

public domain; others have to be procured (and might come with licensing restrictions).

3. ***Computationally intensive research:*** also called high-performance computing (HPC) or supercomputing, this is the most complex and potentially the most expensive area of research computing.

4. ***Research administration:*** these are the ICT systems that support the business of research itself.

Based on the above taxonomy the scope was therefore considered to include areas 1 – 3 inclusive, with the 4th area deemed outside scope.

Scope of Organisation included in Review

The scope of the project was to determine the IT needs of users in relation to the conduct of their research activities. While there is a group in UCD tasked with the delivery of IT services to the community i.e. Research IT, many of the so-called IT services sit outside the scope of the unit in terms of delivery. IT services for researchers may in fact be provided by any of IT Research services, the wider IT Services organisation, the Library, the Audio Visual Centre, external third parties or other. Therefore all internal and external organisational boundaries have been ignored for the purposes of this exercise and instead the project assumed a user defined perspective as to what constitutes IT to support research.

Further current organisational and service delivery offerings are based on a segmentation of the user population into a variety of roles. Academics needs are broadly defined as being that of a teacher, administrator and researcher. The reality is that the three roles require many of the same services and the demarcation of services along artificial role boundaries makes accessing services difficult. Therefore, the project team decided that in the context of this exercise the term “user” would encompass all aspects of the academic persona rather than limiting the assessment to the artificial concept of a “research user”.

Timeframe for Foresight

The focus of the project was to determine the needs of the research community for IT services and infrastructure over the next 5 years. While 5 years is a relatively short time window for a foresight exercise, the nature and speed of change in the IT sector and the potential for the emergence of new disruptive technologies dictated a need to reflect on the near future.

Methodology

In order to determine the needs of the community, the project looked at practices and service offerings in other universities and organised a number (3) of focus groups with members of the UCD research community.

The team undertook three focus groups held over a three-day period, drawn from academics over the full range of UCD's disciplines. These took place on

- April 30th – Group 1
- May 1st – Group 2
- May 2nd – Group 3

Each of the groups responded to the same three questions

1. Thinking about your existing interactions with Research IT and its associated services
    a) What are the things that it does well?
    b) Are there any existing gaps in service/support?
2. Thinking about the future directions of your own research and the emerging trends and techniques applicable to your field, will your ICT needs change in the next 5 years and if so; what new or enhanced services and infrastructural requirements will you have?
3. How can the university best assist you with emerging requirements for data management and data sharing?

While the first two questions were open in nature and allowed the discussion of a broad range of concerns and challenges, the third question focused on the area of research data management as the working group identified this as an area which needed to be addressed institutionally. Emerging requirements from funders and other stakeholders are determining that researchers need to retain data collected as part of their research efforts and deposit this information in accessible data repositories. While the requirement is at an early stage in the Irish and European context, international practice demonstrates that this will become a significant issue for UCD over the near term and should be addressed.

Following the focus groups, the output was synthesised and compared with international best practice so as to provide the findings for this report.

FINDINGS & RECOMMENDATIONS

Summary of Key Findings

IT Services for Research within UCD is generally well regarded. Focus group participants and other key stakeholders highlighted a number of the service and organisational aspects that supported this widely held and articulated viewpoint; particularly:

- Recognition that services have come a long way in the past 10 years, providing a stable network, server support and local HPC services;
- Appreciation of the high quality skills/expertise available to researchers;
- The value and advantage of the provision of a gateway to ICHEC;
- Valuing the overall responsiveness of the service.
- Much of the service is now regarded as a utility, which has come to be expected in terms of availability and performance.

While appreciating the current services, some areas for service improvement and enhancement were identified. They can be broadly categorised into three distinct areas;

1. The need to **consolidate and communicate existing offering**
    - IT Services is a difficult organisation to navigate and the service proposition is unclear.
    - Inconsistency of service across the university – e.g. basic infrastructure missing in Newman.
    - Service gaps e.g. website design and hosting, video conferencing, accessibility.
2. There is demand for a **new type of IT Service delivery approach** to support research, including
    - Expanded advisory type services to include
    - Access to third party services
    - Planning input into proposals
    - Discipline based expertise or interfaces
    - Training Services
3. **Data management policy formulation and advice**

The remainder of this section takes each of the three aspects above and discusses the findings in more detail.

