A review of the University of Edinburgh Knowledge Management Operational Plan

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Introduction

The University of Edinburgh’s Knowledge Management Operational Plan supports the Knowledge Management Strategic Plan and describes the current activities and development plans in various operational areas.

The Operational Plan was reviewed with reference to the Strategic Plan and instances have been highlighted in which:

- the Operational Plan does not appear to correlate directly with the Strategic Plan
- issues raised in the Operational Plan do not appear to correlate directly with other sections of the Operational Plan
- there appear to be ‘gaps’ or inconsistencies in the Operational Plan

The review was carried out with the following messages from the plans particularly in mind:

- The University has identified three core strategic goals – excellence in education, excellence in research and excellence in knowledge transfer and commercialisation.
- A key overarching goal for the next three to five years is the creation of greater opportunities for collaboration, taking advantage of the University’s broad base of expertise by linking like functions across the University, identifying good practice wherever it exists and sharing expertise and knowledge.

This report has been structured to present comments on:

A. The articulation of the Operational and Strategic Plans
   In which areas could the Operational Plan relate better to the Strategic Plan?

B. The context of the KM Strategy
   Could the complex set of drivers and goals be represented to put the Operational Plan into context?

C. Operational Plan – usability issues
   Some suggestions for enhancing the presentation of the Plan

D. Representation of knowledge assets and functions
   Some suggestions for drawing together and representing the wide range of knowledge assets and initiatives that the plan cites.

E. Promotion and Outreach
   What are the plans for reporting progress to the wider University community?

F. Specific points in the Operational Plan
   Questions and issues raised in specific chapters

G. Summary
A. Articulation of the Strategic Plan and the Operational Plan

The main aim of the review was to identify any ‘gaps’ in the Operational Plan. That is, does the Operational Plan describe actions that reflect the aspirations of the strategy, and do the plans in various operational areas join together and relate to each other to provide a comprehensive approach to the strategies outlined?

In general, the Operational Plan describes a comprehensive set of actions and plans that address the aims of the core strategic goals of achieving excellence in research, teaching and knowledge transfer outlined in the Strategic Plan.

There are, however, five areas in which the the Strategic and Operational Plans could perhaps articulate more thoroughly:

1. The forthcoming Research Assessment Exercise (RAE) is clearly an important event for the University and one in which quality knowledge management will make a key contribution. Strategic Priorities (3) and (10) relate to the RAE. Priority (10) describes the use of the Edinburgh Research Archive to track University-related publications and this is subsequently reported in the Operational Plan in 2.5.2. However, Priority (3) whereby ‘Reporting for the Research assessment exercise is integrated into corporate services and systems’ does not appear to be described in the Operational Plan. There is a mention of the RAE in chapter 3 Information Support Services where in 3.2.3.2 it is described as placing demands on support services and that there is work underway to understand the needs relating to the RAE. The reader is referred to Chapter 4 but I couldn't find specific information about RAE-related work in Research Support. The RAE is mentioned in several other areas such as the use of e-learning activity as a research output and therefore as a contribution to the RAE (5.3.22) and also as the top priority for Administrative support services (9.2). Considering its importance as a strategic priority for 2005/06 perhaps the RAE warrants a short, separate description pulling together the various citations in the Operational Plan and expanding on the administrative and corporate services that will support the overall RAE effort.

2. Strategic Priority (11) calls for Administrative systems to ‘...link to the major e-learning tools in use in the University’. Although there are mentions of e-learning research, centres of e-learning excellence within the university and a strategy for e-learning, the introduction to section 5.2 notes that ‘...there is no comprehensive central record of what e-learning methods are in use in undergraduate and postgraduate courses. Central units are trying to improve understanding through consultations and surveys.’ It may be useful to expand on the plans for creating a central record of e-learning tools since this will presumably be important in linking administrative systems to them.

