

Using Collaborative Online Tools for Business and Community Engagement



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Introduction

Collaboration is at the heart of Business and Community Engagement (BCE), manifest in three dimensions: within institutions (across disciplines and functions), across institutions, and between institutions and external partners.

While effective and sustainable collaboration requires initial (at least) face-to-face contact, the vast majority of BCE collaborative work is heavily dependent on virtual collaboration through email, telephone or online tools and resources. In a severely time-constrained and information-heavy environment, it is critical that tools that enable collaboration are simple to use, with minimal risk and mutually convenient. Web technologies, in particular, offer exciting opportunities to meet these needs.

The practice of knowledge transfer/exchange is maturing into a profession, as testified by the 2007 launch of the Institute of Knowledge Transfer (IKT, a professional body for Knowledge Transfer (KT)) and both KT and employer engagement are strategic government priorities. Both activities rely heavily on effective collaboration, new hybrid skill sets and flexible, interoperable systems, but generally institutional central services and policies such as those related to HR, finance or IT are not designed to empower these activities. Therefore the tools and infrastructure used to support collaborative activity tends to be whatever can be found to work to meet current needs resulting in a hit-and-miss approach.

With all this in mind, Facilitating Collaboration was designed as one of six core streams of work within the BCE Programme, with the aim of 'enhancing collaboration and provision of service across and between institutions through enabling systems and technology'.

This project

The Trialling of Collaborative Online Tools for BCE - aimed to enhance and empower BCE collaboration¹ among practitioners, between institutions, and between institutions and external partners, through the testing and piloting of selected web technologies, tailored as appropriate, in specific BCE collaborative contexts.



8 trials took place in a variety of different BCE contexts as the table below shows:

¹ <http://www.jiscinfonet.ac.uk/infokits/collaborative-tools/project-activities-and-processes.pdf>

	Within and Across regions	Lifelong learning	Employer engagement	Open Source Software (OSS) Example	FE Lead	New to BCE	Knowledge Transfer Network (KTN)
University of Leeds	✓	✓		✓			✓
University of the Arts		✓		✓			
University of Huddersfield	✓	✓		✓		Partners	
Knowledge House		✓	✓	✓			
Northumbria University				✓ International			
Birmingham Metropolitan College	✓	✓	A type of	✓	✓	✓	✓
New College Swindon	✓		✓	✓ + Community		✓	✓
University of Glamorgan	✓	✓	Member of	✓		Partners	

Background

What is BCE?

Business and Community Engagement (BCE) is a term increasingly being used to describe the relationships between further and higher education institutions and external organisations and individuals.

Why is BCE important to my university or college?

The current and future climate for further and higher education means that external engagement and partnerships with commercial, public sector, cultural, social and civic organisations are going to be increasingly important to the success of both individual institutions and the sector as a whole. Indeed, knowledge exchange, innovation and employer engagement are high on the Government's agenda and are seen as an important funding stream for further and higher education. These relationships can take many forms; examples taken from trial projects are given here.

Working with Small and Medium Enterprises (SMEs)

This type of collaboration is not new but, in recent years, has become more central to institutional strategy. This is exemplified by the University of Glamorgan and its relationships with local SMEs

'Building relationships with local growing businesses is an important part of the University's business development strategy to promote the opportunities for Knowledge Transfer Partnerships, student and graduate enterprise, consultancy, training and postgraduate recruitment'

Knowledge exchange can greatly enhance the opportunities for local and national businesses as New College Swindon found when working with a new business partner to help them create advertising and training materials to assist with the growth of sales and expansion of their market share.

Business Involvement in Curricula Design and Delivery

Increasingly, employers are involved in the design and delivery of curricula ensuring that it meets their needs and the needs of the community. Further and higher education needs to be agile in its response to these requirements by developing relationships, having procedures and policies, and using tools that support the collaboration. An example of this type of partnership is the Midlands Health Academy (MHA) which includes higher education Institutions (HEIs), further education Colleges (FECs) and NHS organisations in the Birmingham and Black Country areas. The MHA consists of 9 partners who are working together to establish a closer relationship with local communities that will manifest itself in more people entering NHS employment.

The Response project was a response to the changing needs of the local NHS

'...use online collaborative tools to share knowledge and documents to ensure that the voice of the employer, the NHS, is heard when developing course materials. Because of changes in the NHS, academic institutions need to be able to respond to a different environment. It is critical that training programmes are available and linked to existing and emerging models of care...'

'The Response project has been innovative in that it has provided a platform for the NHS together with HEIs and FECs to discuss workforce planning and development.'

In the School of Design at Northumbria University, large multinational businesses are involved in the delivery of a collaborative design project for some second year undergraduates. The students not only gain an understanding of team working within such organisations but develop skills that they will require as product designers working in a global market place.

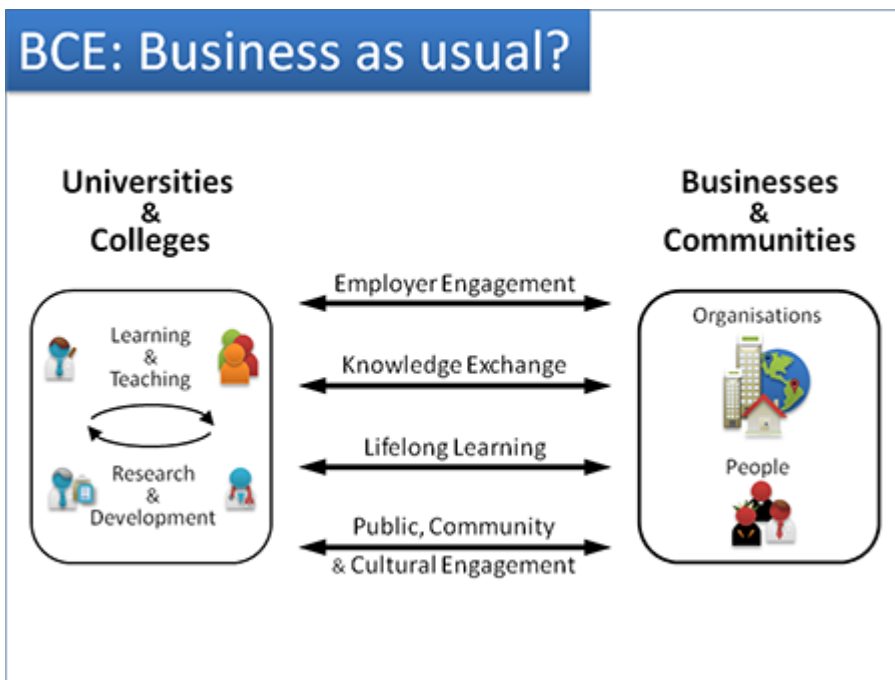
Collaboration between institutions

The nature of knowledge transfer (KT) is changing due in part to the economic climate of reduced resource but also due to technology supported collaboration together with new thinking emerging from social capital, organisational and individual motivation, and innovation theories. The new models of knowledge transfer also need to take into account cross-disciplinary together with inter-institution collaboration. Leeds University has piloted a new type of knowledge transfer - KT2.0 - by creating a virtual KT office in which a greater range of expertise is available beyond the host institution. The Leeds Innovation Forum is now integral to the Leeds University commercialisation team's activities and working with Manchester University on a common platform there are now opportunities for direct knowledge sharing between the two institutions.

Knowledge House has developed a web-based collaborative Customer Relationship Management (CRM) and project management system to help companies access the combined expertise, skills and specialist resources available from the five universities in the north-east of England. The system was developed to meet the very specific requirements of the universities and the interactions between them.

Communities of Practice

Developing a community of practice can have benefits for both sides of the partnership (Etienne Wenger). The practitioners gain the support and knowledge of academics, and students and staff of the institution gain from the knowledge and skills of the practitioners. Post-graduate students on the photojournalism course at the University of the Arts London benefit from such a community of practice that was created for professional photojournalists worldwide to share practice and enable discussion on topical questions.



Knowledge exchange, innovation and employer engagement are high on the Government's agenda for economic prosperity and are now becoming major drivers for institutional strategy. Within individual universities and colleges, the strategic management of the processes and relationships this creates will be crucial to future impact and success - BCE must become 'business as usual'.

The Trial Projects

For all final reports, multimedia and project pages visit: <http://www.jiscinfonet.ac.uk/infokits/collaborative-tools/projects>

University of the Arts

This trial project explored how web 2.0 social networking tools can be used to build a community of practice that links the academic world with the professional one in a multifaceted exchange, enabling students to gain insights into the world of professional practice and industry, but also for industry to gain the critical perspectives on practice that an academic environment can provide.

Birmingham Metropolitan College

The Response Project demonstrated the use of online tools to support collaboration between NHS employers, Further Education Colleges and Higher Education Institutions. This trial project facilitated the recruitment and retention of qualified local people into a changing health economy workforce through knowledge exchange and transfer.

University of Glamorgan

This trial project created a 'listening zone' for feedback, ideas and partner-making, and acted as a marketplace for business referrals and contacts. The 'G-Blog' forum, created by the University of Glamorgan and trialled by a number of SMEs recruited from the local Business Club and the University business incubator (GTi), facilitated access and interaction.

University of Huddersfield

The trial project investigated the benefits of using collaborative tools to facilitate more effective communication and networking across the West Yorkshire Lifelong Learning Network (WYLLN). It was envisaged that by using collaborative tools in this way it would greatly reduce the amount of time spent in travelling to meetings, create improved ways of working together on documents and make it easier for staff in diverse locations to work together.

Knowledge House

KHIS is a web-based collaborative project tool used by Knowledge House and the five North East Universities to manage Third Strand revenue generating projects. The trial project aimed to assess the potential of KHIS as an Open Source Platform for use by a broader range of organisations, including Knowledge Transfer Networks (KTNs).

University of Leeds

The trial project sought to increase the external social capital of the partner knowledge/technology transfer offices and to increase the internal social capital of academic researchers within partner universities. Through this, the trial project proves the effectiveness of a much more 'open innovation' approach to knowledge transfer - exploiting an 'Innovation Division of Labour.'

New College Swindon

This trial project supported the monitoring and collaboration between relevant participants by using Web 2.0 tools and information extracted from a CRM. Collaboration between businesses was facilitated using online conferencing tools, discussion forums and other technologies. Information will be presented through online project management environment which will include blogs and wikis.

Northumbria University

The aim of the 'Open ICT tools' trial project was to enhance understanding of the use of ICT tools to facilitate global collaborative learning with external business and community partners. Using the Global Studio as a research site, the trial project examined the utility of various IC technologies for enabling secured collaboration with community and industry partners.

Tools Used in the Project

There is a bewildering array of online tools that could be used for Business and Community Engagement (BCE) collaborative work, the majority of which have not been proven in this context. The 'Trialling of Online Collaborative Tools for BCE' project did not specify which tools were to be trialled by its partners as it is important to choose the tool that is appropriate for the context of the collaboration.

In choosing the tools, the trial partners based their decisions on a variety of factors. For example, the University of Northumbria utilised an action research methodology - plan, observe, reflect and revise. They had previously used a wiki to enable collaboration between students and multinational organisations but this tool was not effective in this context. They chose to trial Plone, more usually used as a Content Management System backend for websites, in the first semester. After reviewing its use (especially feedback from the students), they implemented WordPress in the second semester. Other communication tools were used in parallel. Due to commercially-sensitive product material, security was paramount in this trial project and so any tools chosen had to be implemented behind the University firewall.

Others, for example The University of The Arts London and Birmingham Metropolitan College trialled tools that the team had previous experience of using but in a different context and the University of Leeds chose to use a tool already used by a professional organisation.

All the trial projects were very aware of the need to keep costs and required technical support to a minimum as these would be factors when looking to sustain the use of collaborative online tools in business and community engagement after the completion of the project. However, the University of Glamorgan decided to pay for hosting in the USA, as opposed to using a university server, as this met the requirement of the business incubator facility being 'semi-detached' from the university and the time difference meant that traffic would be low when G-Blog was being used in the UK.

Some Trial Projects chose the same type of tool but used them in different contexts. For example, blogging tools were used by Northumbria University for international collaboration between groups of students and businesses (co-design), and Glamorgan University used the same type of tool for local small and medium enterprises (SMEs) to discuss their requirements. The project blog was used to disseminate information about the project as a whole.

"WordPress has proved an excellent platform for G-Blog, without any technical difficulties"

University of Glamorgan - Note: G-Blog is the name that Glamorgan University gave to their collaborative online working space.

"One of the major barriers that had to be addressed by the project team was access to the NHS network. Moodle allowed access through the Firewall and online chat sessions [involving external users] did not present a problem."