Consolidate and communicate existing offering

During the focus groups it became apparent that many of the users struggled with the navigation of the IT organisation and its associated service offerings. Much of the confusion in terms of accessing the service and knowing what is available tended to result from the differing perspectives of IT services and its user population. IT services are articulated around service lines and distinct personas such that Research IT is seen to service researchers and their needs while teaching and learning is supported from another group. The IT organisation is structured around this artificial service structure and the website is built around this organisation structure. Users tend to access services based on their requirements rather than from an organisational perspective. As users perform multiple roles – i.e. teacher, researcher and administrator – they tend not to see these as individual activities but over lapping and integrated requirements.

IT services is also only partly responsible for the delivery of what a user might determine to be IT services. For example, many IT training courses are offered through HR and PMDS, the Library houses specialist IT services and groups such as the audio visual group offer pod casting services.???

A review of organisation? and websites of other universities shows that the navigation of services has been divorced from organisational structures and that the IT services catalogue often merely redirects users to other service provides for fulfillment. Best practice articulation of services is often broken into the following three categories:

1. Direct fulfillment – this is where the service organisation is responsible for all aspects of the service delivery;
2. Gateway service – this is where the service organisation provides an access point to users and manages the interface to a third service provider. The third party provider is responsible for fulfillment but the service organisation manages the relationship and access to that service for the user group (e.g. ICHEC); and
3. Sign posted services – this is where the service organisation has no involvement in either providing access to or fulfillment of a service but provides basis information to direct the user to the required service (i.e. signposting). (e.g. Training Catalogue).

It would be useful for IT services to consider its service offering in terms of this type of framework rather than concentrating on direct fulfillment.

The feedback from the focus groups highlighted the following:

- The IT service offering needs to be defined in the first instance before developing new services.
- The available service is wider than communicated and that not all of it falls under the remit of IT Services, let alone Research IT. Taken in its broadest perspective, users would like IT services to provide an overview of the services available to support

research, regardless of who delivers/fulfills such services organisationally – i.e. a one stop service catalogue.

Based on the foregoing we would make the following recommendations

Recommendation 1. IT needs to redefine its service offering in terms of user needs and provide multiple ways for users to access information about how and where to access services. The presentation of services should be decoupled from organisation structures such that service information can be located without a need to understand the IT organisation structure.

Recommendation 2. In redefining its service offering, IT should clearly define those services which it fulfills directly, those services to which it provides gateways to (i.e. IT services act as a broker to a third party (internal or external) for service fulfillment) and services to which it can signpost users (i.e. service is outside the remit of IT but it can usefully point users to that service provider.

Recommendation 3. The IT services website needs to be reorganised so as to reflect and communicate the above.

New Type of IT service and delivery organisation needs

In addition to looking at the current service offering and organisation structures, the focus groups also looked at what is required into the future. There was general agreement that the foundations are good but the time has come to move to a new service model which is less focused on direct fulfillment and more concentrated on the provision of advisory services and quick and easy access to a portfolio of external service providers.

The rationale for such a move is based on the realisation that IT Services cannot deliver everything directly in such a rapidly changing environment. Keeping staff skills and expertise updated to new and emerging technologies was recognised as a key challenge and not one that can be realistically provided. Advisors would stay current with developments and would provide users with the guidance and know how to access specialist services either internal or external to the university but would not necessarily fulfill services directly. Given the rapidly changing IT landscape it was considered that this model could be highly responsive and did not require the constant up-skilling of the existing IT staff and the associated retention challenges. This approach would permit UCDs IT service to concentrate on higher value advisory services. Therefore the remit of IT Services would move to one as a 'sourcer' and 'consolidator' of services rather than the provider of services. This was described as a "service broker" model.

It was suggested that a network of advisors be established to support the community directly. Advisors would have dual reporting line to a research unit and the IT service organisation. It was suggested that advisors have perhaps a core domain expertise so as to 'fit' well with the user group they service. While much of the advisory services would be similar in nature regardless of discipline, it was also considered important that certain subject matter expertise be also made available to researchers. In the first instance the areas requiring subject matter experts were identified as Digital Content, GIS and Personalised Medicine.

While the "service broker" model was proposed as the best approach to addressing ad hoc needs, the focus groups identified a key service need for website development, hosting and support for research projects. In many of the UK universities, such a service exists and is often provided on a cost recovery basis, as the costs of building websites to provide and share information and even collect data is a cost recoverable from research grants. Currently researchers must either provide this capability within the research team or outsource to a third party. This is done time and time again without any capacity to leverage lessons learned, apply best practices or even avail of discounts due to bulk purchase of external consultancy days.

