# Capacity Building For Sustainable Digital Information Services In An Academic Library

Hilton Gibson

The repository content and the repository infrastructure require support teams, to ensure that the repository is properly maintained, now and in the far future

In the context of the library, the operational team provides information services, that are supported by the technical team using information systems, which are built and maintained in co-operation with the information technology department.

INFORMATION DOMAINS

SERVICES

SYSTEMS

TECHNOLOGY
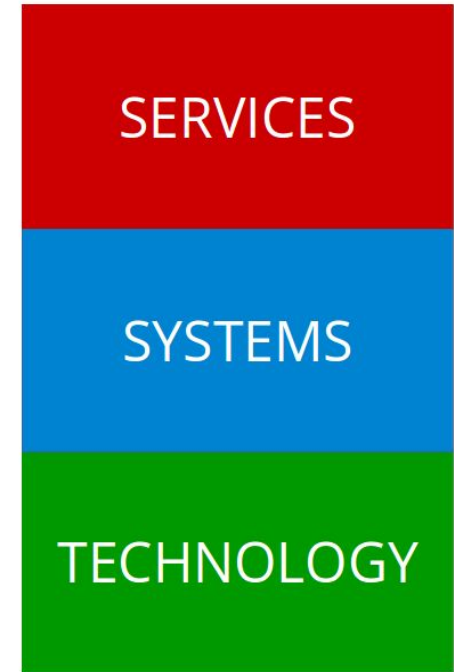
Director

The director need not be a full time appointment, however someone at the director level should be made responsible.

- Excellent written and verbal communication skills.
- Doctorate in library or information science.
- Academic journal publication and/or institutional policy development about "open scholarly communication and preservation".
- Expert understanding of open access digital repository content management.
- Expert with metadata standards for academic publishing.
- Professional understanding of digitisation technologies.
- Professional understanding of web 2.0 communication technologies.
- Familiarity with repository software.
- Familiarity with desktop computer operations.
- Familiarity with open access digital repository systems management.
- Familiarity with the operations of the internet and how to use it securely.

INFORMATION SERVICES
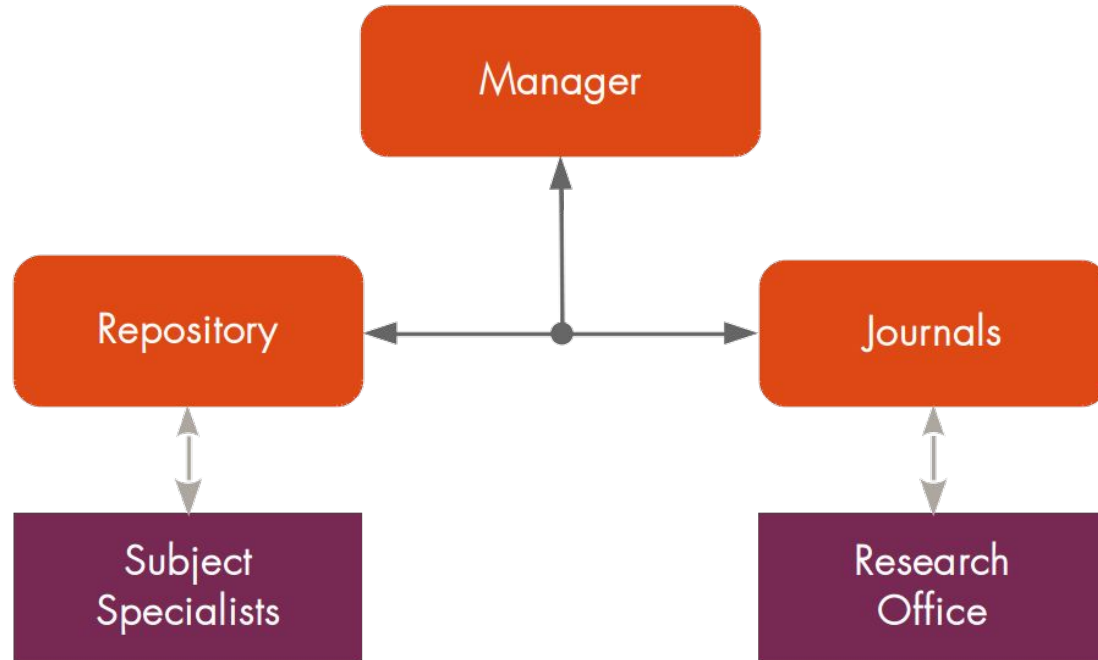
Operational Manager

