

Strategy infoKit

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Contents

The importance of strategic-level thought and action	4
About this resource	5
Mission, Vision, Values	6
Identifying your mission, vision and values	6
The importance of concepts over terminology	6
What is a mission statement?	7
The characteristics of a good mission statement	8
How to identify and agree your mission statement	9
What is a vision statement?	10
Why do you need a vision statement?	12
What makes a good vision statement?	12
How far ahead should you look?	13
How to identify your vision?	14
The value of values	14
Defining your values	16
Consultation	18
Analysis and feedback	21
Making your strategies work for you	21
Environment Scanning & Business Intelligence	22
How to use this section	23
What is Business Intelligence?	24
Advantage of Environment Scanning	27
What do Higher Education Institutions (HEIs) want to know?	27
What are the questions that are being asked?	30
Why use external data?	34
Who are the main sources of external data?	35
What data can external sources supply?	35
Maturity Model	35
What are the options? Case Studies	38
Case Study – Varied Vendor Approach	39
Case Study – Data Warehousing	41
Case Study – Business Intelligence as IT Project	43
Case Study – Data Definitions	44
Case Study – Single Central System	46
What are the options? Vendors	48
The Business Case	48
What are the challenges? – For institutions	52

What are the challenges for the sector?	53
What is sector doing?	54
Where is Business Intelligence going?	55
Acting on your Intelligence.....	58
Assessing Risk.....	59
The need for effective information management.....	59
Assessing the quality of leadership and management	60
Summary.....	62
Managing Strategic Activity	63
What are we actually trying to achieve?	63
Co-ordination	64
Creating a strategic framework.....	67
The role of Key Performance Indicators	68
The benefits of Key Performance Indicators	70
Aligning operational activity with strategic objectives	73
Prioritisation	75
Enabling Change	76
Engagement and communication	77
Establishing a productive strategic conversion.....	78
Monitoring	82
Monitoring progress	82
Approaches to analysis.....	84
Monitoring Direction	87
Monitoring Means	87
A Monitoring Checklist	88
Conclusion	92
Disclaimer	93

The importance of strategic-level thought and action

What's the use of running if you are not on the right road' **German proverb**

Today's further and higher education institutions face a multitude of pressures, most of which will be familiar to managers operating at all levels. These include:

- operating within a rapidly changing political landscape, especially in relation to funding and inspection
- coping with rapid and radical developments in Information and Communications Technology which have the potential to fundamentally alter the way in which learning and research are conducted
- the challenges of operating within an increasingly competitive market
- the need to absorb major new strategic priorities such as internationalisation and responsiveness to business
- the ability to work with and benefit from new stakeholders, such as those within business and the community
- ever-increasing pressure on resources and the resulting need to 'do more for less' through the maximisation of assets and minimisation of wastage; and
- recruiting and retaining staff with the right skills, experience and attitude

Most analysts and commentators agree that the scale of these (and other) challenges facing universities and colleges is only likely to increase over the coming years, thanks to a combination of socio-economic, demographic, political and technological pressures. The nature of many of these challenges means that most are beyond the capabilities of individual managers, or institutions, to control - but that does not mean that we are powerless. It simply increases the importance we must attach to ensuring that our institution is functioning as effectively and efficiently as possible and, therefore, is in the best possible shape to meet these demands.

This infoKit is designed to be of relevance and assistance to those who play an active role in the formulation or implementation of strategic planning processes within their institution. This not only includes members of the institution's senior management team, but also those with local responsibility for overseeing the completion of strategic objectives within their own faculties, departments or teams. It will also be relevant to those posts which directly support strategic development and operations, either from a project management, quality assurance or innovation angle.

The following diagram provides a graphical representation of both our approach to strategy and, as a result, the structure of this infoKit. Though we believe that it is possible to define certain key stages in strategy development and implementation we do not view them as linear in progression. Rather, we see each as complementary to the others and operating in parallel to them, hence portraying them as three cogs, each with a purpose of their own, but only making real sense when viewed as part of the progression of a bigger 'machine'. Lastly, we believe that successful strategic planning and activity can only occur when those responsible for it have all relevant facts at their disposal: hence the need for ongoing, accurate and informative 'environment scanning' and the importance of the management of the information which enables it.

Strategic Issues Survey

Conducted online between 10th March - 29th April 2008. Part of JISC infoNet's Strategy Planning & Implementation Initiative ¹.

¹ <http://www.jiscinfonet.ac.uk/strategy-planning/survey-results>

"Having the kit as a reference point for everyone kept the task focussed, indeed the excellent structure of the kit was mentioned several times as being very useful. It was also noted by new LT members that the kit really helped them as they 'found their strategic feet' and provided a good way to benchmark their activity." **Rohan Slaughter, Head of Technology, Beaumont College**

More from the pilot projects:

<http://www.jiscinfonet.ac.uk/infokits/strategy/importance-pilots>

About this resource

A quick search of the internet, or your nearest bookshop, will confirm that there are probably as many books and resources on strategy planning available as there are FE/HE institutions in the UK. Each one is described as being the must-have guide, often providing a simple step-by-step methodology to implementing an effective strategy. Unfortunately, real life never seems to be quite as straightforward as these books tend to assume.

'There is always a better strategy than the one you have, you just haven't thought of it yet'

Sir Brian Pitman

Our resource isn't designed to tell you how to develop and implement your strategic activity. We don't claim to have all the answers and yet, at the same time, we are firm believers in the notion that nothing is ever perfect and that even small improvements to the status quo can often yield big returns. If all this resource does is to encourage you to stop and question how you currently conduct strategic activity within your institution it will have performed an important function.

This framework is deliberately non-prescriptive and non-dogmatic. It does not require you to reject the way you currently do things and to 'sign-up' to our approach. Instead, it simply reflects what we believe to be the most important tasks and processes required to successfully articulate, coordinate and manage strategic activity within your institution.

Within each of the stages you will find a host of different tools, techniques and approaches. Some you may find useful, others not; some you may be doing already, and others you may have tried and discarded in the past. The intention is not that you will use them all, but that you may find some of them of use within your particular situation.

Those new to the subject of strategic planning and activity, or planning a fundamental review of how it is conducted within their institution may find it useful to read through each of the four stages in order to gain a clear understanding of the purpose of the four stages and how they fit together. Alternatively, those well versed in the concept of strategy management but looking to strengthen a particular area of their procedures, or introduce a slight refinement, may wish to dip straight into particular elements or resources to address a specific issue.

Feedback

We would be delighted to hear about your experience of using this resource and any comments you may have about its contents and overall usefulness. This infoKit is designed to be a dynamic resource and whilst we may not be able to make changes to it in the light of every piece of feedback received, we will endeavour to continue to make the infoKit as relevant and useful as possible.

Please email us: jiscinonet@northumbria.ac.uk with your feedback.

Mission, Vision, Values

Identifying your mission, vision and values

This stage is all about 'the big picture'. Visualising and articulating what it is that your institution exists to achieve (its 'mission') and what defines its character and ethos (its 'values'). But it is not just about describing the here and now. This stage also represents your opportunity to look to the future, to define your aspirations and to describe the type of organisation you wish to become (its 'vision').

There is often a careful balancing act to be performed. Lofty statements of idealism may encourage a certain (perhaps justified) cynicism about the process, but at the same time it is important to aspire and inspire and to create a shared image of what your institution stands for and where it wants to be. By doing so you avoid wasting time and resources by pulling in a dozen different, perhaps even contradictory, directions and pursuing unnecessary courses of action.

Recognising and resolving these tensions are an inherent element for success during this first stage and will depend not only on the appropriateness of the statements agreed upon but, equally crucially, how they are arrived at in the first place and how they are communicated to the institution as a whole. All of these are topics addressed during this stage.

"There was a clear consensus that Mission, Vision and Values were clearly defined in the infoKit. There was also consensus that the process was clear and in the correct order." **Rohan Slaughter, Head of Technology, Beaumont College**

More from the pilot projects: <http://www.jiscinfonet.ac.uk/infokits/strategy/mission-vision-values/values-pilots>

The importance of concepts over terminology

It would be easy in a resource such as this to allow discussions (or indeed arguments) over terminology to dominate proceedings and to prevent proper progress being made. As with all things, it is, of course, important that there is clarity over what is being referred to, otherwise there can be no understanding; but, by the same token, this does not mean that everyone must agree with every term chosen in order to make use of this infoKit.

Terms such as 'mission statements', 'vision' and 'values' are not fixed and absolute and it is inevitable that what one institution may currently think of as a 'vision' may be construed by another as part of their 'values'. Likewise, the content of one institution's 'mission statement' may be remarkably similar to another's 'value set'. This really doesn't matter - call each what you will according to what you believe will have the greatest resonance for your institution. What does matter are the concepts which these various terms describe and the importance of ensuring that each are addressed appropriately - whatever they may be called.

So please bear this in mind when reading the rest of the contents of this stage and focus on the underlying concepts, rather than the relative suitability of the particular name that we have chosen to define it by

The Institutional Experience - Beaumont College

"We had to take account of the mission, vision and values of our parent organisation. It may be the case that these areas are outside of the remit of the people using the kit - this needs to be made clear when using the kit by whoever is coordinating the use of the kit so that time is not wasted trying to change what cannot be changed - however mapping 'what this means for us' was a useful exercise. The question we asked was: *"Given the values of our parent organisation what is the unique contribution that Beaumont College can bring?"*. We thought the section on mission, vision and values helped clarify a number of issues for the team and in completing the exercises focussed people's attention on 'future talk' which was energising and helpful. It brought to light shared assumptions which were interesting to articulate given the different range of experiences of different team members.

The exercises also brought to light the complexity of aligning the Colleges strategy with that of the parent organisation. Going through the process helped to reinforce once again the importance of clarity in this key area, particularly with regard to governance. A particular point of interest to the Principal was feeding back to governors on the use of the InfoKit and how sophisticated the process was and how it had already begun to develop confidence and competence in the leadership team in handling concepts like mission and vision."

What is a mission statement?

"A mission statement defines in a paragraph or so any entity's reason for existence. It embodies its philosophies, goals, ambitions and mores. Any entity that attempts to operate without a mission statement runs the risk of wandering through the world without having the ability to verify that it is on its intended course."

www.missionstatements.com

Without a mission statement (or a statement/set of principles which conforms to this definition but which may be known as something else), the organisation risks wandering 'off mission' and wasting time and resources trying to achieve things which are at best peripheral and at worst irrelevant to the objectives it should be trying to achieve.

Some may argue that the mission for all further and higher education institutions is simple and self-evident: to provide good quality teaching and learning for its students and to conduct valuable research. But already the flaws in this simplistic response are evident. Not every institution pursues an active research agenda (particularly in further education), whereas for others it represents the focal point of their international reputation and one of their main streams of income. Likewise, although hopefully all institutions would place a high value on teaching and learning, their approach to conducting this may differ markedly: whereas some institutions may view their role as being to nurture and develop academic excellence, others may consider it their priority to equip students with the vocational skills and training required to prepare them for the job market.

In many respects, the mission statement reflects the ultimate distillation of the strategic activity of the institution. If the course of action being considered doesn't seem to conform to the mission statement, serious questions should be asked about whether this is really something that the institution should be involved with. If, after due consideration, the answer is still 'yes' it may well be that your mission statement should be updated to reflect this new change of direction or expansion of remit, but given the 'high-level' nature of mission statements it stands to reason that such changes will rarely be necessary (perhaps once or twice a decade) - any more than this and it suggests that your mission statement is defined at too detailed and low a level.

The rise to prominence of the 'business and community engagement' (BCE) agenda as a 'third stream' of institutional activity is a good example of the kind of major shift in policy and remit which may have required an amendment to some institutional mission statements in recent years.

Examples of mission statements include:

"We are a dynamic, enterprising, and creative university committed to providing an excellent education enriched by our focus on applied research." - **Coventry University**

"To contribute to society through the pursuit of education, learning, and research at the highest international levels of excellence." - **University of Cambridge**

"To advance and diffuse knowledge, wisdom and understanding by teaching and research and by the example and influence of its corporate life" - **University of Dundee (still as first written in 1967)**

"We have a simple mission, "Success for our Students", and do everything possible to ensure that you receive the very best education and training." - **Herefordshire College of Technology**

Each of the above examples say something specific about the institution in question and avoid meaningless platitudes by not only stating what it is that they strive to achieve but how they intend to achieve it. It is this that gives each its distinctiveness and ties it specifically to the institution in question.

An interesting exercise might be to separate the statements from the institutions and to determine how easy you feel it would be to correctly marry them up given what you know about each institution.

When reviewing or redefining your own mission statement this exercise can be taken a step further by including your own mission statement along with these examples and asking colleagues or focus groups to choose which they feel is most representative of your institution. If few successfully manage to recognise your institution from your mission statement this may indicate that it does not sufficiently capture the essence of your organisation.

The characteristics of a good mission statement

Mission statements come in all shapes and sizes: from the short and pithy to the comprehensive and verbose; and from the vague and general to the specific and measurable. There are no absolutes, ultimately it is what is right for your institution, its staff and its stakeholders that is the only criteria that really counts. For no matter how well written it may be, how succinct or worthy, simple or complicated, it will only be effective if it is generally considered to be an accurate and useful summary of your organisation and if it 'says something' to its stakeholders.

That said, there are some general principles that it may be worth bearing in mind when defining a new mission statement, or reviewing a current one.

1. Make it as succinct as possible. A mission statement should be as short and snappy as possible - preferably brief enough to be printed on the back of a business card. The detail which underpins it should be mapped out elsewhere (see Vision and Values)
2. Make it memorable. Obviously partially linked to the above, but try to make it something that people will be able to remember the key elements of, even if not the exact wording
3. Make it unique to you. It's easy to fall into the 'motherhood and apple pie' trap with generic statements that could equally apply to any institution. Focus on what it is that you strive to do differently: how you achieve excellence, why you value your staff or what it is about the quality of the student experience that sets you apart from the rest. The example from Coventry University is a good example of this with its stated 'focus on applied research'
4. Make it realistic. Remember, your mission statement is supposed to be a summary of why you exist and what you do. It is a description of the present, not a vision for the future. If it bears little or no resemblance to the organisation that your staff know it will achieve little
5. Make sure it's current. Though it is not something which should be changed regularly, neither should it be set in stone. Your institution's priorities and focus may change significantly over time - perhaps in response to a change of direction set by a new Vice-Chancellor or Principal, or major changes in government policy. On such occasions the question should at least be asked: 'does our current mission statement still stand?'

It may be useful to re-read the examples cited in the mission statement section in the light of this list and to assess if and how each demonstrate these qualities.

Hopefully, if your mission statement conforms to the above principles it should stand a good chance of fulfilling its objectives, but there are no guarantees - especially if, no matter how well worded - it is not accepted by the broader institutional community. For if your institution as a whole, or significant elements of it, reject your mission statement wholesale its value is effectively lost and it will forever remain a slick, but essentially meaningless, set of words. The main mitigation against this risk is likely to stem from the way in which your mission statement, along with your vision and values are formulated, communicated and disseminated - topics addressed elsewhere in this resource.

The Institutional Experience - University of Sheffield

On the basis of reflection at senior management level, followed by some small-scale 'reality-check' testing in a small number of staff teams, we identified a mission focussed around the concepts of Promoting, Developing, Supporting. The proposition is that these words reflect the scope of our activities over the student lifecycle from initial enquiry to final award (promoting the University; promoting educational aspiration; developing life and learning skills, developing employability, supporting students, etc). We considered whether the three concepts were in a linear or circular relationship and toyed with a number of different layouts. On the final strategy document, the mission appears as follows, alongside an image which is intended to reflect the importance of teamworking, collaboration and partnerships (as expressed elsewhere in the strategy).

How to identify and agree your mission statement

This section deliberately focuses on how to identify and agree your mission statement and not on who should be involved in this process. Questions regarding who should be involved and how it should be coordinated represents a different set of challenges entirely and are broadly the same regardless of whether forming your mission statement, vision statement or values. As a result this guidance is included at the end of this stage and is designed to encompass all three.

Before getting embroiled in the details of precise wording and phrasing your most important task is to have successfully identified the major elements by which you wish to define your institution's *raison d'être*. Examples of what we mean by an 'element' include such things as 'international reputation for research', 'leading edge facilities' or 'excellence in vocational training'. They represent the nub of what you feel represents the best of your institution and what it strives to achieve.

During this process it may help to ask yourselves the following questions:

1. What are the first 5 words that spring to mind when asked to describe your institution?
2. What is it that you do best?
3. What makes you different?
4. What would you like others to think of you?

The next stage in the process is likely to be one of shortlisting, only possible if accompanied by a considerable degree of discussion, compromise and trial and error. It should be fairly easy to move from the original long list to a shortlist of real contenders, simply by discarding those elements which received only very limited support, or which are only slight variations on others. Moving from a shortlist to the final number of agreed elements may prove a trickier proposition, not least because they may all be worthy entrants which, if length were no issue, would all be included.

Here is where a process of prioritisation may prove useful. Ranking each element in terms of its perceived importance to the institution serves two purposes: Firstly, it makes it possible to define a cut-off point, beyond which otherwise worthy elements will not make the final cut (i.e. 'we are only going to include the top 4 elements that we have listed', for example). Secondly, it starts to give some shape to the statement itself by dictating the logical order in which each element should be described, with logic dictating what you consider to be the most important element coming first.

From here on in it's a question of phrasing, reviewing and rephrasing until you are happy with the end result. In many respects the process of defining the final wording of your mission statement is akin to writing poetry, with no word

wasted or included without good reason, plus a similar need for the text to scan and flow as smoothly as possible. Otherwise, it's all too easy to end up with a series of worthy, but disjointed and unconnected statements where, instead, what we are looking for is for the sum of the whole to be greater than its parts.

It is also worth paying particular attention to the range of adjectives used throughout the statement to ensure that you have not inadvertently slipped into unjustifiable hyperbole: are all your facilities really 'world class'? Do you really have an 'international reputation' for research? etc. Focusing instead on what you believe to be most important to your institution, rather than simply repeating or trying to better well-worn generic claims should help in this regard. As ever, it is advisable to avoid jargon and to use plain English and short sentences wherever possible to ensure that your message is not weakened or lost.

As the above guidance implies, it is our view that the mission statement should be an accurate summary and reflection of the institution and what it strives to achieve as it is. Where it strives to be in the future is something which should be defined in its vision - as described in future sections. However, it may be that in certain exceptional circumstances - for example following the granting of university status or other such major changes - that it is necessary to also take a more future-focused approach to defining your new mission statement and perhaps looking to some of the goals identified during the formation of that vision to help craft a mission statement that describes how you see the new mission of the institution going forward, rather than simply reflecting the past you have left behind. Such complexities help remind us that individual circumstance and operational necessity may often require a more pragmatic and less clear-cut approach than it is possible for us to describe in this guidance.

Although crafted with longevity in mind it is also important to periodically review your mission statements to check that they are still current and valid. This may be particularly relevant after the kind of major organisational change mentioned above, but may also be required simply due to the passage of time and the gradual impact of change. A scheduled review process, perhaps annually or every few years can help ensure its continued relevance, always starting with an assessment of the statement as it currently stands and whether each element is still accurate and helpful. If there are aspects of it which should be removed or altered following the rest of the guidance in this section should help you to identify what they can most usefully be replaced with.

What is a vision statement?

If your mission statement can best be described as a reflection of the fundamental purpose or purposes of your institution your vision statement should complement and enhance this by providing a description of where you hope this purpose will lead. In essence it represents a description of what and where you want to be. As such it is a statement of aspiration, not necessarily of fact and represents a vision of the type of organisation that you are striving to become and the high level goals you are hoping to achieve. Given these characteristics it is clear to see why an institution has need for both a mission statement and a vision statement as integral and complementary parts of its strategic framework; whilst at the same time re-emphasising the importance of ensuring a common thread and congruence between the two.

"Effective leaders help others to understand the necessity of change and to accept a common vision of the desired outcome."

John Kottar

It is also worth reiterating the suggestion given earlier not to get too preoccupied with terms and titles. Some institutions may well interpret the objectives of the mission and vision statements in slightly different ways, or perhaps even combine the two requirements into one statement. What matters most is the consideration and articulation of these descriptions of the institution's character and direction: less how you choose to label them.

Some examples of vision statements include:

Our vision is to be renowned as a forward thinking, enterprising and business engaged university.

We will be known for providing a high quality and cutting edge learning experience, for research which has a real world impact and for being a catalyst in economic and social transformation.

We will build on our existing strength to attain an international reputation as a leader in applied design and creativity and in healthcare and active lifestyles

Sheffield Hallam University

Our vision for Cumbernauld College is that it should grow and develop as a valued and responsive learning organisation, promote access, participation and Lifelong Learning, and provide its customers, partners and the wider social and business communities with relevant, effective and innovative learning experiences

Cumbernauld College

"Our vision is one in which **Kirklees College Huddersfield Centre:**

- *is responsive and serves the needs of the whole community of Kirklees*
- *provides a friendly, inclusive, learning environment where all take pride in learning and achievement*
- *is recognised locally and regionally as a provider of high quality education and skills training*

"Our vision is to be the UK's best Knowledge and Learning Partnership University"

University of West of England

"Our vision is to be the number one for sandwiches and savouries from a united team that is passionate about being the best in the bakery"

Greggs the bakers

"McDonald's vision is to be the world's best quick service restaurant experience. Being the best means providing outstanding quality, service, cleanliness, and value, so that we make every customer in every restaurant smile"

McDonald's

"To be the most creative organisation in the world."

The BBC

Why do you need a vision statement?

Organisations need to know where they are heading and what they are trying to accomplish and to state this clearly for getting there is dependent on the efforts of a large number of people - not all of whom can just be assumed to instinctively know what the collective goal is.

An institution's vision statement is thus an articulation of its major goals and ambitions. The organisation which does not articulate its vision for the future will not necessarily fail, indeed it may continue to 'tick over' quite nicely, but nor is it likely to thrive. It stands less chance of growing, expanding and improving because it has no clear idea of what direction or form this growth, expansion or improvement should take. Not every good idea can be funded and not every opportunity pursued. Without a clear idea of where the institution is heading there is no sound basis for prioritising these decisions, resulting in an institution which is paddling as hard as it can, but making little real progress.

The institution's vision statement establishes another aspect of the 'big picture'. As such, it should be possible to trace a link back to it from all other levels of institutional planning and goal setting. Repeatedly asking the question: 'how does this help us achieve our vision?' when setting departmental and faculty-level objectives should help reinforce these links.

Your vision should also be a constant and visible element of your recruitment and selection processes, appearing as part of your initial job advertisement and application pack. By doing so you make a public claim about where you, as an organisation, are heading and therefore the type of people you need to make this happen. Pursuing this idea further, asking candidates either during the written application or interview stage to demonstrate how they would help the institution to achieve it can help ensure that all new staff are aware of the institution's stated vision and are able to play their part in achieving it.

What makes a good vision statement?