Based on the foregoing, the following recommendations are made.

Recommendation 4. The IT service organisation would benefit from realigning its structures such that they move to an advisory research service aligned to university domains (e.g. Colleges). These advisors would work with researchers in their specified domain. Advisors will be au fait with best practice for IT relevant to the domain area and will maintain service relationships with service provides (internal and external) with a view to ensuring delivery for researchers. As part of the IT strategic planning process, this recommendation should be addressed in the context of the full set of university needs for IT service delivery.

Recommendation 5. The provision of expert advisory services would impact a range of research areas and should be implemented immediately. Three areas of need have been identified – GIS, Digital Arts and Humanities and Personalised Medicine. Since these skills would be new to the organisation, they should be sourced independently to the advisors appointed as part of the IT strategy implementation.

Recommendation 6. IT services should include the provision of web design, development, hosting and maintenance as part of its portfolio of service offerings. The service should be paid for via research grants.

Recommendation 7. – Video conferencing and podcasting supports need to be provided as a service to meet the needs of the community rather than the current ad hoc approach.

Data Management for Research

Internationally, there is emerging mandate to make research data available through open access repositories. The research environments in the US, UK and Australia, through funders, already require much of the research data to be retained and accessible on completion of a funded research project. Funders including NIH, NSF, Wellcome, BBSRC, MRC, NERC require the provision of data plans and the subsequent publication of data as part of the outputs of each funded research programme. The OECD has recommended that all OECD members should implement such a policy through public funding bodies and most recently the EU has indicated the Horizon 2020 programmes will require provision and execution of data management plans.

In the UK, policy with regard to data management is centralised but the operation of specialist data repositories is devolved to a small number of universities deemed expert in particular domains. In Australia both the policy and the data repositories are nationally managed and independent from the universities.

Even within UCD the impact is already being felt. Currently a small number of funded programmes in Ireland seek data plans and researchers in certain research fields (e.g. genomics) already provide publishers with research data as a condition of publication.

Given international trends and the emerging needs within Horizon 2020, it is clear that it will only be a matter of time before data management will become an issue for the UCD research community as a whole.

The drivers for rendering research data open and accessible are varied but the following are the most cited motivations:

- **Public good**: Publicly funded research data is produced in the public interest and should be made openly available with few restrictions.
- **Preservation and reuse**: Institutional and project specific data management policies and plans needed to ensure valued data remains usable. Metadata should be available and discoverable; published results should indicate how to access supporting data, while recognising researcher rights with regard to:
    - **Confidentiality**: Research organisation policies and practices to ensure legal, ethical and commercial constraints assessed; research process not damaged by inappropriate release;
    - **First use**: Provision for a period of exclusive use, to enable research teams to publish results; and
    - **Recognition**: Data users should acknowledge data sources and terms and conditions of access.
- **Research Integrity –** Research results should be verifiable**.**

The range of research data to be made available is vast and definitions from differing systems reflect that range. A selection of definitions is provided hereunder.

- "A reinterpretable representation of information in a formalized manner suitable for communication, interpretation, or processing." Digital Curation Centre
- "Any information you use in your research" Cambridge Prepare Project
- "That which is collected, observed, or created in a digital form, for purposes of analysing to produce original research results." University of Edinburgh
- " Research Data Australia accepts records of data that are considered to be important to the Australian research community, rather than to an established definition of what constitutes research data." Australian National Data Service (ANDS)

The focus groups in UCD revealed the following;

- Broad agreement that requirement to provide access to datasets produced/resulting from publicly funded research will have a big impact on research projects and require new supports and policies.
- While generally open as to where support should be sourced, it was agreed that the university should take a lead in influencing national policy and ready the path by providing clear policy.
- There was agreement that UCD could take a leading role in shaping national policy and even provide a national repository for some data classes.
- Some classes of research already provide data as a condition of funding or publication but would welcome a UCD policy.
- Policy will need to integrate with Ethics, Research Integrity and Intellectual Property Policies.
- An advisory service to assist PIs with appropriate data plans and execution needs to be provided by UCD.

It should be appreciated that there is a distinction to be drawn between the compliance aspect for the provision of data and the value to be gained from the reuse of data. In many instances the deposit of data in an accessible data repository will be sufficient to meet compliance and good governance standards as imposed by funding agencies. However, where there is significant value to be had in the reuse of data, then curation and ongoing preservation of the data become of paramount importance and require additional care at the time of data harvest.