Birmingham Metropolitan College - MHA Response

"For the purposes of this project we decided to try the following systems: Plone, MediaWiki, Joomla, WordPress and Skype. Each is available as a free download and has varying degrees of assistance available, mainly via online communities."

Northumbria University - Open ICT Tools

Tools Used in the Project

Tool	Ease of use for users	Limitations	Cost to the Trial project	Used By
Teleconferencing	Reasonable	<p>The cost of the teleconference calls via BT unaffordable without sponsorship by external industry.</p> <p>Voice only. Wired teleconferencing unit can be only used where ports were enabled by the university's IT services. Enabling ports takes time to arrange. It also means that only rooms with enabled port can be used.</p>	The cost of the calls via BT unaffordable without sponsorship from external industrial partners	Northumbria University
e-mail	Excellent	Limitations with size of files that can be attached. This might prevent distribution of larger files. Circulated information only accessible to those to whom an email addressed to.	n/a	Northumbria University
Videoconferencing	Poor - Not every institution might have the Initial setup cost of the (e.g. Polycom)	Not every institution may have equipment. If equipment is centrally managed then needs to be booked well in advance. Experienced a numbers of problems with connection and at times were unable to make connections with industrial and university partners	Initial setup cost of equipment may be prohibitive	Northumbria University
VoIP (e.g. Skype)	Excellent	Only two participants can use the video facility at any time. Poor video resolution	£150 for 10 webcams	Northumbria University Birmingham Metropolitan College

Instant messaging	Good	May have potential security issues.	N/A - MS Commander licence purchased by the University	Northumbria University
WordPress	Excellent	Not designed for blogging so needs to be creatively adopted for collaborative purposes.	N/A	Northumbria University, University of Glamorgan
Plone	Good	Strips custom made HTML codes. Becomes too slow (or even locks down) if more than one person trying to access same file.	N/A	Northumbria University
Wiki Pages	Poor	Poor editing interface.	N/A	Northumbria University
FTP	Excellent	Currently not allowed on University network	N/A	Northumbria University
You Sent It	Excellent	Link expires after 7 days making files inaccessible after this time.	Basic account free of charge	Northumbria University
SMS (Short Messages Service)	Excellent	Only short text can be forwarded.	N/A - personal cost	Northumbria University
Illuminate	Good (BMC, Project) Poor (Huddersfield)	Large bandwidth required so can be very slow at times.	License depends upon number of potential users.	Huddersfield, Birmingham Metropolitan College, Project
Wimba Classroom				University of the Arts
Moodle	Excellent (reliability important, allowed through NHS firewall)			Birmingham Metropolitan College

Selecting an Appropriate Tool

There is much advice and guidance available on procedures for choosing the correct software or tool and some of the trial projects followed a procedure during the project lifetime; for example *plan, implement, observe, reflect and revise*. However, at the start of the trials some had already been through the process or followed a pragmatic approach of choosing a tool that they were already familiar with (often the same procedure but not documented as such).

Security was high on the list for some of the trial projects as they were holding sensitive data or working on potentially commercially important product design. This, in turn, has implications for the hosting of the collaborative tool.

It is frequently reported in the press that some colleges and universities do not allow access to social software such as Facebook, some wiki sites and externally hosted systems such as Elluminate: <http://www.illuminate.com> ; however sometimes it is an external partner that does not allow access. This may be for commercially sensitive reasons or, as in the case of National Health Trusts, patient confidentiality. It is possible to work around these situations but these are not sustainable solutions.

While researching which tools are available for collaborative online activities, it is important to include those tools that at first glance are not designed for such activity. Innovative use of these tools can produce surprising results. It is also useful to investigate those tools in use by professional bodies or other external partners.

Defining Requirements

Each context will have a different set of requirements and different methods can be used for elicitation.

The University of The Arts uses Wimba within a learning and teaching context and together with a knowledge of the professional group (Photojournalists) and the work of Etienne Wenger, this previous experience helped define the requirements. These included:

- Archiving of presentations for later viewing. The ability to generate mp4 files and present directly from the main site (Ning platform) greatly enhanced this feature. The sessions are archived and hosted on Vimeo
- Webinars available 24/7. This is especially important when working with an international group
- Discussion rooms available easily and at short notice. This can facilitate small group discussions that emerge organically from the main network
- Interface easy to use. For example it was found that the 'backchannel' that was used to amplify and comment on the presentations, was instinctive and caused no problems for the audience

Further Resources

More guidance on choosing the correct software tool is available from our System Selection infoKit:

<http://www.jiscinfonet.ac.uk/InfoKits/system-selection>

- Capable of hosting large numbers of people. The numbers attending the live Webinars were unknown at the start of the trial and this had to be factored in to the requirements. In the event, up to 50 people attended

Knowledge House used a questionnaire and face-to-face discussions with user groups to elicit KHIS2.0 system update requirements. These can be found in Appendix C² of the final report from Knowledge House. The meeting proved very successful and instead of using a whiteboard (as they had done in the past), thoughts were captured via a PC and projected onto a large screen. This method was preferable as it enabled an initial brainstorm of ideas, which could then be cut and pasted to fit into themes. Knowledge House also has a KHIS Champions Group (users from each university + the development team) and that the group meets every month to discuss ongoing/new requirements, problems, etc. KHIS is very much a user-driven development and the system requirements are dictated by the users.

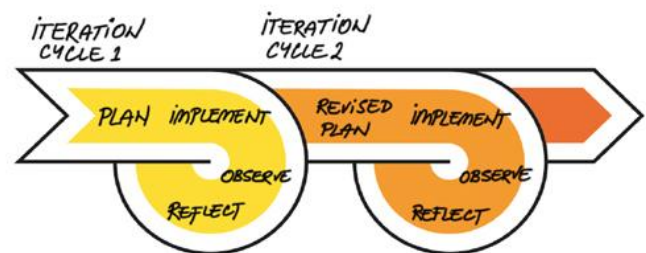
As cost was a major deciding factor for the University of Huddersfield, they used this as their main criteria for the choice of collaborative online tool (Elluminate chosen from Elluminate, DimDim, Webex, and Adobe Connect). However, they examined an alternative tool (Skype), which whilst not being a collaborative tool as such did have 'workarounds'.

Plan, implement, observe, reflect and revise

Most of the projects utilised an action research methodology for trialling one or more online tools, consecutively or in parallel.

Northumbria University had two major cycles each with a different tool for the collaborative activities. Due to the timing of the trials, the same group of students was involved throughout. This had the advantages:

- that the students involved in the evaluation of the tools in the first semester, benefited from their evaluation. Indeed, it was a renegade group that realising the limitations of Plone (used in the first trial), used WordPress for their internal group collaboration
- at the start of the second trial, the students had the skills required to use the tools in this context and could then concentrate on the tool itself. The overseas students that were part of this trial hadn't benefited from this earlier experience and it is believed this slowed their initial progress



Action Research methodology

Based on: Hudson, Owen, & van Veen (2006, p.581)

'The project included two major cycles - plan, implement, observe, reflect and revise - with different partner networks to trial ICT tools to facilitate business and community engagement.'

Northumbria University

Knowledge House developed a test site and invited feedback from its partners using a group of 'project champions'. The level of feedback received depended upon the University's use of the KHIS system –

² <http://issuu.com/jiscinfonet/docs/ncs-appendix-iii---questionnaire-to-providers-shee>

'During development of KHIS 2.0 a test site was established and feedback invited from the five universities. Some were more active than others due to the perceived importance of KHIS 2.0 within each institution. Several saw the new system as a key business development tool and actively reported feedback, whilst others simply planned to use baseline functionality due to institutional commitments to other CRM systems.'

Knowledge House

Using Existing Infrastructure

- Having experience of using the tools in a different context e.g. learning and teaching, can decrease the cost involved
- License agreements may already be in place or additional numbers easily negotiated
- Staff development can be minimised
- Use instructions are already available
- Time that would have been required for familiarisation can be used, for instance, to focus on meta-level questions of how to establish and build a community online

'Negotiating a new contract with Elluminate for the trial meant that use of this commercial product was feasible.'

University of Huddersfield - They had experience of using Elluminate in a learning and teaching context

'Early discussions confirmed that the repository and chat/discussion forum would be Moodle. This was considered a reliable platform that some of the project team were already familiar with but a major factor was that there was a Moodle developer in the team.'

Birmingham Metropolitan College

'Many of our conclusions are 'platform agnostic' as well in the sense that most web conferencing and social networking platforms are essentially similar, with the decision to use one over another often determined by forces outside of the control of an individual project (e.g. institutional adoption)... or matching against what partners were already using.'

University of the Arts

Security

When working with external partners, security is frequently paramount. This was the case for the Northumbria University trial - security was paramount for the international business partners as the projects could be commercially sensitive. This meant that any collaborative tools used had to sit behind a firewall. The trial project wanted to explore open-source software but the University IT department's policy did not support their use. By working very closely with the IT Director (he was on the trial project steering board) and other IT Services staff, both sides came to an understanding of each other's requirements (and the reasoning behind them!) and a virtual server (partially separate to the University's main servers) was made available to the trial project together with IT Services support. This server is now available for all University collaborative projects.

Jed Woodhouse, IT Director at Northumbria University talks about his experiences of the Open ICT Tools Project: <http://www.youtube.com/watch?v=YUIB6u08wFY>

The data held in Knowledge House's KHIS 2.0 system is also commercially sensitive and so security was high on their list of requirements.

One of the major barriers that had to be addressed by the Birmingham Metropolitan College project team was access to the NHS network. Moodle was allowed through the Firewall and online chat sessions did not present a problem. One Elluminate session was undertaken at Heart of Birmingham teaching Primary Care Trust (tPCT) but access to a webcam was not allowed although there was full access to audio and the materials presented. A request was sent to the Information and Governance Committee to allow a webcam to be fitted to a PC on Trust premises - however, after 6 months permission was still not granted. Birmingham Metropolitan College and Heart of Birmingham discussed the issues but the reason given by the NHS for not allowing access to some hardware/software was patient confidentiality.

Hosting

Five of the trial projects chose to host their main collaborative tool within the college or university. However two of these also used externally hosted tools. The reasons for the decisions are shown below:

External Hosting	Internal Hosting
No University/partner control - independence/semi-detached	Control over security/system behind firewall
Easier than discussions with IT Services/marketing	Central support and training
	Cost covered by central services/spread across many departments or projects

In order for Northumbria University to host the collaborative tools of the trial project's choice, IT Services enabled Skype to be used via the wireless network and provided a separate virtual server.

'...one of the requirements was that the ICT tools enable information to be exchanged securely. As the Universities network security policy does not permit peer-to-peer (P2P) software on the wired network; certain communications tools had to be transferred to wireless networks (e.g. Skype contains a P2P component).'

Northumbria University

'Discussions about where G-Blog would be hosted covered buying a dedicated server, asking for space on the University's server, or paying a small fee for external hosting, which fitted well with the 'semi-detached' nature of the business incubation facility. The decision was made to use WordPress, hosted by Media Temple based in the US, which meant that if there was downtime, the time difference would work in our favour, unless everyone was blogging at night!'

University of Glamorgan - Note: G-Blog is the name that Glamorgan University gave to their collaborative online working space.

'External so outside of University considerations ...additional benefit of... that we didn't have to deal with any internal IT issues over licenses, approval etc, which meant that the whole project was agile and could adapt to any changes rapidly and effectively.'

University of the Arts

Don't Reinvent the Wheel

Collaborative online tools or those that could be used in business and community engagement may be in use elsewhere within the college, university or by the external partner(s). It is worthwhile looking to use these tools as there will be experience, familiarity, training material and perhaps central support available. These are some of the reasons why Birmingham Metropolitan College decided to use Moodle as one of their tools, and why Huddersfield chose Elluminate; both being in use as learning and teaching tools.

For open source software there are very active user groups that are more than willing to offer advice and guidance; the University of the Arts tapped into this resource saving time and effort.

The University of Leeds looked to a professional body to assist in their decision. This meant that the community was familiar with the interface.

'Apart from the use of Wimba, which is paid for by the university, the project has used either free, open source or other platforms that were not specifically intended for academic use. Our email system was gmail, and we used Twitter, Ning, You tube and Vimeo for communications and video hosting. Essentially we looked out at industry to see what it was using to distribute and share work, and used those 'industry strength' platforms. This had the additional benefit of meaning that we didn't have to deal with any internal IT issues over licenses, approval etc, which meant that the whole project was agile and could adapt to any changes rapidly and effectively.'