This is a full time appointment.

Core Skills

- Excellent written and verbal communication skills.
- Bachelors degree in library or information science.
- Major or Masters in "open scholarly communication and preservation".
- Expert understanding of open access digital repository content management.
- Expert with metadata standards for academic publishing.
- Expert with digital curation.
- Expert with digitisation technologies.
- Professional understanding of web 2.0 communication technologies.
- Professional understanding of repository software.
- Familiarity with open access digital repository systems management.
- Familiarity with desktop computer operations.
- Familiarity with the operations of the internet and how to use it securely.

Specialist Skills

- Expert with the management of Open Research Repository Systems.
- Expert with the management of Open Journal Publishing Systems.
- Expert with the management of Open Conference Publishing Systems.
- Expert with the management of Open Data Management Systems.
- Expert with the management of Open Educational Resource Systems.

Repository and Journal Librarians - 2 each

*These are full time appointments.*

Core Skills

- Professional written and verbal communication skills.
- Technology certificate in library or information science.
- Major in "open scholarly communication and preservation".
- Expert with repository software.
- Expert with desktop computer operations.
- Expert with metadata standards for academic publishing.
- Expert with digital curation.
- Expert with digitisation technologies.
- Professional understanding of open access digital repository content management.
- Professional understanding of the operations of the internet and how to use it securely.
- Professional understanding of web 2.0 communication technologies.
- Familiarity with open access digital repository systems management.

Specialist Skills

- Expert with the operation of Open Research Repository Systems.
- Expert with the operation of Open Journal Publishing Systems.
- Expert with the operation of Open Conference Publishing Systems.
- Expert with the operation of Open Data Management Systems.
- Expert with the operation of Open Educational Resource Systems.

