

Where to next? A case study of the development of a Career Pathing Tool for Information Services, Griffith University

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Where to next?
A case study of the development of
a Career Pathing Tool for
Information Services, Griffith University

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Abstract:

Change is an integral part of life for Information Technology and Information Professionals. Information Services, Griffith University, has designed a Career Pathing Tool as one way to help manage change and support its staff through change. It is intended to assist staff with their career development, by providing them with an understanding of the career paths available and the skills and training needed to move into the types of roles offered. This paper outlines the processes being developed, the hurdles faced so far and the goal for the completed tool.

Introduction

In modern organisations, change is a regular part of working life. Change to job roles is a certainty and any role you undertake is likely to be affected by it (Wilson 2010; Omekwu & Eteng 2006). For both the Information Technology and Information Professions, in particular, job roles are constantly evolving in order to keep pace with a rapidly advancing industry.

Staff in these roles need to stay abreast of the changes and consider how they will affect their careers. They need to investigate what advantages the changes may bring them and ensure that they maximise development opportunities offered to them.

Organisations will also need to keep up with change and consider how these changes affect their job roles (Omekwu & Eteng 2006). To remain competitive they will need to develop their staff and structures to take full advantage of change as it occurs.

Universities are feeling the pressure of change as keenly as any other organisation, and in Information Services, Griffith University it was felt that one technique that could be used to help manage change and support staff through it was to design a Career Pathing tool. This Career Pathing tool is an application that has been designed to illustrate in a clear and simple way the career paths within Information Services now and in the future and provide advice on the skills and training needed for particular role types.

This paper will outline in further detail the:

- **Background** - background information about Griffith University and Information Services in particular, including its commitment to the ongoing development of staff and the promotion of lifelong learning.
- **Process** - the process of developing the Career Pathing Tool including the need to make the tool future focussed.
- **Design** - the design of both the content of the tool and the application itself, detailing the development of the career streams, paths, positions and career profiles.
- **Hurdles** - the hurdles faced so far in relation to the design of the tool and the communication of the tool's purpose.
- **Reception** – how the tool has been received so far and the goal for the completed tool.
- **Role of the Emerging Roles Paper** - this paper is a literature review on emerging roles in the Information Technology and Information Professions and was written to facilitate a future focus to the tool.

Background

Griffith University is a multicampus university located in Queensland, with five networked campuses spread between Brisbane, Logan and the Gold Coast. It is home to over 43,000 students and 4000 staff from 131 countries across the world. It prides itself on its innovative and interdisciplinary approach to research and learning and teaching. It is placed amongst the top 10 research universities in Australia.

Within the University, Information Services was created to support the University's endeavours by providing a range of information and technology based services to enable the creation, synthesis and dissemination of knowledge within a global information environment.

To facilitate this, Information Services has established three portfolios: Scholarly Information and Research (SIR), Learning and Teaching (L&T) and Information Communication and Technology Services (ICTS), as well as the Information Services Planning Office.

The role of the SIR portfolio is to provide a range of services that support the University's researchers at all stages of the research cycle. This includes providing:

- appropriate scholarly information at the early stages of a research project
- publishing strategies for maximisation of citations for the research output
- e-research solutions to enhance accessibility and discoverability
- research information management solutions to ensure the ongoing viability and accessibility of research data

These services have been designed and developed to meet the needs of the University and are informed by the close relationships that exist between Information Services and the academic community.

The role of the L&T portfolio is to offer a suite of high quality discipline specific services to Griffith's academic, undergraduate and postgraduate communities. Teams within L&T collaborate with Academic Groups to produce quality educational resources and provide learning skills development designed to promote the development of graduate attributes and lifelong learning.

The role of ICTS is to collaborate with all areas of the University to provide a suite of IT services that underpin all aspects of the university's research, teaching and learning operations, business, management and planning functions.

Finally, the role of the Planning Office is to support the three portfolios by ensuring that the governance and planning processes in Information Services reinforce its alignment with the university's strategic priorities and drive the achievement of its mission and goals.

Information Services prides itself on its ability to foster a culture that values innovation and diversity and in having an international reputation for being cutting-edge in the deployment of emerging technologies. It also recognises the need to

continually reassess its alignment with the University's strategic priorities both now and in the future while still providing a quality service to students and staff.