University of the Arts

Cost

Cost is an obvious concern when choosing a collaborative tool. This consideration needs to go beyond the life of the funded projects; sustainability is very important. This is one reason why many of the trial projects chose open-source software or low cost options.

Huddersfield University chose to use Elluminate as their main collaborative tool as it was already used for learning and teaching, but then the university decided not to renew the license. The trial project re-negotiated in order that a cost-effective solution be available for the lifespan of the trial.

The University of the Arts used a range of tools in the trial

'Apart from the use of Wimba, which is paid for by the University, the project has used either free, open source or other platforms that were not specifically intended for academic use. Our email system was gmail, and we used Twitter, Ning, YouTube and Vimeo for communications and video hosting.'

Contexts and Tools

The Trial Projects covered a number of different collaborative contexts:

- With international partners (business and education)
- Within a region (individual and groups of educational establishments with regional business partners)
- Lifelong Learning
- Between departments within an institution
- Between institutions and external partners
- Community of practice
- Learning and teaching

For the same type of collaboration and/or task, similar and different online tools were used making for a rich mix of experiences.

Global Studio Video, Northumbria University – Videoconferencing:

<http://www.youtube.com/watch?v= il9kSEUFrs>

Same Tool, Different Context

The same tools (Elluminate in this example) used in different contexts can elicit very different responses from the user group. The BCE CT Project used Elluminate very successfully for a couple of updating sessions and a training session on 'Video production'. Birmingham Metropolitan College also successfully used Elluminate within the Midlands Health Academy albeit with some problems (not with the tool itself but concerning headset and camera use within the NHS). However, the University of Huddersfield's partners within their Lifelong Learning Network had problems adapting to a tool that they believed was designed for a learning and teaching context.



Global Studio, Northumbria University

An example of a tool used in different ways within one trial project was Wimba, which is of the same product type as Elluminate. This was successfully used by the University of The Arts for Webinars working with an international community of practice for photojournalists. They identified that they needed different kinds of Webinar to debate different types of issues and so used Wimba in slightly different ways:

- Themed panel presentations where an invited/volunteer group of 3-4 'thought leaders' in the community (or from outside of it) each present on the same theme/concept, then a Q&A with the audience. This is how they initiated each major conversation that they dealt with
- A follow up session where a smaller group meet to discuss that topic of the panel presentation in much more detail - a kind of workshop session to actually try and come up with some new ideas/insights
- More 'portfolio like' presentations about geographic or organisational themes e.g. one about what is happening in photojournalism in Asia, or an individual photographer presenting their work
- Presentations linked to events, exhibitions and festivals of photography or real world conferences where they put together a panel to engage in a series of questions in a round table discussion. Most notably they organised a one day conference on the relationship between NGO's and visual media, and webcast the event live through OPEN-i
- Seminars based on specific groups within the community e.g. non profits/NGOs where they would meet to discuss issues specific to them

Listening to Innovators

If particular products are not allowed by an institution, the students will find suitable alternatives working outside the firewalls; these are not always approved by the business partner who may also block for security reasons. In preparation for working in an industry that is extremely security conscious, is this good practice? The University of Northumbria Trial Project shows that by working with IT Services from the beginning, taking time to understand each other's requirements then great leaps can be made. Also by having an open

approach within the teaching side of the team, the students were able to share their concerns and were open about using an alternative system in addition to Plone, resulting in WordPress being adopted for the second trial.

People Matter

Whatever the context, it is usually the people relationships that are important to the success of any collaboration. Building trust and working with users to elicit their needs before engaging the online tool will pay dividends. Working with all stakeholders (within the institution and business) from the start of the project is equally important to the success, or otherwise, of the venture. Familiarity with a particular collaborative online tool or one with a similar interface can similarly help to get people on board.

Professional Face

In using collaborative online tools in business and community engagement the initial impression, as with all relationships, is important. Selecting the right tool for the job is a first step and some advice and guidance from the trial projects can be found in another section - 'Selecting an appropriate tool'. Other factors that can help in giving good first impressions are:

- Having clear objectives
- Having a well-designed site with help/training/advice
- Use a familiar tool or look-alike interface or one that industry is using
- Have resource available to support use
- Have uniqueness, so people have a reason to be involved

These points are discussed further in the **Professional Face** section of the infoKit

Professional Face

Having clear objectives

At the start it is useful to have a clear goal and objectives. If building a community or network then this will give signals to people encouraging them to join, to find out more. As the community grows, it is important to be prepared to be flexible and agile (see later) enabling the community to set the agenda. How far from the original goals this change happens in a BCE context will depend upon the *raison d'être* of the community. If it was intended to create and develop a Community of Practice then the purpose is to *'To create, expand, and exchange knowledge, and to develop individual capabilities'* as opposed to accomplishing a specific task.

If developing a community of practice, Etienne Wenger has developed a useful quick start-up guide:
http://www.ewenger.com/theory/start-up_guide_PDF.pdf

The differences between a Community of Practice and a project Team are proposed in the table below taken from *Cultivating Communities of Practice* (Wenger et al, 2002)

	Communities of Practice	Project teams
What's the purpose?	To create, expand, and exchange knowledge, and to develop individual capabilities	To accomplish a specified task
Who belongs?	Self-selection based on expertise or passion for a topic	People who have a direct role in accomplishing the task
How clear are the boundaries?	Fuzzy	Clear
What holds them together?	Passion, commitment, and identification with the group and its expertise	The project goals and milestones

The goals in the Northumbria University Trial were clearly identified and were part of the module objectives. As part of an undergraduate course, the learners required some guidance and the business partners needed to understand their commitment.

The University of the Arts Trial also involved students (post-graduates) but their interaction was being involved in the discussions on topics pertinent to the professional group (photojournalists). The community decided on the topics with suggestions from the educationalists. The site itself was developed based upon ideas from Cultivating Communities of Practice (Wenger et al., 2002).

Leeds University brought together many different communities allowing technology transfer officers to organise external skill sets as it is impossible to employ more smart people - teams are small. They worked with Manchester University using social media to find experts and outreach work. So in this trial the overall objectives were very clearly defined but as an internal Community of Practice (internal enterprise and knowledge transfer which is cross discipline) with devolved structure the activities were more asynchronous and devolved.

Knowledge House had a clear aim of improving their bespoke system but used their champions group (stakeholder representatives) to help define the objectives so these were understood and owned by the sponsoring community.

Well-designed site with help/training/advice

Most of the trials had a site that acted as a core or first-port-of-call and it was found to be important to have the site set-up and partly populated at the beginning. In the case of the University of The Arts, a few well-known and respected members of the community were part of the first wave of invitations; there was then a second wave of invitations prior to opening the site to all photojournalists.

Familiar tool or lookalike interface or industry using

Adopting the same platform as a professional body or similar may save time and effort for the user and in providing guidance on the BCE collaborative online tool. Leeds University piggybacked on the GINNN

network: <http://www.ginnc.com/> (provided by professional group AURIL) and they believed that this choice helped the community to grow.

Video - Students from Northumbria University: http://www.youtube.com/watch?v=63K_5c9SWQw

The University of The Arts also chose this path:

'Essentially we looked out at industry to see what it was using to distribute and share work, and used those 'industry strength' platforms. This had the additional benefit of meaning that we didn't have to deal with any internal IT issues over licenses, approval etc, which meant that the whole project was agile and could adapt to any changes rapidly and effectively.'

Resource available

Whichever collaborative tool is chosen or whatever the context, people will be needed to manage the resource. This may be embedded within existing workloads but if new work is generated then new ways of working may be needed.

'This ability to ramp-up new business capacity has placed a strain on the slender project management resource at Leeds. This in turn has focused the team on the need to embed social media to manage this collaborative resource, and to handle the new opportunities. And it has led to some radical rethinking of the project management process.'

University of Leeds

Uniqueness, reason to be involved

If there is no obvious or immediate benefit, then people will not use the collaborative tool. The uniqueness, or raison d'être, needs to be marketed. Sometimes, the unique selling point can be a surprise:

'One area that we expected to form a larger part of the community was the discussion forums on the Ning site; we put significant effort initially into 'seeding' these with questions and debates, but they were relatively little used by the community. Our instinct is that this is because the rise of blogging and the existence of other, longer established forums for the broader photojournalism and photographic community that serves this function. We came to realise that what we were providing that was unique was the live real time interaction and the archives of this, so we focused our energies to this goal and withdrew from promoting the asynchronous discussions.'

University of the Arts

If using the collaborative online tools as an alternative to face to face meetings, it is important to ensure that the sessions are well-prepared with assistance available if needed and that the virtual meeting really does have benefits such as saving time and travel.

Maintaining Interest

Maintaining interest in using the collaborative tool will initially involve resource. For example maintaining a library of short videos as these have to be produced, edited and stored. However, as time progresses, the 'community' may take ownership so reducing the commitment by one or a few people. This happened at The University of The Arts and stakeholders began to take responsibility for individual webinars and individual events - some of them real-world spin-offs.

If using webinars, then having multiple presenters can add interest with discussion between them being very engaging.

The University of Leeds generated interest within the University by targeted existing research and subject discipline groups, continually bring new people on board. Providing up to date lists of funding opportunities and news make people feel they need to be involved.

Agility

All parties need to be able to be agile and respond to new ideas and requirements; this may require additional resource. Agility is also linked to uniqueness - making the most of unexpected outcomes.

For example, **The University of the Arts produced 'flipbites'**

'A spin-off of the initial project idea that was a direct result of a demonstration by the JISC team at the initial BCE project workshop was the use of a flip video camera to capture short interviews with industry figures. We call these 'flipbites', and they consist of 1-2 minute 'talking head' clips where the speaker talks about one issue or question. We have recorded these at conferences, exhibitions and other industry events, and they have proven to be very popular with the community, with over 7000 views so far of the 24 clips posted to date. This demonstrates that projects need to be agile enough to introduce new innovations quickly when they emerge as useful possibilities.'

Tools Used and Context of Use

Tool	Context of Use	Comments	Task Type	Used By
Teleconferencing	Discussions with overseas business collaborative partners. Learning & Teaching (Design)	The cost of the teleconference calls via BT unaffordable without sponsorship by external industry Voice only which mean that body language signals missing	Online Meetings	Northumbria University
e-mail for collaboration	Discussions with overseas business collaborative partners. Learning & Teaching (Design)	Limitations with size of files that can be attached. This prevented distribution of larger files - norm in product/multi-media design		Northumbria University
Videoconferencing	Discussions with overseas business collaborative partners. Learning & Teaching (Design)	Experienced a number of problems with connection and at times were unable to make connections with industrial and university partners Good for body language when receiving feedback on design	Online Meetings	Northumbria University
Voice over Internet Protocol (VoIP) e.g. Skype	Discussions with overseas business collaborative partners. Learning & Teaching (Design) Discussions within West Midlands Health Academy	Only two participants can use the video facility at any time. Poor video resolution Blocked by some educational and business partners (e.g. NHS)	Online Meetings	Northumbria University Birmingham Metropolitan College

Instant messaging	Discussions with overseas business collaborative partners. Learning & Teaching (Design)	Short, sharp not in-depth discussions May have potential security problems (major issue for business partners)		Northumbria University
WordPress	Discussions with overseas business and student collaborative partners. Learning & Teaching (Design) Working with local SMEs	Designed for blogging so needs to be creatively adopted for collaborative purposes Interface similar to other familiar products so not daunting for users and shallow learning curve	Collaborative Spaces (co-design, co-creation) Online Communities Managing Relationships Awareness & Communication	Northumbria University University of Glamorgan
Plone	Discussions with overseas business collaborative partners. Learning & Teaching (Design)	Product not designed as collaborative tool so imaginative use required Very different to other familiar products so steep learning curve. The students found the navigation particularly problematic Not really suitable in Design context as strips custom made HTML codes. Becomes too slow (or even locks down) if more than one person trying to access same file	Collaborative Spaces (co-design, co-creation) Online Communities	Northumbria University
Wiki Pages	Discussions with overseas business	Poor editing interface	Collaborative Spaces (co-design,	Northumbria University

	collaborative partners. Learning & Teaching (Design) Project Management		co-creation) Project Management	University of The Arts
File Transfer Protocol (FTP)	Discussions with overseas business collaborative partners. Learning & Teaching (Design)	Currently not allowed on University network so students used external system. Required for sharing large multi-media files		Northumbria University
You Send It	Discussions with overseas business and student collaborative partners. Learning & Teaching (Design)	Link expires after 7 days making files inaccessible after this time		Northumbria University
Short Messages Service (SMS)	Discussions with overseas business and student collaborative partners. Learning & Teaching (Design)	Excellent for short messages. Users very familiar with the tool		Northumbria University
Illuminate	Lifelong Learning Network Health Academy Project updates and training	Change of context of use is not always easy for users Large bandwidth required so can be very slow at times Works well for project updating between partners and also for training and sharing of practice e.g.	Online Meetings Webinars Online Communities	University of Huddersfield Birmingham Metropolitan College BCE CT Project

		Video production		
Wimba Classroom	Community of Practice (CoP) of Photojournalists Teaching & Learning	Different functionality for different uses by the CoP No issues with regard to interface etc reported	Online Meetings Webinars Online Communities	University of the Arts
Moodle	Health Academy	Reliability important Partners found Moodle very easy to use Allowed through NHS firewall	Online Communities	Birmingham Metropolitan College
Huddle	Within Project Management team. Within project. With external evaluation team	Worked well for Project Management but not used by Trial Partners	Project Management	BCE CT Project
Ning	Community of Practice (CoP) of Photojournalists Teaching & Learning	Excellent as main site for the CoP. Archived Wimba presentations viewed directly from site	Online Communities	University of the Arts
KHIS 2.0	Collaboration between group of universities and external business partners	Bespoke system for Universities of the North East	Managing Relationships	Knowledge House
Sossoon	KT 2.0 - Collaboration within a university and between a group of	Limited with regard to customisation	Managing Relationships Online	University of Leeds

	universities	Working very well in this context	Communities	
EBS CRM			Managing Relationships Awareness & Communication	New College Swindon

Institutional Considerations

There are considerations for the Higher or Further Education institution that arise from collaborative endeavour with Business and Community partners. Much BCE activity is innovative and emergent in nature, capitalising on new opportunities in Employer Engagement, Knowledge Exchange, Lifelong Learning and Public, Community and Cultural Engagement. Some institutions are beginning to take a strategic approach to such activities, but the majority is still bottom-up.

