

Division of Communication and Education

Management Practices in Information and Communication Technologies

Task

There is a Group investigating the scope for productivity gains in the current management of Information and Communication Technologies (ICT) within the University, chaired by Lois Jennings and reporting to VCAC. The Deputy Director of the Division of Communication and Education was keen for the Group to understand that each Division was different, and the Division of Communication and Education has made significant gains in the management of ICT over the past few years. The chair requested a presentation from the Division of Communication and Education on its ICT management practices.

Perspective

The presentation approached the issue of the management of ICT within the Division from the perspective of the Technical Services Unit: covering its approach to the management of IT and Media Services. It reflects the Division's *plan*: and doesn't necessarily reflect the current reality on the ground throughout the Division.

The Presentation covered the following major points:

- **Vision** — the major goal of the Division for its IT and Media Services.
- **Guiding Principles** — the underlying values influencing the Division's decisions.
- **Processes** — how the Division plans and manages ICT.
- **Challenges** — current practical issues that face the Division.

Vision

Virtual Campus

The major goal of the Division is to provide universal access to its resources:

1. At any time
2. From any place
3. Accessing any content, and in "any" form.

Content accessibility also refers to accessibility for people with different strengths, from any device.

Remember that this is the goal: how much the goal is realised depends on the resources available.

Guiding principles

Customer/client service orientation: The customer is always right...

The clients of the TSU are predominately staff. Students are serviced by and large through them, however TSU does deal directly with students, especially in media, journalism and to some extent teacher education, advertising and marketing.

TSU sees the Division as a community not corporation — clients or customers are known as individuals with their own requirements. Even so, there is a corporate systems infrastructure behind the services provided, like the network services supplied by Client Services, a helpdesk database (possibly moving to a centralised service through CSD), and the use of Microsoft servers for email, Web, file management and printing.

There is a critical mass for an organisation where it loses touch with its clients as people: a TSU with 9 people working with 300 staff appears to work satisfactorily: it is less likely to work with 1000 staff.

Platform agnostic

The Division supports both PC and Macintosh computers as desktop machines for staff and postgraduate students, and laboratory computers. Some of the legacy server equipment that is being phased out is unix-based.

Open Systems and industry standards are supported where possible, for example through encouraging the use of applications like Dreamweaver and FileMaker that are supported across platforms rather than Front Page or Access. Where there are proprietary applications in use, platform independent browser-based access is provided. The Division's helpdesk application, and the ASP database are examples of this approach.

The Division is developing a compatibility lab to support the diversity that exists.

Centralised support

The Division's IT and Media Services are seen as Divisional resources, not belonging to an individual School or unit. IT services have been brought together in the one space, and meet regularly to go through any outstanding

issues (like help desk requests, development support proposals, major projects like the Divisional web site). Media Services are all provided through Building 9 staff, with project coordination through the help desk where possible.

Involvement with staff from other Divisions, especially Client Services Division, is actively encouraged and supported.

Processes

Decision-making

The Division's IT & Infrastructure Committee is responsible to the Divisional Executive. The Committee is comprised of representatives all Schools in the Division, with a representative from the Division's Business Unit and another from Clients Services Division. The Deputy Director of the Division chairs the Committee. It provides the Executive with recommendations on policies, purchasing requirements, and procedures. IT & Infrastructure Committee is an active committee that Divisional Executive expects will provide it with appropriate advice.

There is also a Media Facilities Users Group (MFUG), a forum for Media users to discuss the Division's media facilities.

Media resources allocation

MFUG is charged with coordinating the use of the Division's media resources so that the most efficient use can be made of the Division's limited resources. MFUG is the forum for negotiating the timetabling of loans equipment, and lab and studio access

Support

Divisional staff access TSU support through the Division's help desk. Requests, preferably through email where possible, are entered into a database and allocated to TSU staff for resolution. There is less likelihood of requests being overlooked when they are in an actively managed database to which all TSU staff have access.

Lab image maintenance

Twice yearly the TSU calls for requests for variations in the applications installed in the Division's computer laboratories. Requests are reviewed by the IT & Infrastructure Committee, which recommends any changes to be implemented. Details of the current installations and proposed changes are available via a website.

IT Purchasing

Divisional IT purchasing is centralised through the IT Loan. Requests are maintained in a database, which eventually will be available for the Division to review and contribute to online.

ICT equipment purchased from research or consultancy accounts is supposed to be bought on the advice of TSU, to ensure interoperability and integration with the Division's existing resources, although this isn't always the case.

Policy and procedures manual

Lab configurations, email arrangements, lab rules and other Divisional policy are included in a Manual that will be available on the Web. The Web version will be maintained as the current repository of the official Divisional line on IT and Media Services policies and procedures.

Performance measures

There are no formal measures of the Division's performance in IT and Media Services. This is one area of process that currently needs attention within the Division.

Informally, performance is assessed in terms of

- Spending in relation to budget.
- Level (or lack) of complaints.
- Outstanding or unmet requests for service, equipment or software applications.