To enable Information Services to do this successfully the Division has a commitment to the ongoing development of staff and the promotion of lifelong learning. The Division's dedication to this and their desire to support staff through change has enabled the successful development of the Career Pathing Tool.

The Process

The process of developing the Career Pathing Tool began in the ICTS portfolio in September 2009. This initial process was the most time consuming, as it included designing the tool itself. A number of hurdles were overcome during this time and some of these will be discussed further in this paper. However, by June 2010 the ICTS component of the tool was ready to launch.

Since that time, the remaining portfolios (SIR and L&T) have been working on completing the tool for their areas. The challenge at this stage is to make the tool as future focussed as possible by considering how the roles of the Information Technology and Information Professional at Griffith University are changing.

To enable this to happen a literature review on emerging roles in the Information Technology and Information Professions has been completed (Hardware 2011). The various portfolios have been asked to consider which of these roles are relevant to Information Services so that they can be mapped into the Career Pathing Tool and the skills, knowledge and attributes required for the roles included. This will be discussed in more detail later in this paper.

The Design

The tool is designed to provide an understanding of the career paths available within Information Services now and in the future and the skills and training needed in order to be considered for progression throughout a career within Information Services.

It has been designed with a number of audiences in mind:

- **Staff** – staff within Information Services can use it to map out their careers and then begin a discussion with their supervisors about what they need to do in order to move into the type of positions they are interested in.
- **Leaders** - leaders within Information Services can use it as a tool for establishing personal development plans for their staff.
- **Prospective Staff** - once completed it will become public, and then prospective staff will also be able to use it to research the types of career paths that exist within Information Services.
- **Students** - students will be able to use it as a way to help them decide on what sort of career path they would like to focus on after they graduate, and therefore what subjects they should be studying.

The creation of the Career Pathing Tool was a two-part process consisting of the content development and the tool development.

Content

The content for the ICTS component of the tool was developed in close collaboration with the Director, senior management team and staff of ICTS.

Career Streams and Paths

A staged approach to the development of the content was taken. The first decision to make was how the portfolio would be represented in the tool. Streams were created that would represent not only job areas within ICTS, but also information technology job areas throughout all of Information Services. These streams are: Infrastructure, Systems, Support, Project Management and Planning (see Figure 1).