Thus BCE activities, including those with online collaborative tools, can present challenges to the established culture, habits and processes within 'the institution'. Overcoming these is at the crux of the successful embedding of BCE. Questions arise, including:

- Does engagement and collaboration with external partners affect organisational cultures, habits or processes?
- Is there a need for new roles and responsibilities?
- What is the impact on existing services?
- Who maintains control?
- What communication channels are used?
- How are senior stakeholders engaged?

Issues relating to organisational cultures

A wide range of issues relating to organisational culture were experienced by the eight trial projects. From coping with demands for institutional branding to adherence to IT policy, challenges were presented to each and every trial project. Based on their experiences, a number of recommendations are offered:

More on the integration of BCE functions is available in our Embedding BCE infoKit:
<http://www.jiscinfonet.ac.uk/infokits/embedding-bce>

- When working across institutions, consideration should be taken of any existing strategies and attitudes towards the use of online tools
- Engagement with your collaborative community should be on their territory, e.g. at their major events
- 'Champion' users are effective to widen the impact and awareness of the online tool being trialled
- Hearsay is that Academia is slow to respond to external partners' needs. This need not always be the case!
- Adoption of even less disruptive online tools for collaboration take a considerable length of time, e.g. CRM
- Some unforeseen organisational processes may impact on any trial of an online collaborative tool, e.g. restructuring, redundancy

'The aims and objectives have had to be adjusted as the project has progressed to fit with the limited staffing and to adjust to the constant staff turnover.'

New College Swindon

'Perhaps the most surprising experiment from the project has been the cultural and behavioural resistance to the adoption of new online techniques within the University community. This has not so much been resistance to the re-engineering of the business processes or the externalisation of KT activity. This has largely been accepted at a strategic level. Rather, it has been intransigence at an organisational and individual level to the use of new online tools. This resistance has featured at many levels - from computing services staff to traditional marketing staff.'

University of Leeds - KT2.0

What is the impact on existing services?

Many online tools for collaboration could be considered as 'disruptive technologies' (Clayton Christensen, 1995) providing end users with the ability to use them in a simple, intuitive and accessible manner. From the

institutional perspective, where there is a common focus on expensive enterprise systems, such technologies are often seen as a threat rather than an opportunity.

The Northumbria University trial project is an example in point, impacting positively on the institutional services, widening the provision. Their trialling of online tools, including Plone, Wordpress, Joomla and Skype, has led to the provision of a dedicated server for online collaboration, available across the institution.

The University of Huddersfield trial project engaged institutional stakeholders, using existing tools (Elluminate) with which they had familiarity. The institution had already invested in the required infrastructure and technical familiarity for other purposes across the institution, including to support teaching and research. Heads of IT services were keen to exploit existing systems rather than set up new hardware/software.

'The OPEN-i project therefore leveraged an existing investment in teaching and learning at UAL and took that out into industry. The decisions on which software platforms to use etc. was thus effectively predetermined based on the tools developed for the online MA, which included Wimba for web conferencing, Ning as a social hub, Twitter for information sharing, and You Tube and Vimeo for hosting archives and other videos. This had the benefit of meaning that the project did not have to spend a lot of its initial energy on determining the best software platforms to deploy, instead we focused on the meta level questions of how to establish and build a community.'

University of the Arts

Who maintains control?

Control and ownership issues will always arise when undertaking a new collaboration or venture with Business and Community partners.

The creation of a new online community of practice raises an interesting consideration of 'control'. Does one institution retain ownership of the happenings within the community? Or does the community collective ultimately control its existence? The University of Arts London considered the potential institutional impact on their goal of creating an online community of photojournalists.

'We thought a lot about how to establish and nurture the OPEN-i community, as we were very concerned that the whole project didn't come across to the practice community or to the students as a cheap way of the universities getting guest lecturers from established professionals.'

'The community manifests its value in a sense of both producing something in common, and in engaging in interesting conversations, but the idea was that the interesting conversations should have some form of structure/goal, and that the community itself should produce the agenda for the conversations.'

University of the Arts

Advantage should be made of existing initiatives, enthusiasm and interest groups in partners, networks and communities to foster greater involvement and allegiance. The University of the Arts London, University of Leeds and Northumbria University trial projects demonstrated this, first building up high profile membership to brand the community before opening it up for additional members.

'G-Blog - The Listening Zone' was so named because we felt that this was about academics listening to businesses as well as entrepreneurs seeking advice from 'experts'.

University of Glamorgan - G-Blog

Knowledge House is a collaborative service ... to help companies access the world class skills, expertise and specialist resources available within [our] five universities. The system was designed in-house to meet the very specific requirements of universities and interactions between them.'

Knowledge House - KHIS

Opening institutional communication channels

Sub-cultures or silos exist within every organisation. However, there is clear evidence that these barriers can be broken down with regard to BCE within an organisation through the opening up of communication channels, championing of new approaches, and considered use of language.

The Northumbria University trial project had a clear and open communication channel with IT Services from the outset. This opened doors within the department and helped facilitate the aim of smooth collaboration³ with external organisation but without compromising the University's systems.

³ <http://www.jiscinfonet.ac.uk/infokits/collaborative-tools/engaging-stakeholders>

Existing channels of communication should be utilised, including newsletters, internal conferences and lunchtime staff development meetings.

The Knowledge House trial project also took the approach of having 'champions' to publicise KHIS, their brokerage service for the North East Universities. A monthly meeting was set up, with representatives from each of their five partner institutions, with the aim of challenging habitual ways of working with the existing system by encouraging users at the vanguard to 'champion' their adoption of KHIS 2.0.

Jed Woodhouse from Northumbria University discusses open communication within the Global Studio Project: <http://www.youtube.com/watch?v=YUIB6u08wFY>

'[Resistance was overcome by] demonstrating the return on investment to users - both in terms of economic return, greater efficiency and greater scalability.'

University of Leeds - KT2.

'The key aim ... was to collaborate with IT services to trial open source ICT tools [for BCE], which ultimately could be incorporated into the University's existing IT infrastructure for wider application.'

Northumbria University - Open ICT Tools

'[One objective is about] enhancing broader academic engagement by encouraging the use of other social media [beyond traditional mainstream press] ... A collaborative initiative with Ben Goldacre will create a series of talking head videos accompanied by explanatory text to guide academics to make best use of social media ... to promote their [research] work.'

University of Leeds - KT2.0

Engaging senior stakeholders

Senior stakeholders within the institution can be engaged through the identification of more measurable 'hard' outcomes, such as economic Return on Investment (ROI) or the development of valuable staff 'information literacy' or specific skills.

There was evidence from the trial projects that demonstrating how social Web2.0 technologies could enhance existing approaches to Business and Community Engagement was more conducive to engagement than promoting new ways of doing new things.

A Readiness Tool for Institutions

Before embarking on a potential collaboration using online tools, an assessment should be made of the subjects (people involved in the collaboration), institutional and partner objectives, and the tools being considered. The following offers key questions to consider:

Subjects

- Who is involved at the institution?
- What are their roles and responsibilities?
- What business or community partners are you seeking to involve?
- Where possible, identify these specifically? e.g. organisations, roles.
- Who else has an interest in the collaboration? e.g. who, such as learners or other stakeholders, might benefit?

See also 'engaging stakeholders'

Objectives

- What are the aims of the institution in engaging these partners?
- How do these aims fit with institutional (or other) strategic goals?
- Why might potential partners be interested in this collaboration?
- How might it meet their strategic goals or other interests?
- What have potential partners and stakeholders said they want from the collaboration, if anything?

See also 'defining requirements' and 'engaging stakeholders'

Tools

- What tool(s) are available for use?
- How comfortable are participants using these tool(s)?
- How effective are the tool(s) for supporting the kinds of collaboration anticipated (e.g. developing documents, open discussion, achieving shared goals)?
- What technical issues, if any, might arise in providing access to these tools from outside the institution?

- What shared tools are available without the institutional environment?
- What support is available to partners and at the institution?

See also 'selecting an appropriate tool'

Overview of trial projects' critical aims aligned to institutional strategy

Listed below are the trial projects objectives aligned to their institutional strategy. These can be used as the stimulus for discussion regarding the potential application of online collaborative tools at your institution.

Institutional strategic aim	Business & Community Engagement Collaborative Tools Trial Objective
Engage employers in the curriculum	To use online collaborative tools to share knowledge and documents to ensure that the voice of the employer, the NHS, is heard through collaboration and co-creation when developing course materials for health professionals. (<i>Birmingham Metropolitan College - MHA Response</i>)
Support work placements and/or work experience for students	To create a collaborative online community of practice (CoP) for the photojournalism industry, linking masters level students, aspiring entrants to the profession, established practitioners and key industry institutions. (<i>University of the Arts - Open-i</i>)
Knowledge transfer i.e. apply the outcomes of research/innovation	<p>To address a complex, commercially and socially valuable process: the effective transfer of technology and innovation from the University research base into real use by business - particularly for economic regeneration and social impact. (<i>University of Leeds - KT2.0</i>)</p> <p>To create a mechanism which encouraged informal access to the University for micro businesses and SMEs. (<i>University of Glamorgan - G-Blog</i>)</p>
Regional development	To develop a collaborative service to help companies access the world class skills, expertise and specialist resources available within five universities in the north east. (<i>Knowledge House - KHISS</i>)
Public/community engagement	To collaborate with IT Services to trial open source information & communication technology (ICT) tools that could be used to facilitate engagement with external business and community partners and could be incorporated into the university existing IT infrastructure. (<i>Northumbria University - Open ICT Tools</i>)
Lifelong learning	<p>An assessment of Elluminate, an online presentation application, in regards to its potential use as a collaborative tool for the West Yorkshire Lifelong Learning Network and its partners. (<i>University of Huddersfield - WYLLN Elluminate</i>)</p> <p>Stimulating internal knowledge exchange by developing communities of practice between academics in different disciplines and with staff who support BCE or manage marketing of research IPR. (<i>University of</i></p>

	Leeds - KT2.0)
Other	<p>To be more responsive in identifying and meeting employer needs and wanted to improve and expand its business links. The project focused on one business, one community group and one training provider for the trial. (New College Swindon)</p> <p>Because the project is core to the commercialisation strategy it has ensured a huge amount of match resource, ongoing effort and promulgation. (University of Leeds - KT2.0)</p>

Collecting evidence of meeting institutional strategies

Outcome or Benefit	Example evidence
Successful implementation of collaborative tools software	Screenshots, guidance notes
Successful collaborative activities with partners using software	Summary, transcript, recording (excerpt)
Identification and follow-up of new BCE opportunities; new partnerships	Summary, transcript, quotations 'Talking heads', audio and video clips
Improved awareness and perception of BCE within the institutions involved	Quotations from staff, 'Talking heads', audio and video clips Outcomes of e.g. interviews, survey, questionnaire, focus group
Improved skills and expertise	Quotations from staff Workshop programme and feedback from participants
More strategic approach to BCE	New institutional policies, strategies, mission statements (excerpts) internal emails indicating new practice or approach
Sustainable approach to the use of collaborative tools	Evidence of use being cascaded to other areas of institution Evidence of guidelines being adopted

Efficiencies for those involved in BCE	Evidence of time taken to conduct BCE activities before and after implementation of collaborative tools
Engagement of external stakeholders in curriculum	Evidence of engagement such as input to curriculum design, work placement opportunities, direct contact between students and employers/businesses/community groups etc. Talking heads, audio and video clips

Technical Considerations

Collaboration with Business and Community Engagement partners across institutional boundaries raises a wide range of technical considerations at institutional, service, project and individual level. The trial projects encountered and overcame many technical issues, including those relating to security, network access, support, network stability, network bandwidth, mobility and hosting.

