



RIN case studies in the life sciences: findings on data management

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BRITISH LIBRARY

Forthcoming RIN/British Library report:

Case studies in the life sciences: Understanding
researchers' information needs and uses
(November 2009)

Research by ISSTI and DCC (Edinburgh)



RIN case studies aim:

“To enhance understanding of how researchers locate, evaluate, organise, manage, transform and communicate information sources as an integrated part of the research process, with a view to identifying how information-related policy, strategy and practice might be improved to meet the needs of researchers.”

Case study research teams

1. Animal genetics and animal disease genetics
2. Transgenesis in the chick and development of the chick embryo
3. Epidemiology of zoonotic diseases
4. Neuroscience
5. Systems biology
6. Regenerative medicine
7. Botanical curation

Research methods

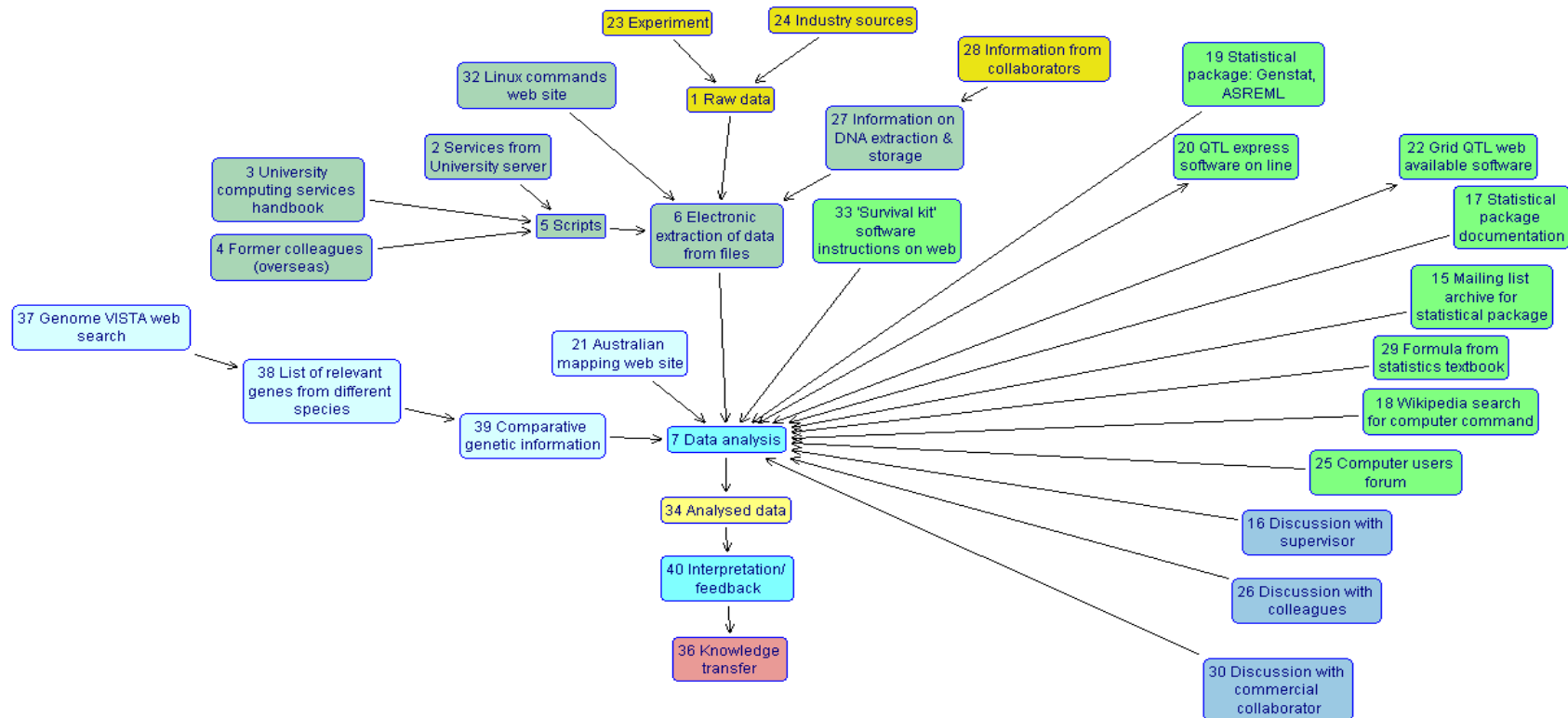
- Probes (information lab books)
- Interviews
- Focus groups