INFORMATION SYSTEMS
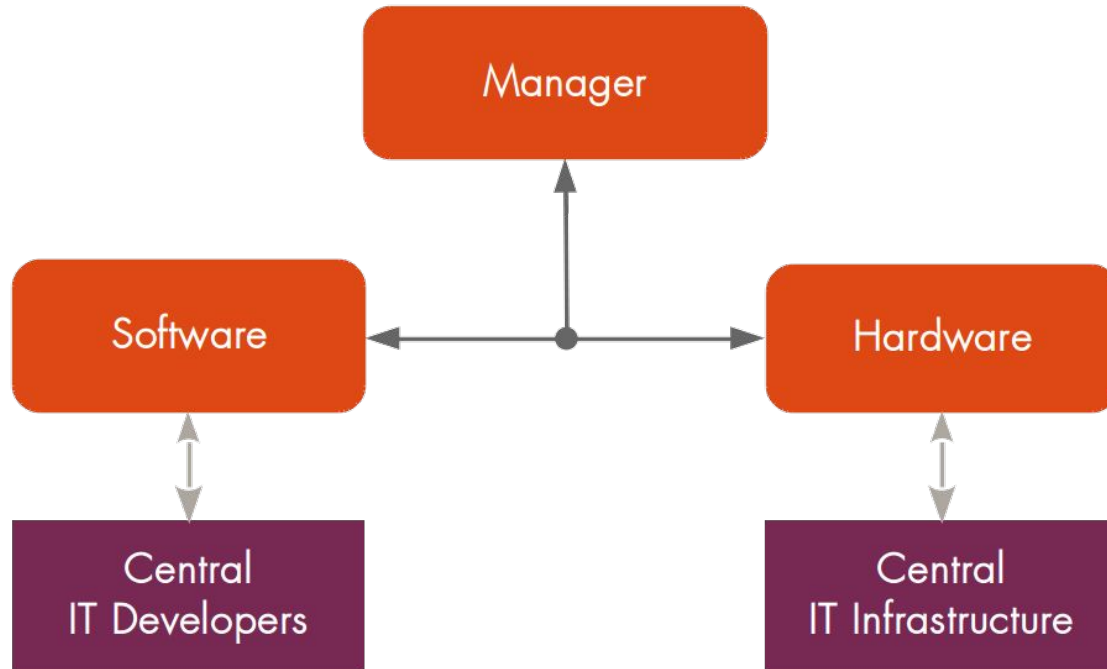
Technical Manager

The technical manager should ideally be appointed internally from within the technology support division of the institution.

The technical manager is **NOT** currently technically skilled, since technology is evolving at a very rapid pace, but rather the manager is aware of the current technologies and how to effectively deploy them.

The technical manager should know how to lead an information technology team by making use of the specialised skills of the team and current technologies to achieve the information systems goals of the open scholarly communication office.

This person should have extensive experience in designing and implementing information technology infrastructure and software systems that fit the "business case" of the institution.

This position does not need to be full-time, rather the position can be shared with the central IT department, *however a person from top management must be made responsible for the long term maintenance and operation of the open scholarly communication office's information systems needs.*

The person appointed should also be a very good communicator and be able to "bridge" the LIS and ICT worlds. In other words, the person can inform the library about ICT and vice versa, the person can inform ICT about the library, thereby creating a vital two-way communication "bridge".

In addition, though not strictly required, it would be very advantageous if the technical manager was personally supportive of open systems and open access.

Most importantly, this person can assist the library in the transition to a new digital era and can help the ICT department transition to the new digital information services era.

Also see: http://wiki.lib.sun.ac.za/index.php/List_of_Repository_Software

Web 2.0 Software Technologist or Web 2.0 Application Specialist or Java Webapp Developer

These are current technology specialists whose expertise may be shared with the central IT department.

Core Skills

- Expert Java programming skills
- Expert XML programming skills
- Professional SQL programming skills
- Professional HTML programming skills
- Professional CSS programming skills
- Professional PHP programming skills
- Familiarity with the Tomcat java webapp server
- Familiarity with the LAMP stack webapp server

Specialist Skills

- Expert DSpace software programming skills.
- Expert EPrints software programming skills.
- Expert PKP software programming skills.
- Expert Open Data software programming skills.
- Expert Open Educational Resources software programming skills.

Web 2.0 Hardware Technologist or Web 2.0 Infrastructure Specialist or Ubuntu Linux System Administrator

These are current technology specialists whose expertise may be shared with the central IT department.

Core Skills

- Expert with the Ubuntu Linux server operating system
- Expert with the Tomcat java webapp server
- Expert with the LAMP stack webapp server
- Expert with virtualization and cloud services
- Professional BASH programming skills
- Professional TCP/IP networking skills
- Familiarity with a major vendors server hardware
- Familiarity with a major vendors networking hardware

Specialist Skills

- Expert DSpace infrastructure support skills.
- Expert EPrints infrastructure support skills.
- Expert PKP infrastructure support skills.
- Expert Open Data infrastructure support skills.
- Expert Open Educational Resources infrastructure support skills.

What else can these teams do for the library and the institution?

These same teams, with their skills, are then also capable of enabling other open systems for the institution, for example:

- An open journal system

- An open conference system

- An open research data management system

- An open research collaboration system

- An open educational resources system

- An open bibliography system

- An open library management system

How do you build these teams?

References

http://wiki.lib.sun.ac.za/index.php/SUNScholar/Capacity_Building

http://staff.lib.sun.ac.za/~hgibson