Security

Security of systems infrastructure is of utmost importance for both education institutions and external partners. Numerous questions relating to security arise when considering online collaborative tools:

- How can an open, collaborative environment be fostered that does not jeopardise the business critical infrastructure of the institution?
- How can commercially sensitive data and ideas be held securely within a collaborative endeavour with industry partners?
- If third party online tools are used, how can security of information be ensured?

The University of the Arts and University of Leeds trial projects took a very open approach, as required to build an online network/community. Username and password security credentials were required for each community member able to gain access regardless of location or institution affiliation.

In developing the new version of their bespoke tool, Knowledge House implemented an Entity-Attribute-Value (EAV) data model, which allows finer grained security and access to data. A strict design rule of the system is that the application layer should never access the database directly.

The Northumbria University trial project sought to use open source software, hosted by the institution, to bring together industry partners and students from across the globe, including students from the School of Design at Northumbria University into the 'Design Studio'.

From the industry partners perspective, security is paramount due to the sensitivity and potential commercial value of ideas created and contributed to the collaboration. Thus, third-party hosting was not an option. Security was also a major concern for the host institution, Northumbria University where a solution needed to be found that did not jeopardise the business critical infrastructure of the institution. To this end the University of Northumbria's IT Services department provided the Open ICT Tool project with a test server (a

virtual machine) which was used by the project team to host a variety of open source potential solutions during this project. This machine was partially isolated from the main University network located within the network's DMZ (Demilitarized Zone). Routes through the University's firewalls were built to allow common access to existing mail servers (for e-mail traffic) and Active Directory servers (to allow Northumbria students and staff access using their existing university usernames).

The trial projects were ultimately successful, enabling the implementation of the dedicated and secure online collaborative tool hosted by the university. Business partners contributed with confidence with regard to security of commercially sensitive project related material. Additionally, the collaborative online tool was only available to community members, ensuring the provision of a safe learning environment for students.

The ability of the Northumbria University trial project to overcome institution-internal security issues is largely due to the excellent relationships that were built. The team spoke to the Director of IT Services at the outset of the project, and from this meeting momentum snowballed. The trial project has brought together Academics and IT Services with lasting benefits for all, the collaborative server and its hosted online tools are likely to be re-institutionalised and provided institution-wide.

Focus on: Skype

Skype provides an example to highlight the management of security concerns within Northumbria University. Until recently Skype was maintained on a separate network to nullify the implications of a peer-to-peer system within the software. Once the security concerns were fully tested and understood and the impractical nature of using Skype alongside other systems on separate networks was recognised, the software was rolled out across the institution.

Taken from: Vimeo

'The main issue that we have in Northumbria is we have an incredibly locked down set of systems. Whether it's wireless, the actual main backbone network or any of the other systems, they are really very heavily monitored. A lot of the things that we've started to use, things like Skype, were already allowed, but they're not allowed in an open way. So you would have to get our students to use a particular wireless network, but that wireless network is not allowed to talk to Outlook Web Access, it's not allowed to talk to Desktop Anywhere, so you don't get any interoperability between the different communication systems we've got.'

Quote from Ben Lovatt - LTech Northumbria University

Access to/from the network

For the user, the ability to gain access to a collaborative environment is clearly vital. For the institution, questions will arise around Access and Identity Management.

Issues relating to access were most pressing for the trial projects when the collaborative activity was synchronous, i.e. in real time, when there is an immediacy of need not matched by instant availability of support.

The University of Huddersfield, who trialled the use of Elluminate for online meetings, note that *"By far the biggest problem encountered was that some participants were failing to connect to the session. There was seemingly no pattern to this - some users could connect whereas others would fail."* However, after closer inspection, they identified that firewalls were preventing access for partners from across the West Yorkshire Lifelong Learning Network.

Birmingham Metropolitan College also trialled Elluminate, but found that many NHS partners experienced technical problems regarding network access from laptops and the use of webcams.

Who is privileged enough to have admin rights?

Elluminate is downloaded to the participant when they request to join a meeting. It runs within a web browser and no previous installation should be required. However, Elluminate requires a Java application which is temporarily installed and runs in the browser. Java is hence required on the host machine and local administrative rights are required to install and configure it correctly.

Support

Engaging in collaborative activity with Business and Community partners raises issues relating to the provision of support when a technical problem is encountered:

- Who provides support for the system or tool?
- Does an individual seek support from their local institution or the institution providing the platform?

Online collaborative tools could be considered to be 'disruptive', challenging existing systems or tools provided by an institution. Working across institutions boundaries, trial projects encountered varied responses to requests for assistance from IT support services, who in some cases understandably took an initial stance to protect their network and enterprise systems.

Knowledge House took a user focused approach to the development of support documentation, encouraging users to write the guidance, not the technical developers.

Network stability and bandwidth

Online tools, in particular those that are used in real-time, require network stability and make high demands on bandwidth. In particular, online communication tools such as Wimba or Elluminate that transmit video and/or audio data can become intermittent and unreliable if sufficient network stability or bandwidth is not available.

The University of Huddersfield trial took measures to ensure stability of the Elluminate service:

1. Meetings were scheduled to occur during periods of 'light' network activity. This meant either first thing in the morning, Wednesday afternoons when no courses were taking place, or late Friday afternoons
2. Web cameras were not used for meetings with more than 2 participants
3. Users were encouraged not to run other applications in the background
4. Users were encouraged to test their connection and audio equipment prior to the meeting

The University of the Arts London trial project, which used Wimba for online webinars, identified the particular technical problems presented by audio:

'Audio was a significant problem although participants recognised that it was normal to have audio difficulties at this stage of technology development. However several pointed out that it interfered with their engagement with the webinar, and the quality of the audio was particularly important when participants include non-native speakers of English. The specific audio problems were the audio breaking up, feedback from multiple microphones, background noise and speakers not aware when audio goes down.'

University of the Arts

A resilient community

They also note the resilience of participants within their online community to overcome system crashes. 'There were a number of system crashes ... However, as a mark of the resilience of the participants, most managed to move to another room that we had available and continue the webinar after a group email was sent out.'

'The system was only as good as local internet connections, and many participants experienced frequent dropping out and having to log in again.'

University of the Arts London

Mobility

Access to collaborative online environments from different locations via mobile devices, whether laptop or smartphone, is an important technical consideration.

The Birmingham Metropolitan College trial project provided all partners with a project laptop, so that they could 'attend' virtual meetings wherever they happened to be. This was an important consideration for academic staff who are part of the project team and who are responsible for recruiting from countries such as India or China and spend a lot of time travelling. The software chosen was Elluminate for video conferencing and a Moodle site for sharing files, forums and discussions.

Hosting

Technical considerations regarding hosting need to be considered when using online collaborative tools:

- Which institution should host the tool?
- Or should a cloud solution be considered?
- What are the cost, maintenance and reliability implications?
- Is the chosen service more 'secure' if it's hosted internally or externally?

The University of Huddersfield trial project changed the hosting plan for Elluminate part way through the project. After experiencing performance issues with self-hosting, they switched to a hosted solution.

'We discussed the matter with our Elluminate Account Manager who indicated that ... the only other institution who was doing something similar (self-hosting) was the Open University. Rather than continue trying to resolve the issues, it was decided to switch our licences over to a hosted solution, using Elluminate servers to hold meetings.'

University of Huddersfield

People Matter

Online tools provide the means but it is people who communicate, collaborate and create communities. They will not use these tools unless they know how to use them effectively (for their purpose, in their context) and derive some benefit. The trial projects designed interactions to keep their communities 'on-board' and a synopsis is given here. More detail can be found in the trial project final reports and in the videos recorded (coming soon) at the Project Showcase event.

Joanna from Northumbria University discusses training: <http://www.youtube.com/watch?v=cM22s2Atgho>

Keeping interest

Whilst developing a community of practice for photojournalists, the University of the Arts found that by varying the activities and information available, they were able to keep people engaged.

'We have run webinars approximately every two weeks during the project, with a variety of times and days of the week to allow different participants from different global locations too more easily participate (note that this has not had a clearly noticeable effect on attendance at the webinars).'

University of the Arts

'...people are willing to accept a certain degree of imperfection in the delivery if the content is relevant, engaging, contemporary and challenging.'

University of the Arts

Of particular importance to the webinar format is the power of narrating experiences, as Wenger confirms: 'sharing tacit knowledge requires interaction and informal learning processes such as storytelling, conversation, coaching and apprenticeship of the kind that communities of practice provide.' (Wenger, McDermott & Snyder, 2002).

'Flipbites' is a term coined by Paul Lowe, University of the Arts, to describe short videos, taken on a Flip camera or similar, at conferences and meetings. They have been used to capture immediate ideas, thoughts and stories that are then shared via the CoP collaborative site. These have proven to be very popular.

Keep in contact

Regular updates (within the collaborative network/community and with the wider stakeholder groups) are important as not only do they maintain interest but can help mitigate against arising problems or risks becoming major issues. With specific regard to the collaborative activities see the 'Building Online Communities' and 'Keeping Interest' (above) sections and for the stakeholder group see the 'Engaging Stakeholders' section.

The trial projects used the following approaches with success:

- use existing communication channels to keep people informed of progress, for example the staff newsletter and specialist newsletters (e-learning, enterprise)
- regular meetings with for example IT Services, LTech (Northumbria University), Marketing (for branding), user groups

- use a wiki as a support tool and due to its inclusive nature this will encourage buy-in from users
- document (perhaps using a wiki) suggestions, actions
- consider using Twitter and Skype (The University of Leeds found this approach worked with their community)

Work with people, not against them

For the collaborative activities to be a success, it is important to work with college or university support services. They will have already have been identified as a stakeholder group and so receive regular updates but usually they need to be party to early discussions in the collaborative process; this will mitigate against later issues.

At Northumbria University, the IT Services Director was a member of the trial project board and e-learning support staff worked with the academics running the trial project on a daily basis. Without the involvement of the IT Director it was felt that several of the more contentious aspects of the trial, for example the use of Skype, would have been impossible to implement. Staff from e-learning support (technical side from IT Services) worked closely with the academics and this facilitated a fast turnaround of fixes for technical problems. This internal collaboration has paid dividends as a virtual server for collaborative work with external partners has been made available to all academics.

'Another important lesson we have learned from the project was the importance for IT Services working with the academics and e-learning support staff (such as LTech) in order to trial academic (user) led development of how ICT might support teaching and learning. The project demonstrated the importance of having the IT Services Director on board, which was paramount to the success to this project. The project contributed to enhancing the relationship between IT Services and LTech. This is important as it has led to increased collaboration between these two services.'

Northumbria University

Similarly the University of Glamorgan trial project had a Senior Multimedia Developer as a member of the team and this ensured that the Learning and Corporate Support Services (LCSS) department of the University was involved from the start.

Sometimes, despite having local people on-board, procedures mitigate against innovation and speedy responses. Birmingham Metropolitan College came up against this when wishing for members of the consortium to hold online meetings using Elluminate. Some staff (National Health Service (NHS), College and University) are not allowed to download software onto their local PCs and NHS staff are not allowed to use cameras (webcams in this instance). In the NHS permission had to be sought from a committee and this did not happen before the trial project had ended. In order to overcome the problem of not being able to

download software, laptops with internet dongles were provided; this workaround is just that and not a permanent or sustainable alternative but in this instance it did enable the trialling of collaborative tools in this context.

Mechanism for reporting errors

All systems need a mechanism for the reporting of problems and collaborative online systems are no different. When working collaboratively it is important to make it easy for users to log comments and errors and to keep this updated with error-fixes.