There are many international repositories already available, which we could leverage. There may be no requirement for UCD or Ireland to build new repositories but to instead focus on policy issues and best practices for compliance and re-use and the determination of the portfolio of accepted international repositories for deposit of data.

Recommendation 8. Given the relatively small number of universities in Ireland, it is recommended that UCD advocate for a centralised policy approach and the creation of national data repositories rather than each university having to undertake the burden of creating its own solution. Ireland could follow a fully centralised model as per the Australia or the devolved hub and spoke model similar to the UK where individual universities run specialist repositories as part of the national system.

Recommendation 9. The advisors appointed within the IT services structures will, as part of their role, provide a service to researchers to create data plans at the proposal stage of projects and advise on implementation as necessary.

APPENDICES

RESEARCH IT FORESIGHT FOCUS GROUP SESSIONS – APRIL 30th – May 2nd 2013

Question 1: Thinking about your existing interactions with Research IT and its associated services

- *What are the things that it does well?*
- *Are there any existing gaps in service/ support?*

Group 1 Summary

Cons:	**Pros:**
♦ IT service offering around research is unclear. There were suggestions that IT research showcase its offering particularly to PhDs and post docs perhaps through the institutes. ♦ Some users reported it a difficult organisation to navigate in terms of who does what. ♦ Some services are not provided for – e.g. websites and associated online services. Much of this has to be provided within research teams but the overhead in terms of required skills from design and content management through to DB and security skills is seldom sourced in a single recruited resource. ♦ Storage costs are inexplicably high here in UCD. ♦ There is an amount of specialist IT which IT services do not cater for – however the group were not convinced that such a service was necessarily under the remit of IT. ♦ Researchers are building in own redundancy around services and data – keeping access open to as many platforms , time consuming and costly..	♦ Generally there was a sense that the IT research team provided a good service when called upon. Staff were considered knowlegable and responsive. ♦ The infrastructure and networks in UCD have improved dramatically over the years and are no longer of concern to Pis. ♦ The access to ICHEC was seen as very important , the main advantage of the service was with regard to the advisory services rather than the pure infrastructure per se. ♦ Approach to provision of cluster arrangements was favourably regarded. Need to have a facility over and above ICHEC.

Group 2 Summary:

Cons:	**Pros:**

• The service is sometimes difficult to navigate, but when you get the right person it is great.
• Storage costs are prohibitively high here in UCD.
• Training and Teaching requirements should be addressed
  ◦ Programming Languages
  ◦ GIS
  ◦ Analytics
• No policy framework for IT within the University and Hospital s
• Shared access to software for research
• Company protocols around data much tighter than imposed here. (e.g. IBM)
• Data management and protection issues are not particularly covered. Becoming more of an issues as we work with increasingly sensitive and personal data sets and with partners such as
  ◦ DAMC
  ◦ Industry
	• The current infrastructure in terms of hosting, local HPC and server provision and management was favourably commented on by all groups.
	• The expertise of the group was also complemented.
	• The UCD Network is now stable and considered robust.
	• Good access to HPC and SW
	• Leverage of ICHEC and PRAICE regarded as highly beneficial. The advisory services of ICHEC were particularly important.

Group 3 Summary:

Cons:	**Pros:**
♦ The size of the clusters going forward is of concern ♦ Over the next 5 years it is anticipated that the capacity of the data centre will be an issue given the growth in research data and requirement for processing power. ♦ There is a lack of so called support specialists within IT ♦ Access to service difficult ♦ IT awareness - e.g. shared calendar not know of. ♦ Storage costs are too high ♦ The range of data bases supplied for law needs to be increased (LIBRARY) ♦ MS office availability (Research students – excel).	♦ Follow up on issues is good ♦ Service is speedy and accessible

Breakout Session 2

Question 2: Thinking about the future directions of your own research and the emerging trends and techniques applicable to your field,

- *will your ICT needs change in the next 5 years and if so what new or enhanced services and infrastructural requirements will you have?*

Group 1 Summary:

- ♦ Need to profile the as is service, particularly on Cloud – it is possibly more comprehensive than we know.
- ♦ There is a need to more away from networks and servers and to a more advisory support service.

- Need to consider a centralised support model which allows PIs easy access to services such as web design and fulfillment though services need not necessarily be provided by IT.
- Specialist advisory services in the areas of analytics particularly referenced.
- Need to explore the funding model in terms of service provision – o/h , via grants or top slice.