"The quality of your vision determines the creativity, quality and originality of your ideas and solutions. A powerful vision statement should stretch expectations and aspirations helping you jump out of your comfort zone." **Time Thoughts Website**²

As with the mission statement, there is no simple right or wrong answer and ultimately what counts is its appropriateness and suitability for the institution and where it is on its own particular 'journey'. However, as with the mission statement, it is possible to define some general principles of good practice which it may prove useful to consider when revising your current vision statement, or drafting a new one.

1. **Be inspirational.** The vision statement is supposed to challenge, enthuse and inspire. Use powerful words and vivid phrases to articulate the kind of institution you are trying to become. This is your chance to lift your institution's gaze above the grind of day-to-day gripes and problems and to focus attention on 'the bigger picture' and the potential rewards that await
2. **Be ambitious.** If you set your sights on being 'within the top 10' the chances are that the best you will come is 10th. If your real aim is to hit the top 5, why not say so and go for broke? What targets you set and how high you aim will, in themselves, also say something about you as an organisation. Ambitious, perhaps even audacious targets will help create the impression of an organisation that is going places, that aims high and demands high standards from its staff and students in a way that comfortable, 'middle-of-the-road' benchmarks will not
3. **Be realistic.** This may sound odd following on immediately from a call to 'Be ambitious', perhaps even contradictory, but it is an important part of the balancing act that is required. For just as the purpose of the vision is to inspire and enthuse, it is equally important that this ambition is tempered by an underlying sense of realism. People need to believe that what is envisaged is actually achievable; otherwise there is no reason for

² <http://www.timethoughts.com/goalsetting/vision-statements.htm>

them to believe or buy in to it. It is perfectly possible to be both ambitious and realistic and it is through successfully marrying these two forces that the best vision statements will be formed. Stating that you will become 'ranked in the top 3 in the student satisfaction league table within 5 years' may be both ambitious and realistic if you currently sit at number 7, but sound far less convincing if you currently reside at number 57

4. **Be creative.** Albert Einstein once said that *"imagination is more important than knowledge"*³. Of course, there is nothing wrong with saying that you will 'deliver world-class learning and teaching standards but it is probably a safe bet that at least a dozen other institutions will be saying the same thing. Just as a commercial company may need to think creatively in order to identify gaps in the market, so too you may need to think imaginatively about what your vision is and how you describe it to help stand out from the crowd
5. **Be descriptive.** Unlike with your mission statement, there is no pressure to pare your vision down to the bone. Of course you want to be concise (indeed many of the best examples of memorable visions tend to be so), but there is no need to enforce an arbitrary limit on its length. Take as much space as you need to get your vision across
6. **Be clear.** As with your mission statement it pays to avoid jargon, keep sentences short and to the point and use precise, uncluttered language. Otherwise you risk diluting or losing your message amongst the background 'noise'
7. **Be consistent.** Though bearing in mind their different purposes, there should still be an element of continuity between your mission and vision statements, or at least some careful thought and discussion given as to why this is not the case. At the same time, the vision need not be constrained by the current remit of the mission. Perhaps the institution is keen to explore new areas in the future: to become the region's conference venue of choice, for example, in which case this would need to be reflected in the mission statement in due course

How far ahead should you look?

If your vision statement looks to the future, the question needs to be asked: how far into the future should we be looking?

If you look too far ahead it can seem too distant and remote: perhaps even beyond the period that most of your staff are even envisaging staying at the institution and thus being considered largely irrelevant by them. The flip side of this is that by looking too close to the present day you do not leave yourself the time required to achieve what should be quite ambitious and challenging goals.

To a certain extent any notion of an 'ideal period' will be influenced by the type of institution you are and the nature of the vision you have defined for yourself. For example, a heavily research orientated institution with strong industry links might need to take a longer term perspective than one that is focused more, say, on teaching for vocational purposes. However, so far as it is possible to define a specific 'ideal period' we suggest five years to usually be about right. Five years is far enough into the future to allow for profound change to be accomplished, but is near enough at hand for it to generate the momentum and focus required to influence strategic activity within the institution.

So far as it is possible to define a specific 'ideal period' we suggest five years to usually be about right

At the very least, we would advise reviewing your vision statement every 3-5 years - even if this is just to confirm that it is still relevant and useful - or in the light of any major changes affecting your institution or the sector at large, such as a change in government or a radical change in government's strategic priorities.

³ "What Life Means to Einstein : An Interview by George Sylvester Viereck" in The Saturday Evening Post Vol. 202 (26 October 1929), p. 117 http://en.wikiquote.org/wiki/Albert_Einstein

How to identify your vision?

As with the guidance on mission statements, this section focuses on the how. The who is addressed at the end of this stage.

The following techniques may help you to identify and shape a suitable vision for your institution.

Do your research. There is little point in striving to excel in something that nobody wants. This is not an easy task. Not only are you operating in a crowded and competitive marketplace, but it can also be difficult to predict now what might be in demand in five years time. Techniques such as Scenario Planning and others addressed in the Environmental Scanning & Business Intelligence stage may be as close as you can get to a crystal ball in this regard.

Be imaginative. Try to visualise the organisation you wish to become. Think about and/or articulate what it will be like to work or study at. Perhaps try using creative approaches such as describing a fictional person's 'journey' or 'storyboard' through this new institution, or graphical metaphors to help visualise it. Anything which helps people to think outside of the constraints of how things currently are and to envisage how they might wish it to be.

Be bold. Avoid the temptation of letting where you are now necessarily dictate your vision of where you want to be. Your vision statement should be proactive, not reactive and focused on new horizons, not retreading the same well worn ground.

Look for synergies. Though people may articulate them in different ways, or chose to stress differing aspects, you may find it useful to look beyond the differences and to identify those goals which, though on the surface appear different, actually share the same roots or characteristics and whose realisation would represent fundamentally the same achievement.

Be coherent. Check whether any proposed elements of the vision statement are possibly contradictory in nature.

Consideration of the above in as open, creative and constructive an environment as possible should help to ensure that your vision is as broad, inspiring and challenging as possible and will, therefore, set the right overall agenda for your strategic activity. Of course, the challenge is often how to achieve consensus, especially across large, diverse and devolved institutions. More information on who to involve in such discussions and how is covered later on in this stage.

Tools and Techniques

Our Scenario Planning⁴ resource has examples of how to inspire through creativity and imagination.

The value of values

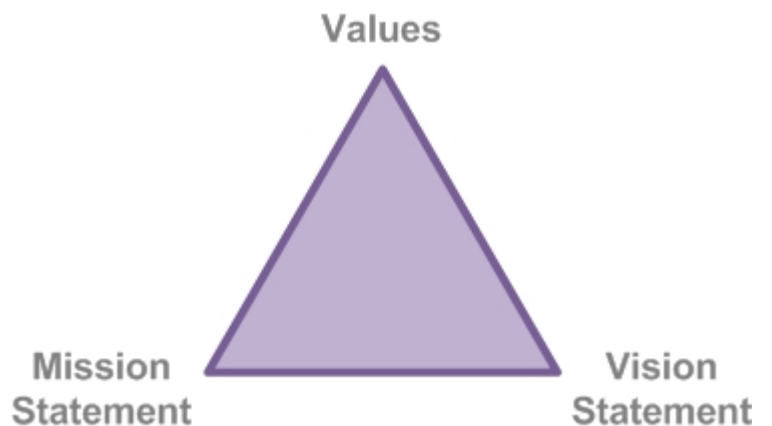
"It's not hard to make decisions when you know what your values are" Roy Disney

Core values can best be described as operating philosophies or principles that guide an organisation's internal conduct as well as its relationship with the external world.

So, if mission statements tell you what your institution currently exists to achieve and vision statements articulate where you aspire to be, the purpose of stating your core values is to help define the type of organisation you strive to be. As such they describe something of your culture, your ethos and your priorities. They represent the how alongside the what and the where of your mission and vision statements. Of course it is quite possible to combine your values within your mission statement to achieve the same effect, but we feel that separating the two helps each to retain their specific purpose and makes it easier for others within the institution to appreciate the contribution they are designed to make.

⁴ <http://www.jiscinfonet.ac.uk/tools/scenario-planning>

As with all these high level strategic statements, their value only really emerges if and when they make the leap from words to deeds. Your values should both reflect and inform the culture within your organisation but will only do so if effort is made to 'make them breathe'. This may include publicising your values around the institution, including them within recruitment information, your prospectus and other promotional material and running informal sessions on them for staff designed to encourage reflection on what adhering to these values may mean to them on an individual level. Highlighting, and perhaps even rewarding, particular teams or individuals who have made a positive contribution to the life of the institution through acting in tune with a particular value can also be a powerful means of emphasising that values are not just well meaning words, but an integral part of the life of the institution.



Core values can help remind the organisation what is important to it and to make sure that these qualities do not get lost, either in the middle of daily operations, or in pursuit of your vision. But in order to be of such practical use it is vital that the values you define for your institution are specific and meaningful to your institution. Agreeing sincere, yet bland and generic 'motherhood and apple pie' style values which no one could argue with but which could equally apply to every institution is relatively easy.

What is more difficult to achieve is to identify and agree values which are original, inspiring and specific to your institution.

It must be said that all too often the values listed by further and higher education institutions do tend to fall into the 'motherhood and apple pie' camp, full of well-worn phrases such as 'Valuing diversity, equality, inclusion and opportunity', 'Excellence in service delivery' and 'Respect for learners and staff'. Contrast these with the following examples from the private sector which not only say something specific and immediately recognisable about the organisation in question, but are also clearly reflected in the way they conduct business.

Some examples of organisational values include:

Everything we do is underpinned by our core values of transparency, fairness and security. These are the foundations which enable us to maintain our financial strength and deliver long-term good value

Nationwide Building Society

*Focus on the user and all else will follow
It's best to do one thing really, really well
Fast is better than slow
Democracy on the web works
You don't need to be at your desk to need an answer
You can make money without doing evil
There's always more information out there
The need for information crosses all borders
You can be serious without a suit
Great just isn't good enough*

Google

*our co-operative values**Self-help - we help people to help themselves**Self-responsibility - we take responsibility for, and answer to our actions**Democracy - we give our members a say in the way we run our businesses**Equality - no matter how much money a member invests in their share account, they still have one vote**Equity - we carry our business in a way that is fair and unbiased**Solidarity - we share interests and common purposes with our members and other co-operatives.**our ethical values**Openness - nobody's perfect, and we won't hide it when we're not**Honesty - we are honest about what we do and the way we do it**Social responsibility - we encourage people to take responsibility for their own community, and work together to improve it**Caring for others - we regularly fund charities and local community groups from the profits of our businesses.***The Co-operative**

What all of these have in common is their relevance to the organisation in question and the sector in which they operate. As a result they are unambiguous, non-transferable and immediately recognisable as part of the ethos behind the brand. Can the same be said to be true for your values? Are they specific to your institution (or even your sector?) or could they be applied with equal accuracy and relevance to another institution, or even another type of organisation altogether?

Defining your values

As with your mission statement, your values should describe something of how your organisation currently is, less what it wishes to become. That said, there is something aspirational about the notion of values. A commitment to value 'Excellence in service delivery', however, is not a claim that all your services are always faultless; it is a statement that as a principle you will not compromise on service quality and that the pursuit of excellence will guide the decisions you make and the contracts you enter into.

Defining your values should be a creative and collaborative process. Who and how to involve people is addressed more fully in the next section but the general principles of obtaining as wide a representation of views as possible and pursuing the most constructive and creative ways of capturing them are also worth mentioning here. It is also a process which must be handled with sensitivity. Attempts to define your institution's values will inevitably touch on issues of individual ethics, morality and beliefs. Encouraging such introspection is a valuable part of the process and an important one in making people see the relevance of institutional values to them as individuals, but is also one which, if not handled with tact and diplomacy could risk surfacing tensions and alienating rather than including people.

Reflecting on how those who come into contact with your institution viewed the experience can help ensure that your values actually reflect your institution. Audit reports, staff and student satisfaction surveys and the reflections of associated, but independent, people such as governors can all provide a steer in this direction. Perhaps a strikingly high number of such sources make particular mention of the friendly atmosphere, the commitment of staff or the quality of the facilities. In themselves these might not represent ready-made values, but might lead the way to the underlying values which make them possible.

Just as with your mission statement it is important that your values are supported by some sort of evidence. For every value you identify it should be possible to point to several, hopefully many, examples from all corners of the institution

"(The strategy infoKit) was very helpful in encouraging a straightforward approach and to avoid generalisations and 'motherhood and apple pie'"

Dr Andrew West, Director of Student Services, University of Sheffield

of that value in action: how it has influenced a decision that has been made or positively contributed to an aspect of institutional life. Such a process can also be used to help move beyond the general and hackneyed such as 'respect for people' towards something more relevant and informative by encouraging you to reflect on how such respect has previously been demonstrated or why it was given such a high priority in that particular circumstance and to what effect. In doing so what may emerge is a far richer and more illustrative value that is rooted in the reality of your institution.

There need not be any self-imposed limit on the number of core values you define and you should include as many as you feel are required to reflect your institution's traits and priorities. A quick scan through a random selection of college and university websites suggests that the average number of core values listed is around six, with ten being the most and three the least. What matters most is that you have captured the essence of what it is that makes you the institution you are.

Values are often described by one or two words (e.g. 'student focus', 'high performance', or 'inclusiveness'). However, as in the example from the Cooperative included in the previous section, it is often useful to further elaborate on this with a short accompanying sentence that can help define its particular relevance or how it influences the work of the organisation. Once again this can help guard against over-generalisation and provide the opportunity to demonstrate its roots and relevance to the institution.

Other techniques used to help make the values memorable include the use of acronyms (with the first letter of each value spelling out a central key word (e.g. RESPECT), or diagrams which portray the values as a series of interlocking pieces⁵.

Living the values

Once again, institutions must resist the temptation to treat the publication of their core values as the end of the process. In order to be effective the values must be something shared, adopted and believed in by the organisation as a whole - otherwise they represent just another hoop jumped through and just another page on the website. It may well be worth regularly monitoring the views of staff and students about the values⁶, their relevance and what progress is being made towards them to reassure you that they are continuing to serve a useful purpose.

Repeated examples of discrepancies between stated values and organisational behaviour are clearly likely to dent enthusiasm for the values and belief that they mean anything. Sometimes such discrepancies might not be immediately apparent but with a moments reflection it is easy to see how some of the following examples could have a negative influence on people's perception.

- offering reserved parking spaces for senior management whilst 'believing in staff equality'
- closing down socially important, but unprofitable, courses whilst 'behaving in the interests of society'
- banning all staff use of social networking sites (even during breaks) whilst 'trusting our staff'
- preventing use of university facilities by local residents whilst 'respecting our local community'

There may be perfectly good operational reasons behind each of these decisions, but, perhaps, a moment's pause to reflect on how the intended decision squares with the institution's values may have lead to an alternative approach being adopted. If not, and if your values are simply put to one side each time circumstances dictate an alternative course is taken, perhaps you really should question whether your stated core values are anything other than just fine, but ultimately meaningless, words.

⁵ <http://www.leeds.ac.uk/comms/strategy/strategy/values/index.html>

⁶ http://www.lboro.ac.uk/staffsurvey/part-b/s3_culture-values.html

As with your mission and vision statements, your values should be integrated into all relevant aspects of institutional life. Obvious examples of where your values can play a useful role in reflecting and reinforcing the essential nature of your institution include:

- during the recruitment and selection process by informing potential applicants of the type of institution they are considering joining and giving them the opportunity to reflect on whether they share these values
- during regular staff appraisal processes by incorporating the values into the criteria by which you assess the performance of staff and set goals for the coming year
- as part of the decision making framework employed by management by encouraging a consideration of 'is the decision we are about to make in tune with our agreed values?'
- promoting the values through regular stories within college or university magazines about inspiring or successful examples of staff and students 'living' the values, possibly combined with an annual award for the individual or team who have done most to exemplify one or more value

The Institutional Experience - University of Sheffield

In practice we tested the values using a combination of an exercise we described as 'values in action', which was inspired by the 'Living the Values' guidance. This involved asking a selected group of staff teams to translate the existing list of values into practical examples in their working life, and within their experience of service delivery. Where this proved difficult we asked staff to suggest alternative words and/or to identify gaps in the existing list. Alongside this staff consultation exercise, I also convened a meeting with the president of our Students' Union, to get some student input as to whether the values were those he and his sabbatical team would expect to be espoused by a service department such as ours. Among the helpful feedback received, an interesting debate emerged around the concept of 'transparency' - some colleagues believing this to be an important concept; others feeling it was a meaningless management 'buzzword'; some feeling concerned that it contradicted their professional requirements around confidentiality; and the student view that it suggested an inappropriate degree of openness which could lead to user concerns around trust. The final product is a very straightforward list of eight words, which we have presented in simple alphabetical order within the strategy.

Consultation

Senior managers often and rightly take the lead role in formalising the text of documents as high-level, strategic and important as mission, vision and value statements. In some circumstances it may even be formally decreed who has the authority to define such things, as is the case in many FE colleges where the Corporation is responsible for agreeing the mission statement. But regardless of where the final responsibility lies there will be few institutions who do not consult with staff, students and other stakeholders during this process. Taking creative and active steps to engage with stakeholders through a variety of means not only increases the likely relevance and quality of the 'end product' but also starts the process of encouraging ownership and active engagement within the concepts the statements define.

There is no one right way to undertake this process of consultation and engagement and, indeed, there are significant advantages to employing several parallel approaches, each designed to achieve a specific goal or to engage with a particular target audience. It will also depend on how far down the road of engagement and consultation you wish to travel. Some institutions may wish to only seek wider opinion once a range of options have already been shortlisted, whilst others may see merit in proactively engaging stakeholders at a much earlier stage when ideas are still being formed.

Be ruthless in summarising and synthesising

The various environmental scanning exercises and consultation activities are likely to generate a large amount of material, references, comments, and opinions. Skill is needed to précis and re-present these

**Andrew West, Director of Student Services,
The University of Sheffield**

More from the pilot projects:

<http://www.jiscinfonet.ac.uk/infokits/strategy/mission-vision-values/consultation-pilots>

Table 1. Possible approaches to consultation

Technique	Pros	Cons	Hints, tips and exemplars
Briefing documents (online or printed)	Cheap Wide reach opportunity for ideas/proposals to be expressed in a considered, uninterrupted manner	Difficult to measure impact 'One way', no opportunity to engage in dialogue	The example from the University of Leeds ⁷ demonstrates an excellent use of online resources, including video clips, and provides information at varying levels to accommodate the casual browser and those interested in the detail
Management blogs	Very cheap Informal Opportunity to raise awareness of the constraints and problems faced by management which may influence the process Helps 'humanise' the process of management Feedback can be captured (and moderated) via blog comments	Requires an ongoing commitment A careful line must be trod between informality and openness and necessary management discretion	Martin Hall, Salford University ⁸ From a distance, Dr Christine Sexton ⁹
'Road shows' and drop in sessions (i.e. informal exhibitions and information points which can be located at popular congregation points to distribute information and promotional literature and to answer questions)	May reach those reluctant to participate in more formal events Informal atmosphere encourages honest reaction and debate Distribution of promotional 'freebies' helps raise awareness Able to target particular areas where it is felt that awareness is low or resistance high	Resource intensive Difficult to capture/analyse feedback	Locations in or near refectories, cafes, libraries and campus shops often make good locations ensuring a high 'foot fall' Providing free food and drink (coffee and muffins etc) will usually attract people Providing a comments and suggestions box (or electronic equivalent) will enable some outputs to be captured
Team/ faculty / department briefings	Provides opportunity for discussion to be tailored for specific operational areas Encourages groups to interpret the proposals and think about them in an applied, as opposed to abstract, way Starts the process of local planning	Outputs (flip charts, whiteboards etc) difficult to capture	Electronic keypads/voting systems can help capture preferences (though less useful at capturing new ideas/suggestions) Use digital cameras to capture comments made on whiteboards Consider who should facilitate the briefing: a member of the senior management team or, perhaps, an external, independent facilitator

⁷ <http://www.leeds.ac.uk/comms/strategy/strategy/values/index.html>

⁸ <http://www.corporate.salford.ac.uk/leadership-management/martin-hall/blog/>

⁹ <http://cicsdir.blogspot.com/>

in response to agreed proposals

with specific expertise in this area

<p>Focus groups</p>	<p>Ability to choose participants enables you to ensure a useful cross-representation of stakeholders</p> <p>Provides the opportunity to engage with a broader group of stakeholders by including governors, research partners, local residents etc</p> <p>Members of the focus groups can act as 'champions' within their local areas</p>	<p>Requires focus group members to devote time to the process</p> <p>Difficult to enforce attendance so may only end up with those already favourable to the process</p> <p>How many groups/members are required for the group to be representative?</p> <p>Getting people together may be difficult in split location institutions</p>	<p>Don't shy away from inviting some known opponents or critics of the process onto the focus groups. Having the opportunity to air their grievances and to be actively engaged with the process may just encourage them to see it in a fairer light</p> <p>Again consider whether external expertise in group facilitation is required</p>
<p>Electronic discussion areas (e.g. wikis, VLEs etc)</p>	<p>Provides an opportunity for all stakeholders (staff, students and beyond) to proactively contribute ideas and suggestions at an early formative stage of the process, rather than simply reacting to predefined suggestions</p> <p>Shared nature of the tool means suggestions made are likely to stimulate further comment and suggestions</p> <p>Outputs easy to manipulate and analyse</p> <p>Location independent</p>	<p>Use of technology (particularly new technology) may alienate some staff from the process</p> <p>Active participation may lead to false expectation that all suggestions will be incorporated leading to disappointment and frustration</p>	<p>Determine in advance how the discussion forum will be managed (how will you check for and react to inappropriate/offensive comments etc)</p> <p>Using existing tools (e.g. your VLE) may encourage participation - providing it delivers the required functionality</p> <p>Because of their nature, there are few publicly accessible examples of wikis that we can point you to. Although the wiki itself isn't accessible, it is clear to see how Bristol University is using a wiki¹⁰ to encourage debate about possible IT futures and the University's strategic direction</p> <p>A simple explanation of how wikis work and why they are useful is available from YouTube¹¹</p>
<p>Voting / survey systems</p>	<p>Makes it easy to obtain the views of large numbers of people</p> <p>The data is easily captured and analysed</p> <p>Can either be used independently via the intranet or as part of workshop, briefing or other event</p> <p>Ease of use encourages high levels of participation</p>	<p>Use of technology may alienate some staff</p> <p>Only suitable for seeking opinion on existing proposals, rather than encouraging new ones</p>	<p>Think carefully about question structure to ensure that useful, comparable data will be returned</p> <p>Consider the balance which must be struck between comprehensiveness (to ensure you obtain all the information you require) and brevity (to increase the level of response)</p>

¹⁰ <http://www.bristol.ac.uk/it-strategy/scenarios/>

¹¹ <http://www.youtube.com/watch?v=-dnL00TdmLY>

Innovative and creative use of a range of such techniques makes it possible to move towards engaging in a true 'strategic conversation' within the institution. By encouraging people to think about and debate what the institution's mission, vision and core values really are the institution will have generated genuine momentum behind the process and encouraged real institutional ownership, rather than staff just viewing them as a set of meaningless words which suddenly appear on the website.