Knowledge House use 3 mechanisms for enabling users to report bugs:

1. Automatic Bug Reporting Mechanism
2. Open Source TRAC⁴
3. Monthly KHIS Champions Meeting

Knowledge House

For further details of its approach see page 11 of the final report and the

Knowledge House Blog:

<http://knowledgekhis.wordpress.com/2010/03/01/bug-swatting/>

Digital Literacy

What is meant by digital literacy?

The European Commission uses the following definition '*the confident and critical use of ICT for work, leisure, learning and communication*' European Commission report DigEuLit 2006⁵.

Digital literacy is not an absolute but exists in context. Also, it is not static: as new technologies develop, there will be new ways of using that technology and the digital literacy required for effective use of the technology in a particular context may change. This is where Glister's (1997) view is important - digital literacy is '...about mastering ideas, not keystrokes'. However, it may be sometimes best to start with mastering keystrokes before moving to the bigger picture.

The use of collaborative online tools within a business and community engagement context will involve people in many different roles bringing a variety of experience and hence training needs. If using a tool or interface type that users are familiar with (albeit a different context) then this will ease this training requirement. For refresher training and for new people joining, it is useful to have online training material available in form of screencasts. If utilising synchronous meeting facilities, then the archived sessions are useful as training material and can prepare people as to what they can expect in a session.

⁴ <http://trac.edgewall.org/>

⁵ http://ec.europa.eu/information_society/tl/edutra/skills/index_en.htm

A staged approach to implementation, with much emphasis on support and training in the early stages, can help participants gain confidence. This also gives them the opportunity to give feedback so that adjustments can be made prior to the main collaboration activities.

Internal Staff Training

Most of the trial projects found internal staff training to be a key priority and the University of Leeds found screencasts to be very useful. Be aware that although staff and partners may be skilled in using certain aspects of social media, they may lack broader digital literacy skills. They not be aware of this gap (you don't know what you don't know!) or not be willing to be honest. Making training materials available for everyone to use when they want to use can help overcome this problem before it becomes an issue within the collaboration activities.

Joanne Cone from Northumbria University discusses Digital Literacy:

<http://www.youtube.com/watch?v=VUU7SliyRGg>

'Another lesson we have learned is that although students engaged in the Open ICT Tools project had relatively good expertise in using Web 2.0 technologies, project findings suggest students lack broader digital literacy skills, particularly the organisation of information and files. This affects collaboration between distributed project team members, potentially limiting students' learning opportunities. Whilst Web 2.0 technologies provide exciting new learning opportunities, particularly the production of learner-authored content, there have been challenges for students in learning how to use these technologies to share and structure the content successfully.'

Northumbria University

This view is supported by a report in October 2010 to the Higher Education Funding Council for England (HEFCE) from the National Union of Students (NUS) *Student perspectives on technology - demand, perceptions and training needs*⁶

'There was a common request for more skills training, particularly around how to effectively research and reference reliable online resources. Students seem concerned about a perceived lack of formal research skills instruction, which maybe suggests broader concerns with education and accountability beyond the ICT sphere. Training in specific programs is also commonly desired; however, primarily the skills required are not technological, but academic'

Student perspectives on technology - demand, perceptions and training needs - Report

⁶ http://www.hefce.ac.uk/pubs/rereports/2010/rd18_10/rd18_10.pdf

Although interestingly in the same report 88.6% of respondents said that they were effective online researchers.

Training Your Partners

Some of the students involved in the Northumbria University trial project said that some initial training in Plone may have been useful but they didn't require any WordPress training. However, other students felt that it wasn't training in the tool per se but in the processes that they needed.

The University of the Arts found that its community of photojournalists did not require significant training:

'Participants appreciated the ease of access, flexibility, comfort and time-saving of being to log in from home or wherever they happened to be, and that Wimba is simple to access and login from anywhere'

University of the Arts

Some users don't initially see the relevance of training:

'Users invited to take part in the study were offered free training on the product in order to be comfortable using it before any meeting takes place. A couple of users volunteered for this and were taken through the application in a separate meeting'

University of Huddersfield - This is a situation where screencasts and archived sessions can prove to be most useful.

New College Swindon reported that their partners greatly appreciated the training provided.

Sometimes the collaborative sessions themselves can be used as training sessions - encouraging people to think about how they could use collaborative online tools in different ways to improve the way they work and interact with colleagues. This is especially true when using tools that have previously been used in a different context, for example learning and teaching.

What may be straightforward for a technical person may be a major problem for users and this can equally apply to system changes. Knowledge House held regular meetings with system champions who had training in the new system and were able to offer feedback. They also ensured that those who were responsible for the system updates (technical staff) did not write the user manuals!

Gently does it

A staged approach can help in getting people on-board and give them confidence in using the tools especially in situations where some of the team have never used such tools before:

'Although some of the project team were fairly confident with using different technologies, others had never used Moodle or online conferencing.'

Birmingham Metropolitan College

Consider who leads the training; a technical person who has excellent knowledge of the tool may not be the most appropriate! A Birmingham Metropolitan College partner said:

'I found the elluminate session hard going mainly due to the intermittent reception that I had. Also, I was a bit put off by the constant stream of instructions to do tasks and the lack of learning on one task before running on to the next. It got a bit much and I tuned out I'm afraid. In reality I expected the pace to be a little slower and the tasks/information flow to be more meaningful. Sorry to be negative - I think it will be a good tool in the end!'

Birmingham Metropolitan College

Benefits

Using collaborative online tools brings many benefits to all partners; for example swift responses to collaborative possibilities and enquiries, enhancement of learning and teaching, and a greater understanding of cultures and business needs.

New business opportunities

By using collaborative online tools a spirit of co-operation and collaboration, together with the sharing of resources, can be fostered. This can lead to the development of new groups as was found in the Birmingham Metropolitan College trial project where the closer partnership between the FECs and HEIs led to consortium being formed to apply for Lifelong Learning funding.

By Universities in the North East of England sharing information, when a particular university receives an enquiry which they are unable to handle, rather than simply tell the client 'no', they can use KHIS to rapidly refer the opportunity to other universities who might be able to take the work on. This also saves time for the business making the enquiry.

The Leeds Innovation Network, developed by the University of Leeds trial project, combined with the coordination of a cohort of external entrepreneur consultants has contributed to staggering uplift in performance in respect of the attraction of external grant funding for proof of concept (POC). For example: a 60% uplift in licensing revenue and moving from 0 to 100% success rate in Yorkshire Concept proof of concept funding. Yorkshire Concept is a new project fund designed to stimulate the commercialisation of research and knowledge-based activities in the Higher Education Institutions (HEIs) across the Yorkshire

and the Humber region. It is funded jointly, on the principle of matched funding, by the Regional Development Agency, Yorkshire Forward, and the Higher Education Institutions themselves.

Sharing information & knowledge

Sharing information and knowledge can help the academic institutions be more responsive to the needs and requirements of business partners. Birmingham Metropolitan College found benefits in being able to have documents in one place as they are often difficult to find if spread over several sites. Also they were able to share internal documents that were not available to the public for several months, yet the content, workforce plans, was of great importance to academic organisations.

Savings in time & money

Collaboration using online tools can lead to an understanding of the various partners that would not occur due to face-to-face meetings being prohibitively expensive in money and time. Birmingham Metropolitan College found that they were able to address a lack of knowledge in the education sector about workforce planning in the NHS.

'A cost analysis of the savings achieved by the partners using online tools was undertaken. On average each participant saved their organisation £27 per session. This cost analysis took into account salary costs whilst travelling, mileage allowance and parking charges.'

Birmingham Metropolitan College

What are the Benefits Specific to my College or University?

Sharing information & knowledge

Universities for the North East, who use the KHIS 2.0 system developed by Knowledge House, can consult the system for historical data relating to a particular company or contact; this helps the universities work together collaboratively, rather than competitively, and ensures that teams do not 'step on each other's toes'.

The Global Studio (Northumbria University) promoted the sharing of resources such as teaching strategies and techniques and collaboration in relation to curriculum development across the HE participating partner institutions. For example one academic from a partner university commented:

'I have developed new approaches to teaching design projects, and an increased appreciation for the value of 'presentation' as a learning activity. The cross-school and cross-institutional collaboration has enabled the intersection of various pedagogical and disciplinary approaches.'

Northumbria University

Enhancement of learning & teaching

Northumbria University used a number of collaborative online tools to enable students to interact with international businesses and fellow students in the area of product design. Student surveys indicated that their perceived learning experience has been enhanced during the engagement with external partners. The success of this collaboration has led to other academics investigating how to incorporate cross- institutional business focused learning activity into their programmes. An academic based at Northumbria commented that:

'Working with other students at other Universities brought great benefits to the students at Northumbria. It exposed them to the knowledge and experiences of other design students, reinforcing their identity as "budding designers", which can so easily be lost in a non design centred, studio based programme. The interaction stimulated the students and gave them great confidence, especially when they communicated aspects to other students and found that what they considered frailties and weaknesses in their own design skills and abilities were actually similar to those of other design students. As a result, the students demonstrated substantial motivation to succeed in this project and embed themselves in its activities in order to fully benefit from the experience.'

Northumbria University

Another academic from an international partner university commented that:

'My students worked hard, complained a lot but in the end I am happy to see they made good progress. ... [The industry partner's] input gave my students confidence and provided value to what they did.'

Northumbria University

Parjay Parmar from Northumbria University discusses enhancement of learning and teaching:

<http://www.youtube.com/watch?v=L6ioCs0Ed3A>

Enhancing research

Professor David Campbell of Durham University found the community designed and developed by the University of the Arts to be an important resource in his academic research, in which he has sought to learn from practitioners about the complexities of the current visual economy. He commented:

'OPEN-i has been invaluable in making that aspiration real. It brings together a community around shared concerns and breaks down the barriers between theory and practice. Being able to participate in webinars, access material online and benefit from the network's support for our investigations, has helped advance my work'

University of the Arts

Benefits specific to the External Partners

Enhancement of learning & teaching

The Community of Practice for Photojournalists, developed by The University of the Arts, brought photojournalists and academics together to discuss some of the critical issues facing the industry. During the webinars, key supporting research and articles were highlighted so bringing an academic flavour to the discussions. In other webinars and a forum, knowledge was shared about using multimedia. Professor Fred Ritchin of the Department of Photography & Imaging, New York University, notes that this project is a 'major step forward in creating a virtual community based upon learning and sharing experiences'.

By working with academic institutions industry and business ensure that graduates have skills and knowledge that is required by the industry. For example students in the School of design at Northumbria University worked with Intel and Motorola and Birmingham Metropolitan College developed academic pathways meeting the requirements of their NHS partner.

Luke and Archie from Northumbria University discuss skills for industry:

<http://www.youtube.com/watch?v=ZfwugGHOGGA>

<http://www.youtube.com/watch?v=8O48QxJh0bw>

'Head into a different mental space' Nick Oakley, Intel Corporation

In addition to the actual collaborative activities, there are additional benefits. Nick Oakley, Intel Corporation and member of the Northumbria University trial expressed this as '*... head into a different mental space*'. He worked with students in the School of Design and, having been out of academia for a number of years, found it very useful to see product design from a young end-user, rather than technical, point of view.

Stephen Mayes, director of one of the most significant photojournalism agencies, VII, and a regular contributor to the network, felt that OPEN-I, the platform designed by the University of the Arts, provided a '*completely new opportunity*' that has introduced him to:

'new people with different perspectives and information that has allowed me to expand my thinking. OPEN-i is a terrific resource'.

University of the Arts

Students can be prepared for employment; for example in business culture or pitching ideas as is discussed in this video: <http://www.youtube.com/watch?v=M6xfnrGmEb8>

Etienne Wenger⁷ commented that OPEN-I (University of the Arts) *'seamlessly broadens the course into an open process of continuous professional development'*. This professional development is applicable to both college and university staff and their external business and community partners.

After training in using collaborative online tools as part of the LetMEbeFrank project by New College Swindon, 30% of the clients had gained sufficient confidence to continue with formal study.

How to get the Best out of Working Together

Using collaborative online tools for business and community engagement has, at its centre, the people involved. This is covered in the section 'People Matter'. As a result of trialling collaborative online tools, the trial projects have produced some very useful advice and guidance (or 'Top Tips' as you can find them in their final reports) and this has been collated and reproduced in the following four sections:

- Building Online Communities
- Engaging Stakeholders
- Holding Online Meetings
- Hosting Webinars

During the progress of the trials, the trial projects shared some of these emerging practices at meetings run following the CAMEL methodology:

<http://www.jiscinfonet.ac.uk/camel>

Building Online Communities

Online communities do not spontaneously spring into existence without a reason for them to exist. This may be a common interest or desire, or a necessity. Someone has to take the lead to set up the technology and initial structure and as the online community grows, others will take responsibility for different roles.

