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applied infoKit

## Creating an MLE

Summary

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# Summary

In this infoKit we have tried to present the creation of Managed Learning Environments as a process that needs to involve the whole institution and not as just a technical exercise. An MLE can completely transform the way in which all institutional activities are carried out – learning, teaching, administration, support and management, hopefully, for the benefit of all concerned. This kind of transformation requires social and cultural change as much as high quality technical design and implementation, and demands participation from all stakeholders at all stages of the development.

We suggest that at the outset the whole institution should spend time exploring and developing the vision for the MLE. What do you want to achieve organisationally that the MLE can make possible? What do you want to change in your current practice? What price will you have to pay?

Involving the whole institution in this sort of activity is not a trivial undertaking. It can be costly in time and effort. We suggest various ways in which this can be undertaken and provide a range of resources to inform and support the process.

Before we begin to realise a new vision for our institution we need to understand in a detailed way exactly how we do things now. In complex organisations no one person can possibly know the detail of every process carried out by every member; nevertheless, a rich picture of the operational activities needs to be built and there are many methods for doing this. We break the problem down into a number of categories and provide checklists, approaches and case studies on how to approach this complex problem.

It may be that after this exercise, you will return to the section "[Why might you want an MLE?](#)" – as your vision may have been changed by having a deeper knowledge of how things work now. Indeed, you could repeat both of these activities several times before you decide to move on to the more specific activities of "[Gathering Requirements](#)".

Once we have our vision for the proposed MLE development, and we understand our current processes well, then we can begin to gather and specify the requirements for the MLE. There are many formal methodologies for requirements gathering and a wide literature base. We have tried to point you at those that we think are particularly relevant for this sort of development, while stressing that requirements involve tight integration of both technical and social elements.

Of course, before you can decide what you are going to do, you need to know what is technologically feasible, desirable and affordable. "[Technological Options](#)" provides an overview of the various technical options open to you including: developing your own system from scratch, buying or acquiring components and joining them up, or handing over the whole job to an external supplier. We discuss the costs and benefits involved in adopting an open standards approach and provide access to the experience of many of the JISC funded and other projects that have done pioneering work in this area.

"[Design](#)" is where work begins on the design of the MLE proper. Although software design is a technical matter with formal methods and tools even here we believe that all stakeholders need to be involved and need to understand the implication of design decisions. This may at times be frustrating for software designers and slow the process down but the end result will be a system that has widespread approval and minimises problems later in the implementation process. We have provided a range of resources on issues that need to be addressed in the design stage – processes, tools, domain models and architectures – and suggested a range of resources that elaborate on these.

Implementing an MLE involves software implementation and organisational change. As the system is introduced into the organisation people's jobs begin to be affected and processes change. This requires training, staff development and even job redesign or redeployment. These are hugely

sensitive issues so planning the implementation requires involvement once again from a wide range of stakeholders. Although there is not a huge range of experience yet, in the implementation of MLEs, it is growing and we have provided case studies and other resources based on the experience currently available, in particular from JISC funded MLE projects.

Finally, embedding needs to take place to complete the organisational changes envisioned. There is almost no experience yet of the embedding of MLEs. Most developments are still either at an earlier stage or have been limited in their scope, perhaps only seeking to achieve data exchange between student records and VLE systems. Nevertheless we have tried to provide you with insights into the embedding process, refocussing on the purposes of the MLE and what needs to happen for these to be realised long term.

The sections in this infoKit have been presented in a linear order giving the impression that if the sequence is followed then success will be achieved. This is partly due to the constraints of the site design and partly because the sections do indeed follow on from each other. However, we want to stress that we see MLE specification, design and implementation as being iterative. It was suggested earlier that you might need to revisit earlier sections after tackling a later one – this is true throughout the infoKit. The experience of doing any section will result in new ideas and reflections and space needs to be made for these, although strong management is needed to make sure that progress is made.

Even after the implementation is complete and embedding has begun you will want to move on to the next version, the next vision. Adopting information and communication technology is not a one-off activity – it is an ongoing process as we seek to make the best use of these technologies to provide better opportunities for our learners.

So we would like to suggest that you use this resource in an iterative way, moving back and forth between sections as appropriate to your needs. As you do so, your experiences will themselves become valuable resources for others trying to do the same. We would be very pleased if you decide to offer your experiences as case study resources on this site. In a new area like this, resources will become out of date quickly and we are continually looking for new material. You can contact us by emailing [jiscinfonet@northumbria.ac.uk](mailto:jiscinfonet@northumbria.ac.uk). We would also encourage you to use the discussion forum on this site. This site provides a starting point, with over 200 resources and we hope that it will provide a focal point for a new Community of Practice, and interdisciplinary group, of people involved in MLE development.

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