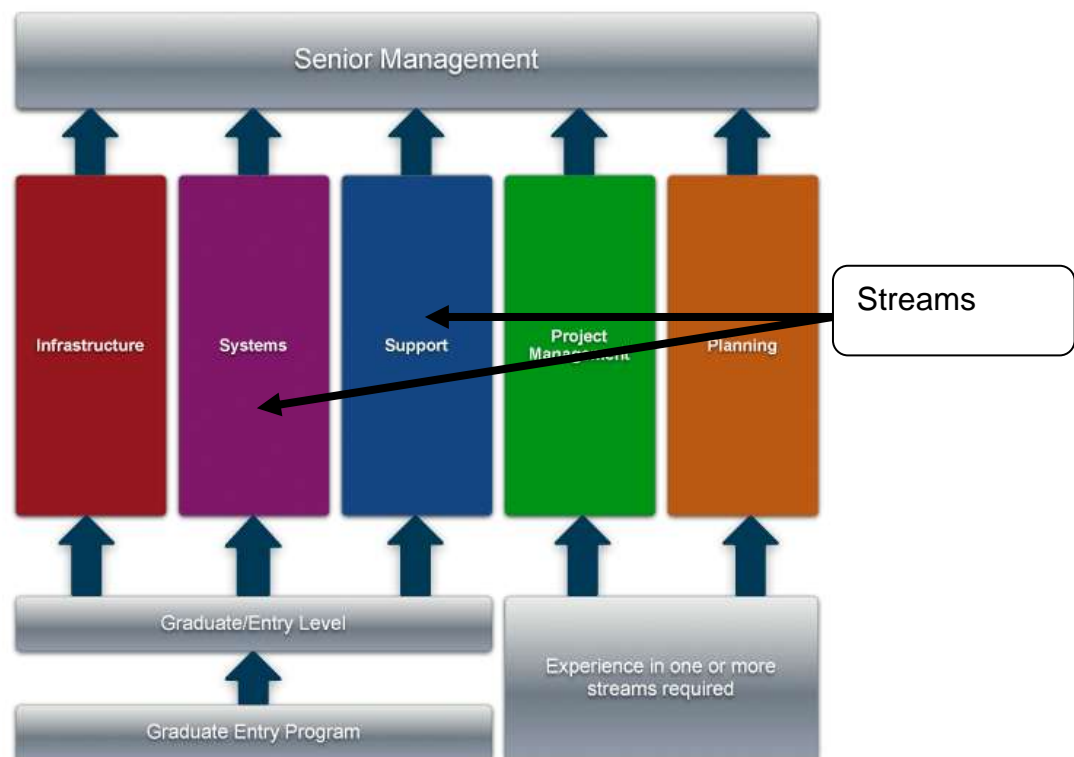


Figure 1: Career Pathing Streams

The second step was to map the career paths within these streams (see Appendix 1 for an example of one of the streams). This was a collaborative effort conducted through both individual meetings between the project officer and each of the senior managers and workshops with the entire ICTS Senior Management Team. The draft was then presented to the ICTS Managers and Team Leaders Group and their feedback was used to fine-tune the maps.

These career paths are not designed to be the only paths a staff member may follow. They are designed to give an example of the most likely paths available within Information Services.

Positions and Career Profiles

Each of the career paths have a number of position boxes along them with detailed career profiles underneath. The content for these was written by staff within ICTS. Their contribution to this process was invaluable.

To make the Career Profiles (see Appendix 2 for an example career profile) as useful as possible it was decided that they would have the following content:

- **Staff Testimonial** – this provides a valuable insight into the role from a staff member’s point of view. The objective here is to provide real information about the benefits, challenges and opportunities the role can offer from someone actually doing it.
- **What the job is about?** – this provides information about the duties of the role that are not necessarily in the position description but are important to know.
- **What experience do you need?** – this provides useful information from an insider’s perspective of the experience needed for the role.
- **How to get there?** – this is probably the most important section as it aims to provide a “one-stop” shop for information on the qualifications and types of training a person should undertake in order to increase their chances of getting this type of role. It also lists information about various resources available for professional development such as in-house training, industry bodies and professional associations.

Welcome and Stream Introductions

To complete the content of the tool the Director, Information and Communication Technology Services wrote a welcome statement for the front page of the tool and members of the ICTS Senior Management Team wrote an introduction to each of the streams. The Welcome communicates the purpose of the tool and the stream introductions provide information on the stream, its role in the University, the skills required for a position within the stream and information about its future direction.

Tool Development

The second part of the process was to work very closely with the application development team (INS Consulting Services) to develop the tool. This was done in parallel to the content development.

An environmental scan was conducted to see if there were any existing tools that could be utilised. The scan was unable to find an existing tool that fulfilled the necessary requirements therefore INS Consulting Services were engaged to create a custom-built tool.

This tool has two parts:

- Back end administration
- Front end user interface

It is written in PHP (PHP: Hypertext Preprocessor) which is a general-purpose server-side scripting language designed to produce a dynamic webpage, i.e. is one that produces fresh information for each individual viewing. It also has an Oracle database back end and uses jQuery to create the interactive career paths by simplifying the scripting of the HTML for the user interface. Furthermore, to make the administration of the Career Pathing Tool as easy as possible the editing aspect of the tool uses a WYSIWYG (see Figure 2). Using a WYSIWYG means documents can be created in word and then copied and pasted into the tool.