Analysis and feedback

Of course it is one thing to encourage and receive contributions from stakeholders via any or all of the approaches listed, but quite another to then manipulate, analyse and reflect upon the data obtained. The scale of this task should not be underestimated and may well take a range of staff and associated skills: technical, statistical, operational, managerial and presentational.

As well as aggregating and synthesising data for the consideration of those ultimately responsible for agreeing these strategic statements it is also worth considering the benefits of providing timely and ongoing feedback to those who have contributed to the process - and those that haven't. Providing regular updates, summaries of feedback received to date and management responses to what has been said all helps to demonstrate that a two-way consultation process is genuinely underway and that people's views are being listened to, if not always acted upon. Without such feedback loops people might start to doubt progress and question whether their continued participation and interest is justified.

Our Guide to Social Software¹² has further information on the various technical solutions now available and their possible application within an FE/HE institution.

Making your strategies work for you

Hopefully, having read the previous sections, readers should be left in little doubt as to the importance of defining a clearly articulated set of mission statement, vision statement and statement of core values. They exist to remind people of the big picture and to set the main course and, hopefully, act as a source of stability in an ever changing world.

But their formation, agreement and dissemination mark the beginning, rather than the end, of the process. Unless they guide decisions, shape actions and influence behaviour such statements would achieve little and offer little return on the investment required to create them.

What underpins these high level strategies will vary from institution to institution depending on tradition, circumstance and operational need but regardless of the detail the overall requirement remains broadly the same: to cascade this strategic direction down and throughout the institution with sufficient detail and clarity to directly inform and coordinate its operations and activities.

Stage 3, Managing Strategic Activity¹³ explores a host of approaches designed to help coordinate planning and operations within local areas in line with your overall strategic objectives. But before these issues are addressed this infoKit continues to explore the forces which may dictate an institution's strategic direction and which therefore sets the context within which both its institution-wide and local strategic planning must operate.

¹² <http://www.jiscinfonet.ac.uk/infokits/social-software>

¹³ <http://www.jiscinfonet.ac.uk/infokits/strategy/managing-strategic-activity/index.html>

Environment Scanning & Business Intelligence

The term 'Environment scanning' is often thought to only apply to external forces, to the broader political, economic, social, technological, legal and environmental factors creating the backdrop to educational institutions. This is an important part of the equation and many of the tools, techniques and data sources covered in this section (e.g. PESTLE analysis, benchmarking, Boston Matrix) relate to this external perspective. However, it is also essential that the institution and its managers also have access to information required to accurately assess the internal environment, as well as its strengths and weaknesses and ability to meet current and future strategic challenges. 'Business Intelligence' is an agenda moving rapidly to the top of many institutions' priority lists combining, as it does, data from both within and outside the institution.

It is fair to say that this section generated the most discussion in the Leadership Team and has been one of the most valuable sections of the kit"

Rohan Slaughter, Head of Technology, Beaumont College

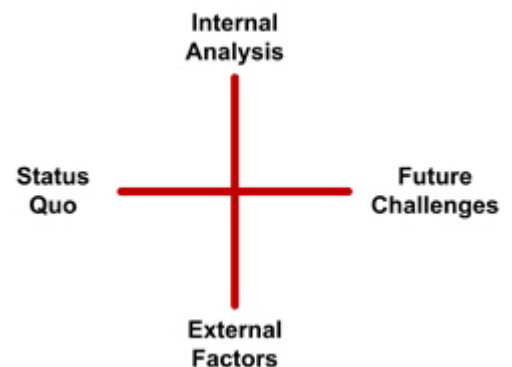
The material included within this stage is designed to help your institution to answer two main questions:

- Is our organisation currently 'fit for purpose' and in the right condition to undertake the activities planned?
- What factors may currently, or in the future, influence our chances of success?

Being able to answer the first of these questions relies heavily on having access to the right data at the right time and being able to trust its currency and accuracy.

In essence, answers to these questions create a four way matrix of views of your institution:

Critical to these four perspectives is timely access to reliable, accurate and useful information. For more than a decade the need to improve information management within institutions has been acknowledged: in some areas, significant strides have been met whilst in others there still remains much more that needs to be done. The focus too often has been upon the application of technology rather than upon the management and governance of the information created and contained. Awareness is growing of the vital role that effective control of an institution's information assets has in ensuring organisational efficiency and maximising its competitive advantage. However, this potential can go unrealised as institutions continue to be constrained by practical problems limiting their ability to gain full value of the information they create and obtain.



Ultimately, environment scanning is about making sure your institution has access to the right information at the right time. Exactly when that is and what information you need access to will largely depend upon your own individual circumstance and, as we shall see, investing in initiatives which improve your 'Business Intelligence' represents the

The institutional experience - Beaumont College

"It was interesting to note that the process of working on the kit really made the entire Leadership Team think about the diversification agenda in a more joined up and comprehensive way and highlighted the areas that different Leadership Team members had divergent views on. How 'risk' was perceived was very different depending on the perceived impact that diversification will have on different teams"

best way of achieving this.

How to use this section

Background

This 'Environment Scanning' section consists of content resulting from the culmination of a separate 12 month JISC-funded project¹⁴ to:

"Investigate, identify and evaluate what can be derived from the information base of institutions that can be used to improve the decision-making process of senior managers"

and

"discover which institutions are currently considering or adopting business intelligence and data visualisation systems and their experiences to date."

During the course of this project we conducted two surveys, both of which attracted responses from over 100 institutions. We also spoke to or visited a number of institutions active in the Business Intelligence (BI) arena, representatives from the BI system vendor community, and the main agencies providing external sources of data to the sector. This enabled us to obtain as complete and balanced an overview of the topic as possible.

Given the clear and desirable links between BI and improved strategic decision-making we decided to make the outputs of this project available within the context of this Strategy infoKit, thereby reinforcing the value of access to accurate and reliable information to assist decision-making. This also highlights the importance of ensuring that any investment in improved business information actually leads to a direct influence on strategic and operational processes within the institution.

Purpose

This section of the Strategy infoKit provides an introduction to the area of BI to those working in the UK Further (FE) and Higher Education (HE) sectors. It attempts to uncover the questions that senior institutional managers may have that may be answered through improved BI - and to provide an overview of some of the stages involved in achieving this. It also explores in some detail some of the many sources of external data which are available to institutions in addition to that created within their own walls. The infoKit goes on to explore some of the benefits and challenges which seem to be emerging so far from institutions already engaged in this agenda.

The aim of this section is to provide a useful introduction to those new to the area whilst providing evidence and fresh perspectives to those already active in pursuing improvements to BI within their institution. Whilst the majority of this section is devoted to BI it also includes other tools and techniques which are of value when attempting to obtain an ongoing, accurate assessment of the 'health' of the institution and the nature of the external pressures it must bear. It also features guidance on how to interpret and make use of the information your institution obtains to maximise its benefit to the strategic planning process.

Section overview and roadmap

The section starts with a definition of what is meant by the term 'Business Intelligence' along with a discussion of some of the problems and limitations that over-reliance on a single definition can cause. We instead propose that adopting a 'checklist of attributes' (both required and desirable) might be a more useful means of usefully defining what does and doesn't constitute BI.

After a brief look at the benefits which 'environment scanning' provides to strategic planning processes we examine the results of a survey indicating the current information needs of senior managers within the sector as well as the main subject areas of interest. Such data should help inform the scope of any proposed BI initiatives within the sector.

¹⁴ http://www.jisc.ac.uk/fundingopportunities/funding_calls/2010/09/grant1210.aspx

The focus then moves to an analysis of the external sources of data available to institutions, their providers as well as the uses to which they can be put within the BI context to help address the information needs of senior managers.

During the course of our research it became apparent that institutions within the sector take a wide variety of approaches to improving BI and that this can make it difficult both to gauge their progress and for institutions setting out on this journey to decide which approach to adopt. Included in this section are several resources specifically designed to counter this complexity and to provide means of both assessing what the various routes to achieving BI might look like and what the experience of the vendor community has to offer. This is all set against the backdrop of a 6-stage 'Maturity Model' designed to help institutions benchmark the current 'maturity' of their BI capability and to see what may be required to progress it further.

The resource goes on to examine the areas that a business case for investment in BI needs to cover before continuing to explore some of the challenges faced by both individual institutions and the sector at large when attempting to progress this agenda.

Analysis of a survey conducted by the project team into the current state of BI in the sector brings together the various intertwined threads addressed within this section. These include different:

- implementation models
- levels of maturity
- vendor offerings
- benefits and challenges

We then cast an eye to the future and what it might hold for this agenda within the sector.

Finally, the section considers 'what happens next'? How should institutions make use of the intelligence they hope to derive from BI to help determine strategic planning? This includes the importance of taking a risk-based approach to analysis and decision-making, the importance of information management for ensuring the quality of information being relied upon, and the need for the institution's senior management to be prepared to honestly analyse their own effectiveness. These are considered within the context of an ongoing review of the institution's strengths and weaknesses.

What is Business Intelligence?

For the purpose of producing this resource we have defined Business Intelligence (BI) as:

Evidence-based decision-making and the processes that gather, present, and use that evidence base. It can extend from providing evidence to support potential students' decisions whether to apply for a course, through evidence to support individual faculty and staff members, teams and departments, to evidence to support strategic decisions for the whole institution.

What is a Business Intelligence System?

For the purpose of this project we have defined a Business Intelligence System (BIS) (a BI system, a management dashboard) as:

"A system that compiles and presents key internal and external information in a concise, pictorial format, to support decision-making, planning and strategic thinking. It provides easy interactive access to reliable, current, good quality interdepartmental information, when needed. It allows senior management to be confident in the integrity and completeness of the information as they move between an overview and a detailed view. Advanced BI systems provide reliable, comprehensive information to all interested parties and include flexible user-defined views for senior managers and planning staff, and fixed views for public access and other users."

Other definitions

We should acknowledge that whilst the above definitions have proved robust and useful during the conduct of this project, and are probably as accurate and useful as any such definition can be, they are not intended to be definitive. Many other descriptions have been applied to both BI and BIS, just a few of which are included below:

'Business intelligence (BI) is a broad category of application programs and technologies for gathering, storing, analysing, and providing access to data to help enterprise users make better business decisions. BI applications include the activities of decision support, query and reporting, online analytical processing (OLAP), statistical analysis, forecasting, and data mining.' **Mirum.net**

'A popularised, umbrella term used to describe a set of concepts and methods to improve business decision making by using fact-based support systems. The term is sometimes used interchangeably with briefing books and executive information systems.' **Noise Between Stations**¹⁵

'BI normally describes the result of in-depth analysis of detailed business data. Includes database and application technologies, as well as analysis practices. Sometimes used synonymously with "decision support," though business intelligence is technically much broader, potentially encompassing knowledge management, enterprise resource planning, and data mining, among other practices.' **IT Toolbox**¹⁶

'Business intelligence (BI) is the process of gathering information in the field of business. It can be described as the process of enhancing data into information and then into knowledge. Business intelligence is carried out to gain sustainable competitive advantage, and is a valuable core competence in some instances.' **Wikipedia**¹⁷

This term was used as early as September, 1996, when a Gartner Group report said:

'By 2000, Information Democracy will emerge in forward-thinking enterprises, with Business Intelligence information and applications available broadly to employees, consultants, customers, suppliers, and the public. The key to thriving in a competitive marketplace is staying ahead of the competition. Making sound business decisions based on accurate and current information takes more than intuition. Data analysis, reporting, and query tools can help business users wade through a sea of data to synthesize valuable information from it - today these tools collectively fall into a category called "Business Intelligence.' **Tech Target**¹⁸

Checklist of attributes

However, it is worth noting that no such definition should ever be seen as prescriptive. Those contemplating a BI project (or managing a BI system) should note that each institution must decide on its own requirements and select an approach to management information that is fit for the purposes of that institution. Local solutions will inevitably often diverge from a single definition in one way or another. As a result it may be more instructive to consider what does or does not constitute a BI system by the degree to which it conforms to an agreed checklist of criteria. Some of which can be classified as 'required' (that is to say if the system in question is not able to demonstrate the attribute in question then it is questionable how appropriate it is to describe it as a 'BI system' and those which are 'desirable' (which it is not necessary for a system to demonstrate in order to still be described as a BI system, but some or all of which it might still be expected to display)).

¹⁵ http://www.noisebetweenstations.com/personal/essays/metadata_glossary/metadata_glossary.html

¹⁶ <http://it.toolbox.com/blogs/bi-applications/what-is-bi-10201>

¹⁷ http://en.wikipedia.org/wiki/Business_intelligence

¹⁸ <http://searchdatamanagement.techtarget.com/definition/business-intelligence>

Required	Desirable
Accessible when needed	Automatically updated in real time, or
Concise, pictorial or graphical	Can be refreshed at the user's command (to update figures when desired)
Up to date, current	Includes external information sources
Known update times and intervals	Complete
Can select data for [any, or defined] time period	Different (pre-designed) pictorial formats available
Good, reliable quality and integrity of data items	New pictorial formats are easily designed and implemented (even by a normal user)
[All, major] internal information sources are included	Fixed views can be set, with suitable security, for public, student, and some staff users
Drill-down and roll-up capabilities (zoom in or zoom out; allowing broader or narrower views, as the user requires)	
Easy to understand	
Easy to export to a presentation or document	
Easy to add new information sources (internal or external)	
Allows the user to ask "What if... ?" questions	

Stages of maturity

In assessing the above checklist it may be helpful to think of the stages in a BI project, or in the development of mature BI capabilities. These might be defined as:

- **Stage 1** - Data are fragmented and distrusted - scattered among traditional, often locally held data sources; manual reports are available to departmental, faculty and institutional management.
- **Stage 2** - Information is increasingly coherent, held in centrally managed system(s) with clear local responsibility for data entry and data quality. Most reporting is still manual.
- **Stage 3** - A Business Intelligence (BI) Project is started, and a vendor and system are selected.
- **Stage 4** - An initial BI System is put in place which allow managers at each level to access data when they need to.
- **Stage 5** - The BI system and its links to data sources are increasingly automated; reporting becomes more sophisticated and spreads to a wider user population.
- **Stage 6** - Systems are used for evidence-based decision-making and for predictions, models and assessment of future options.

The *'Required'* attributes from the above checklist are probably present in any mature BI system (at Stage 4, 5 or 6). The *'Desirable'* attributes probably aid the breadth and maturity of a full BI system, which should support local (public, student, departmental or faculty) decisions as well as institutional (university or college-wide) decisions.

Further detail on these stages of BI maturity, plus hypothetical case studies of what each may look like in practice are included within this section of the infoKit.

Advantage of Environment Scanning

Environment scanning as part of your strategic planning processes is advantageous in several regards as it helps:

1. identify your strengths as an institution; areas it might make sense to build upon and develop further
2. ensure that your high level strategic planning is grounded in fact and is realistic and achievable
3. ensure that what you are striving to achieve is marketable and will add value to the institution once completed
4. provide the opportunity for managers to see beyond the confines of their own often specific areas of responsibility and help foster a more informed strategic overview
5. identify any weaknesses within the institution which you hope to address through your strategic activity, or which represent a potential obstacle to the successful realisation of your activities (for example a lack of staff with certain key skills); and
6. identify and predict forthcoming developments within society, culture, the economy and technology which may have a bearing (for good or ill) on the outcomes of your activities

All managers will be familiar with SWOT analysis as a tried and tested technique for structuring and summarising an analysis of the status quo within the institution and as such it has much to recommend it. But, as illustrated in the previous section, how the institution is now represents only one of at least four views of your 'environment' that are required for a comprehensive picture to emerge. Inevitably, such a wide range of factors cannot be addressed through one single process or by adopting just one technique - hence the reason for our outlining several different methodologies throughout this stage.

Finally, it is inevitable that the potential use and benefits of the type of information that you are likely to accrue by adopting some or all of the techniques suggested will not just be limited to planning and implementing your strategic activity. They will undoubtedly be of use in informing decision-making at all levels across the institution, as well as providing the source data for many future initiatives.

Tools and Techniques

SWOT Analysis¹⁹

What do Higher Education Institutions (HEIs) want to know?

In April 2010 JISC infoNet ran an 'Assessing Information Needs' survey²⁰ as part of its Business Intelligence (BI) programme. The survey was designed to ascertain what information senior institutional managers and key decision-makers within universities and colleges would most like access to in order to fulfil the responsibilities of their position. The survey generated 116 validated responses providing a credible and detailed foundation on which to develop further the BI programme's objective to assist institutions in the development of their business intelligence systems.

Subsequently, once the initial findings of the Information Needs Analysis had been identified and published;

- A series of detailed interviews was undertaken to achieve a greater depth of knowledge and understanding of institutions' business intelligence requirements and the achievements and challenges they had encountered to date
- Interviews were held with seventeen institutions during which it became clear that the survey findings were strongly substantiated within this sample, and further detail of requirements and challenges, included below, was elicited

¹⁹ <http://www.jiscinfonet.ac.uk/tools/pestle-swot>

²⁰ <http://www.jiscinfonet.ac.uk/smi/information-needs>

The establishment of this sound primary evidence base provides robust and verifiable data so enabling subsequent research to be credible and reliable. It demonstrates that there is a basis of understanding within institutions of what effective business intelligence might deliver, and identifies what are institutions' most common requirements in this area. There is repeated evidence of some of the challenges that currently hinder institutions in their quest for effective operative business intelligence systems. Thus the analysis of responses to the question 'What do you want to know?' provided below shows clearly some of the user requirements and expectations of institutional BI systems. In order to be successful, any proposed BI system should either be able to answer the type of questions on the range of subjects indicated below, or ensure that the project is able to manage such expectations appropriately.

What do higher education (HEIs) & further education institutions (FEIs) want to know?

Leaders and strategic planners in higher and further education institutions recognise that the most effective planning depends on sound evidence-based decision-making. This requires a commitment to undertake the right processes to gather, present, and use that base of evidence to deliver reliable and authentic business intelligence.

Our survey results revealed a wide range of areas of interest, clearly indicating the breadth and depth of information that ideally institutions would like to access in order to function proactively and effectively.

Assessing Information Needs Survey - Area of interest chart



Two of the questions in the survey (Question 2 and Question 4) provided the opportunity for open-ended answers.

Question 2 asks, 'In relation to your current role what is the most burning question that you would most like to be able to answer within your institution which you are not currently able to?' In short: 'What would you most like to know?'

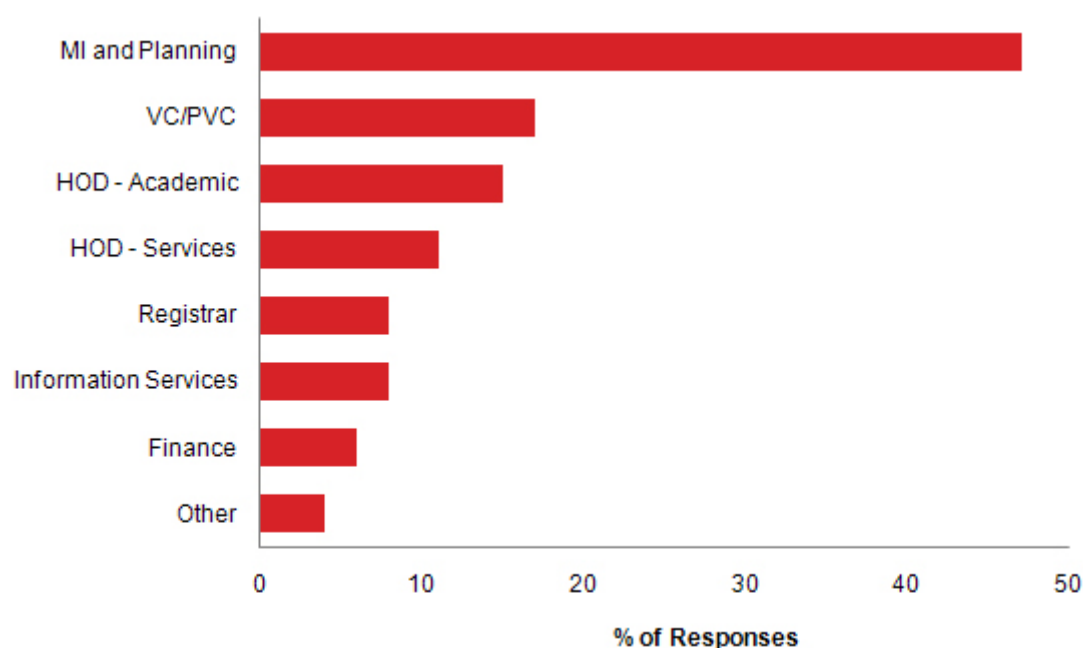
Question 4 asks, 'Do you have any projects or initiatives either planned or underway which may address any of the issues you have identified?'

In order to meaningfully analyse the data provided we have profiled the answers received into categories. The following table provides a list of the categories employed, together with a definition of how we have interpreted each category for the purpose of analysis. The final two columns within this table indicate whether the category in question is applicable to Question 2, Question 4, or both.

Categories	Definition	Q2: Interest Categories	Q4: Project Categories
Finance/costing	Funding, income and expenditure by activity, cost effectiveness, sustainability	✔	✔
Student data/information	Life cycle data, Staff Student Ratios (SSR), student numbers	✔	✔
Performance measurement and management	Key Performance Indicators (KPIs), added value	✔	✔
Research data/information	Principal Investigators (PIs), Research Excellence Framework (REF) data	✔	✔
Estates/space management	Estate and space information	✔	✔
Data and information management	How do institutions manage their data and information, data quality, common definitions and sources?	✔	
Staff data	SSR, profile, retention, workloads, costs	✔	
Benchmarking	How do institutions compare with orders within the sector?	✔	
Strategic planning	Portfolio planning, strategic planning, international strategy	✔	
Marketing	Market trends, area of growth, market share	✔	
Business and community engagement	External engagement, managing external contacts, collaboration	✔	
Workload planning model	Academic workloads		✔
New technologies	Flexible Service Delivery Programme, Enterprise Architecture, New learning technology, IT Infrastructure Library (ITIL)		✔
Transparent Approach to Costing (TRAC) data analysis	Collecting and analysing data contributing to Transparent Approach to Costing (TRAC) returns		✔
Improving business processes	Improving business processes within student systems, change management, process review		✔
Development of data warehouse	Development of a repository of an organisation's electronically stored data		✔
Data quality	Data accuracy and timeliness, common definitions		✔
Scoping information needs	Finding out about management information needs, problems and solutions, missing data		✔
Integrated business reporting	Management reporting based on integrated IT systems, use of a data warehouse, provision of current information		✔
Effective systems already in place			✔
Project unspecified			✔
None			✔

Who's asking the questions?