⁷ <http://www.ewenger.com/>

The following recommendations are based upon the finding of the trial projects:

- Identify in advance how you intend to collaborate - what does it mean for you as an organisation?
- Choose a product that is scalable to the size of your organisation or network and has a decent margin for growth; you don't want your community having to suddenly change platform with all the resulting staff development or angst that can accompany this
- Ensure buy-in by making use of existing communities or building upon previous projects
- Start with the core (big players, senior/high profile), then add leaders/experts in the field. Get them engaged and then invite others
- Need to get a buzz going initially (identify tipping point) and then may need to support community to keep the buzz
- Don't try and do everything - use the group expertise and bring in others as required
- Deliver relevant material or engage in relevant topics
- Use the power of 3
- Publicise outcomes as a result of this collaboration and funding opportunities
- Remember it is a co-operative and collaborative space not competitive
- If you have different groups or topics within the space, ask other members to be moderators
- Choice of tool may be pragmatic rather than best fit - e.g. previous experience in different context but be aware that some people may be resistant to new use. Even if use sophisticated platform the end-user interface must be easy to use and navigate with some user generated features
- When using online meeting tools it is a good idea to have one person lead the session and another as administrator (keep an eye on hands-raised, texts, additional resources)
- When working across different institutions, need to be aware of all strategies and attitudes otherwise there may be delays
- Support all users in preparation on how the collaborative online tools might be used to support them during the collaborative project

- In the initial stage, identify and engage with key stakeholders to enable internal support and resource. This also ensures that any problems that occur are dealt with swiftly otherwise the use of collaborative space will dwindle
- Be flexible. If your chosen tool is not working for the community then consider changing or bring in new functionality. Pick up on ideas from the community as to what is working and what isn't
- Know your institution's IT policies e.g. will they host open source software? Do they allow access to your chosen tool from within their network? Work with central resources (especially IT Services, Marketing, and External Engagement/Enterprise) rather than against them

The University of the Arts developed their 6 Rs

- Rhythms: how often do you want to provide activities for the community? Too frequent and people will be overwhelmed and unable to commit time, too rare and people will lose interest and the initiative will be lost
- Relationships: what kind of relationship are you trying to engender between the participants - colleagues, friends, contacts, collaborators?
- Roles: who will do what in the community, and who will be paid and who will work for free?
- Resources; how can you leverage existing investments, and what can you get for free and what needs to be paid for?
- Respect: treat members fairly and don't make them feel like they are being exploited - how can you ensure they feel valued?
- Responsibility: who is responsible for what, but also what responsibility does the community have to itself to participate actively and sustain the debate?

We would like to thank **Etienne Wenger**: <http://www.ewenger.com/> for his support. Paul Lowe, University of the Arts, based the setting up and development of his Community of Practice for photojournalists on Etienne's work and then shared his initial findings with a group of trial projects at a CAMEL meeting. Following this, Etienne led a one-day conference '**Mediating Boundaries**' <http://collaborativetools4bce.jiscinvolve.org/> held on 21st May 2010. He has been a great supporter of this project, especially the University of the Arts trial.

Engaging Stakeholders

These recommendations are based upon the findings of the 'Trialling of Collaborative Online Tools in Business and Community Engagement' Project and as such are not an exhaustive or generic list. The trial projects utilised a range of approaches that have worked well in their contexts.

Start from established groups

Taking advantage of existing initiatives, demand and enthusiasm, and community interest groups can foster greater involvement in the trial outcomes. For example, The University of Glamorgan's partnership with Rhondda Cynon Taf (RCT) Business Club initially provided an introduction to a larger group of SMEs, to add to their micro-businesses in the incubation facility. The University of Leeds also tapped into existing internal academic groups and the Association for University Research and Industry Links (AURIL) network. Whilst engaging with these existing communities, it is important to market the extra value to the individuals and the community of belonging to this new group or using a new tool.

JISC infoNet has a number of resources dealing with Stakeholders

Stakeholder Management:

<http://www.jiscinfonet.ac.uk/infokits/project-management/stakeholder-management>

Influencing Others:

<http://www.jiscinfonet.ac.uk/infokits/influencing-others>

In all communities there are key members who are leading thinkers. To have these high profile, well-respected individuals as initial members of the community will encourage others to join. This is the method employed by the University of the Arts to develop their Community of Practice for photojournalists.

Use familiar systems

Familiarity with a system can create a sense of comfort and a willingness to participate. As the University of Glamorgan found, there is much competition in a crowded social marketplace so being able to use a collaborative online tool that requires little or no familiarisation is an advantage.

One of the reasons why students at the University of Northumbria liked using WordPress was because they were familiar with the type of social software interface.

Also the institution may have already invested in particular ICT infrastructure and tools for other purposes, such as to support teaching or research to facilitate external engagement and in these circumstances Heads of IT services are keen to exploit existing systems rather than set up new hardware/software.

'Early discussions confirmed that the repository and chat/discussion forum would be Moodle. This was considered a reliable platform that some of the project team were already familiar with but a major factor was that there was a Moodle developer in the team.'

Birmingham Metropolitan College

James Ravenhall from Northumbria University discusses Wordpress:

<http://www.youtube.com/watch?v=zPIIOIVg9HE>

Training & supporting staff/partners

Even if some of the stakeholders are familiar with the online tool, not all will be and so it is important to provide training and/or support material. In some projects it will be possible to have an initial stage of training and familiarisation prior to the collaborative activities. This will build-up trust and confidence in the collaborative online tool and maximise engagement in the collaborative activities. In the trials it found that this was particularly important when using synchronous collaborative online tools such as Elluminate. What may appear to be simple activities such as using headsets can cause problems for those unfamiliar with such equipment and systems.

Knowledge House highlighted the development of a user guide, champion meetings, on-site visits and training sessions as key approaches to ease users into the use of a new system.

Involve senior contacts

To encourage senior stakeholders in institutions and business to engage, it is usually necessary to identify measurable 'hard' outcomes, such as economic return on investment (ROI), development of valuable staff 'information literacy' or knowledge transfer (KT) skills. There is also evidence that demonstrating how new social Web2.0 technologies could enhance existing approaches to Business and Community Engagement (BCE) was more conducive to engagement than promoting new ways of doing new things.

'The project demonstrated the importance of having the IT Services Director on board, which was paramount to the success to this project. The project contributed to enhancing the relationship between IT Services and LTech. This is important as it has led to increased collaboration between these two services.'

Northumbria University

The University of Leeds demonstrated that by adopting the KT2.0 approach, specifically the identification and engagement of external professionals (not employed by the University), business expertise was injected across a spectrum of domains, in which universities cannot hope to employ business development managers/specialists.

Holding Online Meetings

Top ten tips for Holding Online Meetings (using Elluminate) from the University of Huddersfield

1. Use software that everyone is comfortable with

If you have a license for an application that no-one has heard of or ever seen then there is going to be a learning curve for all participants upon joining the meeting

2. **Being the chair does not mean you have to provide the software**

This seems to be an automatic reaction - you are calling the meeting therefore you are responsible for providing the facility to host the meeting. This is not required - you can be granted moderator rights in most meeting software. If someone has a better software option, use it and ask to be granted moderator rights.

3. **If you are chair, don't try to moderate large meetings yourself**

In a real world meeting, the chairperson does not take minutes, nor are they responsible for ensuring that everyone has the right documents and that presentations are loaded prior to the meeting. The same is also true of virtual meetings. If they are formal or structured, appoint someone else to be moderator or co-moderator.

4. **Get users to test their connection prior to the meeting**

Obviously resolving any potential connection problems is better done before the meeting rather than during

5. **Respect people's privacy (Part 1)**

Illuminate has a 'Supervisor' mode in which any inter-participant text chat that does not involve the moderator is still transparent to him. Participants are unaware when this mode is switched on (it is off by default). If you are going to activate this mode, ensure your participants know (or at least have some thick skin)

6. **Respect people's privacy (Part 2)**

Another privacy busting feature of Illuminate is the option to record meetings. This facility may be a little more obvious to users as there is an icon displayed at the bottom of the screen indicating when recording is taking place. However, it is good practice to inform participants prior to the meeting (and not as they join) that you intend to record some or the entire meeting. They may have issues with this or they at least will not make remarks that they would not want repeated outside of the meeting. If the software allows the recording to be exported (Illuminate does not) then users should be informed of where it will be posted and for how long, as well as who will have access to it.

7. **Add extra time to the meeting**

Although a benefit of using online meeting tools is that more efficient use of time can be made, it may not always be beneficial to do so. In real world meetings people do not [aim] to arrive just as the meeting starts, they get there early to network and hang around after to discuss other matters. Buffer

times can usually be added to meetings - let your participants know what the buffer times are so they can take advantage of it

8. **Have technical support available**

Most institutions have an IT Support desk to help with issues. Holding a meeting online can be a technical challenge so ensure support is available and don't schedule the meeting to occur during any planned system downtimes. Although it would be unlikely to affect the quality of the meeting, it just means that IT Support will likely be busy dealing with that and may not be as available

9. **Be flexible**

If a feature stops working or becomes unusable because of lag, adapt the meeting to get round it rather than postponing. Not everyone is guaranteed to have the same quality connection, so if one person is having problems following a PowerPoint presentation on the server, send them a local copy to use

10. **Practice!**

Familiarity with the functions and features of Elluminate (or any software) will make meetings run more smoothly and fluidly

Hosting Webinars

Top tips for webinars from the University of the Arts, London

1. Have multiple back up arrangements for accessing the login URL in case one route fails
2. If the system goes down, keep chatting as everyone logs back in so that they can hear that they are re-connected
3. Decide at the start what clock is being used for times if working internationally and give this a high profile ensuring all participants understand
4. The fifteen minutes before the official start time are important for welcoming participants and building a sense of community
5. Have an intro and closing slide with presenters names, websites
6. Ensure that the audio is as good as possible by avoiding multiple microphones in the same space and people speaking from noisy backgrounds
7. Provide an advice sheet for presenters

8. Ensure audience know how to tell who is speaking and where there is multiple use of one microphone then ensure the moderator indicates who is talking
9. Ensure that the moderator picks questions coming in through the text box if the main speaker does not spot them
10. Provide advice notes for participants covering:
 - Exit button
 - Talk button
 - Putting up hand
 - How to write in the text box
 - What to do if you lose contact
 - What to do if the whole system crashes
11. Understand that the role of the moderator is crucial and that must involve chairing the session so that discussion flows well and that all forms of participation through text box as well as oral questions and picked up and dealt with
12. It is important to have back-up for the moderator in case the moderator loses contact through system failure or own local internet connection

Showcase Event

The final showcase event took place on 24th September 2010, presenting findings from across the trial projects involved within the Trialling of Collaborative Online Tools for BCE project. An audience exceeding 80 people from across the sector converged on the Royal York Hotel, York, including senior managers, academics, lecturers, IT directors, knowledge transfer managers, business development managers and staff from support services.

Feedback from the event was extremely positive. As one delegate commented:

There was an interesting blend of pedagogy, technology and business engagement which are aspects of University life which are often considered in entirely discreet silos with no sense of connection - but there obviously should be!"

Another attendee summarised that the event offered:

"An exciting demonstration of innovative approaches to Business and Community engagement in a realistic context of change and uncertainty."

Professor Di Martin, University of Hertfordshire, chair of the JISC BCE Advisory Board, gave the opening keynote, providing an overview of the importance of Business and Community Engagement, including current observations about government policy.

Then followed a number of themed sessions, each showcasing findings and experiences from the Trial Projects. The three themes were:

- Security and Data Protection
- Building and Maintaining a Community of Practice
- Exploring the Tools

The second plenary session focussed on the Northumbria University Trial Project, Open ICT Tools, in which online tools were used to facilitate global collaborative learning with external business and community partners. Three students from the School of Design who took part in collaborative space - the Global Studio - presented their perspective, reflecting on their experience of using online collaborative tools to work with external partners.

The third plenary session was delivered by Brian McCaul from the University of Leeds. He provided a fast-paced presentation, focussing on the intersection of Knowledge Transfer and Web2.0 - what he calls "Knowledge Transfer 2.0".

The event concluded with a panel session, all speakers from the day invited to join Simon Whittemore, JISC BCE Programme Manager, on the podium to take questions from the floor. A range of topics were discussed, from the future of the BCE programme to digital literacy to approaches to building online networks. Discussion was certainly lively, proving the central role of collaboration in the BCE environment.