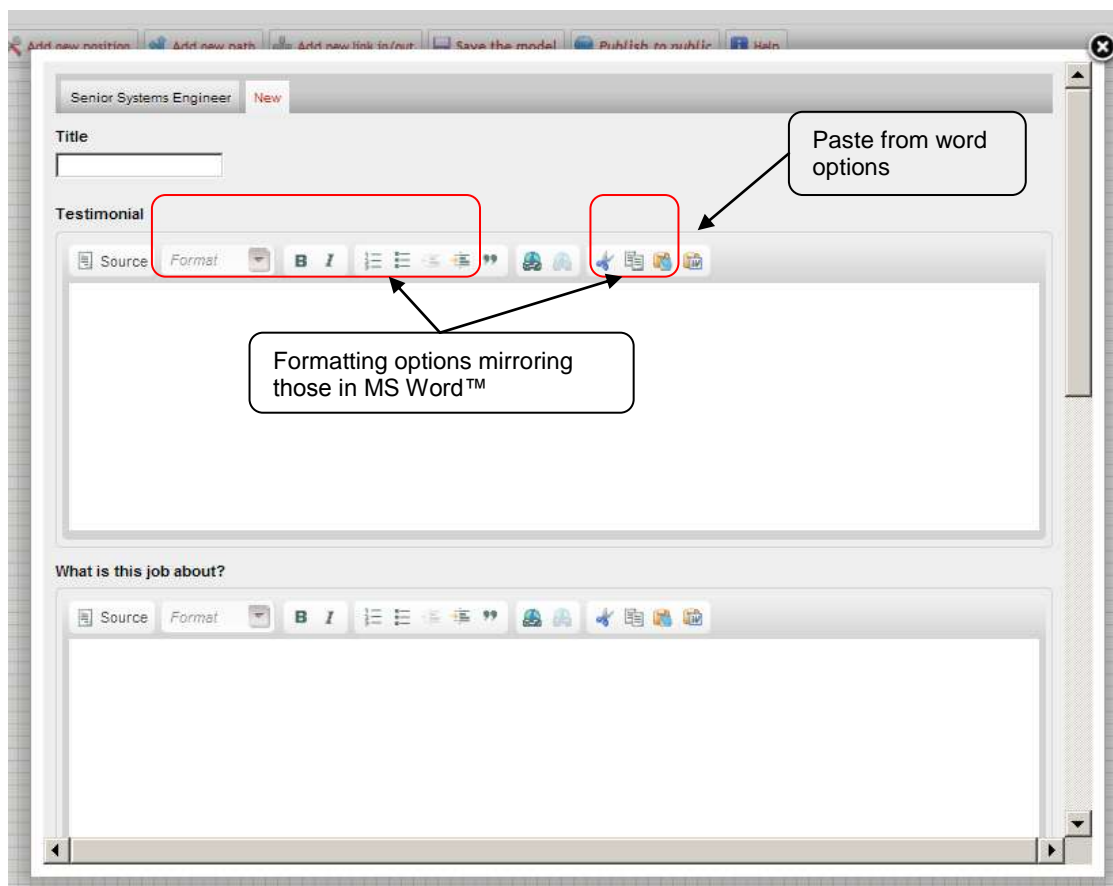


Figure 2: Career Profile WYSIWYG editing interface

To assist with the administration of the tool a handbook was developed, giving a step-by-step guide to editing the content of the tool.

Both the tool and the handbook were tested by a selection of staff members for ease of use. Feedback from these staff members was used to correct any errors discovered.

Hurdles

A variety of hurdles had to be tackled during the development of this tool. One of the major hurdles was the design of the tool itself. It was challenging to create a tool that was simple enough to use yet reflected the complexity of the career paths. Placement of the position “boxes” and lines were vital to its success, as was the creation of in/out boxes to indicate paths in and out of the stream.

Considering size and placement of boxes, thickness and shape of lines, colour of boxes/streams and so on was also critical to the look of the tool and the ease of its use (see Figure 3 for examples of these).