3. The Strategic Plan states that the aim of developing good KM within the university is “To provide the knowledge management infrastructure and services that empower and promote the University’s business”. Many of the initiatives described in the Operational Plan are (necessarily) internal developments that improve KM and knowledge sharing within the University. However, one of the outcomes of these internal developments is to enable the University to create a comprehensive, representative, high quality web presence that promotes the institution externally to prospective students, researchers and business partners. This redeveloped presence will significantly contribute to the the University’s ability to satisfy a number of drivers and goals in the Strategic Plan, such as its desire to sustain and develop its position as a research and teaching institution, to engage with the wider community and to build partnerships. It is surprising therefore that the re-development of the University web site has a relatively minor mention (in 7.5.14) and that there is little discussion of the implications and benefits of this redevelopment.
4. Although there are examples of collaborative working and knowledge sharing scattered throughout the Operational Plan, these could be better highlighted considering that a 'key overarching goal for the next three to five years is the creation of greater opportunities for collaboration'. A section such as an Executive Summary, or even a dedicated collaborative culture section in the Operational Plan, could draw together specific examples and therefore ensure that their collective value is recognised. These could include:

- the creation of an e-learning gallery
- the elearning@edinburgh conference
- redesign of library space during refurbishment?
- Growth of respositories for different resource types
- Establishing a Research Computing Body
- creation of a 'star gazing' group of 'technology astronomers'

5. The development of a single search environment and reduced login services will significantly contribute to the goals of becoming '...a more efficient and cohesive organization with easier user access to relevant and authoritative information...' and providing University members with '... information when they need it, regardless of where they are located'. Indeed, the introduction to the Strategic Plan cites the aim of the KM objectives and actions as being to '...enable members of the University to easily and seamlessly connect to information and knowledge whenever it is needed and wherever it resides'. Plans for a single overarching search environment are in the 2006 must-do milestones, but an expanded explanation of the role of MyEd and the functionality of EASE might help to clarify the progress towards easy, seamless access.
B. The context of the KM Strategy

The context in which the Strategic and Operational Plans have been developed appears to be complex with a number of goals, objectives, priorities and drivers cited throughout the documents. It might be helpful to display the relationship of these graphically. Table 1 (page 3 of the KMSP) could be extended to show the relationship between the various levels of strategic drivers and the way in which the operational framework supports these. For example:

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<table>
<thead>
<tr>
<th>University Core Mission</th>
</tr>
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<tbody>
<tr>
<td>University Strategic Plan</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>core strategic goals</td>
</tr>
<tr>
<td>cross-cutting supporting goals</td>
</tr>
<tr>
<td>Operational priorities</td>
</tr>
<tr>
<td>KM Objectives</td>
</tr>
<tr>
<td>KM Drivers</td>
</tr>
<tr>
<td>KM principles</td>
</tr>
<tr>
<td>(recurrent theme throughout these three is creation of a collaborative culture)</td>
</tr>
<tr>
<td>KM Strategic Plan</td>
</tr>
<tr>
<td>KM Operational plan</td>
</tr>
</tbody>
</table>
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The diagram illustrates the flow from the University Core Mission to the University Strategic Plan, with additional layers indicating core strategic goals, cross-cutting supporting goals, and operational priorities. The KM Objectives, KM Drivers, and KM principles are connected, reflecting the recurrent theme of creating a collaborative culture. The KM Strategic Plan leads to the KM Operational plan, which encompasses operational areas and key priorities.
C. Operational Plan – usability issues

1. Plan structure
Although all chapters follow a similar structure, there is some variation in the amount of detail included and, in particular, the way in which the chapters are introduced. Chapter 2 begins with a short description of what it aims to cover while others appear to simply describe the function of the operational area. A combination of the two would be helpful in all cases as might a statement about the strategic goals that the chapter is specifically aimed at (eg as in chapter 5 Supports the University’s goal areas: excellence in education, excellence in research).

2. Navigation
During some of the longer chapters it is sometimes easy to lose track of which section you are reading – vision, current situation or roadmap. It would be helpful to have a consistent use of heading, icon or some other signposting to help with reader navigation.

3. Summaries
Some of the longer chapters have a lot of information to digest and it might be useful to provide a summary table showing key points of the vision, the current situation, the roadmap and the associated milestones.

4. Chapter order
The current order of the chapters is as follows:

1. Introduction
2. Scholarly Information Resources
3. Information Support Services
4. Research Support
5. Educational Technologies and Infrastructure
6. Transferable Skills
7. Core infrastructure, Information and Communication Technology Services and Networking
8. Strategic approach to new and emerging technologies
9. Administrative Support Services
10. Management of information legislation
11. Management of Information resources and services
12. Human Resources
13. Knowledge Transfer

Some of the chapters might group together more usefully – for example

1. Introduction
2. Scholarly Information Resources
3. Information Support Services
4. Core infrastructure, Information and Communication Technology Services and Networking
5. Research Support
6. Educational Technologies and Infrastructure
7. Strategic approach to new and emerging technologies
8. Administrative Support Services
9. Management of information legislation
10. Transferable Skills
11. Human Resources
12. Knowledge Transfer
13. Management of Information resources and services

although this would then present a different order to the strategies summarised on page 4 of the Strategic Plan.