Individuals in a range of roles across HE and FE campuses are committed to developing business intelligence solutions in order to answer key strategic and operational business questions. Findings of the survey described above, showed how widespread that interest actually is.



Nearly half of the those interested, as might be expected, were based in management and information planning departments. Members of the executive - vice chancellors (VCs) and pro-vice chancellors (PVCs) - and heads of academic departments were also strongly represented. Key concerns were also highlighted by registrars and heads of service and other departments (eg estates, human resources, student information, information services, finance)..

Who is interested in what?

Staff in a wide range of roles highlight the importance of finance and costing, led by VCs and PVCs but also including those in management information and planning departments. Data and information management is also a key concern of these departments, as well as of registrars. All are interested in benchmarking and performance measurement to a greater or lesser extent, while heads of academic and finance departments emphasise issues related to research data and information. The following table shows the key concerns of individual job profiles.

Job Profile	Benchmarking	BCE	Data and information management	Estates/ space management	Finance	Marketing	Performance measurement and management	Research data/ information	Staff data	Strategic planning	Student data/ information
Finance	1	0	1	0	1	0	1	2	1	0	0
HOD - Academic	0	2	0	0	6	1	1	0	1	3	4
HOD - Services	0	0	2	0	4	0	0	0	1	0	4
Information Services	0	0	0	1	4	0	1	1	1	0	2
MI and Planning	9	1	11	1	15	3	11	1	7	2	10
Other	0	0	0	0	2	1	0	0	0	1	2
Registrar	1	0	2	0	3	0	0	1	0	0	6
VC/PVC	0	0	1	0	9	1	1	0	2	1	4

What are the questions that are being asked?

Evidence gathered by this project from HEI/FEIs indicates a preference for two basic kinds of questions when seeking to generate effective business intelligence:

1. Subject based enquiries: such as accurate student numbers, potential markets, research performance or benchmarking, the answers to which feed into the planning process

2. Know-how based enquiries: such as 'what do we as an organisation have to do in order to ensure that we have the right processes in place to gather, present and use information and data effectively?'

Subject based questions

As is clear from the survey results, interest is most predominantly expressed regarding the area of **finance and costing**. Return on investment and justification of expenditure are key concerns particularly during an economic downturn.

Some are asking

'What are our salary commitments for the next financial year?'

'What is the full economic cost of teaching every programme we offer?'

Others ask

'How much income does each academic generate?'

'Is my department in profit and financially sustainable?'

'Which are our most profitable courses, financially and academically?'

There is interest in the relationship between students and finance too:

'I would like to do more future modelling of student numbers to show impact on finances, and to be able to model the cost of programmes too.'

There is also concern about maintaining student quotas and the risk of funding body penalties should institutions over-recruit.

There is widespread awareness of the need to maximise **student information and data** in order to compete successfully against peer institutions and gain full understanding of the student lifecycle, pathways and experience . Areas of concern may relate to helping applicants to make informed choices about which university and programme to study, or to improving the student experience and identifying those at risk, (thus focusing on student well-being). Others include apparently basic but in reality rather complex questions such as 'How many students have we actually got?' and 'how can I track non-completions more accurately?' and the more complex 'How can I undertake proper analysis of a specific student cohort?'

Staff data and teaching performance data are in many areas integrally associated with student data, and are equally essential to sound planning and management. Here issues frequently appear to relate to accurate and real time measurement of staff/student ratios, the calculation of academic workloads, the accurate reporting of staff contact hours and the question of

'Which staff of which type teach which students on which modules.'

Others concentrate on the staff themselves, such as

'How is our staffing profile changing?'

'What attracts, motivates and retains staff at the university?'

'What are our staff costs?'

'What is the size and nature of expected staffing cuts?'

Equally key to strategic planning and competitive edge is knowledge of staff and institutional **research** performance. Information requiring statistical answers may relate to such issues as the success rate of research proposals submitted, or overall research income generated or who is the most successful principal investigator in a particular

area. For example 'What metrics should we use to measure research grants, contracts and awards, research income, research student numbers and admissions reporting?' Qualitative responses are needed for such questions as 'What is the quality of our research activity, where are our strengths and weaknesses? Can we measure these in relation to RAE/REF?'

Measurement of performance both across the institution and by benchmarking against other institutions is a requirement in all institutions but complex in execution. Areas of interest range from the straightforward 'How are we performing against our targets?' to those requiring more complex knowledge about performance trends relating to student numbers across various faculties and departments. Typical issues concern which courses are the most successful in terms of achievement, retention, employability and satisfaction. Key performance indicators (KPIs) are high on the agenda: for example 'How do we develop appropriate KPIs at department, faculty and institutional levels particularly in emerging areas such as internationalisation and enterprise?' Also difficult to compute is 'How do we measure the links between qualifications on entry, learning and teaching practice and outcomes in order to measure added value in a meaningful way?' Others seek a greater ability to develop performance metrics that cross functional areas of data (staff, space, student, finance) - for example the financial contribution per metre square of space allocated to an academic department. And data management issues arise too: 'I would like to be able to integrate the student dataset in order to be able to produce performance management/management information data, as well as use the data for operational purposes.'

Benchmarking is one of the most vexed issues for many institutions. In order to retain a competitive edge it is crucial to be able to gauge performance against that of peer institutions. It seems that many are able to source fairly high level data but are unable to access data at a more granular - and therefore meaningful - level. Some ask

'How do I get benchmarking data across HEIs on per capita expenditure on corporate and academic services that I can rely on as reliable and consistent - and is at a more detailed level than currently available?'

'How do we benchmark against other institutions and make informative comparisons?' Another states 'I am frequently asked about comparable data from other institutions/subjects and that is incredibly difficult, if not impossible to obtain.' And a data management angle again: *'I want to know how (or if) other institutions are able to present "dashboard style" KPI information which is benchmarked against other HEIs or benchmark groups'*

Benchmarking is acknowledged as one of the main challenges faced by institutions in relation to BI and is currently the subject of a HEFCE-funded **HESA initiative**²¹.

Tied in with benchmarking to some extent is **marketing**. It is difficult to take a market position when you do not know how others are performing. Institutions want to be able to establish what the market trends are in terms of student demand in each of the subject areas offered at undergraduate, postgraduate and international level, with some including knowledge transfer and CPD. Others are seeking an increased toolset to look at student recruitment markets - current and potential - to inform marketing activity.

'What is our market position?'

'Most of our burning questions are about aggregate market demand and market share'

'What are our potential markets for new, or existing programmes of study? How do we compare with other HEIs?'

Strategic planning as an area of interest is often tied in with any of the other subject areas described above. Those who have highlighted it in its own right may ask general questions such as where to concentrate strategic planning and change management effort in order to improve performance and cost effectiveness. It seems that more would like to be able to use data to inform future strategic planning relating to staff redundancies, budget parameters and the like, or to forecast business plans, combining HR data, financial data, research awards and overheads and spend patterns, by business unit.

²¹ <http://benchmarking.hesa.ac.uk>

In relation to the BI focus of our survey, **business and community engagement** currently appears to be a topic of fairly limited interest and concern, but this is likely to change as institutions are increasingly required to explore additional sources of revenue. Issues in these areas range from how to use a Customer Relationship Management (CRM) system to manage colleagues' relationships with their external contacts better, to how to encourage academics to want to engage with local business and the community to empower them to flourish.

Surprisingly few respondents expressed a concern with obtaining information about **estates management** and the most efficient use of the institution's estate. Some want to know whether the university has sufficient, flexible teaching space capacity to meet the challenges of the next five years. Others ask 'How can we use the university's estate more effectively?'

Know-how based questions

Our **record and information management resources**²² provide further advice and guidance on how to improve the way in which information is managed within institutions.

Articulating the questions to which you want an answer is just the first stage however, and institutions are conscious that getting the answer can in itself be a complex process. Many acknowledge that their issues and areas of concern are also about underlying data and information management systems, and that ultimately business intelligence processes need to be in place in order to deliver solutions.

Therefore successful answers to many of the questions outlined in the sections above require robust **data and information management** practices. Those who focus their attention here acknowledge that successful business intelligence depends on good quality data, user friendly systems, the ability to draw data from disparate systems, to use data strategically, and to get buy in and ownership from staff across campus. Our 'What is BI?' section contains a 'checklist of required and desirable attributes' from any BI system.

From our research it is clear that many institutions have already embarked on BI projects, developing, for example, data warehouses, dashboards and web reporting tools. Further information on the range and nature of BI activity in the sector and how it can currently be profiled is available in this section of the infoKit.

There is clear appreciation that access to a single source of management information would help institutions to meet their planning challenges. This was expressed by one respondent as

'How we can share the same piece of data across different systems so that we streamline the data collection, input and access to core corporate planning data'.

It is clearly understood that this might embrace, for example, the planning model; student records system; timetabling; HR system; Transparent Approach to Costing (TRAC); the finance system; academic workload planning and so on. People also acknowledged that data is not always as accurate as it might be, as is evident in the following statements:

'We create lots of information, but not always the right data'

'Why can't we easily produce information drawing on reasonable to good quality data held in different systems?'

The need to produce user-friendly, accessible reports is also an issue:

'the biggest challenge is to use the information to produce visually powerful reports and succinct interpretation and explanation that allows senior management to rapidly reach a well informed decision'.

²² <http://www.jiscinfonet.ac.uk/records-management>

Why use external data?

Information used to support business intelligence and contribute to strategic planning can be derived from data both generated and held within higher education (HE) and further education (FE) institutions and from data that is generated and hosted by external data collectors and organisations. Although there are many sources of external data of value and relevance to institutions, discussion here is confined to eight bodies, six of whose chief role is to provide educational services and data to government and HE and FE institutions.

These are the Higher Education Statistics Agency (HESA), the Universities and Colleges Admissions Service (UCAS), the Higher Education Funding Council for England (HEFCE), the Universities and Colleges Information Systems Association (UCISA), the Higher Education Academy (HEA), and the Learning Records Service (LRS) (formerly Managing Information Across Partners (MIAP)). The seventh, The Administrative Data Liaison Service (ADLS) is a research council funded service that supports research into administrative data. Finally the Office of National Statistics (ONS), the provider of statistics to government, also holds educational data.

The ability to 'add new information sources (internal or external)' has been identified by the project as a 'required attribute' for any business intelligence systems. This enables institutions to draw data and information from across internal applications (such as HR, finance and student record systems) as well as in combination with external data sources as required. External data relevant to all the subject categories identified through our survey is available to a greater or lesser degree. Although most of this external data available is statistical, some qualitative data (such as the National Student Survey) is available too.

Currently although reuse of external data across the sector remains patchy, data providers are working to help HE and FE institutions to apply it more effectively in their planning processes and interest in the ability to 'benchmark' institutional performance against that of peers continues to grow.

Using external data

The Benefits

Institutions that use external data effectively have the potential to place themselves ahead of the game in terms of strategic planning and competitiveness within the sector. Benefits include:

- External data providers make available high quality information and data for reuse by institutions to support strategic planning
- The quality of data held is assured
- Large quantities of data are available to institutions free providers' web sites
- Bespoke services are provided when more detailed data is required
- Regular publications are provided in hard copy form by some providers
- High level data on peer institutions enables comparisons to be made
- Time series and historical data enables comparisons over time
- Training in the use of data is offered by some providers
- Ongoing discussion between providers aims to provide a rounded service

"At the initial review SMT opted to target the project on the 14-19 part of the College's business and to focus on the delegation of some decision making to curriculum managers, giving them the tools with which they could make informed decisions."

**Andrea Chilton, Vice Principal - Quality,
Cambridge Regional College**

More from the pilot projects:

<http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/data-pilots>

- Data providers are working proactively to enhance the usability of their data
- Allows an institution to benchmark specific aspects of its own performance against that of peer and/or rival institutions

The Challenges

There are still challenges in delivering and using external data for optimum results, both for institutions and data providers. Challenges, therefore, include:

- Working with statistics is still seen as a burden rather than a benefit by some managers in HEIs
- Some managers still see working with statistics as a function just for the IT department
- Without experience it can be difficult to frame the right question to ask external providers
- It can be expensive to acquire data from external data providers
- It can be difficult to translate statistics into meaningful information accurately
- Providers need to supply more guidance and case studies on re-use to the sector
- A lack of data join up (about the same data) between external providers can lead to inefficiency and inaccurate outcomes
- It can be difficult to join up externally with internally held data to draw accurate conclusions
- It is difficult to obtain data at a sufficient level of detail for making useful comparisons with competitors

Who are the main sources of external data?²³

The main providers of statistical and qualitative data are available on our website.

What data can external sources supply?²⁴

We now know what kind of questions planners and others in higher and further education are asking. In terms of the categories of subjects that these questions fell into, the greatest amount of data is available about students, and the least - if any - about strategic planning and marketing per se. The data flows between the providers are complex: more than one of them will hold the same, or similar data. (For example Unistats and HESA hold the National Student Survey). Most data is held by HESA, some of which is made available via HEIDI, but data is also available from other portals.

The information, available on our website, profiles the data available from external supplies by the subject categories which our survey indicates that institutions are most interested in knowing information about.

Maturity Model

Purpose

A Maturity Model is a convenient way of describing an area of work, so that practitioners can communicate with one another, describe progress in diverse projects, and identify shared goals and problems.

²³ <http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/who>

²⁴ <http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/supply>

The model describes the different stages of Business Intelligence (BI) implementation, as observed in interviews with HE and FE managers, interviews and discussions with vendors, published research and case studies, and experience in other sectors. In so far as this Maturity Model is useful, we commend it to the HE & FE community. In so far as it needs improvement, we hope people will comment on it and suggest changes.

Stage 2 (Coherent Information: centrally reliable, locally responsible) is subdivided into several sub-stages. The sub-stages are useful because most successful BI projects need to address each sub-stage, but they often do them in a different order and at different times during the project. They express discrete, separable elements of the stage of BI maturity in which information is brought under control and given appropriate attention.

No part of this model is intended to be prescriptive; the model has no force or authority apart from its utility to individual projects and practitioners. However, we, and others active in the BI field, have found that few successful projects bypass the different parts of Stage 2.

Characteristics of each Stage

Each stage in the evolution of mature Business Information systems is described briefly below. There is a risk that these descriptions may verge on caricature, but each feature described has been observed or reported at least once. Discussion about this maturity model is welcome. We hope the model will evolve as the experience of BI and the expectations for BI in HE and FE evolve.

In particular, the order of steps 2 and 3 varies: sometimes (often in successful BI projects) Improvements to Corporate Information (step 2) are at least begun before a BI Project (step 3); however there are cases where the BI Project (step 3) precedes and facilitates any Improvements to Corporate Information (step 2).

1. Traditional information sources: fragmented and mistrusted

An institution has disparate, unconnected information sources, Finance, Personnel, Students, Curricula, Estates, Courses and exams etc. Since these sources are often not accessible to all staff, or are not trusted (or both), staff in Schools, Faculties or Departments often keep local data on spreadsheets or local databases. Planning or reporting meetings may spend up to 2/3 of their time wrangling about data quality and disputing specific data items. Gathering coordinated data (e.g. the cost of a new course, the income generated per faculty member, the profile of students who do not complete their courses) is a difficult manual process.

In this stage the governance structures for information management, risk management and KPIs may not yet be established.

2. Coherent information: centrally reliable, locally responsible

In order to have reliable, trusted corporate information, five steps have been found to be necessary. They are not always done in the same order, or with the same rigour, but all seem to be required to establish reliable data across the whole organisation.

a. Build governance structures

There do not seem to be any cases where an HE or FE institution has achieved stages 2 or 3 without high level support for improved information management, data quality, strategic thinking about risks and KPIs, and evidence based decision-making. This support should be from the Vice-Chancellor, a Pro-Vice Chancellor, the Principal, and/or a Deputy Principal. Involvement of academic and support staff at all levels is required as well, but without this leadership and support from the top, no BI system will have enough impetus to succeed.

b. Replace systems, if necessary

Some central systems may not be fit for purpose; they may be old, overly bespoke, or unsupported. The next step is to identify systems which are not for purpose (as stand-alone) systems and to replace them. No central BI system will ever succeed if it is trying to gather data from ill-functioning sources.

c. Make local staff responsible for the data they supply

HE and FE institutions gather data from a wide variety of internal (and external) sources. The initial data must be correct. There is an unhelpful history of blaming the (computer) systems for data problems.

Each individual person, and each team, putting data into any institutional system must be personally and specifically responsible for the data quality. Nobody should be able to complain about the quality or accuracy of data for which they were responsible, and any complaint about data input by another must be a direct claim that that other person or team has not done their duty.

This personal responsibility must include support staff (finance, HR, administrators, estates) and academic staff.

Some institutions have found data workshops to be helpful. In these, Management Information staff explain why data are needed (to report to external authorities like HEFCE, and for internal planning), what different data mean, and how data can be collected accurately. Staff can discuss issues with reporting, data, and systems. An informed, educated and cooperative community produces better data.

d. Support data entry with validation

In parallel with 2c, systems should be checked to make sure that they promote good data quality. Where possible, entries should be selected from pick lists; entries like dates should be taken from calendars or have their format checked by the system. Data should be entered once only, if possible.

Examine data and see what the most common errors are: then build aids into the system to prevent or catch these errors.

e. Require that the central systems be used

The final step is to require that all levels of the institution use the data from the central systems. Of course this requires that the central systems be available to all parts of the institution and that the data required locally be obtainable from the central system. For these reasons, this step may not be possible until after a BI system is introduced.

However, it is important to realise that local ad hoc systems are not just ways of consuming staff time. These local spreadsheets or little databases prevent parts of the institution from being committed to supporting the central data systems. The local collections take up the local attention and effort, and leave the central systems with second-class support and as the targets of blame.

3. BI Project: selecting an approach and a vendor

The next step toward Business Information maturity is to set up a BI project and select an approach to BI and a BI system (vendor). There are a number of options here. These are explained in more detail in the model case studies.

- Select a system that replaces some or all of your existing systems and provides a dashboard linked to the remaining systems (**'Single Central System'²⁵** approach)
- Build a data warehouse with a system that displays information from it (**'Data Warehousing'²⁶** approach)
- Build your own BI system (**'BI as IT project'²⁷** approach)
- Select a system that can see all your existing data and display them in a dashboard (**'Various Vendors'²⁸** approach)

²⁵ <http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/single-central>

²⁶ <http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/data-warehousing>

²⁷ <http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/bi-it>

²⁸ <http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/varied-vendor>

It is also important to decide on the level of services you will need from your system vendor or from external consultants. You can select a system which your own staff can configure, link to data sources, and modify as your needs change. You can also select a system where essentially any change is made by an external expert.

Bespoke and home-made systems are possible, and are used by some institutions. There are also a number of open-source and commercial systems offering different approaches to BI.

While there is a range of prices, and levels of support, cost should not be a reason for avoiding a BI system. BI systems can be introduced for about the cost of one full time staff member, and a good BI system will almost always save the equivalent of one full time staff member in time needed to collect data, correlate different systems, prepare reports, and answer strategic questions from senior management.

4. Initial BI System

When a BI system is selected and installed, most successful projects limit the types of data covered in the initial phase. Sometimes this is financial and personnel data, other times student data are the priority. The important aspect is to get a limited system up and working, and to obtain visible benefits from it.

Some projects go for a BI system that will link to all of their data sources from day one. This may be riskier and more expensive, but it can be a successful strategy.

In either case, make sure the initial system is configured to suit your institution's style and needs, and make sure that some benefits are realised and are visible to the whole community.

5. Growing BI coverage and involvement

No BI system should be seen as something you install and forget about. Once a BI system is available, other parts of the institution (service and support departments, academic departments, research teams) will find ways that they could use the BI system to save time, improve data gathering and interpretation, and improve services.

Provision should be made for the BI system to evolve and grow. Eventually it will probably be providing data to senior management, to all other levels of institutional staff, to students, to prospective students and to the public.

6. Reliable predictions and forecasting

HE and FE institutions are constantly changing, in response to society's changes, to government initiatives, and to the results of their own research. The ultimate value of a BI system is that it allows an institution to understand its past, its present situation, and to predict the effects of likely futures. A mature BI system can show the likely financial and human results of closing a course, opening a new course, increasing the proportion of part-time students, refurbishing a building, and so on.

What are the options? Case Studies

This resource includes two sorts of Case Study.

Where vendors have provided Case Studies, or where we have been able to download vendor case studies from their websites, we include these, with a brief index. These are commercial case studies, designed to encourage you to select one vendor's system and services. Individually, they include useful concepts and ideas.

We have also prepared some composite, 'generic' case studies. These illustrate different paths to a successful BI system. (In a few cases they illustrate paths that do not lead to fully successful BI implementations.) These generic case studies present stories, showing how different drivers and institutional choices can lead to the next stage in the BI Maturity model.

While the generic case studies have been informed by discussions with HE & FE institutions and with vendors, each case study is a composite of different institutions and different vendors. Any resemblance to real persons or organisations is purely coincidental.

The purpose of these generic case studies is to show that there is no 'single, correct path' to BI; there is no 'perfect BI solution'. There are many paths to many solutions; you need to find the route for your institution.

We also wish to illustrate that BI is not something that can be done to you or for you. You cannot just purchase a BI system off the shelf or out of the box. A successful BI implementation requires hard work, thought and difficult decisions on the part of each institution

Case Study – Varied Vendor Approach

Unsatisfactory systems

BI Maturity Model Stage 1

New senior management in a College or University [The Institution] found that their systems for managing financial and student data were not satisfactory. Financial data were not entered correctly; were not available when needed; and did not agree with spreadsheets kept by individual schools or departments. Student data were inaccurate; student names were duplicated, misspelled, and omitted. Central student records often disagreed with student records kept by schools or departments. Meetings of senior staff in the Institution often spent half or more of their time discussing errors in data and working out which data to accept.

A set of individual systems

BI Maturity Model Stage 2

The new management of the Institution set about replacing their systems with new, fit-for-purpose systems. The Finance systems were replaced first. The new system was selected from a vendor who had experience of the Education sector, and for whom good reference sites were available.

The Curriculum information, HR and Payroll systems were replaced next. Again, systems were selected from vendors with good reference sites in the Education sector.

Finally the Student information system was replaced. A different vendor from those above, but with a good track record in Education was selected. As with the earlier systems, the Institution's senior management selected vendors with whom they could establish a good working relationship. The initial 'vibe' was important, and this was checked by making sure that the vendor sent the same technical people to demonstrate the system as would be working with the Institution to implement the system.

This work led, over a period of several years, to a set of centrally trusted, fit-for-purpose systems.

Tips: system selection

1. Visit users and see good system demos, related to your own situation
2. Examine more than one architecture
3. Think about your long-term relationship with the vendor (even if it is an internal vendor)
4. Set a realistic schedule

Devolved, Supported Responsibility

BI Maturity Model Stage 2

At the same time as new systems were being introduced centrally, local administrators and Deans, Heads of School, or Heads of Departments were trained to use the new systems. This support was clearly linked to local responsibility for correct, timely, accurate and complete entry of data. It was also linked to local access to the central data systems, and therefore to the end of locally held spreadsheets and databases.