The showcase event was certainly a success and all speakers, Trial Projects and the project team are well deserving of the praise the event received. One attendee concluded:

"I found the breadth of approaches and ideas, the involvement of students, as well as staff from Research and Enterprise Divisions, and the enthusiasm for collaboration and engagement really encouraging. As the presentations reflected projects which had actually been implemented, I could envisage the problems and hurdles which had had to be overcome, and set them in the context of my own institution."

The generic project tag #BCEct was used to capture backchannel comments and conversation on Twitter - preserved and available to view as a PDF document. Each session was also videoed and these can be viewed using the links below.

- Open Innovation Project: http://www.youtube.com/view_play_list?p=DD1B89ED2BA04FE8
- KT 2.0: http://www.youtube.com/view_play_list?p=15C60E281848EB34
- Open ICT Tools: http://www.youtube.com/view_play_list?p=92B92301C888818B
- Exploring the Tools: http://www.youtube.com/view_play_list?p=92B92301C888818B
- Importance of BCE: http://www.youtube.com/view_play_list?p=719FAF56A783B5E9
- Communities of Practice: <http://www.youtube.com/watch?v=Dc3qODiyE98>
- Response Project: http://www.youtube.com/view_play_list?p=AA3867B5EC9B6B57
- G-Blog: http://www.youtube.com/view_play_list?p=8523E130AFD780B3
- Using CRM and Collaborative Tools: http://www.youtube.com/view_play_list?p=E3BAC88199D8B517
- Northumbria Students: http://www.youtube.com/view_play_list?p=1799C8C2633E4AE4
- Knowledge House: http://www.youtube.com/view_play_list?p=87AAC92D89B0DE5B

Mediating Boundaries Event

London College of Communication played host to a lively and interactive one-day conference⁸ (12th May 2010) offering 100 delegates from both Further and Higher Education (FE/HE) a chance to examine the theoretical and practical composition of Communities of Practice (CoP). With a focus on Business and Community Engagement (BCE) and the way in which FE/HE staff traverse the online landscape to engage community and business organisations alike, delegates were able to discuss the subject in depth with some of the great minds already working in this area, not to mention the fruitful conversations had by all during breakout sessions.

- Etienne Wenger⁹ - thinker, researcher, consultant, author, and speaker
- Paul Lowe¹⁰ - E-Flections
- Brian McCaul¹¹ - University of Leeds, Business and Enterprise

⁸ <http://collaborativetools4bce.jiscinvolve.org/events/mediating-boundaries>

⁹ <http://www.ewenger.com/>

¹⁰ <http://eflections.edublogs.org/>

¹¹ http://enterprise.leeds.ac.uk/info/14/people/173/brian_mccaul

- Jeremy Davenport¹² - Creative Industries Knowledge Transfer Network
- Simon Whittemore¹³ - JISC BCE Programme Manager

Etienne began the day with a keynote presentation, providing an overview of his work and current thinking around CoPs. Some of the key statements and highlighted summaries from delegates via twitter, include:

- The role of moderators/technology stewards or CoP facilitators is critical in any effective, lively CoP
- A new type of hybrid role: academic-business practitioner is emerging as a particularly effective enabler of cross-boundary CoPs. This individual is a translator, facilitator, PR expert, educationalist, business person all rolled into one
- Technology is not a replacement or a model for brain consciousness, but a part of how we learn and construct knowledge
- That we need to create spaces of meaningfulness where we can explore our identity with questions raised about how we create those spaces
- The idea of CoP as learning partnerships
- That we need to recognise the social artists within our organisations and value the work they do
- That 45 degree walkers are essential to cope with vertical/horizontal axes of accountability!
- To get value from CoPs the narrative (CoP stories and experiences) needs to be combined with some form of measurement

A full overview of tweets from the day are available thanks to TweetDoc - Mediating Boundaries TweetDoc¹⁴

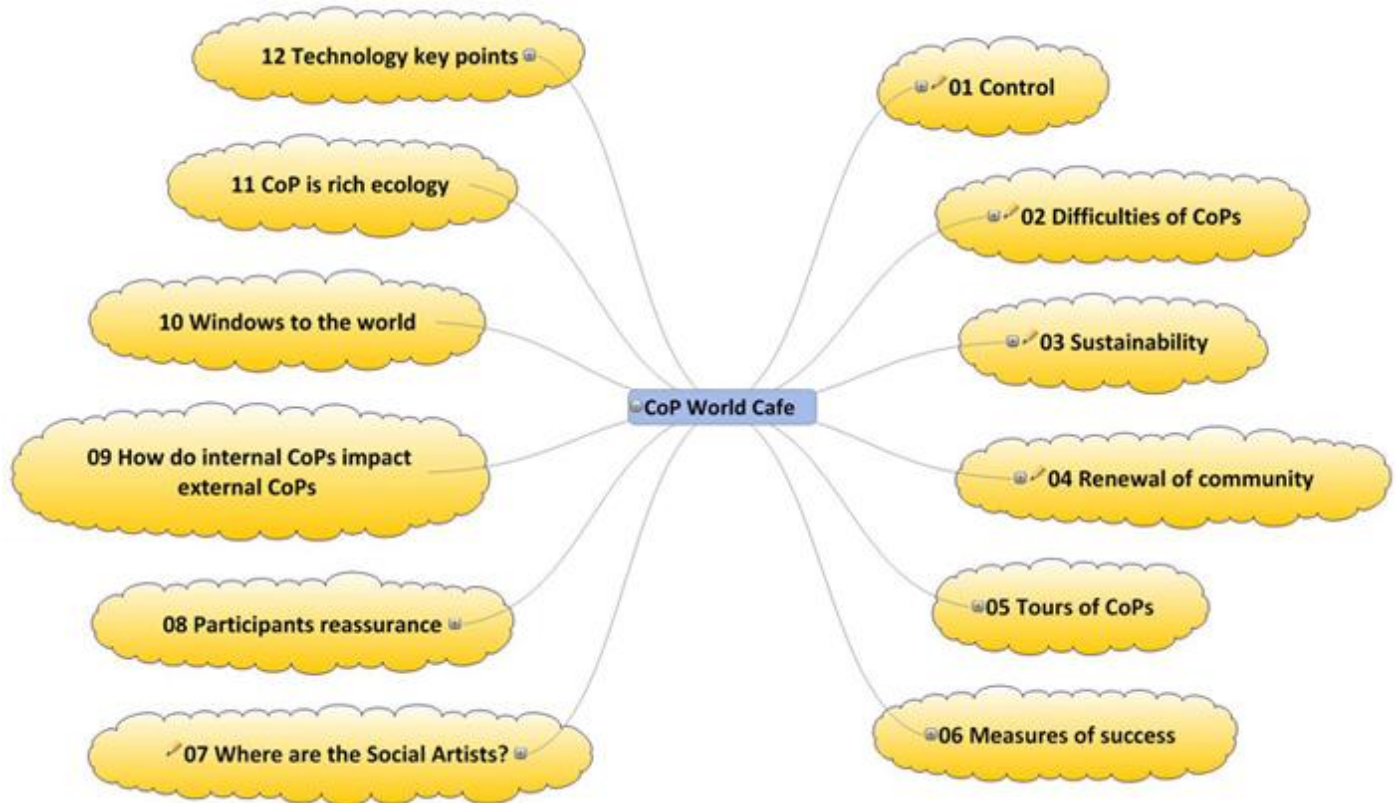
In the second session, Paul Lowe, Brian McCaul and Jeremy Davenport provided delegates with an overview of their practical experiences from building online networks and CoPs that focus on engagement with external organisations. Paul Lowe spoke about Open-i, the CoP he's developed for Photojournalists which has completely transformed learning and the tri-lateral relationship of students, academics and professionals in that field. Brian McCaul gave a high-paced talk highlighting his thoughts on Knowledge Transfer 2.0 and what that means to the Business and Enterprise function at the University of Leeds.

¹² <http://creativeindustriesktn.org/>

¹³ <http://www.jisc.ac.uk/whatwedo/programmes/bce.aspx>

¹⁴ <http://www.tweetdoc.org/View/2421/BCE-CoP-Mediating-Boundaries>

Jeremy Davenport gave an update on the exciting developments of his Creative Industries Network and the way in which he is developing that community.



An expanded mindmap is available on flickr¹⁵

In the afternoon the World Café, 'popcorn' session, debate and Q&A session provided the opportunity to further conversations on the day ... but they certainly didn't end there! Numerous blog posts have been written by attendees, such as Forging identity and learning in Professional Practice by Rosemary McGuinness, and Apprenticeship and Transformative Learning by Lindsay Jordan. Emails are also being received with reflections after the event. Even an audiobook has been produced!

Link to quick reflections on #bcecop audiobook: <http://audioboo.fm/boos/127439-quick-reflections-on-bcecop>

We thank everyone who attended for their contributions to the day!

Overall, it was an innovative, high energy and successful conference. The venue was in some ways 'alternative' in comparison to many events, a welcome change for some, but perhaps a shock to the system for others. One delegate noted:

¹⁵ <http://www.flickr.com/photos/infonet-projects/5332763813/sizes//>

"I hope you don't get any negative feedback about the food and the rooms; I thought your catering and room choices were inspired, and I wouldn't expect anyone there would have chosen to forfeit such an inspiring speaker in favour of fancy food and waitress service. Everyone keeps whinging about how money is so tight in HE and we can't do anything decent anymore; you've shown everyone that yes, you CAN run a truly good, catered conference on a minimal budget - and raise money for Haiti at the same time... great stuff "

Glossary

AURIL

Association of University Research and Industry Links (a network) -
<http://www.qub.ac.uk/auril/pages/home.php>

BCE

Business and Community Engagement

BCE CT

Business and Community Engagement Collaborative Tools - the shorthand name used for the main Project -
The Trialling of Collaborative Online Tools for Business and Community Engagement

BMC

Birmingham Metropolitan College - one of the trial partners

CoP

Community of Practice

CRM

Customer Relationship Management

FEC

Further Education College

G-Blog

The name given to the collaborative online working space developed by the University of Glamorgan trial project

Global Studio

The website for international collaborative work in the learning and teaching of Design

HEI

Higher Education Institution

IKT

Institute for Knowledge Transfer (a professional body) - <http://www.researchintoktpractice.co.uk/IKT/>

IPR

Intellectual Property Rights

KHIS

The CRM system developed by Knowledge House and used by the 5 Universities in the north east of England

KT

Knowledge Transfer

KT2.0

A term coined by Brian McCaul, University of Leeds, to describe the harnessing of Web 2.0 technologies within a Knowledge Transfer/External partnerships context. A video of Brian discussing this can be found in Project Resources

KTI

Knowledge Transfer Initiative

MHA

Midlands Health Academy - a partnership of Higher Education Institutions, Further Education Colleges and NHS organisations in the Birmingham and Black Country areas

NGO

Non-governmental Organisation

NHS

National Health Service (UK)

Open ICT Tools

The University of Northumbria's trial project name

OPEN-i

The collaborative area for photojournalist community of practice developed by the University of the Arts

OSS

Open Source Software. <http://www.oss-watch.ac.uk/>

POC

Proof of Concept

ROI

Return on Investment

SME

Small and Medium sized Enterprise

TP

Trial Project (one of the trials of this Project)

TPCT

Teaching Primary Care Trust - regional collaborative project involving Primary Care Trusts, universities and colleges. It provides a focus for initiatives to attract and retain essential healthcare staff across a region, particularly in under-resourced areas

UAL

University of the Arts, London - one of the trial partners

VoIP

Voice Over Internet Protocol - is 'any of a family of methodologies, communication protocols, and transmission technologies for delivery of voice communications and multimedia sessions over Internet Protocol (IP) networks, such as the Internet.' http://en.wikipedia.org/wiki/Voice_over_IP

WYLLN

West Yorkshire Lifelong learning Network - a partner in the University of Huddersfield trial project

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Paul Lowe and the team at the University of the Arts, London

Brian McCaul and the team at Leeds University

Stephanie Warren and Bryan Davis of the New College Swindon Trial Project

Lynda Austin and the team at Birmingham Metropolitan College

Pam Voisey and the team at Glamorgan University

Paul Cranner and the team at Knowledge House

Joanne Charlesworth and the team of the Huddersfield University Trial Project

Project Advisory Group

Laura Tyler, Dick Willis and Roger Greenhalgh

Project Evaluators (and support to Trial Projects on evaluation)

Jay Dempster and Helen Beetham

Support at Meetings and Events

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JISC Advance Staff

JISC infoNet staff for support throughout the project and at meetings and events

Etienne Wenger - keynote and support at the 'Mediating Boundaries' conference

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