5. Web presentation
The Operational Plan chapters are currently presented as individual files on the KM web site. This makes it difficult to read the document as a whole and it would be advantageous to publish the files as one pdf and also as an html version.
6. Acronyms and projects
Acronyms are used throughout the Operational Plan and could become a little confusing if the audience is not familiar with all of them. For example in 2.4.2 the acronyms RAE and ERA are used in the same sentence. Other examples include:

BSC (3.2.6.1)  
EUSA (3)  
CHSS (3.2.4.4)  
CMVM (3.2.4.4)  
EASE (3.2.4.3)  
ISLES (3.3.5.1)  
CPA (3.3.8)  
EPCC (4.2)  
ISG (5.3.3)

Many of these are names of various departments, groups or committees and an explanation of the various titles could be helpful. Some, however, are projects such as:

EUCLID student records/admin  
LTC e-learning tools review group (?)  
LSSRG Learning Spaces review group  
TRIAG Teaching Room Infrastructure Advisory Group  
ADNP Assessment of Development Needs Project  
e-CPD support (ISG)  
Transkills project

This might be the first time that details of all of these projects have been drawn together – if so there may be some benefit in collating and summarising these, if such a resource doesn't already exist, thereby providing an explanation of the projects and also an illustration of the breadth of initiatives across the organization. For example:

<table>
<thead>
<tr>
<th>Project</th>
<th>summary</th>
<th>Outcomes and measures</th>
<th>Areas of likely impact</th>
<th>Timescale</th>
</tr>
</thead>
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7. Definitions
Some of the phrases used such as 'open access' can have several meanings (on display for general use; the open access publishing model). Other similar uses include open standards, open services and open source and a general list of definitions would be helpful.
D. Representation of knowledge assets and functions

The collation of project information described above is an example of how the Operational Plan can help to represent KM activity and requirements across the organization. There are other examples whereby knowledge assets are cited individually but may be more usefully described if put into context and represented with related projects, resources or tools. One example is in 2.4.2 where the capture of University knowledge is discussed. In this the Edinburgh Research Archive, Edinburgh Learning Objects Repository and the Digital Image Data Archive are cited. Later in 2.3.5.8 (and elsewhere) a single search environment is mentioned. This will be a powerful knowledge discovery tool and its impact might be more powerfully shown if maps were used to show the relationship between various KM initiatives. A simplified example would be:

![Knowledge Map Diagram]

This type of representation can also show the interaction between, and overlap of, projects and how they might inform each other's progress. It might be beneficial to explore the construction of a single knowledge map for the organization as a whole, if this does not already exist, to represent the current and future interactions of knowledge functions and assets.

E. Promotion and Outreach

There is a clear message throughout that balanced scorecards will be used to measure achievements against milestones but it isn't obvious how the progress in each of the operational areas will be aggregated and monitored centrally. As importantly, mechanisms and responsibilities for the reporting and outreach to University members and stakeholders aren't clear. Such outreach is important not only to update the University community with progress, but also to engage with stakeholders and encourage future involvement in the project. In 2.5.5, it appears that the Museums and Galleries Plan has an outreach plan but this appears to be the only mention of such promotion.
F. Specific points in the Operational Plan (by Chapter)

Questions and inconsistencies that relate to specific points made in a number of chapters are noted below:

Chapter 2 Scholarly Information Resources

- 2.2.1 – The heading should be 'Information resources for learning and research' – the title is there but not as a heading. This will affect the section numbering.

- 2.4.4 – The vet school is developing a 'study landscape' – would it be possible to describe this further? Does it represent an example of knowledge sharing/collaboration?

- 2.5.3.2 – '...schools will receive accurate financial and usage information... ' provision of financial information is described later in Administrative Services but what will be the benchmark be for usage statistics? COUNTER? Proprietary software developed by the University? Will usage statistics be available for all University collections or just the library catalogue?

- 2.5.3.2 – '...University members will be encouraged to publish in open access journals...' is there a University policy about this? If so can this be cited? Can the KM rationale be expanded upon for this eg Improved accessibility, findability?