Challenges

The challenges facing the Division in respect of IT and Media Services are viewed as that: challenges that need to be addressed. They are not seen as 'problems' or issues that can't be resolved. They set the agenda for planning within the context of the Division's overall vision and the outstanding requests from staff.

Databases

There are a number of databases around the Division that have been developed over a number of years to service the needs of individual units. In many cases the original developers of the databases have moved on,

leaving behind legacy systems that the unit relies on, but with no expertise available to maintain and improve them. The requests for maintenance and development often then come to the TSU.

Some units rely on commercial systems, of which there is a variety across the Division, while still other units have so far unmet needs for databases that the Technical Services Unit does not have the resources to satisfy.

Websites

With the increasing use of the Internet, an especially the World Wide Web, more and more requests are coming through to the TSU to develop, support and maintain websites and other Internet services on behalf of the Division. Some of the challenges facing the Division in this regard are:

- *Look and feel:* conforming to the emerging UC Online design for websites.
- *Application development:* developing dynamic web-based services like databases and emailing lists.
- *Metadata and marketing support:* designing, building and maintaining pages that can be found by their intended users.
- *Hosting:* where is the website to be served from.
- *Content maintenance:* ensuring that, once built, content is kept up-to-date and relevant.

Quality Assurance

With limited resources in the Division, it is often difficult to ensure that proper Quality Assurance processes are in place and carried out. An example of this is the checking of content on websites to ensure accuracy and currency.

Where to get support?

Within the Division there is still scope for increasing clients' understanding of where they need to go to get support: the responsibilities for various IT and Media Services are spread throughout the University, often in an apparently arbitrary manner.

Space utilisation

There are opportunities to increase the utilisation of the Division's space and equipment resources. Some issues that need to be considered in this regard are:

- *Design:* the current allocation and layout of the spaces in the Division may be able to be made more efficient with the right sort of design input.
- *Timetabling and scheduling:* there is scope within the current allocation of space to classes, and scheduling of student projects, for the better utilisation of resources, especially laboratory and loan equipment.
- *Ownership:* With limited resources, every opportunity must be explored for providing students and staff with access to resources that historically were considered to be "owned" by a particular unit.
- *Flexibility:* as equipment becomes more capable at an affordable price, with proper planning there are opportunities for getting more use out of resources by using them in a more flexible manner.

Equipment loans

As digital media becomes more mainstream there is an expectation that the Division can, for example, supply digital cameras, computers, software and CD RWs for 320 students in one course, as well as providing support for traditional clients.

Equity

With such a range of requirements throughout the Division, it is difficult to ensure that all requirements are addressed in an equitable manner.

Equipment turnover

The University has a policy that IT equipment should be kept for no longer than three years before being replaced. The Division has over 450 computers, so to keep them all for no longer than three years means that one third of the computers must be replaced each year. At an average cost of \$2,200 this means spending over \$300,000 every year on computers alone. There are other equipment needs beyond desktop computers, so the scale of just maintaining the Division's current equipment, let alone satisfying increasing demands for resources, needs to be addressed.

Training

IT and Media Services are changing rapidly, particularly with the rise of digital media and the convergence of communication, media and IT. The training of

- ICT Staff,
- General Staff, and

- Academic staff

all needs to be addressed in the context of these changes.

Career paths for ICT staff

One challenge facing the Division is to keep staff; in the IT area the lack of career paths for staff means that to progress they need to move elsewhere. This issue is by no means restricted to the IT staff: it is a matter of concern throughout the University for technical and general staff.

Extent to which the technical staff “teach”

As IT applications and Media Services change, there is pressure on the technical staff to “teach” users (staff and students) how the technologies work. There is a tradition in the media area for the technical staff to take quite a role in transferring knowledge and skills to staff and students, but there is little recognition of this “teaching”.

Network storage

The complexity of modern IT systems, reliability, file sizes, the convergence of media, IT and communications, and the changing expectations with around-the-clock access to network resources, are some of the pressures that lead to a need to move away from personal storage devices like floppy disks and Zip cartridges, to network storage that is available from any computer, anywhere on campus or even anywhere in the world.

Developing secure and reliable systems large and fast enough to cope with this type of use is a challenge for the Division, particularly with images, sound and video files .

Backup

Currently, with mainly distributed storage of files on local hard drives, backup of files is inconsistent across the Division. The move to central file storage will alleviate this, since the network storage is backed up nightly, but in the meantime there is a lot of the Division’s data that isn’t being reliably protected against loss.

Asset tracking/disposal

There is some scope for improving the tracking of hardware and application software installed on desktops and laboratory machines in the Division.

Disposal of equipment once it comes to the end of its useful life is also difficult, and at the moment far too much space around the Division is taken up with storing old equipment that should be disposed of.

Conclusion

While it may appear that the challenges facing the Division are daunting, when placed in the context of a vision for the future, some guiding principles and a set of processes they provide an agenda for the future.

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