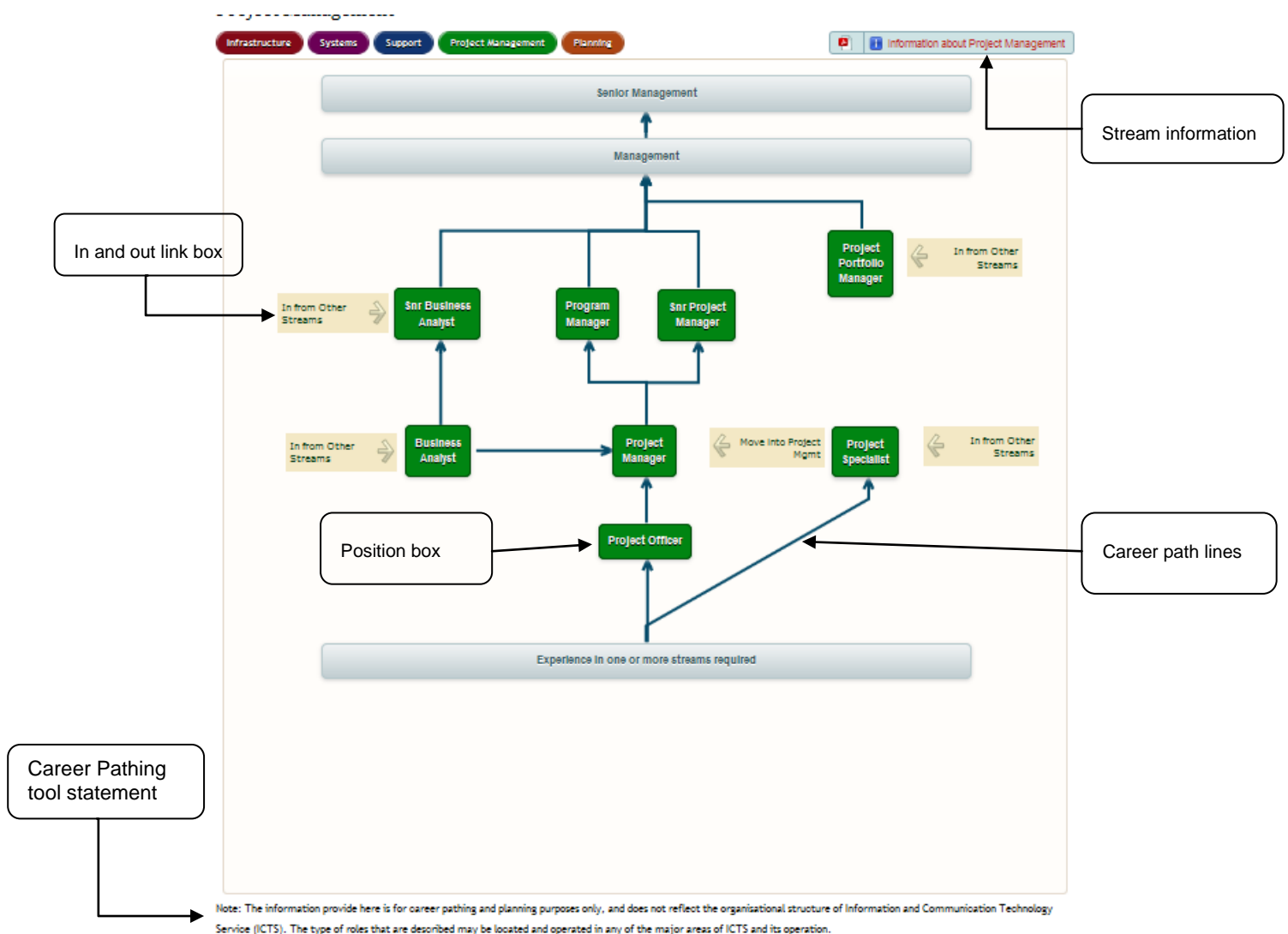


Figure 3

Another hurdle was deciding which positions fit into which stream especially when the position could fit in to a number of streams. The decision was made to put the position into the stream that reflected the major focus of the work required by the role.

A further issue to consider was how to effectively communicate the purpose of the tool. It was important for staff to understand that this is a Career Pathing Tool not an organisational map of ICTS. The tool provides examples of types of positions within ICTS and where the portfolio is headed in the future. It does not list each individual job that exists within the area. A number of communication methods have been used to address this issue. Firstly, the purpose of the tool has been communicated to all supervisors in order for them to make this clear to their staff during career discussions. Secondly, it is always discussed during presentations of the tool. Lastly, it is clearly stated in the Career Pathing Tool welcome statement and in a statement that has been added to the bottom of each stream (see Figure 3).

Reception

The tool has been well received both within Information Services and by a broader audience.

Internal

The tool was launched at the June 2010 ICTS Rewards and Recognition ceremony. Since then there has been a great deal of positive feedback from Information Services staff. The anecdotal evidence received at the time of writing this paper (December 2011) has shown that staff are using the tool for themselves and during career discussions with their line managers, which validates one of the primary objectives of the tool.

Furthermore, as part of the design process, INS Consulting Services built in the ability to monitor the tool's usage. Table 1 shows the statistics since the tool was launched in June 2010.