Now all staff were trained to use the central systems, and were expected to use the central systems. All data were entered once, and once only, into the central systems. All staff whose duties required it, had access to the data in the central systems.

Data validation routines were put in place where possible. These were either format masks (so a date field had to have a correct date; a cost field had to have a correct cost of the right size) or drop down lists.

Since the local managers and administrators were clearly responsible for the data quality from their unit, there was no longer any scope for debating data quality at management or planning meetings. Any criticism of data quality was a criticism of the manager whose unit had entered the data. If the data were indeed faulty, that manager had to repair them and improve their processes. Suddenly meetings spent only a few minutes discussing data quality issues. Almost all of the time was spent on the real business of each meeting. This alone represented a big increase in efficiency and productivity.

Business Intelligence (BI) System Selection - Read-only links to existing systems

BI Maturity Model Stage 3

A BI System vendor was selected using the following criteria:

- Access can be granted where needed across the Institution
- Security is ensured whenever access is not granted
- The BI system will talk to all of the Institution's data sources (which include both widely used and rarely used commercial systems)
- It is easy for staff in the Institution to set up new links, to drill down to any level of detail, and to change views
- The interactions with the vendor's technical staff were positive

It was interesting that cost was not a problem, since all of the vendors considered came in at similar costs for institution-wide licences.

One vendor met all of the criteria, and provided convincing reference sites and a realistic demonstration (including links to the Institution's more unusual systems). That vendor was selected.

The system selected will be able to receive data from all of the Institution's management systems. (This was demonstrated convincingly during the evaluation phase of BI system selection.) It will not store the data itself (this is not a Data Warehouse model) and it will not write anything to the Institution's management systems.

The update frequency of the dashboards is determined by the update frequency of the Institution's systems: for example, during enrolment, student numbers are updated constantly, and the dashboard shows figures in real time. By contrast, many financial questions (income from catering last month or last term) depend on defined financial reporting periods, and are only updated in those periods.

Initial BI deployment - Senior Administrators and Management

BI Maturity Model Stage 4

Initially the Institution sent about a dozen administrative and IT staff on a 2-day training course. This course, held at the Institution, included making the first links to the Finance, Curriculum and Student systems. These systems were then made available to the senior managers for the Institution.

Following further training courses for the system's administrators (2 days for each for Finance, Curriculum information, ICT and Estates), drill down facilities were added. Staff from the Institution were now skilled and confident at creating new dashboard segments linking different data sources, and allowing drill-down to any level of detail. Senior staff were shown how to customise their own dashboards.

At this point, training and expansion of the BI system paused while the senior staff became used to it and explored its performance.

Expanding BI Use - All Staff, Students, the Public

BI Maturity Model Stage 5

As experience grew, the Institution made the BI system available to more and more staff. Senior staff and administrators in schools and departments were trained to use and modify their own dashboards (by the Institution, who had learned BI and training skills from the vendor). The security model was explained, so they would know which data they could not see and what effect this would have on their dashboard views.

Other staff were given pre-configured dashboards which they could not alter. This was also done for the information offered to students via the Institution's intranet and the information offered to the public via the Institution's website and via kiosks in some public areas.

The Institution has an active environmental programme and monitors water and power use. It generates some solar and wind power and uses grey water. All of these figures are available to the public and to all staff and students.

Forecasting and Planning

BI Maturity Model Stage 6

Finally, with experience of BI across all academic staff and all services the Institution can use their BI system to assist with planning and forecasting. Questions which can be asked relate to changing demand for courses, development of new courses, shared services, and partnerships.

Case Study – Data Warehousing

New Management

BI Maturity Model Stage 1

The senior management team of a Higher or Further Education Institution ('The Institution') became concerned that existing management planning was not based on reliable evidence. They also found discrepancies between data they were given for planning and the Institution's statutory returns.

The senior management team convened a project group, including people from IT, Finance, Planning and Academic (Curriculum) management. They asked this team to deal with data quality and to identify a Business Intelligence system (BI) for the Institution. The senior managers recruited a Project Manager with experience in BI from outside the education sector.

The project was given a tight timetable, and asked to have a working BI system within 12 months.

Postpone data quality issues

BI Maturity Model Stage 2

In their initial discussions with vendors and users, the project team found that a BI system could often identify problems with data quality and might provide a way of monitoring and improving the data quality of source systems.

They therefore postponed data quality work, and included it as a requirement for their proposed BI system.

Business Intelligence (BI) System Selection

BI Maturity Model Stage 3

After reviewing the market place, and talking to several vendors with experience of the Education sector, the project team decided that a Data Warehouse approach would be best for their institution. They invited a shortlist of data

warehouse BI providers to demonstrate their systems and found that it would be possible to connect their existing finance, student record, HR and estates systems to a data warehouse with overnight data refreshing done automatically. The system could even take data in from the nested Excel spreadsheets used to manage research projects.

They purchased software (at a cost of less than £45,000 for the licenses they needed, with 20% annual maintenance) and consultancy services (for about £75,000 over 2 years). The BI system was installed and working within 4 months.

Initial BI deployment

BI Maturity Model Stage 4

The software was installed quickly, and included database elements and a data warehouse building tool (specific to the Institution's preferred database).

The initial deployment of the BI system depended heavily on the spread of skills and interests in the Institution's project team and on input from the supplier's consultant (who had prior experience in the Education sector). They agreed that Student data were the priority and staff from the Registrar's office worked with IT staff and the vendor's consultant to identify the relevant data sources and design the required reports and data views.

This initial focus on Student Engagement quickly paid off with improved completion for courses, and improved student satisfaction.

Data Exception Reports

BI Maturity Model Stage 2

Once the data warehouse was built, it could produce exception reports - highlighting data with quality problems (incomplete, badly formatted, wrong dates, etc.). Data problems could then be addressed:

- At data entry, by improved training for staff; by better drop-down lists or data masks
- In the source data system, by highlighting errors or preventing them at entry
- In the data warehouse (if the other routes are not practicable)

The shared dashboard views and the exception reports highlighted the importance of good quality data, and the places where errors were common. This visibility and understanding quickly led to improved data quality.

Adding Data Sources

BI Maturity Model Stage 5

Once the Student Records were incorporated the Institution decided to add Finance and Estates records to the data warehouse. Some data sources did not need to be incorporated into the warehouse: they could be accessed directly by the BI system. These were quick to add.

Other data sources did need to be analysed and integrated into the warehouse. The time required varied from a few hours to a few weeks, depending on the complexity and quality of the new data source.

Consultancy time was also used to prepare new reports and dashboards and to train new users.

Tips - Data Quality

1. Make sure people understand why you collect data and what they are used for
2. Make sure people understand the varied data definitions
3. Build in validation

4. Have good training for data entry and data users

Forecasting and Planning

BI Maturity Model Stage 6

With time, the Institution's BI system allowed them to create a system for identifying students at risk of non-completion, and to intervene early. It also allowed the costs and popularity of courses to be followed, so that new courses added were profitable from the beginning and served to attract even more students to the Institution.

Planning of Estates issues was also improved - from proactive maintenance to building renovations.

Case Study – Business Intelligence as IT Project

IT Project

BI Maturity Model Stage 1

The IT Director of a Higher or Further Education institution ('The Institution') is concerned by constant complaints that data on students, faculty and support staff are inaccurate. Management also complain that data from the HR system do not agree with data from the Finance system. Preparing statutory reports is always stressful, and they are sometimes late.

The IT Director attends a meeting at which a vendor presents a Business Intelligence (BI) system. It is said to automate reporting and to improve data quality.

Data Issues Ignored

BI Maturity Model Stage 2

After discussions between data producers and the IT department, the data producers assume that the new BI system will fix all data quality, reporting speed and accuracy issues. Any work to improve data entry, data validation and data meaning is left until after the new BI system appears.

A Technical Choice

BI Maturity Model Stage 3

The IT staff review BI systems and select one that uses the Institution's preferred database and promises to interface with their Finance and Student Records data sources.

Nobody from the central administration, from planning, or from any of the data-producing or data-consuming departments is consulted or involved in the project.

A system is selected and is purchased (at approximately £50,000 to £75,000 which is available in the software budget, plus a further sum for consultancy).

IT-Focused Implementation

BI Maturity Model Stage 4

The software is easily installed, and a set of model reports is built by the vendor's consultant with the IT staff. (There is still no involvement from data-producers or data-users.)

The BI system is presented to the Institution's staff at an open workshop. Only a few of the relevant staff attend, but some of them are enthusiastic about the new system. Unfortunately none of the most senior management has time to attend; they are still not involved in the BI project.

Staff who attend the workshop are invited to a training session; a few attend. They begin to use the BI system and find it meets some of their needs. A few of the statutory reports are suddenly easy to produce.

Tip - Preparation

1. Define practical initial goals
2. Assemble a full team
3. Assemble the business case (hard with no BI!)

Patchy and Reluctant BI Use

BI Maturity Model Stage 5

However, because senior staff (and relevant staff) have not been involved, data quality remains an issue. Inaccurate, wrongly labelled and incorrect data make their way into the new BI system. Data continue to be entered into the BI system late. Senior staff meetings continue to have frequent irascible discussions about data quality, blaming the IT systems, including the new BI system.

Those academic and support functions that have not bought into the BI system continue to use their own local databases, and complex sets of nested Excel spreadsheets. Much of the data in these local systems is not centrally available, and is not collected or labelled to consistent standards.

No Widespread Acceptance

BI Maturity Model Stage 6

In the absence of top-level involvement and support, and in the absence of detailed input from data-producers and data-consumers this project is unlikely to succeed. It will probably be seen as a failure and (at some point in the future) start over from the beginning.

While this description may read like a caricature, it is a distillation of project errors which have happened several times and have slowed or crippled several BI projects. One experienced vendor estimates that only 10 to 15 of the active 'BI Systems' in UK Educational institutions are actually accepted and working at Maturity level 4 or above.

Case Study – Data Definitions

Specialist Staff

BI Maturity Model Stage 1

Academic staff at a Further or Higher Education Institution ('The Institution') find that they do not understand the data submitted in statutory reports, or used in planning and performance review meetings in the Institution. They appoint a Director of Information Management and Performance from outside the Education Sector (for example, from local government, the police service, the health service).

Initially, for a few years, the new Director with a small team, concentrates on understanding the data sources and meanings, and on preparing (manually) spreadsheets and graphs for senior management.

Data Definitions

BI Maturity Model Stage 2

The key to progress is a series of meetings and workshops with data providers and data users. The School and Faculty Administrators are essential to this. These briefings and discussions cover what data are needed, why they are needed (statutory returns, internal decisions etc), and what the data mean. The meanings of data and the steps needed to secure data quality are discussed in small groups throughout the Institution, led by the Director of Information Management and Performance and her team.

One example of potentially confusing data: HR data are aligned by manager and reporting structures, while Finance data are aligned by Cost Centre. These can give different numbers, since who reports to X may be different from whom X pays for.

From these meetings, written instructions (Standard Operating Procedures) are developed, along with maps showing which data sources relate to which reports or spreadsheets.

Exploring BI Tools

BI Maturity Model Stage 2

After discussion and visits to other institutions, two BI tools begin to be used, with small numbers of licences. These pilots do not prejudge any full-scale project, but they do provide immediate benefits because certain reports are now more easily and more quickly prepared, and some graphical outputs make the data clearer to senior management.

Another benefit of this pilot work is that the management information specialists (both in the central Information Management and Performance Team and in schools and faculties) are becoming familiar with BI tools and therefore know better what to look for when they do start their full-scale project.

Business Intelligence (BI) System Selection

BI Maturity Model Stage 3

Finally, after more discussions in their group of similar institutions, and more visits to institutions already using BI, the Institution sets aside a budget for a full-scale BI project. Using their pilot experiences with BI tools, they define specific purposes for their BI project, and set out a phased plan, over three years. The specification and project plans are developed together by the ICT service and the Information Management and Performance team.

Several vendors express interest, including some with no educational experience and some experienced in the sector. The Director and her staff meet with all the interested vendors, and assess their proposals against the Institution's goals. A short list of three vendors is agreed, and a scripted technical demonstration is designed. Each vendor performs well, but one is clearly best, and is also 'easy to work with' for the Institution.

Initial BI deployment: Student Data

BI Maturity Model Stage 4

The first phase of the BI project is to automate the collection and reporting of Student Data, with a dashboard available to the senior management, management information (MI) specialists, and key faculty administrators.

For a cost equal to about 1.5 or 2 full time staff members, the software licences and consulting services are obtained, and a BI system is in place and working within about 8 weeks.

Since the departments are already familiar with their student data, they quickly accept the BI system and see the benefits it offers. Automated reporting, and easy access to ad hoc reports saves time equal to more than 2 FTE staff across the whole Institution.

Expanding BI Use

BI Maturity Model Stage 5

In their Phase 2 plan the BI system is extended in coverage and depth.

Coverage expands to include Financial and Facilities data. A modest amount of further consultancy is needed for this, and a few extra licences are purchased. The work takes a few weeks to implement and test.

Depth is increased to allow senior staff in Faculties, Schools and Departments to use the dashboards. This expanded population of users is achieved by:

- Some preset reports and dashboards, not user-configurable

- Additional training for users (provided by the BI vendor)

Later in this phase, some elements of the dashboards are made available via the Institution's website to students, prospective students and the public.

The process of expanding the BI system through the Institution strengthens 'dotted line' reporting relationships among the central Information Management and Performance staff and the administrators and management information staff in service departments, schools, faculties, and departments.

Forecasting and Planning

BI Maturity Model Stage 6

Finally the BI system is embedded throughout the Institution and well understood by administrators, planners and senior staff. It is now expanded to support planning and forecasting. A traditional separation between planning and business information is resolved.

The BI system allows the Institution to ask 'what if?' questions, like:

- What if central funding is decreased by 20%?
- What if overseas students (for course X) increase by 10%?
- What if we offer Course Y through our overseas partners?
- What if we close and remodel building Z?

The future may not be uniformly rosy - change and challenges continue. But at least decisions are made with good evidence, and data about the Institution are shared transparently.

Case Study – Single Central System

Concerns with Student and Facilities Data

BI Maturity Model Stage 1

An institution of Higher or Further Education ('The Institution') was concerned that statutory reports took too long to prepare. They also found that senior management and departmental staff could not agree on student data. Even something as basic as the number of students enrolled at the Institution could not be ascertained reliably.

In addition a major building programme, and the need to refurbish existing buildings, highlighted concerns about facilities data. It was not possible to agree on the costs of individual buildings, their levels of utilisation, or the relative costs and advantages of new buildings or refurbishment.

A Single Central System

BI Maturity Model Stage 2

After a review of the Institution's data and systems, senior management, finance, the ICT service, and the planning and performance department found they were agreed that a new system, replacing almost all of the Institution's existing systems was required.

Because of the likely costs and risks of such a major investment, a working party from Finance, ICT, Academic Affairs and Planning was convened. This group contacted vendors and visited a number of institutions which had recently invested in major, complete systems replacement. Their visits included private industry and others outside of the education sector.

After lengthy discussions, the Institution decided to select a single, all-encompassing system.

Business Intelligence (BI) as Part of the Main Management System

BI Maturity Model Stage 3

The three vendors who expressed an interest were shortlisted, and gave convincing demonstrations of their software as it might be applied to the education sector.

The vendor selected provided HR, Finance, Procurement, and Customer Relationship Management functions in their basic software. Their consultants were able to show that the Institution's processes could be modelled in the software and managed by it. There was an extensive library of reports, including graphic displays and dashboards.

After a month spent in contract negotiations, risk assessment, and initial project planning, the purchase was made and planning for deployment started.

Part of the business case for the new software was the saving on HR and Finance software which would be replaced. The remainder of the business case was built on the enhanced data gathering, process management and reporting capabilities of the new software.

Initial BI deployment

BI Maturity Model Stage 4

The initial deployment, which took 4 to 6 months, required careful coordination among HR, Finance, ICT and Planning. Since existing systems were going to be totally replaced, a suitable breakpoint had to be selected, and legacy data had to be reviewed, cleaned, and migrated into the new system.

Also, since the new software had its own defined, tested ways of doing things, the administrative staff at the Institution had to learn some new processes, and to learn how to use the new software. Luckily the user interfaces were friendly, and relatively easy to use.

In the end, the migration went smoothly, and the new software was in place before the start of term.

Expanding BI Use

BI Maturity Model Stage 5

Once the Institution was used to the somewhat prescriptive style of their new software, they found themselves part of a large international community of users, including banks, manufacturing industry, government, and other educational institutions. As part of this community of practice, new applications of their software system were often announced and discussed, and third party add-ons were also offered.

As more administrative and managerial staff at the Institution were trained to use the software (down to department level, and even to individual research groups), more segments of the Institution were able to improve and automate their administrative and management processes, and to benefit from the transparency and reporting facilities of the comprehensive software package.

Management information specialists from Finance and Planning also took an active part in the vendor's User Group, and contributed to improvements in the software aimed specifically at the Education sector.

Forecasting and Planning

BI Maturity Model Stage 6

Since the Institution had been concerned about student numbers and the student experience, this was the first place where they explored Forecasting with their BI tools. They found that the student and coursework dashboard allowed them to highlight groups of students who were at risk of failing to complete (or failing) a course. The drill-down feature allowed individual students who were at risk of non-completion to be identified.

Targeted interventions were welcomed by most of these students, and the Institution found that fewer and fewer students were failing to complete their courses. They also found students reporting an improved student experience, and the online reputation of the Institution's courses grew.

What are the options? Vendors²⁹

The following table, available on our website, provides a selection of case studies which may prove useful to those considering, planning or implementing a BI system. It should be borne in mind that these are largely commercial case studies provided by system vendors but all contain useful information about the realisation of BI within varying institutional contexts. As well as examples from the UK FE/HE sector there are also several case studies from other countries, especially the USA, where BI appears to be in a more mature stage of development.

In addition to the data provided in this table, UCISA also publishes an annual survey of Corporate Information Systems³⁰ currently used by its members.

The Business Case

Building a Business Case for a Business Intelligence (BI) System is made more than normally difficult because the data you need for your business case are those that you need the BI system to gather.

Benefits Measurement is intimately linked to the Business Case. A Business Case often includes a set of predicted benefits; Benefits Measurement is identification and capture of the actual benefits, measured at two or three points after the BI system has been installed. Both depend on a baseline that expresses what your processes cost now.

A Business Case takes the baseline of present costs and says 'our proposed system will affect [reduce, you hope] these costs by X and Y'. A Benefits Measurement says "our new system [perhaps after 6, 12 and 24 months] has affected these baseline costs by W and Z".

The way to make progress is to figure out what you want the BI system to do. What teams, processes and areas of work will it affect in the first and subsequent phases and then to identify the baseline costs for the teams and processes likely to be affected.

JISC infoNet has produced a freely available 'Impact Calculator'³¹, a tool specifically designed to help you predict and measure the benefits (both tangible and intangible) of any change initiative, such as the implementation of a BI system. The Impact Calculator requires you to accurately measure the baseline 'as is' performance of the processes in question - as suggested above - and then allows you to identify an (unlimited) series of benefits which you hope to achieve through the change initiative being undertaken. Each of these benefits can then either be predicted (as part of the kind of business case being discussed here) and/or measured based on actual performance changes: thus making it possible to compare the actual benefits realised with those predicted as part of the initial business case.

Our System Selection infoKit³² also has further information on building a business case.

What will the BI System Do?

A good place to start is by asking yourself and your colleagues what the BI system is needed to do. It will help to divide your BI goals into phases and to focus the initial Business Case on the earliest goals. Consult as widely as possible within your Institution, and make sure you include Senior Management (Vice-Chancellors, Principals, Deans...),

²⁹ <http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/vendors>

³⁰ https://www.ucisa.ac.uk/members/surveys/cis_2009.aspx

³¹ <http://www.jiscinfonet.ac.uk/records-management/measuring-impact/impact-calculator>

³² <http://www.jiscinfonet.ac.uk/InfoKits/system-selection>

Student Records, Academic Departments (Schools or Faculties), Finance, Facilities Management, HR, IT and Planning (or Management Information).

Even if all of these units will not be involved in the first implementation phase, they should comment. You also want to be sure your project does not create accidental barriers to future expansion and that you do not accidentally clash with other information or data management projects.

Good summaries of goals are given in the Survey responses. Some of the goals can probably be measured quantitatively; others will almost certainly need qualitative (anecdotal) evidence. These distinctions are indicated in the lists below.

Likely Phase 1 goals for a BI system include:

- Improved decision-making (anecdotal)
- Better strategic planning (anecdotal)
- Better risk management (anecdotal)
- Competitive advantage (quantitative)
- Income generation (quantitative)
- Efficiency gains (quantitative)
- Performance benchmarking (anecdotal and quantitative)
- Student satisfaction (quantitative)
- Student retention (quantitative)
- League table ranking (quantitative)

Of course, a successful project is unlikely to attempt all of these at once. Pick the few that are most important to your institution, and place the remainder in Phase 2 or Phase 3 of your BI project.

Present Baseline

Gather as many data as you can to define the present baseline costs and performance of your management information processes. Again, you may find the JISC infoNet Impact Calculator a useful tool for achieving this. Ask (if you can):

- How many people are directly employed on data gathering? (for statutory reports, for internal reports, for finance, facilities, or student management, ...)
- How many people are directly employed producing reports (both statutory and other)?
- How much time from other administrative and support staff is used in data gathering? In preparing or formatting or distributing reports?
- How often do staff or departments disagree about data values or data meanings? How much time does this use?
- How often are reports late? Do these or other delays cost you money or opportunity?
- What are the costs of preparing reports and data for your intranet and your public website?

- What are your present software costs? What do you pay for Reporting software? (Include reporting modules in Finance, HR and other systems.) What do you pay for other software that gathers, shares or reports on data?

Ask the questions relevant to the goals you have identified for your Institution:

- Improved decision-making (level of satisfaction with decision-making speed, quality and accuracy at present)
- Better strategic planning (level of satisfaction with planning speed, quality and accuracy at present; any evidence of the success of plans)
- Better risk management (level of satisfaction with risk estimation and alleviation speed, quality and accuracy at present; any evidence of risks successfully managed; or of risks that were not managed)
- Competitive advantage (Are you receiving more applications from students, faculty, staff? Are the candidates better? Are more of them accepting your offers? Are you getting more research funds? Competing better for grants, events?)
- Income generation (Is your income, by category - such as undergraduate faculties or schools, graduate faculties or schools, housing, food, events, research etc - up or not?)
- Efficiency gains (By whatever measures you have available now (before your BI system!) what are your costs per unit output?)
- Performance benchmarking (anecdotal and quantitative comparisons with similar and competing institutions)
- Student satisfaction (quantitative survey results)
- Student retention (quantitative)
- League table ranking (quantitative)

Have a free-wheeling ideas session (a 'brainstorming session') to identify any other places where the BI system may affect your costs and processes and gather any baseline data that you can.