- 2.5.3.2 – mention of management of the data ‘...created by the GRID community...’ – what does this mean in reality? Compare with 7.5.8 (Core Infrastructure) discussing the need for specific ICT infrastructure to be in place and sustainable before GRID technologies can be fully realised.

- 2.5.3.6 – In order to move to more digital provision the library requires '....reassurances about long term access to digital resources...' – is there a link to EDINA work that can be made here?

- 2.5.3.8 – single search environment is being developed but difficult - this is an important message but a little hidden?

Chapter 3 Information Support Services

- 3.2.4.1 - lack of interoperability can create need for more support - this implies that an improvement in cross -organization access (eg through MyEd portal) will decrease support requirements?

- 3.2.4.3 - the EASE reduced login service – what is the relationship between EASE and MyED? It would be helpful to have a clear picture of this.

- 3.2.6 – surveys and focus groups are being used to gather information from users. Surveys are mentioned elsewhere in the Operational Plan – is the organization/design of and feedback from these info-gathering exercises shared to ensure that effort isn't duplicated, eg the same questions aren't asked twice?

- 3.3.2 – disability audit currently being carried out – the findings from this presumably have implications for other operational areas, but I couldn't find mention of it elsewhere – even in 10.2.2 (Accessibility) although a Disability Advisory Group is mentioned.
3.3.2 – mention of a Research Centre being set up in the library – can this be described in more detail in order to link it to other activities?

3.3.3 – mention of an FAQ service to help users to be self sufficient. There is simply a mention of a 'knowledge base' but no description of how the knowledge base will be created and maintained. There is also discussion in previous sections about the various parts of the support service (help desks in various locations plus online services) – but how will these join up to provide a comprehensive database of FAQs, etc? If a description of this is available it would act as an illustration of knowledge sharing culture and a joined up approach.

3.3.5.1 - ‘...a growing element of support is to help individual academics in course development...’ – I wasn't clear about what IS does here? Do they find resources – or advise on where to find? How will a single search environment affect this? Does this need an expanded comment to illustrate the important role of IS?

3.3.6 – During 2005/06 particular emphasis will be paid to postgraduate needs – again using focus groups – will the findings be made available to inform other operational areas? Is the focus on Post-Grad just by Info Support Services or is this a theme elsewhere?

Chapter 4 Research Support

This chapter has no introduction – its title does not make it clear that it addresses primarily computing services and research. It would be useful to clarify how the focus of this chapter differs from Chapter 7 - Core infrastructure, Information and Communication Technology Services and Networking

“Both individual scholars and research teams will have access to an integrated infrastructure for computation, digital curation and information access.” should this list also include deposit and management?

Chapter 5 Educational Technologies and infrastructure

5.1.3 – mention of the University e-learning strategy and that it ‘dovetails’ with the KM strategy, but very little else on the content or key points of the strategy. Several Strategic Priorities relate to the e-learning strategy (eg (7) Central services work with College e-learning coordinators and with Schools to develop plans for implementing the University e-learning strategy)

5.1.7.1. - this section includes a general description of repositories for learning resources – chapter 2 is more specific about what those repositories are (LORE, ERA, DIDA etc) – should these be linked or use the same graphic?

5.2 – no central record of e-learning at EDU - Central units are trying to improve understanding through consultations and surveys – I couldn't see a specific milestone for an audit of e-learning provision – but it is maybe the sum of various milestones?

5.3.15 –“....ISG needs to continue to discuss the use of Digital Object Management Systems with Colleges and Schools. An understanding needs to be reached on the functionality and use of a small number of such systems across the University. Digital resources are expensive to develop and it will be important to make sure that these are re-
used where possible. Information Services Group should provide re-usable learning object management systems and repositories...” This implies that the repositories aren't available or that their development isn't definite – yet previous chapters (chapter 2 in particular) are clearer about this.

Chapter 6  Transferable skills

- The section starts “To provide training...” - should these intro sections be entitled 'Aim' or 'Goal' ?
- 6.1.2 typo - repeat of Personal Development Plan
- 6.4.1 – no explanation of ‘Roberts' funding until 6.4.4 – should this be explained at start?
- 6.4.3 - Assessment of Development Needs Project (ADNP) – initial stage was due to complete 2005 – are there early findings that can be reported?
- 6.5.5 – OLL plans to ‘provide comprehensive staff and tutor development opportunities that allow cross-fertilisation of ideas and practice relating to quality teaching and learning’ – this could be a statement for the aims at the beginning of the chapter?
- Could there be more details of the types of courses (content) offered?
- Could there be more about what a PDP will offer and how it will work? The Plans will ‘...enable staff to assess their own skills, career and professional development needs...' but from an organizational point of view could collectively inform the University about common skill sets, skill locations, common development needs – a KM tool in itself.