Table 1

Pages Viewed	Number of times
Career Pathing front page (June – Dec 2010)	462
Career Pathing streams (June – Dec 2010)	712
Career Pathing front page (Jan – Nov 2011)	675
Career Pathing streams (Jan – Nov 2011)	1040

Given that there are approximately 320 staff members within ICTS, these statistics indicate that the tool is being widely used. Once rolled out to all of Information Services, it is expected that these figures will increase further.

External

The tool has received positive feedback from a number of outside sources. A presentation of the tool has been given at a Queensland University Libraries Office of Cooperation (QULOC) staff development workshop. It has also been shared with a number of other universities eg Cambridge University, Queensland University of Technology (QUT) and the University of Queensland. The feedback from sharing the tool so far has been extremely positive.

The most exciting feedback has been from the Council of Australian University Directors of Information Technology (CAUDIT). They had also been investigating career pathing in the Information Technology industry and upon seeing the tool chose to adopt it and adapt it for use on a sector-wide basis. This is a major achievement as CAUDIT is an industry wide group consisting of the IT Directors/Chief Information Officers of all the universities in Australia and New Zealand together with universities in Papua New Guinea and the South Pacific and major Commonwealth Research Organisations such as CSIRO, AIMS and ARCS.

Following on from this success, Griffith University has begun a collaboration with the University of Western Australia, Bond University and the University of the Sunshine Coast to develop a similar Career Pathing Tool for the Information Profession across the three universities. It is envisaged that this tool may then be adopted by the Council of Australian University Librarians (CAUL).

Tool Completion

The goal for the completion of the first iteration of the tool was the end of January 2012. The inclusion of the Learning and Teaching Portfolio is on track for this date, however, the inclusion of the SIR portfolio by this time will not be possible. SIR is undergoing a process of change through the Turning a New Page Program and this program will take up to another twelve months to be completed, delaying the completion of the Career Pathing Tool until approximately the end of December 2012.

The completion of the tool is further challenged by the fact that roles within the Information Technology and Information Professions at Griffith University, as with the rest of the industry, are constantly changing. This means that the tool itself will need to be updated regularly to reflect these changes.

Role of the Emerging Roles paper

To facilitate a future focus for the Career Pathing tool, a literature review into emerging roles in the Information Technology and Information Professions was conducted (Hardware 2011).

Relevant Findings

The research undertaken for the literature review discovered that the issue of emerging and evolving roles is particularly relevant to the Information Technology and Information professions. By increasing expertise in the emerging areas discussed in this paper, Information Services can keep up with change and continue to improve the experience of both staff and students. Furthermore, it can play a leading role in advocating the use of emerging technologies within the University, and demonstrate its ability to further the university's goals and objectives.

Some of the job roles Information Services may need to evolve or develop to support these emerging areas are included in Table 2 below. This is by no means an exhaustive list but highlights areas staff may like to investigate when considering where their career is heading. Staff within Information Services will need to continue expanding their skills and competencies in order to take advantage of the roles Information Services choose to evolve or create.

Table 2

Growth areas for the Information Technology and Information Professions	
social technologies & networking skills	data visualisation
self help solutions	visual data analysis
business analysis	cloud-based technologies
project management	virtualisation
open scholarship	E-research
cataloguing skills	consortia
becoming partners in the educational process	web 2.0
online information	web 3.0
taking on a teaching role	semantic applications
taking on a research role	gesture-based computing
electronic books	augmented reality
open content	mobile technology

The need for staff to develop transferable skills is another issue that was highlighted during the literature review. As the Information Technology and Information professions become increasingly integrated, Information Services staff will need to be aware of the skills they have, their value and how transferable they are. Table 3 below lists the relevant transferable skills.

Table 3

Transferable Skills	
Ability and willingness to learn	Interpersonal skills
Analytical skills	Leadership
Business awareness and understanding	Negotiation
Collaboration	Networking
Communication	Openness and trust
Creativity	Organisational awareness
Credibility	Problem solving
Decision Making	Project Management
Facilitation	Self awareness
Flexibility	Sharing – information, knowledge, ideas
ICT Skills	Team work

Moving forward

As discussed earlier, the next stage in the process is to expand the tool to encompass all of Information Services. To do this Information Services will need to map SIR and L&T into the tool. The details of how this is to be done are being discussed through workshops with SIR and L&T management teams.