Information flow maps

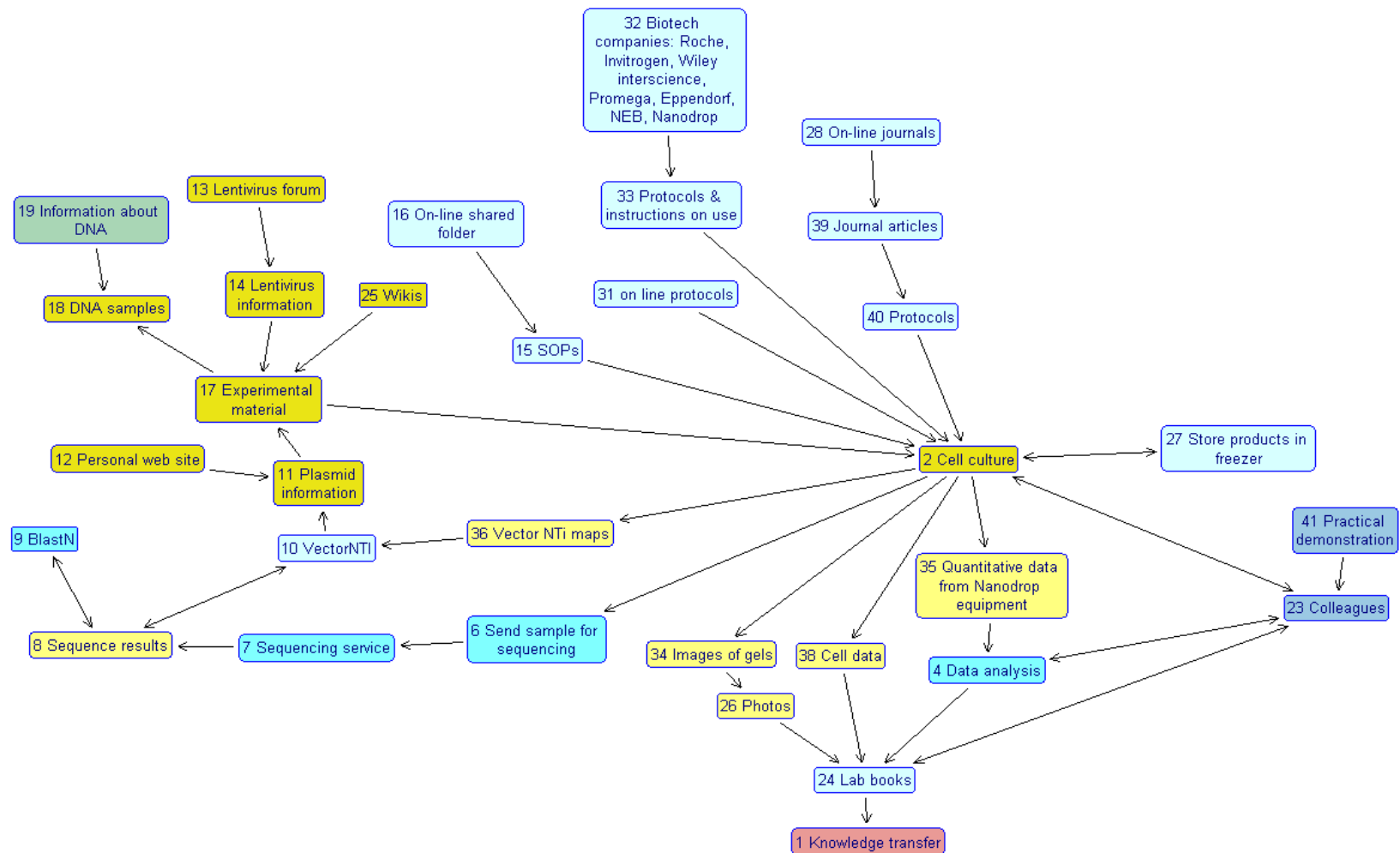
Study concept & design Data collection Data processing Data Access & dissemination Data analysis

Curation tools Informal interaction Information discovery Research results Outcomes

Animal Genetics and Animal Disease Genetics



Transgenesis in the chick and development of the chick embryo



Getting to grips with managing data

1. There is little evidence of planned data management as standard practice
2. Confusion over terms has implications for practice
3. Effective curation needs human infrastructure, and the more local the better

A culture of sharing – with caveats

- Ethos of sharing in the life sciences
- Different modes of sharing

Constraints on sharing

- Barriers to sharing and re-using:
 - career imperatives
 - protectiveness
 - confidentiality
 - lack of trust in cyberspace
- Provisos for sharing

Needs for data services & support

- Most groups need more locally-available support on handling data
- Challenges include data volumes and standardisation requirements
- Funding concerns over data curation

Conclusions

- Gulfs between practices and e-science visions
- Diversity of research and information flows
- Policy to be informed by researchers' practices

Recommendations: funders

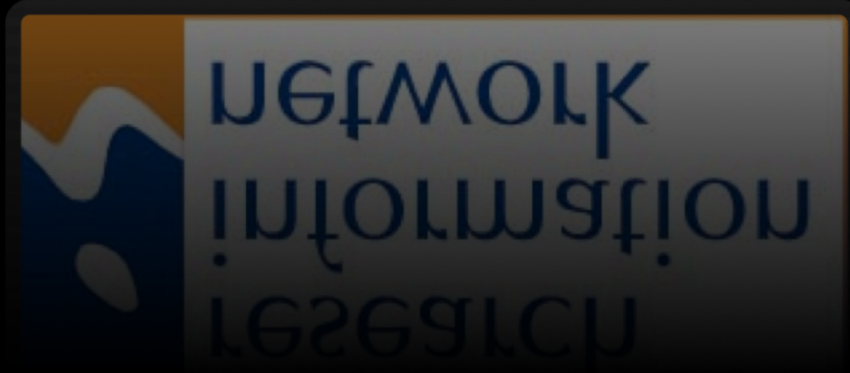
- Engage further with researchers to identify constraints and develop more experimental policies to build upon existing information sharing
- Define more closely which data and information they expect to be shared, to what ends and under what circumstances
- Monitor the development of hybrid information support roles
- Assess national requirements for skills in research data curation and support

Recommendations: HEIs

- Attend to features of current professional formation processes - including training and career development, and professional recognition and reward structures - which currently inhibit the effective use and exchange of information

Recommendations: library and information service providers

- Work towards better portals and tools to identify information resources
- Work towards developing easy-to-use, tool-based support for researchers to undertake their own data curation
- More active engagement between data producers and curators



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