A side benefit of this exercise, if it is supported from the highest management, is that it may find areas where secrets are kept, and may help to introduce transparency and open discussion into your institution's management discussions.

Role of a Business Case

Your Business Case will be more convincing if you include full, realistic costs for the proposed BI system. However, experience shows that if senior management is committed to a project, the Business Case is often purely a box to tick. Equally, if senior management is opposed to a project, no Business Case will ever be accepted. No Business Case is ever beyond question; the assumptions can always be criticised.

This does not mean you should be careless with your Business Case: it is an essential tool to understanding your BI project. Just don't think it will magically generate support and remove opposition.

Realistic Costs of the New BI System

To calculate the real costs of a new system, ask (and get answers for) the following questions:

- Is new computing hardware needed? (include costs for buying, installing, operating, managing and maintaining the hardware)
- Is supporting software needed? (Include costs for any new operating systems, database software, etc.)
- Are there any licence costs of your BI software?

- Are there any annual maintenance costs of the BI software?
- Any installation and configuration costs? (include internal staff time as well as consultants)
- Any training costs? (include internal staff time, and internal trainers, if they will be used)
- Managing the BI system (will internal staff be devoted to, or partly assigned to, the BI system?)

Have a free-wheeling ideas session (a brainstorming session) to identify any other costs of the BI system and to predict costs for 3 to 5 years into the future.

Predicted Benefits: the Business Case

The Business Case is the balance of predicted costs and predicted benefits.

Use the baseline measures collected above with information from your BI system supplier, from the literature, and from colleagues, to estimate the benefits you will receive from your BI system. (It can be helpful to estimate benefits at 1, 2 and 3 years after implementation.)

Realistically there are two hierarchies of benefit for any BI project. In the first, actual cash savings have the most weight:

- Cash savings (e.g. from retired software and hardware, from redeployed staff)
- Income generated
- Improved speed and efficiency
- New capabilities and opportunities
- Improved quality and reduced risk

Most organisations, reviewing a business case, will give more weight to well-demonstrated cash savings, and less weight to improved quality and reduced risk.

The second hierarchy depends on your budget-holders and senior management. They will tell you which benefits they are most concerned about. That is an important order of priorities for estimating and demonstrating likely benefits.

Actual Benefits

Once your Business Case has been accepted, and your BI system is installed, you will have two ways of measuring benefits. Both should be used, and benefits should be measured more than once. Measuring benefits at 1, 2, and 3 years after implementation allows you to show the positive effects of staff training and familiarity, and the incremental improvements as people begin to use the BI system in new ways. It also gives you a basis to forecast future benefits, and to propose further phases of the BI system. Our Impact Calculator allows actual benefits to be measured for up to 5 years.

The first way to measure benefits, is to use (as close as possible) the same measures you used on your baseline for the Business Case and the Benefits. Even though these initial measures were not taken with the BI system, and might therefore be inefficient or cruder than information which the BI system could provide, it is important to measure changes (and therefore benefits, good changes) by the same measure that was used for the baseline.

The second way to measure benefits is to use the BI system. If you identify new benefit measures which the BI system could give you, gather a baseline measurement (or a 'near-baseline measurement') as quickly as you can after the BI system is installed. Then repeat the measurement at intervals to obtain the benefit and its trend in time.

What are the challenges? – For institutions

1 Senior level sponsorship and engagement

BI systems struggle to be funded and to be implemented properly without strong sponsorship from the top of the organisation. It would appear that a BI implementation is not one of those things that works well when bottom led.

Some senior managers understand in theory how effective data management will help planning but don't know how to achieve this. Others simply don't think joining up data can achieve change. Some are good at articulating strategy, but are unable to set meaningful targets; whilst others ask for unrealistic data or reports.

2 Tendency towards bespoke rather than 'off the peg' system development

Underestimation of effort involved in creation of a data warehouse (and possibly other BI models too) causes institutions to try to do it themselves. This is almost always more expensive initially and certainly more expensive over the years when support is considered.

Some institutions think their needs are so specific they can't use an "off the peg" system from a vendor but need a system tailored exactly to themselves. This is rarely true. Vendor systems bring good value for money since development costs have been spread over many institutions, experience of what works so avoiding common mistakes, and can in any case be tweaked to provide a more personalised system.

There is a clear link between this institutional challenge and the 'inadequate core knowledge and experience across the sector' reported in the Challenges for the sector (No. 1)

3 Data quality

Most institutions interviewed have to draw data manually and at speed from dispersed systems in order to create meaningful reports. This jeopardises accuracy, reliability, consistency and is time consuming. Data may be 'owned' by those who operate it - this is fine operationally but not strategically.

You only get good predictions out if you put accurate data in. While it may be possible to control the quality of internal data sources this won't be so with external sources so some 'health warning' ought to be attached to data where the quality is dubious.

4 Data Definitions

Considerable concern has been expressed about consistent data definitions between external bodies (eg HEFCE & SLC) - see Sector challenge No.3 However, some also found that failure to understand data and related questions led to problems with source data, inconsistency of reporting and difficulties in obtaining consistent KPI data at a detailed (department and course) level within the institution, leading to difficulties with internal performance benchmarking.

This situation is compounded when institutions either have as a legacy issue, or continue to wish to have different systems or modules from different vendors (perhaps because each is believed to be the best particular fit for the specific function in question). There is currently a lack of common standards that would allow these to sit together seamlessly.

5 Who should 'control' the BI system?

There is clearly an issue to be resolved regarding which department should have "control" of the BI system? By default it is likely the IT department will look after the working of the system but they will not be the consumers of the majority of the data, so who decides what service level agreements etc should be in place - those who have to deliver them or those who benefit and who, as a result, should pay?

Substantial change management programmes are taking place within many institutions. People realise that this requires a two-way conversation between service & academic departments which may each have different priorities. Planners need to continue to support departments and communicate and present data as effectively as possible; and managers need to own data and recognise it as a corporate asset.

The BI system will be the most flexible if it can respond quickly to changing requirements. This could mean that users need to be able to link to additional/new data sources themselves, however to preserve data integrity it may be best to limit the ability to make such links to professional administrators. There are difficult issues to resolve regarding a sensible balance point.

6 Business Case

Some institutions are finding it hard to quantify efficiency savings and return on investment (ROI) in terms of decision-making, and presenting a convincing business case. This may become a particularly serious issue in times of budget constraint where there may be a requirement to justify purchase of a BI system by showing how it will save money, and how much will be saved etc. And yet institutions may struggle to gather the data required for this justification without a BI system, thus resulting in something of a 'chicken and egg' situation.

7 Security

Obviously personal data must remain secure but too much security can reduce the potential value of the system because people don't have access to the data they need. A sensible balance is required and one which can be difficult to achieve within complex organisational structures.

8 Modelling

A number of institutions contacted asked for guidance for modelling on, for example: quotas for staying within HESA contract; data security; data handling; compliance etc. Successfully utilising your BI system for modelling and scenario planning purposes forms part of the 6th and final stage of our Maturity Model and, if realised, has the potential to extract the maximum benefit to the institution from their investment in BI.

What are the challenges for the sector?

1 Inadequate core knowledge and experience across the sector

Many of those institutions and individuals contacted during the research for this project admitted that although they know the outcomes they want and can discuss what successful BI systems will do, they do not fully understand the technology, nor are entirely clear of what processes they will need to undertake to get there.

There is a belief that there is inadequate core knowledge and experience across the sector in the area of BI and a lack of sector leadership here too. Many would like to be able to share and compare with peers, but competition and a hesitation to show ignorance seem to prevent this. As a result a number are paying consultants to help them.

While those who are struggling with their projects seek networking opportunities, one or two that now have working systems are unwilling to share success with 'competitors'.

FE institutions feel further behind in the discussion with little or no opportunities for discussion. There is a lack of collaboration and people are buying off the shelf solutions.

2 Lack of consistent data definitions

Considerable concern was expressed about the lack of consistent data definitions between external bodies (eg HEFCE & SLC). Some also found that failure to understand data and related questions led to problems with source data and to inconsistency of reporting.

The issue of inconsistent data definitions was also raised as a problem within institutions and also features under the 'Data Definitions' institutional challenge (No. 4).

3 Benchmarking

Institutions reported frustration at the difficulty of comparing KPIs from institution to institution for benchmarking purposes. Most respondents found benchmarking with other institutions almost impossible to do satisfactorily.

Many found HESA's HEIDI a useful tool, but clunky and not user-friendly. All commented on the lack of granularity (beyond institution level) and difficulty of making meaningful comparisons, with at least two institutions paying an external contractor to undertake their KPI and benchmarking work for them as a result.

What is sector doing?

Background and context

In April 2010 JISC infoNet ran an extremely successful 'Information Needs Analysis' survey as part of our research for this resource. The survey was designed to obtain a clear picture of what questions senior institutional management most want to be able to answer in order to fulfil the responsibilities of their position.

We then followed this up with a second survey of Business Information (BI) Solutions currently planned or in use in the Higher and Further Education sectors. This was designed to build upon and complement the initial 'Information Needs Analysis' survey and to try to ascertain how closely aligned institutional activity is with the apparent needs of some of its key stakeholders. The survey was run between 10th May 2010 and 11th June 2010 and attracted 102 validated responses.

The aim of the survey was to assess the means by which many institutions were seeking to provide senior decision makers and others access to the very same accurate, timely and complete information which our previous survey has already indicated they need.

The focus of the business intelligence survey was therefore more technical and detailed and was designed to obtain a snapshot of the current state of maturity of such systems within the sector; what their nature and scope was, and to identify some of the issues which may be affecting their ability to meet the needs of their intended users.

Summary of results

1. Interest and/or activity in BI within the sector is very high

Only 9% of those responding to the survey said their institution had 'no interest' in BI whereas for 56% of institutions surveyed BI was either a reality now or would be within the next year

2. Cost savings and competitive advantage may not be as strong as drivers as may be expected

Though both of these are clearly important to institutions they are eclipsed by a desire to improve strategic planning and make quicker, better, more informed decisions.

3. Data warehousing is overwhelmingly the most popular BI architecture at the moment

Over 50% of respondents reported they were either taking or planning to take a data warehouse based approach to BI within their institution, double those taking a Web Services approach.

4. Access to real time data appears less critical than might be expected

Contrary to the popular image of BI needing to provide instant access to data that is updated in real time, the reality appears to be that many users are more relaxed in their requirements when it comes to regularity of update, content with monthly updates for the majority of data categories. This view may also have contributed to several respondents taking issue with our description that a BI system must have a 'dashboard style' reporting interface.

View the survey results³³. For a full background of Business Intelligence visit the BI section of the website³⁴.

³³ http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/survey-results/index_html

³⁴ <http://www.jiscinfonet.ac.uk/bi>

Where is Business Intelligence going?

The following road map has been developed from several sources:

- Discussions with Business Intelligence System (BI) suppliers
- Discussions with those in HE and FE who are using BI systems, or planning them
- Published research and case studies
- Meetings and conferences
- Reports from outside the UK, and from outside the education sector
- Other trends in enterprise computing services

This is not an 'AA Route-planner' map: it does not tell you the best, fastest, or only way to get from now to the future. It is much more like Google Earth: it shows some aspects of a space, part of which you might visit or move into. Some parts of the space are given in more detail, some are fuzzier. Some parts of the space will be relevant to your institution, some will not. You may already be in some neighbourhoods and they may look different on the ground from our brief outline.

If you can improve these descriptions, please add your comments and experiences (just as you would add photos to Google Earth). If any part of this is useful to you, please use it; if not, please ignore it.

Current State of the BI Market in Education

The BI vendor market consolidated during 2007 and 2008. The result is a relatively mature mix of large vendors, smaller vendors dedicated to BI, and suppliers specifically experienced in the education market.

In a typical competition, about 10 suppliers will bid initially, 3 to 5 will be shortlisted, and a suitable supplier (fitting both technical and commercial criteria) will be selected. There should be no barrier to BI from the supplier side.

One industry consulted during this project source believed there are only about 10-15 real, effective, enterprise-wide BI systems in the UK education sector. This means that much of the road map for the next few years will be installing new BI systems and extending existing partial BI systems.

For a full list of vendors visit our website³⁵.

Growing adoption - wider use

The financial, political and competitive pressures on the UK Education sector is likely to mean that all institutions will require an effective BI system during the next few years. The benefits in efficiency, knowledge-based decisions, and improved responses to pressures will be understood by more and more HE and FE institutions and will lead to a rapid spread of BI systems.

Also, as those institutions with effective, enterprise-wide BI systems share their experiences, and as BI vendors gain experience in the Education sector and tune their offerings to meet the specific needs of Education, it will become easier to justify and implement BI.

Greater Autonomy - wider audience

There will be an equal growth of BI within each institution. Systems used mainly by administrators and senior staff will spread onto Intranets (for all academic and service staff) and onto Websites (for students, parents, suppliers, and the public). There will be two aspects of this growth in the audience for each BI system.

³⁵ <http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/where>

Some audience growth will be driven by defined reports or dashboard elements, presented on intranet or internet sites. These will be available to internal and public viewers, but will not be customisable. The viewer will see the data selected by an administrator, and will have no control over those data.

Other audience growth will be driven by options to allow users to have autonomous access (within a carefully designed and frequently tested security model). In this case, users will be able to select which data they view, what time periods they see, and how data are related and presented. This may include students seeing their own results and comparing their results to class means and to prior year aggregates. It is likely to include 'green' data showing water and energy use by the whole institution and by significant parts (buildings or faculties).

More automation

Some present BI systems involve manual transfer of data from the source to the BI system. Other environments include double entry of data into more than one source system. For reasons of efficiency, speed and accuracy, more and more data will be captured only once (and captured as automatically as possible). Once captured, data will be shared among systems without further change or intervention.

Another aspect of automation is 'automated alerting'. At present, most BI systems expect the user to look at the system on their own initiative, and even to navigate the system by hand. In the future, BI systems will alert key users when specific KPIs exceed their target tolerance, and will even lead the user to the subset of data that have caused the deviation. A more active, automated interaction between busy users and BI systems will lead to a quick recognition of any deviation from plans or KPIs, and a quick resolution of any problems, whether they are financial, issues with a specific course, or concerns about a specific group of students.

Incorporate more Data Sources - 'Unstructured Data'

At present the majority of BI systems interact with databases and spreadsheets. They focus on numerical data. In future, as the inherent 'structures' in 'unstructured information' (documents, emails, letters) are recognised, BI systems will be able to interact with electronic document and records management systems and with email systems to report data from unstructured information sources.

This may include workflow reports, such as 'we have received term papers from X of our Y students', or 'M of the N term papers have been checked for plagiarism and have passed'. It may include calculations extracted from documents, such as 'the fifteen bids for this contract ranged from £a to £b'.

In parallel, BI systems will continue to interact with all of the internal structured data sources. These interactions will continue to be flexible and sophisticated, allowing the users to select data and to highlight or even correct faulty data.

Focus on Student Care and Retention

Many of those involved in BI in UK Education and experience from North America, suggest that an increased focus on student performance, student care and student retention is a key driver for BI and a key benefit from BI.

As UK HE and FE institutions become more familiar with BI, they will find ways to track students, to identify problems early and to intervene in ways appropriate for each institution. BI can help HE and FE institutions guide students to find and complete the courses and qualifications best suited to each students abilities, circumstances and aspirations.

BI, by gathering and maintaining 'a single version of the truth' can also help student mobility: the data about a student can be passed from one institution to another (with the student's permission and within the constraints of the Data Protection Act).

Increased 'What if?' Scenarios and Predictions

The education sector in Europe is entering a period of complex change. Money will be restricted, and sources of money will shift suddenly. Perceived needs for training of different sorts in different subjects will change, often unexpectedly and rapidly. New industries, disciplines and skills will appear and need academic support.

All of these changes can better be met and accommodated if an institution can quickly assemble data to ask 'What if we added this new course?', 'What if we reduced the size of this course?', 'What if we cooperated with this partner?', 'What if our income dropped by 20%'.

Mature BI systems allow the full range of 'What If' questions to be asked and answered. This will be an important area of development and growth in educational BI.

More Local Links

Shared services, shared delivery of courses, movement from one institution to another, joint research initiatives, and other drivers are increasing the cooperation among institutions which share a geographical, intellectual, or academic neighbourhood. 'Local' in this sense may mean the same county or city; it may mean the same academic discipline; it may mean the Russell Group, or joint research into nanotechnology or sustainable building.

BI systems can support local links. Sometimes the local partners will share a single BI system. At other times the different BI systems of the partners will share defined data (within a security model and a formal data sharing agreement). In either case, shared data will make the partnership more efficient and more effective. Transparently shared data will inform decisions, where (before BI) disputed data used to open rifts.

More Links to Overseas Partners

Universities are increasingly competing and cooperating internationally. Links to overseas partners, both for recruiting students to come to the UK, for sending UK students abroad, and for delivering UK courses through a foreign partner, are important for some institutions. At present, BI systems do not support these overseas links as well as they might.

In future, BI systems will allow UK institutions to share data with their overseas partners. These data may help to recruit students, and they may help with shared courses. Some UK institutions will have campuses overseas, and their BI systems will be used to manage the foreign campus, and to coordinate data from the foreign campus with their UK data for overall management and development.

Changes in Enterprise Computing

Of course, any BI system must keep up with changes in enterprise computing. These will include:

- Developments in MS Office
- Developments in web browsers and the Web
- Developments in Social computing and mobile devices
- Increased use of Open Source software
- Changes in major database systems
- Increased use of internal (and external) clouds, with reduced local computing power (almost back to dumb terminals)
- Security challenges

Open Source Systems

The future may also hold some expansion in the use of open source BI systems (e.g. see Pentaho³⁶). It is hard to predict whether the open source market will grow significantly or continue as a small contributor to applications. It should certainly be watched.

³⁶ <http://www.pentaho.com>

Acting on your Intelligence

The approaches, systems and sources of data outlined in this section have the potential to provide institutions with an extremely comprehensive corpus of information about their organisation and operating environment. However, having access to such data is only part of the story. Knowledge without appropriate accompanying action will achieve little and the investment made in accumulating such intelligence will have been wasted.

The challenge is to integrate environment scanning into your strategic and operational decision-making processes and to act on the business intelligence you have access to. This will require an appreciation of risk and its appropriate management and also a commitment to taking an honest, critical look at the role of senior management within the institution, their strengths and weaknesses and their capacity for making effective use of the business intelligence available to them.

Thankfully, a range of well established techniques exist which can help in this regard, each designed to elicit a particular perspective or view of your institution and the challenges it faces. Crucially, some, such as 5 Whys³⁷ and Ishikawa or Fishbone Diagrams³⁸ are designed to look beyond the symptoms of problems and help uncover their root cause.

Others, such as the Boston Matrix³⁹, help you to assess your current portfolio of activities and to gain an impression of their status in relation to current market conditions. Such a tool can help you to visualise elements of your institutional activity at any point in time and match this against where you want to be. As such it can play a vital part in informing your decision-making processes when it comes to prioritising strategic activity.

Looking further to the future, Scenario planning or scenario thinking is a strategic planning tool used to make flexible long-term plans. It is a method for learning about the future by understanding the nature and impact of the most uncertain and important driving forces affecting our world. Many of the regular methods for strategy development assume that the world in three to ten years' time will not significantly differ from that of today and that an organisation will have a large impact on its environment: they assume we can mould the future. Scenario planning however assumes that the future can differ greatly from what we know today.

The method is based on creating a series of 'different futures' generated from a combination of known factors, such as demographics, with plausible alternative political, economic, social, technical, legal and environmental (PESTLE) trends which are key driving forces. The goal is to craft diverging worlds by extrapolating these heavily-influencing driving forces. The technique can also include anticipatory thinking elements that are difficult to formalise, such as subjective interpretations of facts, shifts in values, new regulations or inventions. It is a group process which encourages knowledge exchange and development of mutual deeper understanding of central issues important to the future of your organisation. Although the method is most widely used as a strategic management tool, it can also be used for enabling other types of group discussion about a common future.

The thought processes involved in getting to the scenarios have the dual purpose of increasing knowledge of the environment in which you operate and widening the participant's perception of possible future events - encouraging them to 'think the unthinkable'. For each of these worlds, appropriate action plans can be considered. Asking the key question, 'what do we need to do (now) to be ready for all scenarios?', can then inform the formulation of strategies to cope with these differing pictures of the future (or at least to address the maximum number of possibilities).

Comprehensive guidance on undertaking Scenario Planning exercises within your institution is available from our Scenario Planning infoKit⁴⁰

³⁷ <http://www.jiscinfonet.ac.uk/tools/five-whys>

³⁸ <http://www.jiscinfonet.ac.uk/tools/ishikawa>

³⁹ <http://www.jiscinfonet.ac.uk/tools/boston-matrix>

⁴⁰ <http://www.jiscinfonet.ac.uk/tools/scenario-planning>

Assessing Risk

What is immediately apparent is that there are an almost limitless combination of external trends and forces which are either impacting already or may in the future impact on your organisation. Identifying them is one thing, choosing which to plan for and devote resources to preparing for is quite another. What is therefore required is an appreciation of both their probability and their impact in order to make an informed decision as to what represents an appropriate level of response.

Risk management is a well established approach which is fundamentally about making better decisions. In order to decide how serious a risk is risk management tends to advocate looking at two parameters mentioned earlier, probability (the likelihood of the risk occurring) and impact (the consequence if the risk does occur).

Impact can be assessed in terms of its effect on:

- Time
- Cost
- Quality

There is also a third parameter that needs to be considered: Risk proximity - when will the risk occur?

Proximity is an important factor yet it is one that is often ignored. Certain risks may have a window of time during which they will impact. A natural tendency is to focus on risks that are immediate when in reality it is often too late to do anything about them and we remain in 'firefighting' mode. By thinking now about risks that are 18 months away we may be able to manage them at a fraction of the impact cost.

Another critical factor relating to risk proximity is the point at which we start to lose options. At the start of a project there may be a variety of approaches that could be taken and as time goes on those options narrow down.

Assessment of both probability and impact is subjective but your definitions need to be at an appropriate level of detail for the work in question. The scale for measuring probability and impact can be numeric or qualitative but either way you must understand what those definitions mean. Very often the scale used is High, Medium and Low. This is probably too vague for most projects. On the other hand a percentage scale from 1-100 is probably too detailed.

Use enough categories so that you can be specific but not so many that you waste time arguing about details that won't actually affect your actions. Experience suggests that a five-point scale works well for most projects.

The need for effective information management

Access to information is the central theme running through this stage; it is impossible to effectively scan your internal and external environments without it. But it can only help you achieve this if it is managed appropriately throughout all stages of its 'lifecycle'.

We all understand the need for effective record and information management and usually have well established local systems and processes in place to ensure it is achieved. What has changed in recent years is the need to take a consistent, strategic and institution-wide approach to this area.

Through legislation such as the Data Protection Act, Freedom of Information Act and Environmental Information Regulations there now exists a complex set of mandatory requirements governing the management and use of information and records.