An integral part of the process will be to use the Emerging Roles paper to initiate discussion into which roles will be relevant to Information Services. Once this has been decided, these roles will be mapped into the Career Pathing Tool and the skills knowledge and attributes required for the roles included.

This will require an integrated approach with staff from ICTS, SIR and L&T working together. Collaboration will be needed to appropriately map the many crossovers in the types of positions that sit within each portfolio and the many areas where career paths move between the portfolios. Furthermore, there will be times when the next step along the career path is to another area of the University or even outside the University and this will need to be reflected in the tool as well.

Workforce Planning

As the development of the Career Pathing Tool moves forward it is recognised that Information Services is going through a period of significant change. In recognition of this, it has been acknowledged that there is a need to engage in a process of workforce planning.

Workforce planning is the process of identifying the staff needed to meet an organisation's goals and the strategies to acquire these staff (Emmerichs, Marcum & Robert 2004).

In order to ensure that Information Services not only meets the challenges facing it, but also thrives, the need to identify the skills necessary to do this and the gaps that exist has been acknowledged. The Career Pathing Tool is a key tool in this skills gap analysis. By ensuring that career paths and positions have a future focus, the tool can be used to investigate the skills that will be needed into the future. It can also contribute to effective change management by engaging staff in the workforce planning process. This has been achieved by involving staff in the development of the tool and by designing it as a vehicle for them to use to take their career planning into their own hands.

Effective workforce planning will provide Information Services with a significant opportunity to successfully position itself to deliver against its strategic priorities of supporting research and learning and teaching as well as enhancing the student experience.

Issues for further consideration

At this point in the process, there are a number of issues for further consideration. One of these is how to reflect the diversity of career pathways both within Information Services and externally. This will become a more significant issue as the remaining areas of Information Services are mapped. Some positions in these areas have multiple career pathing opportunities and/or pathways that progress to other areas of the university or even externally.

Another is to investigate the tool's effectiveness. To do this a staff survey will be conducted in January 2012.

Moreover, career paths are not static. They will need to continue to evolve along with the industry. Therefore, the tool will need to be continually reviewed and updated.

Conclusion

While this tool can be used for a number of purposes, one of the most important messages Information Services staff hope to get out of its development is that there will always be opportunities for staff in an ever-changing work environment.

To take advantage of these opportunities, staff within Information Services will need to consider where they would like to take their career in the future and ensure they pursue development opportunities when offered. Staff who keep up with the progression of technology, keep their skills current and have long-term career plans will be better placed to use these opportunities to advance their careers (Hardware 2011).

In order for staff to do this they will need to participate in lifelong learning. This lifelong learning is not only the responsibility of the individual but of the organisation as well. As an organisation, Information Services has developed the Career Pathing Tool as one tool among many to contribute to the development of our staff.

The creation of this tool has on the whole been a very positive experience for Information Services. There has been great informal feedback from staff as well as recognition of its usefulness by external sources.

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Appendix 1 – Example of career paths within a stream