Group 2:

- GIS supports are required – common to all disciplines – perhaps pilot on this basis
- Development of a training function
- Organise/Facilitate access to specialist services
- Consider resourcing by discipline specialism (E.g. statistical supports).
- Local Visualisation services – 3D TV (central services do not work – people will not walk across campus to access services – some things have to be local)
- IT as a brokerage service to leverage buying power and expertise across UCD.
- Data management services throughout life cycle – including reference to best practice, use of work flow, establishment of data repositories and ownership.
- UCD should support national initiative around repositories and data management.
- Storage issues need to be addressed.
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- Common hosting services.
- Academic staff need to be upskilled and trained in certain instances – awareness building.
- Access to cloud services and storage – IT role to co-ordinate access. (Advice as to which services are to be reminded)
- Upskilling staff in IT to move to next stage of service provision.
    - Look at staff exchanges with private enterprise – Google
- Accessibility of systems needs to be reviewed
- Need to start work on data management policies so as to protect and secure data and associated IP.
- Perhaps co-ordination of training and access across HEIs

Group 3:

- Uni policy, Research technology , technology support
- Need to set expectations – perhaps pilot the approach
- Insight – security of data transmission and privacy needs to be addressed.
- Open access tools and technologies – available and communicated but also accessibility WAC3 – Blackboard is proprietary and limited (not accessible).
- Centralise common services and needs, move away from local solutions. - Advisory services on data design and acquisition, prototyping and design services. Buy centralised services through grants.
- Thematically based services – specialist per discipline/area?
- Prioritisation key
- Central kit store – phones tablets etc.
- Software licensing and domain registration post project.
- Videos of lectures are accessible but no facilities to do so.
- Interoperability of audio and visual and textual content/data.
- Podcasting (how to do it, who supports it, what are the implications around its publishing) and videoconferencing (skype will not hook up with video conferencing). Getting individual users to hook in is the biggest obstacle.
- Capacity to respond to changing needs as the needs are somewhat unpredictable.
- Hosting of websites – work involved is too onerous.
- Innovation – route resources to need
- Training services – computation
- Share across HEIs resourcing load
- Variety of IT standards by building – lights , av in Newman.

Breakout Session 3

Question 3: How can the university best assist you with emerging requirements for data management and data sharing?

Group 1:

- When is data data? - Students create significant data but mainly wrong – need to put guidelines in place about how to collect and store and when to do so.
    - Piloting of new policies to test implementation requirements
    - GIS might
    - Learn from working with PhDs/PD as to how they use data.
- Library already run repositories so should leverage that experience – ISSDA.
- Publicly versus privately funded rules should be different.
- Where will IP rights sit in the data plan?
- University led policy versus school and local involvement.
- SFI will drive compliance – i.e. they will change PI behaviour via funding rules.
- Competitive edge in data

Group 2:

- Data framework required.
- Campus or national service – how is it funded – individual/grants
- Need to sell benefits to researchers
- Inhouse or outsource technical data management
- Data protection defined by ethics committee but what policy are they operating to. Seems inconsistent
- Policy frameworks needs to be in place, model agreements, training
- DP changes to be factored in – right to be forgotten.
- Some data is already deposited - genomes. Need to deposit in order to publish. Different requirements on disciplines and point of maturity.
- Might need to be aggregated or raw.
- Data security and students education.

Group 3:

- Data going into public databases needs to be accessible
- Need to guard against loss of IP.
- Managing inhouse gives great control.
- Open access tends to be lower impact
- Risk of data becoming available may prevent research participation. – policy needs to be clear as to what is disclosed from the outset.
    - Stops research before it starts.
- Crosses with research integrity – use of data and fraud
- Data is an advantage - “data is the wealth of a University”
    - Allows others to catch up too quickly
    - Longitudinal needs more time
    - Need to be aware of computational analysis.
- Research Benefit
    - Capture research in all its guises
    - Defines responsibility
- Central services versus local – need to keep context and type in mind.
- Joined up business models and datasets (repositories linking together)
- IRC have already asked for dataset – phd places and buried in terms and conditions
- Role of the University –
    - advocacy – embargo times
    - Guide to process – data rules and plans applicable regardless of funder.
    - Data store and “shower” of data
    - Data standards and meta data requirements
    - Need to consider the difference between right to gain access and automatically available access
    - May need different protocols per discipline