Meanwhile there is a growing demand from funding and regulatory bodies for institutions to be able to demonstrate high standards of corporate accountability and good governance: qualities that rely heavily on evidence in the form of complete, accurate and reliable records for proof.

If properly resourced and managed a concerted effort to improve the consistency and quality of the information and records held by your institution should help to enable timely access to the right information at the right time to help inform planning and decision making and to facilitate effective analysis of information derived from multiple sources - both vital to realising the objectives of environment scanning outlined in this stage. It is able to achieve this by:

- ensuring the right information and records are being created by mapping the link between them and the business processes which create them
- identifying what information and records are held where
- agreeing common formats for information and record creation and description to enable their reuse and cross-analysis
- introducing standardised record design and automatically generating content to ensure the accuracy and quality control of their content

Underpinning all of these is an acknowledgement that it is the information, rather than the technology used to create and store it that must be the focus of any endeavours in this regard. This was a firm conclusion from the **JISC Information Strategies Initiative**⁴¹ work first carried out in the mid-1990s and revisited in 2008 and is the theory which underpins the **Managing the Information Lifecycle infoKit**⁴² which provides further information on this area and how to progress it within your institution.

Legislation

Data Protection Act⁴³ | Freedom of Information Act⁴⁴ | Environmental Information Regulations⁴⁵

Assessing the quality of leadership and management

The one section of the institution which wields more power and influence than any other is its management. These are the people whose task it is to lead, to inspire and to manage and in whose hands the strategic direction of the institution largely rests. Leadership operates at various levels throughout the organisation: from the governors, Vice-Chancellor or Principal, through senior and middle management teams to faculty, departmental and team leaders. Each with a key role to play in setting and delivering strategic objectives.

Bearing this in mind it stands to reason that any environmental scanning process aimed at achieving an accurate summary of the current 'health' of the institution should include an assessment of its leadership and management within its remit. Such reflection is likely to already form part of an institution's processes, especially in the FE sector where it forms part of the **Ofsted Common Inspection Framework**⁴⁶ used as the basis for annual self-assessment. Where this is so it may well prove sufficient to meet the requirements laid out in the section, or at least to fulfil a substantial element of it.

⁴¹ <http://www.jiscinfonet.ac.uk/infokits/strategy/jisi/index.html>

⁴² <http://www.jiscinfonet.ac.uk/infokits/information-lifecycle>

⁴³ http://www.ico.gov.uk/for_organisations/data_protection.aspx

⁴⁴ http://www.ico.gov.uk/for_organisations/freedom_of_information.aspx

⁴⁵ http://www.ico.gov.uk/tools_and_resources/document_library/environmental_information_regulation.aspx

⁴⁶ <http://www.ofsted.gov.uk/Ofsted-home/Forms-and-guidance/Browse-all-by/Other/General/Handbook-for-the-inspection-of-further-education-and-skills-from-September-2009>

C. Leadership and management

- C1. How effectively do leaders and managers raise expectations and promote ambition throughout the organisation?
- C2. How effectively do governors and supervisory bodies provide leadership, direction and challenge?
- C3. How effectively does the provider promote the safeguarding of learners?
- C4. How effectively does the provider actively promote equality and diversity, tackle discrimination and narrow the achievement gap?
- C5. How effectively does the provider engage with users to support and promote improvement?
- C6. How effectively does self-assessment improve the quality of the provision and outcomes for learners?
- C7. How efficiently and effectively does the provider use its available resources to secure value for money?

Extract from Common inspection framework for further education and skills 2009, Ofsted

In addition to the above, for the purposes of ascertaining whether your leadership and management staff and structures are 'fit for purpose'; such assessment might also usefully include analysis of the decision-making processes currently in place plus of the skills, experience and abilities of members of the various levels of management throughout the institution. Perhaps there is an imbalance within the team, with too many members drawn from similar professional backgrounds, or perhaps the reverse is true with the team lacking contributions from a particular and important professional perspective. Our Project Management infoKit includes guidance on **helping to develop teams**⁴⁷. The same resource also makes mention of **Belbin Team Roles**⁴⁸ - the ideal mix of roles for a team. Where team members don't conveniently fall into each of the roles, then allocating the roles to individuals can have the same effect and ensure the right composition within them.

It is also important that all members of the management function are encouraged to undertake an honest and constructive assessment of their own skills and performance. As in most branches of both the public and private sectors there is still a tendency to find the most able and talented practitioners within their particular chosen field promoted up out of their specialism and into a management capacity. This is a well established and necessary part of the career progression process within most institutions which often sees the most gifted academics or professionals becoming extremely able leaders and managers. But it should be noted that this is not an automatic transition and such a smooth progression can not just simply be assumed. Agreeing a set of core management competencies, or adopting an existing set such as the **National Occupational Standards for Management & Leadership**⁴⁹ can help in this regard by providing the opportunity for managers at all levels to assess their abilities against these competencies, identifying where gaps or weaknesses in their knowledge and experience exist and giving access to the support required to address them. The **Core Management & Leadership Programme**⁵⁰ established by Oxford Brookes University is an excellent example of just such an approach.

A number of other agencies who deal solely with an executive and senior management audience also offer support in these areas, including:

⁴⁷ <http://www.jiscinfonet.ac.uk/infokits/project-management/building-the-team>

⁴⁸ <http://www.belbin.com/rte.asp?id=8>

⁴⁹ http://www.management-standards.org/content_1.aspx?id=10:5406&id=10:1917

⁵⁰ https://docs.google.com/viewer?url=http%3A//www.management-standards.org/client_files/Oxford%20Brooks%20Case%20Study%20-%20Final.pdf

- Scottish FE Unit's 'Leadership Programme'⁵¹,
- Centre for Excellence for FE's 'High Quality Managers Programme'⁵²,
- Leadership Foundation's 'Senior Strategic Leadership Programme'⁵³,

Summary

The idea behind the guidance within this stage is to create a four way matrix of views of your institution which looks both within the institution and to the forces which are influencing it from outside and to assess these factors both as they exist now and are likely to exist in the future.

If carried out with rigour, honesty and enthusiasm these techniques can provide you with the best possible data from which to frame your strategic decision-making and with which to inform your strategic activity. But accurate and informative data alone does not achieve results or ensure success. All analysis can do is help inform your actions, it cannot carry them out. To achieve this requires the successful management of your strategic activity - which represents the focus of the next stage of this resource.

The institutional experience - Beaumont College

"Reflecting on the infoKit one of the things that struck our Principal was how the need to act quickly had created deficits in processes like environmental scanning (ES) and consultation. The fundamentals of driving activity through strategy have been implemented and understood in varying degrees in different parts of the college organisation - and again using the infoKit brought this to light in a clear way"

Environmental Scanning needs to be focussed

"Our mistake in approaching Environmental Scanning was to start 'too wide' this is being corrected with three 'possible futures' being outlined so that these can be used as a basis for the scenario projection exercise and the resulting Environmental Scanning that will inform risk identification, management of these risks and future planning using informed foresight.

This was probably the most challenging part of the process for the team not because the process was unclear or badly structured simply because of the extraordinary uncertainty in the current circumstances of the college. A very powerful outcome of the work undertaken on ES by the team was the decision taken to pursue scenario planning as an outcome which will at least allow us to attempt some sort of rational codification of the multiple variables in play. We are convinced that we would not have come to that helpful conclusion if it had not been for us working through the infoKit in a structured manner. We also think the attempt to assess risk following an exploration of the underlying values in the organisation is helpful. We think that assessing risk as a first step would be damagingly limiting on the future options available. Spending an adequate amount of time on emphasising what the college does well and what values the college holds in theory and in practice meant that the team was able to estimate risk in a framework of appreciative enquiry.

We think some of the team struggled to translate the data generated by ES into meaningful action. But given the potential for wholesale change in the FE sector this is not surprising."

⁵¹ <http://www.scotlandcolleges.ac.uk/>

⁵² <http://www.excellencegateway.org.uk/page.aspx?o=157052>

⁵³ <http://www.lfhe.ac.uk/support/ssl/>

Managing Strategic Activity

It is in achieving the interweaving of the kind of high-level strategic priorities outlined in Stage 1 (e.g. your mission, vision and value statements) and the day-to-day activities of individual teams and members of staff across the institution that often proves the weak point in many organisations' strategic activity.

Lofty ambitions and statements of intent are articulated at 'the top', whilst below it the rest of the organisation largely carries on regardless, either unaware of the new challenges set or simply unable to realise them due to existing or competing pressures.

Much of the guidance provided in the Mission, Vision, Values stage has been designed to try to prevent the common criticism of strategy formulation as a 'one-way, top down process' and by encouraging the active participation and engagement of the institution at large it is to be hoped that some of these criticisms will be prevented and that individual teams and members of staff are, at least, aware of what the institution is trying to achieve, where it is heading and how it intends to get there. But awareness alone is not enough. All the grass roots enthusiasm and engagement in the world is not enough to enable strides to be taken towards achieving these goals if there is no mechanism for translating them into part of regular organisational behaviour and the annual, monthly, weekly and even daily planning that goes on within every faculty, department and team.

Nor can progress be made if it is not made possible to feed the consequences of unforeseen circumstance and the need for pragmatic action in the light of events back into the planning loop. For with the best will in the world and with all the environment scanning techniques at your disposal, it is inevitable that your institution and its staff will continue to be affected by unexpected events and issues which do not appear in your strategic plans, but which need to be addressed nonetheless.

What it is that enables the successful interweaving and co-ordination between high level planning and day to day events and activities are the focus of this stage - perhaps the most important stage of them all.

The institutional experience - University of Sheffield

Part way through this process, a new planning cycle was introduced within all professional services departments by the University's new registrar who joined the institution in autumn 2009. The proposed cycle cut across my own timeline, which had been planned before the new planning arrangements were developed. I negotiated with the registrar that our own input into the planning process would be provisional, pending the completion of our strategic review. This had the potential to be problematic and/or to de-rail our activity. In reality there has been no difficulty. At the same time, the delayed production of the University strategic plan has enabled me to cross-refer to the emerging corporate document at a point at which our own thinking was more mature, and the two processes have thus been mutually reinforcing. This experience perhaps speaks most to the helpfully pragmatic commentary on unexpected events set out in this part of the infoKit.

What are we actually trying to achieve?

Let's forget about strategies as written documents for a moment and concentrate instead on what it is that we are actually trying to achieve through them. Let us also assume that we have already managed to formulate and agree the high-level mission, vision and core values within our institution.

What we are now looking for are the best ways possible of achieving the following:

- a means for ensuring local (i.e. faculty, departmental, team and/or individual) planning is consistent with these high-level strategic objectives and will contribute positively to achieving them
- a means for ensuring that these local units have the resources necessary to make the required progress

Pilot outcomes from Beaumont College and Cambridge Regional College

<http://www.jiscinfonet.ac.uk/infokits/strategy/managing-strategic-activity/achieve-pilots>

- a means for ensuring that disparate local activity is carried out in a consistent and co-ordinated fashion in pursuit of these objectives
- a means for assessing the relative importance and priority of proposed tasks
- a means for agreeing a logical order in which the agreed tasks should be carried out based not only on their relative individual merit, but also on where they must logically occur in relation to other planned tasks
- a means for reviewing and reassessing the relative importance, priority and logical order of tasks in the light of changing circumstances and for these changes to be communicated and co-ordinated across all affected areas
- a means by which the agreed high-level mission, vision and value statements can be reviewed and revised in the light of changing local circumstance, priorities and operating conditions
- a means for ensuring that individual task progress can be measured
- a means for ensuring that overall progress towards the agreed objectives can be measured
- a means for ensuring that the right people within the institution are kept up to date with progress
- a means for ensuring the continued constructive engagement of staff as active and willing participants in the process

It is clear from this list that mission, vision and values statements alone are not enough to achieve all of the above. They may represent part of the solution, but only as part of a much broader, integrated framework which addresses the following five areas:

1. Co-ordination
2. Prioritisation
3. Enabling change
4. Engagement and Communication
5. Monitoring and evaluation

The rest of this stage is structured around tools and techniques for achieving the first 4 of these areas whilst the question of monitoring and evaluation forms the focus for the fourth and final stage of this infoKit.

Co-ordination

The Strategic Plan

In the Mission, Vision, Values stage of this resource we looked at the formation of 3 key strategic statements: the mission, vision and values statements which together should help set the overall tone and direction of an institution's strategic planning. What are now required are ways in which these words can be turned into deeds. Most commonly this is achieved through a framework of strategies operating at different levels and encompassing different areas of the organisation but all sitting beneath and coordinated by the institution's Strategic Plan. Though their precise content will vary the strategic plan is commonly a composite document containing some or all of the following:

- Mission, vision and value statements
- Themed sets of high level aims (e.g. for research, learning and teaching, estates etc) to be achieved during the period of the strategic plan

- A more detailed breakdown of the goals or objectives which must be achieved in order for the aims to be realised
- Targets or milestones to be able to measure progress and recognise when aims and objectives have been achieved
- A review of progress to date against the aims identified in the previous iteration of the strategic plan
- A summary of the current status of the institution (numbers of students, pass rates, major achievements) plus potentially a more detailed 'SWOT' style overview and/or consideration of the current climate within which the institution works
- A summary of the major risks faced by the institution which may prevent realisation of the aims and objectives

The period a strategic plan should span and how regularly it is updated varies from institution to institution. Most institutions seem to adopt a multi-layered approach with the plan receiving a major review and re-issue every three, four or five years.

Interestingly, a simple desk-based research exercise involving Google searches conducted on 7th October 2009 for 'university strategic plan' and 'college strategic plan' seems to indicate that most universities favour 4-5 year planning periods whilst the majority of further education colleges are based around a shorter 3 year horizon.

Examples of 3 year strategic plans

Aberdeen University⁵⁴

Bridgend College⁵⁵

Examples of 4 year strategic plans

Aberystwyth University⁵⁶

University of Essex⁵⁷

Examples of 5 year strategic plans

Lincoln University⁵⁸

City College Brighton & Hove⁵⁹

But between these major reviews typically lies a regular, often annual, process of review and more detailed planning to set the priorities for the year ahead and to keep the institution on track to achieving its goals.

According to a survey⁶⁰ conducted in 2008 by JISC infoNet, 44% of those institutions who responded update or renew their strategic plans on an annual basis.

⁵⁴ <http://www.abdn.ac.uk/ppg/index.php?id=21&top=3>

⁵⁵ <http://www.bridgend.ac.uk/strategic-plan/>

⁵⁶ <http://www.aber.ac.uk/en/strategic/>

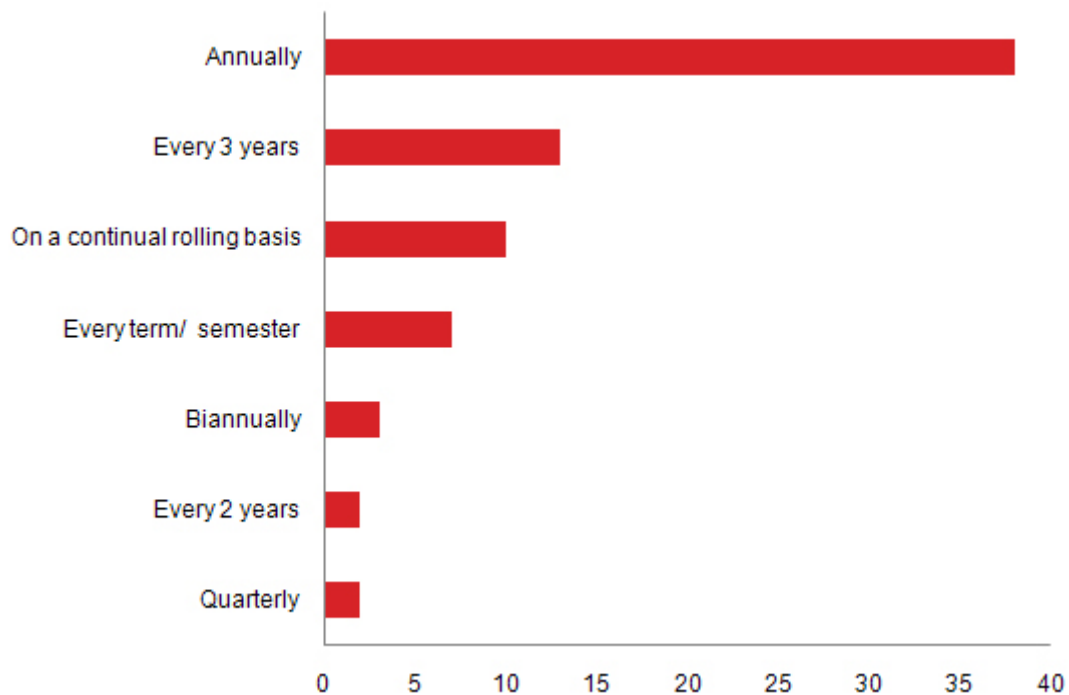
⁵⁷ <http://www.essex.ac.uk/planning/about/index.shtm>

⁵⁸ <http://www.lincoln.ac.uk/home/publications/strategic/>

⁵⁹ <http://www.ccb.ac.uk/public/about/strategicplan>

⁶⁰ <http://www.jiscinfonet.ac.uk/strategy-planning/survey-results>

Figure - How regularly do you update and/or renew your strategic plans?



There are many sound reasons for adopting such an approach, these include:

- the ability to amend the strategic plan in the light of changing circumstances
- integrating the strategic planning process into the rhythm of institutional life
- ensuring due consideration is given to the process as part of a scheduled and monitored process
- keeping strategic planning and decision making in tune with the annual budgetary cycle, thereby ensuring that funding decisions reflect agreed strategic priorities
- helping to cascade the agreed strategic priorities throughout the institution by scheduling faculty, team and even individual staff planning processes to continue on from the agreement of institution-wide priorities

Our Risk Management infoKit⁶¹ and Portfolio, Programme and Project infoKits⁶² include guidance on identifying, quantifying and resolving issues and risks which may be relevant in this regard.

But of course, crises and opportunities seldom confine themselves to the right month of the year to be assessed as part of the scheduled planning process. As a result, institutions who do adopt an annual approach to their strategic planning appreciate these risks and also incorporate procedures which can be used to cope with extraordinary events within the overall context of their scheduled processes.

What we are therefore beginning to witness is a move away from strategic plans as (necessary) documents and towards strategic planning as a set of processes which are both influenced by and directly influence the life of the institution.

⁶¹ <http://www.jiscinfonet.ac.uk/InfoKits/risk-management>

⁶² <http://www.jiscinfonet.ac.uk/p3m>

Creating a strategic framework

If your strategic plan is understood to be the definitive articulation of your organisation's goals over a defined period of time the necessity for translating and co-ordinating these goals at a 'local level'. In some respects the term 'local level' is misleading as this implies the existence of a single, flat organisational level below that of senior management which is a gross over-simplification of the true picture of the multiple strata of organisational complexity which makes up most institutions.

Instead we should acknowledge the importance of articulating and co-ordinating a network of integrated strategic and operational planning documents all of which are informed by, and consistent with, the overall strategic plan and which contribute at some level to realising its objectives. This policy framework should cascade down from the institution-wide focus of the strategic plan through faculties and/or departments to individual teams or units and, ultimately, to individual members of staff through the annual review and appraisal system.

It is this framework that gives unity and cohesion to an institution's strategic planning and, more importantly, provides a means of coordinating the activities it engages in to realise it. The exact components of this framework will vary from institution to institution but are likely to include some or all of the above:

- 'Structure specific' strategic plans (e.g. at department or faculty level)
- 'Issue specific' strategies which are pan-institution (e.g. environmental strategies, information strategies)
- 'Development strategies' which are designed to specifically achieve a specific, 'one off' objective (e.g. a move to a new campus, achieving university status etc)
- Team/unit objective setting and planning documents
- Forward work planning as part of each member of staff's regular appraisal activity

The tone, style and content of each of the above will all differ from one another, reflecting their different purpose. Whereas the institution's strategic plan is intended to describe the 'big picture' and outline the general strategic thrust, so the documents which support it are likely to be more focused, specific and detailed. As a general principle the fewer people covered by the document the more detailed it is likely to be. It is in this way that the kind of strategic framework outlined can be cascaded throughout the institution and make the transition from words to deeds.

Whatever strategy and planning documents you choose to introduce to support your institution's strategic plan it is important that they are all fit for the specific purpose they are designed to achieve. To help ensure this is the case it is worth asking yourself the following questions:

- Are all the objectives outlined in our strategic plan specifically addressed within all relevant supporting strategic documents?
- Are the objectives outlined in each of your supporting strategic documents consistent with those expressed in your strategic plan (Note: it is worth emphasising that your strategic plan is not going to include every objective outlined in every departmental or other supporting strategy, but questions should rightly be asked if goals are defined locally which appear to be directly contradict those defined at an institutional level)
- Are the objectives outlined in each of your supporting strategic documents consistent with each other?
- Are the objectives stated in ways which are appropriate for the audience covered by the particular strategy in question?
- Are the objectives achievable by the particular audience in question? (for example, have efficiency savings identified for the institution as a whole been broken down to clarify what is expected from each area of the institution)

- Is there a process for ensuring that all supporting strategic documents are reviewed, updated and reissued when a new version of the strategic plan is approved?
- Is it clear who is responsible for ensuring the objectives are achieved and for reporting back on progress?

An institutional experience

More from the pilot outputs⁶³

The role of Key Performance Indicators

Many institutions make use of Key Performance Indicators or KPIs as part of their strategic planning activity KPIs can be defined as *"financial and non-financial measures or metrics used to help an organization define and evaluate how successful it is, typically in terms of making progress towards its long-term organizational goals"* (Wikipedia⁶⁴).

Consult with your governors

"Engaging the governing body in the process of strategy development has proven useful; the impact of this will only be seen longitudinally in the next phase of the planning cycle. It is our recommendation to involve governance as early in the process as possible" Rohan Slaughter, Head of Technology, Beaumont College

More from the pilot projects: <http://www.jiscinfonet.ac.uk/infokits/strategy/managing-strategic-activity/role-kpi-pilots>

One of the key roles of KPIs is to give substance to the high level aspirations outlined in the organisation's strategic documents and in doing so to make them both more tangible to those who must make progress towards them and those whose job it is to measure this progress. As such it is important that the KPIs identified stem directly from these other strategic plans and statements and do not operate separately and in parallel to them. After all, there are innumerable aspects of the institution's performance that could be measured but unless it is possible to draw a clear line between the KPI and the strategic objective to which it relates the value of gathering and analysing the data required to record progress is questionable. Worse still, it may risk diluting the focus on those KPIs which are directly relevant to helping the institution achieve its goals.