Chapter 7  Core infrastructure, Information and Communication Technology Services and Networking

- 7.5.8 – this section starts ‘The university must make full use of the opportunities offered by e-science ..’ but finishes ‘...To fully realise the e-science potential requires both a considerable change in the mindset of the university and in the technology deployed...’ There is no further description of how the University must change in order to realise this potential but the first 3 Milestones refer to the resolution of e-science issues. Further discussion of the issues and potential resolutions would be helpful.
- this chapter appears to be closely linked with chapter 4 (Research support) and chapter 5 (Educational Technologies and infrastructure). In Chapter 4 there is talk of a representative body within the University committee structure dedicated to 'understanding, aggregating and presenting research computing support service requirements across the university’ – in 7.5.9 there is mention of a need to remain abreast of new technologies and to ‘...harness the efforts from around the university to inform the policy makers and implementers of what is available’ – would this representative body mentioned in chapter 4 also do this – if so, this would be a natural link.
- 7.5.12 – what does inter-networking with the NHS mean? Is there more information here to
demonstrate working with an external partner?

- 7.5.14 – This appears to be the only mention of a new University website. I didn't see it cited elsewhere, yet this is a key tool for the University to promote itself and to ‘...sustain and develop its position as a research and teaching institution’ – does this need more presence in the Operational Plan? Presumably it will require consultation with all stakeholders in the University and therefore could be used as an example of cross-organization KM.

Chapter 10  Management of information legislation

- The Disability Audit Mentioned in 3.3.2 is not mentioned in 10.2.2 'Accessibility'

Chapter 11  Management of Information resources and services

- This chapter could be the final summary chapter or combined with the introductory chapter since it appears to provide an overview of the over-arching KM activities

Chapter 12  Human Resources

- there is no mention of PDPs or career development tools that are discussed in chapter 6, but this is presumably an HR-related material. Could this be joined up in some way?

- Milestone HR-1 aims to ensure that 'Mechanisms are in place to promote information and knowledge sharing between all levels of University staff and students'. It isn't clear what those mechanisms might be since the discussion of knowledge sharing in the body of the chapter relates to skills, attitudes and behaviours. Perhaps some explanation of these mechanisms would be helpful, as would their contribution to the encouragement of a knowledge sharing culture.
G. Summary

1. In general, the Operational Plan describes

- a comprehensive set of actions and plans that address the core goals of achieving excellence in research, teaching and knowledge transfer outlined in the Strategic Plan.
- current or planned collaborative working
- examples of, or the benefits of, knowledge sharing.

2. There are five areas in which the Strategic and Operational Plans could perhaps articulate more thoroughly:

- the management and support of the forthcoming Research Assessment Exercise
- information about e-learning provision
- the plans for developing a new University web site
- a better representation of examples of collaborative working and knowledge sharing
- the plans for reduced login barriers and the use of MyEd

3. The context of the KM strategy is complex and although it is described in the text, an expanded graphical view would be helpful.

4. A number of suggested formatting changes are put forward to improve the usability of the Operational Plan as a whole:

- consistent and improved introductions to each chapter
- consistent use of the headings and signposting to help readers
- summaries of key points of vision, current situation, roadmap and milestones to provide an overview of the longer chapters

5. The Operational Plan provides the University with a (new?) resource about KM initiatives across the organization. These could be summarized and defined.

6. Individual descriptions of KM activities and knowledge assets can be enhanced by collecting them together and presenting them (perhaps graphically) to show interaction and context.

7. Plans for promotion and outreach, to update university members and stakeholders with progress and to engage them in future involvement, are not clear.

8. Some question relating to individual chapters have been noted including:

- the need for clarity on the development of a single search tool
- the need for the e-science infrastructure issues to be resolved if information benefits are to be fully realised
- the need for clarity regarding the representative body for computational research – will this body be able to gather information required by other operational areas?
- What mechanisms and tools will be put in place to encourage a culture of knowledge sharing?