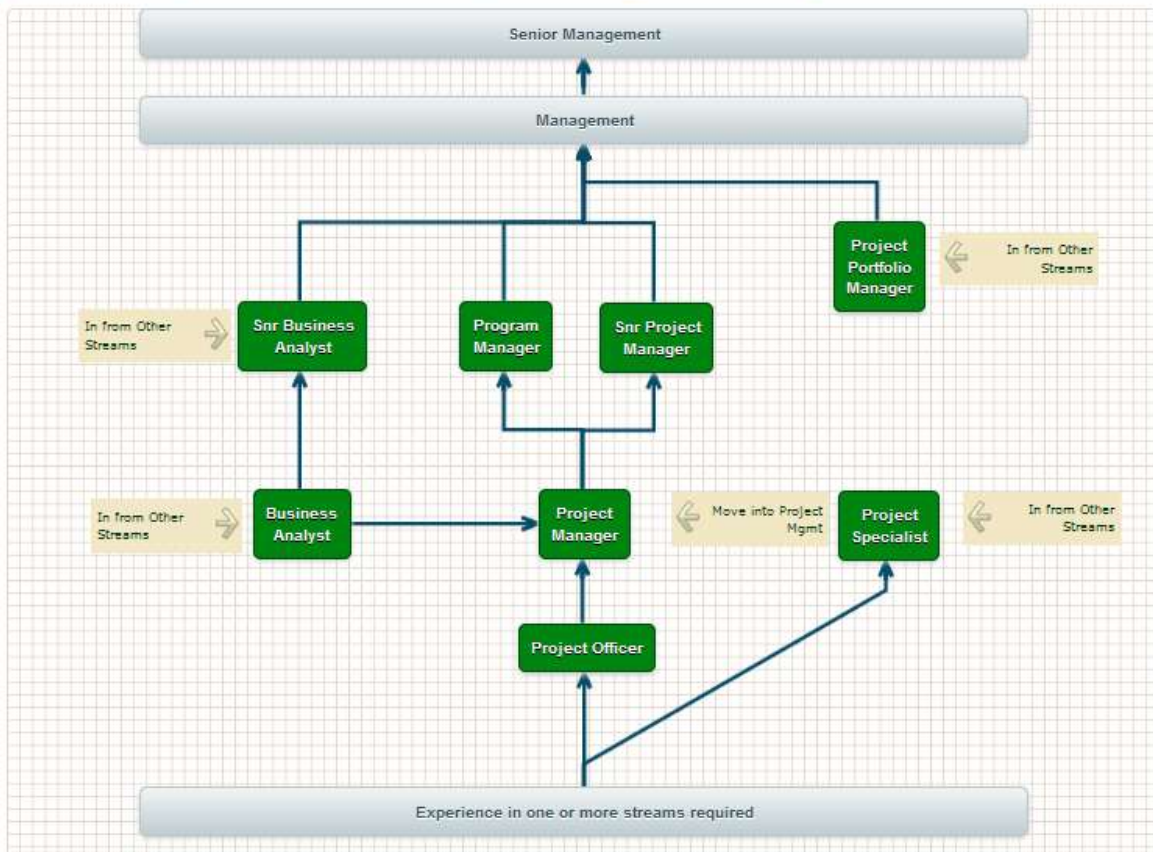
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Project Management

Logged in: Jennifer Hardware | [Logout](#)

[Add new position](#) [Add new path](#) [Add new link in/out](#) [Save the model](#) [Publish to public](#) [Help](#)



Appendix 2 – Career Profile Example

Senior Software Procurement Officer Career Profile

Testimonial

"The role provides many opportunities to develop a range of procurement, technical and information management skills. I've enjoyed the exposure to new technologies, and the chance to explore how they can be used to improve existing systems for managing software licensing and management."

Graeme McCowie
Senior Software Procurement Officer
Client Technology Services

What is the Job about?

The Senior Software Procurement Officer is part of a team of Software Licensing staff. The role is charged with providing high level support of the majority of the University's software site and volume licences. In particular you will be involved in the negotiation of new and renewed license agreements, the reconciliation of licensing records and subsequent internal charging of licenses to internal clients.

You will assist in the development, maintenance and operational use of a variety of systems, including an in-house Software Asset Management database, Software Contract Register, shopping cart and the sections presence on the Griffith website.

You will provide high level advice and take a lead role in relation to client queries and work collaboratively with internal and external stakeholders to get the best value outcomes for license agreements, volume or ad-hoc license purchases.

You will be part of regular communication and negotiations with software resellers and vendors, and participate in activities of the University Software Licensing Collaboration group.

You will be required to work both independently under broad direction from the Team Leader, and also with other team members to provide high levels of customer service.

Expected Experience

In order to be successful in this position it is expected that you will have, or be able to quickly gain, a high level understanding of software licensing and software asset management issues as well as procurement skills. This would usually come from exposure working with software licensing or within a procurement team.

A background in Information Management would be useful and demonstrated experience in providing IT support services to end-users would be seen as an advantage.

Qualifications, Training and Development Resources

Essential

- Tertiary qualifications in Information Technology or equivalent and relevant IT work experience.

Recommended

- There are many valuable short courses on offer through Staff Development. The following courses could be valuable in preparing for a role as a Senior Software Procurement Officer:
 - Managing at Griffith
 - Supervisor Essentials Series
 - Exceptional Consulting Skills
- External Courses:
 - Getting To Yes (Negotiation Skills via CMA Learning)
 - ITIL Foundation Course
 - ITIL Software Asset Management or IATAM Certified Software Asset Manager course
 - Queensland Purchasing Training (To Level 2)

**Position Description to be attached to document.