Six "prior conditions" for implementing KPIs

1. A proper governance context, including an appropriate separation of roles and a strategic planning process in which governors play a meaningful role
2. Clear integration with other key processes, so that the KPIs discussion is seen as assisting, rather than adding another layer to, the existing governors' agenda (Most obviously, links to strategic planning and risk management)
3. Recognition that KPIs will never be "perfect" or "finished". This is an 85% activity, where governors need a reasonable set of indicators as soon as possible, but these will continue to develop as strategy also develops
4. Willingness to be selective. Institutions should not feel any obligation to make the KPIs comprehensive, or to choose everything off the "menu" in the CUC Guide. An alternative approach is to have KPIs which cover areas of particular concern to governors at any time. These will probably change over time, and the Board may adopt a different mechanism for reviewing other areas of university performance
5. A link to performance so something really happens ("what gets measured gets done" to quote one chair of a case study university)

⁶³ <http://www.jiscinfonet.ac.uk/infokits/strategy/managing-strategic-activity/strategic-framework-pilots>

⁶⁴ http://en.wikipedia.org/wiki/Key_performance_indicators#cite_note-0

6. The support and buy-in of the chair and of at least some key governors

Taken from the Committee of University Chairs (CUC) Report on the implementation of Key Performance Indicators: case study experience June 2008⁶⁵

Number and grouping

There is no ideal number of KPIs to aim for. Instead you should focus on defining as many as it takes to capture and record progress against the substantive goals articulated in your strategic plans. In many respects it is probably better to measure a few key indicators well than to attempt to measure almost everything, which risks diverting resources unnecessarily and losing sight of the most important trends to be watching. Focusing on indicators which help answer a specific question, rather than just including those indicators you know you have the ability to measure should help in this regard.

Most find it useful to group their KPIs under subject headings reflecting the major areas of institutional engagement, in a university for example this may be: teaching and learning, research, knowledge transfer, financial etc. Some find it useful to distinguish between a small number of primary groups such as those just listed and a secondary set of supporting indicators relating to areas such as sustainability, internationalisation, facilities and estates etc. Under each of these headings it is common place to find somewhere between one and five KPIs, but again the focus should be on completeness and relevance, rather than arbitrary targets.

Expressing your KPIs

KPIs can be viewed as SMART targets⁶⁶ and ensuring your KPIs adhere to these principles will ensure that you obtain the maximum benefit from them.

Each KPI is usually comprised of multiple elements including the Performance Indicator itself (i.e. the area of activity to be monitored) alongside a statement of how performance is to be measured (e.g. increase in full-time students, improved RAE or Ofsted inspection results, improvement in National Student Survey or Framework for Excellence performance etc) plus a statement on what the target level of achievement is set at (e.g. To be ranked within the Top 10 research universities, to achieve a student satisfaction rating above 90% etc).

Measurable indicators

Most commentators are agreed that if KPIs are to have any real value they must be measurable - otherwise there is no means of establishing if and to what degree you are making progress towards achieving the targets you have set for yourself. It is the difference between a KPI which confirms the intention to 'be in the top 10 institutions in the student satisfaction survey' and one which simply aims to 'increase the quality of the student experience'.

However, that does not mean to say that all KPIs must be quantitative. The capture and inclusion of qualitative information can also be extremely beneficial and help provide valuable information about progress and achievement in pursuit of strategic objectives. For example, the inclusion of awards or prizes won for achievement as part of the KPIs illustrating improving teaching quality.

Benchmarking

Of course the measurement of progress is only possible if you have relevant and reliable baseline data in the required areas in the first place and the ability to generate accurate progress data on an ongoing basis. This reinforces the importance of the principles outlined in the Environmental Scanning & Business Intelligence stage.

It is also extremely useful to be able to benchmark your institution's own performance against that of other institutions - especially those of whom you view as direct competitors. This enables you to review your performance in a more meaningful context and may well put a completely different slant on what the KPIs appear to be saying (for example a

⁶⁵ http://www.bcu.ac.uk/docs/cuc/pubs/CUC_Report.pdf

⁶⁶ <http://www.jiscinfonet.ac.uk/tools/smart-targets>

decline in student numbers which, in isolation, may appear entirely negative may be viewed somewhat differently if your rate of decline is far slower than that of all other institutions against whom you compare your performance).

Benchmarking your performance against that of others in ways which you chose can be a far more useful exercise than simply comparing your relative positions in national league tables by allowing you to focus on the enabling factors and trends relevant to specific agendas which may not otherwise be apparent in national surveys.

External benchmarking may well have a bearing on what KPIs you choose to track and how you choose to express them in order to make your data comparable with that generated by and available for other institutions.

Consultation

In order to ensure that your KPIs are fit for purpose it is important that your proposed indicators are agreed by those people within the institution who have a direct interest in monitoring the data they generate. Members of the senior management team and internal auditors should all have a view regarding what indicators are included, how they are expressed, what metrics will be used to identify success and how this will be measured. Likewise it is wise not to ignore the views of those members of staff who will be responsible for generating the data required to ensure that collecting it is feasible and sensible and that any practical issues are addressed.

One of the most important groups of stakeholders when it comes to the capture and especially the monitoring of KPIs are the members of your Board of Governors.

Accurate and clearly presented KPIs are now recognised as an essential element of the information which Governors require to fulfil their appointed role in monitoring the strategic direction of the institution and assessing its performance against the objectives it has defined. It is in recognition of this fact that the Committee of University Chairs⁶⁷ has produced an invaluable guidance document⁶⁸ on the implementation of KPIs based on the experience of its members and specific case studies. Although the report is HE specific in its remit there is still much generic good practice included here which all institutions would find useful in this area.

'At the heart of the process, governors need to be well-enough informed and independent enough to provide a distinctive view on institutional goals and performance. But they need to do this in a way which is also acknowledged to be useful to the executive management of the university, and which can actually lead to an impact on performance'

Taken from the Committee of University Chairs (CUC) Report on the implementation of Key Performance Indicators: case study experience June 2008⁶⁵

The benefits of Key Performance Indicators

Formulating and maintaining Key Performance Indicators for your institution based on the guidance outlined in the previous section should positively contribute to your strategic activity in several regards. If we take the list of outcomes suggested earlier that we should be trying to achieve through our strategic activity the successful use of KPIs should directly contribute to achieving the following:

- a means for ensuring local (i.e. faculty, departmental, team and/or individual) planning is consistent with these high-level strategic objectives and will contribute positively to achieving them

"In the words of the Strategy InfoKit, our performance indicators stem directly from [...] strategic plans and statements and do not operate separately and in parallel."

Alexis Cornish, Director of Planning and Deputy Secretary, The University of Edinburgh

⁶⁷ <http://www.bcu.ac.uk/cuc>

⁶⁸ http://www.bcu.ac.uk/docs/cuc/pubs/CUC_Report.pdf

- a means for ensuring that overall progress towards the agreed objectives can be measured
- a means for ensuring that the right people within the institution are kept up to date with progress

The strengths of KPIs thus largely revolve around measurement of progress and communication and embedding of strategic objectives throughout the institution.

Communication and embedding

A focused and clearly articulated set of KPIs will help make the strategic objectives of the institution more tangible: it gives them form and makes them recognisable, relevant and understandable to staff. As such they can start to influence people's behaviour and shape their actions in ways which contribute positively to achieving the stated aims.

Naturally it is important that the targets set strike an appropriate balance between ambition and what is achievable but, assuming that balance is struck, it should become possible for staff to trace a clear connection between their own work and the successful realisation of targets that seem (and indeed are) real and achievable as opposed to remote and theoretical.

By ensuring that your KPIs are measurable and regularly comparing progress against baseline performance data (either your own or your competitors) it becomes possible for your institution to accurately chart its progress and to communicate this to all relevant stakeholders. Key Performance Indicators lend themselves well to being summarised in various ways to illustrate progress, including graphically by means of a 'traffic light system' where the colours red, amber and green are used to indicate Indicators which are either missing their target, showing some warning signs of missing their target or are proceeding according to plan. Some institutions advocate the inclusion of a fourth level (for example: red, amber, green, gold or: red, amber, amber-green, green), the benefits being that this helps prevent the tendency for people to use the middle 'amber' setting as the default

An example of the use of a **'four light' approach**⁶⁹ can be found at Newcastle University.

But variations on the traffic light system are only one means of visualising the data being produced. Some institutions are now making use of technology to help senior managers and others to interpret the data via means of KPI Dashboards. These enable the user to combine KPI data with other relevant information and statistics about the institution's performance and to 'slice and dice' this data as required to provide multiple views of the institution or to answer specific questions.

An overview of one approach to **producing a KPI dashboard**⁷⁰ can be found at University of Exeter.

Alternatively (or in addition) some institutions use a **balanced scorecard**⁷¹ approach to tie their KPIs to their organisation's strategy.

Such 'at a glance' summaries can then be made available to specific stakeholders who have an obligation to monitor the performance of the institution, such as Governors, as well as the institution at large. The value of monitoring KPIs to the work of the Board of Governors is evident from the survey results generated as part of the **Committee of University Chairs Report**⁷² (CUC) project on implementation of Key Performance Indicators which indicated that 35%

'Consider the nature of your institution, the progress you have made down the 'strategic vision' path, and any possible technical issues, when selecting the consultation method(s) you will use.'

Alexis Cornish, Director of Planning and Deputy Secretary, The University of Edinburgh

⁶⁹ http://www.ncl.ac.uk/executive/assets/documents/J_005.pdf

⁷⁰ <http://as.exeter.ac.uk/it/systems/businessintelligence/>

⁷¹ <http://www.jiscinfonet.ac.uk/tools/balanced-scorecard>

⁷² http://www.bcu.ac.uk/docs/cuc/pubs/CUC_Report.pdf

of Governing Bodies reviewed performance data at each meeting with 27% reviewing annually and 14% doing so twice a year.

University of Edinburgh Pilot Outputs

The Process⁷³ | Lessons Learned⁷⁴ | Institutional Examples⁷⁵

Cascading KPIs

Lastly, it is possible to extend the KPI framework by cascading it down to as many levels and degree of detail as is desired - all within a consistent and coherent framework. Supporting sets of KPIs can be defined at a local level to measure performance and to help co-ordinate departmental activity with the strategic objectives of the institution as a whole. For example, an institution may have identified a 25% reduction in CO2 emissions by 2010 as one of its environmental KPIs. This may then be further reflected and elaborated upon within individual departments as they articulate the changes they would need to make at a local level to enable the organisation as a whole to meet this target.

KPIs: Key questions to address

In summary, institutions may find it useful to ask themselves the following questions in relation to the use of KPIs as part of their strategic planning processes:

- What questions are you hoping to answer through your KPIs?
- Do these questions link directly to the strategic objectives outlined in your Strategic Plan?
- Are you collecting the data required to answer these questions, or focusing simply on the data you know you can easily collect
- Are you collecting data unnecessarily?
- Have you consulted widely when selecting your KPIs?
- Have your KPIs been approved by senior management and the Board of Governors?
- How and how regularly are you going to monitor progress against your KPIs?
- Have you assigned appropriate owners for each KPI and are they aware of their responsibilities in this regard?
- Have you considered a mechanism for reviewing the KPIs themselves and changing them, removing them or adding new ones?
- Have you selected a means of displaying progress against the KPIs that suits the needs of all relevant stakeholders?
- Have you considered what other data streams (derived from both within and outside the institution) that you may wish to integrate with your KPI data?
- Are you collecting data in a format which may make it possible to integrate with other data streams?
- Are you comfortable with the idea of publicly flagging 'red' areas (i.e. areas where you appear to be failing to meet agreed KPIs?)

⁷³ <http://tinyurl.com/3lnhh8y>

⁷⁴ <http://tinyurl.com/3nfemsh>

⁷⁵ <http://tinyurl.com/3zfeaeg>

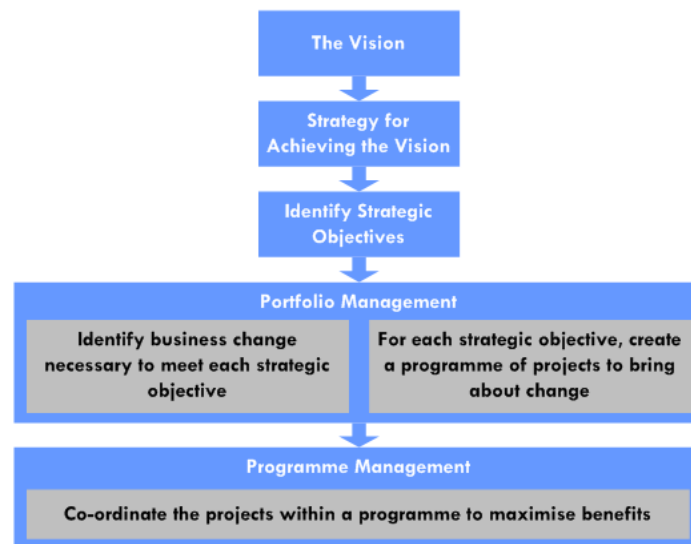
- Have you considered what happens when areas are reported as being at 'amber' or 'red'? For example, are there links between this reporting process and your institution's issue and risk reporting procedures?

Aligning operational activity with strategic objectives

Much of what we have talked about during this stage of the infoKit has revolved around ways in which decisions regarding the strategic direction of the institution can be cascaded throughout the organisation. As such it should be possible to follow a consistent thread that passes through your mission, vision and value statements down through your strategic plan to the local strategies, team and individual planning processes that coordinate work across the institution.

The Strategic Objectives of an organisation give a time-bound, measurable state or result to be achieved in order to move the organisation along towards the vision. The timescale may be the current financial year, or a longer period. The Strategic Objectives will suggest the business changes necessary to achieve the result. Often you will define a programme of projects or activities aimed at achieving each objective.

Each Strategic Objective of an organisation may be the responsibility of a single member of the Senior Management Team, someone who will have the ability and position to command the resources necessary to effect the changes necessary to achieve the objective.



There may be many individual projects needed to bring about the desired change to achieve each objective and in an ideal situation they will be grouped into programmes with each programme aligned to a particular strategic objective.



In the real world you may inherit a situation that is less structured and you will need to make judgements about whether all of the projects currently underway are adequately aligned with your strategic goals and likely to deliver worthwhile return on investment. Mapping out your activities in this way can be a useful first step in identifying duplication of effort and outliers that do not sit readily within the bigger picture.

Co-ordinating the numerous initiatives required to make progress towards the realisation of your strategic objectives is no easy task, but is essential for ensuring that the relevant issues are being addressed and that real progress is being made in pursuit of the institution's agreed strategic objectives (something which should then be confirmed by monitoring of the relevant KPIs).

*Our **P3M infoKit** provides detailed advice in this regard based on a hierarchy of activity management approaches relating to each of the three 'Ps'*

Portfolio Management⁷⁶

Portfolio Management is about making sure your organisation makes the right investments and gets the returns it needs for organisational growth and delivery of its Mission

Programme Management⁷⁷

Programme Management is co-ordinating a group of related, and interdependent, projects that support a common strategic objective. A single large or complex project may have the characteristics of a programme and require similar skills

Project Management⁷⁸

Project Management is a structured, 'lifecycle-based' approach to help you do the right things at the right time in order to meet your project goals

⁷⁶ <http://www.jiscinfonet.ac.uk/infokits/portfolio-management>

⁷⁷ <http://www.jiscinfonet.ac.uk/infokits/programme-management>

⁷⁸ <http://www.jiscinfonet.ac.uk/infokits/project-management>

Prioritisation

The importance of prioritising at all levels

Being faced with multiple strategic and operational challenges at any one time, whilst maintaining day-to-day service levels and making progress towards agreed organisational improvements all within limited levels of resource inevitably calls for a stringent approach to the prioritisation of institutional activity.

Indeed, prioritisation is a management discipline that needs to be exercised successfully at all levels of strategic planning and implementation, whether in reference to what targets make it into your vision statement, what objectives you set to realise your vision within your strategic plan and what activities you choose to devote most resource to achieving in pursuit of your objectives.

Clearly it is important that decisions regarding relative priority are made not on a whim or the personal preference of an individual, but according to a rigorously applied set of criteria which not only helps to create an objective definition of importance but also helps quantify the implications of not proceeding with it.

Prioritising your strategic objectives

An obvious starting point in this process is by determining how closely aligned the activity in question is with the strategic objectives outlined in your plan. If no link is discernible, or is of a distinctly weak and tenuous nature then obvious questions should be asked as to why resource should be devoted to it. But this alone is not enough to effectively decide where your priorities should lie - especially when faced with multiple, equally worthy, candidates.

There are numerous tools and techniques designed to identify the relative importance of competing proposals and suggestions. When it comes to agreeing high-level strategic priorities, such as determining which objectives should form part of your strategic plan for the next 3-5 years techniques designed to assess the broader context within which the institution operates such as PESTLE analysis⁷⁹ can be valuable. Using a Boston Matrix⁸⁰ can assist in determining the relative demand for and popularity of your offerings and how this is likely to change in the future.

Prioritising your activities in support of your strategic objectives

Once your strategic objectives have been agreed, use of a Balanced Scorecard⁸¹ helps you think about your organisation from four different perspectives and to question how the initiative under discussion will impact these four aspects. The JISC-funded espida project⁸² is based on a Balanced Scorecard approach and uses it to aid in the creation of business cases for proposals that may not necessarily offer immediate financial benefit to an organisation, but rather bring benefit in more intangible spheres.

Techniques such as Clariscope⁸³ and using an Urgent/Important matrix⁸⁴ can all help to reach agreement on where best to target resources as part of a transparent and objective options appraisal process.

It may, of course, be the case that all the options on the table seem equally worthy of attention. Perhaps they are all closely aligned with the institution's strategic objectives and could all be reasonably described as both urgent and

⁷⁹ <http://www.jiscinfonet.ac.uk/tools/pestle-swot>

⁸⁰ <http://www.jiscinfonet.ac.uk/tools/boston-matrix>

⁸¹ <http://www.jiscinfonet.ac.uk/tools/balanced-scorecard>

⁸² <http://www.jiscinfonet.ac.uk/records-management/espida>

⁸³ <http://www.jiscinfonet.ac.uk/tools/clariscope>

⁸⁴ <http://www.jiscinfonet.ac.uk/tools/urgent-important-matrix>

important. On such occasions it may help to differentiate between the choices available by considering the consequences of not doing them. This is the logic behind the concept of a Change Variable template⁸⁵.

It is important to note, however, that some proposed activities may, on the surface, seem less important than others when compared in isolation and on a 'like-for-like' basis. This risks overlooking the fact that a task which seems relatively inconsequential may actually form a vital 'link in the chain' and represent a critical element in the completion of a much more important target. This points to the fact that what is also needed is an appreciation of the activity in its true context. This is something which Precedence diagramming⁸⁶ and critical path analysis can help you to define.

Though all of the above techniques have their own strengths and weaknesses the adoption of any one or combination of them should pay dividends simply by demonstrating to staff that there is an objective and transparent decision-making process in place. Communicating institutional priorities across the institution is an important part of this process and another reason for engaging in the kind of ongoing, constructive and open 'strategic conversation' with staff that has been referred to throughout. Adopting a Prioritisation Matrix⁸⁷ can play a useful role in this regard by clearly articulating what the institution's priorities are and how competing proposals have been assessed against them.

Enabling Change

Planning

What are required are practical ways of melding your institutional management processes with your stated strategic objectives, not in an abstract or artificial way but in ways which are co-ordinated, mutually supportive and integrated.

Our Portfolio, Programme & Project Management⁸⁸ resources provide detailed guidance on how to manage an integrated suite of initiatives aimed at achieving change in pursuit of agreed strategic objectives. It includes the following 3 top tips for senior managers when managing a portfolio of change initiatives:

1. Develop a robust attitude to risk
2. Develop a flexible approach to planning
3. Develop the readiness for change

With reference to the second of these points; central to the JISC infoNet approach to managing projects and programmes is the concept of the 'Sliding Planning Window'. This means only planning ahead so far as is feasible and sensible at the time. It is also known as Rolling Wave Planning. Our Project Management infoKit includes a further list of 'Top Tips'⁸⁹ when it comes to effective planning.

Monitoring

It is vital that progress against your planning is constantly monitored to ensure that you remain on target to achieve your strategic objectives. After all, even with the best planning in the world it is inevitable that changing circumstances will necessitate regular changes to your intended approach. The sooner that you acknowledge a potential issue, risk or change the sooner you are able to reflect on its implications and make the necessary decisions required to keep your

⁸⁵ <http://www.jiscinfonet.ac.uk/tools/change-variables>

⁸⁶ <http://www.jiscinfonet.ac.uk/tools/precedence>

⁸⁷ <http://www.jiscinfonet.ac.uk/tools/prioritisation-matrix>

⁸⁸ <http://www.jiscinfonet.ac.uk/p3m>

⁸⁹ <http://www.jiscinfonet.ac.uk/infokits/project-management/top-tips>

progress on track. Broader issues relating to monitoring and evaluation are addressed in the fourth and final stage of this infoKit but specifically in relation to the planning and activity cycle it is worth considering the regularity with which you are going to monitor progress.

One way of making such monitoring activity a more seamless part of regular management activity is to reorganise the agendas of management team meetings so that they directly relate to discussing progress in relation to specific agreed strategic objectives. This may also help drive progress towards them by directly allocating responsibility for the completion of tasks to particular members of the management team. That 35% of the Boards of Governors who took part in a survey conducted by the CUC in 2008⁹⁰ reviewed their KPIs 'at each meeting' suggests that many institutions see the value of regular monitoring as part of established management and governance procedures.

An alternative approach is to set up new and distinct processes for setting targets, monitoring progress and revising objectives. Some commentators support the notion of 30 or 90 day planning and review cycles whereby every month (or 3 months) those with responsibility for realising the institution's strategic objectives meet to identify the most important actions that need to be taken and to make someone responsible for that action. In 30 or 90 days' time the group meet again to update on progress, refine the goals where necessary and then repeat the process again. Such meetings should be kept brisk, brief and focused and deliberately light in terms of paperwork. The important thing is the constant process of monitoring, reflection and realignment in the light of changing circumstances that this approach engenders - not creating reams of unnecessary reporting documents. Alternatively, if regularly getting the required people in the same place proves impractical updates and new objectives can be discussed and reported using a wiki or other online forum. What matters most is that strategy is transformed from something distant, remote and only needing consideration at particular points of the year to something that is immediate, relevant, directive and measurable.

If people complain that all this talk about strategy and focus on meeting strategic objectives somehow 'gets in the way' of their work or is otherwise distracting and burdensome it suggests that you have not yet succeeded in truly aligning your day to day operations with your strategic activity. Work, therefore, still remains to be done in truly integrating the two.

Engagement and communication

The benefits of the 'Strategic Conversation'

As the previous section acknowledges, one of the principal challenges in this area is to achieve a seamless alignment between strategic planning and operational activity. Clearly, the strategic framework described earlier in the infoKit which is responsible for cascading and translating the institution's strategic direction across the institution has an important part to play in this regard, so too the discussions of committees and management boards. So too do the operational links which help join the setting of these same strategic objectives with the coordination of activity through a consistent and effective approach to portfolio, programme and project management. But underpinning all this activities must lie a constant, constructive and creative approach to communication.

Earlier in the infoKit we introduced the concept of the 'strategic conversation', an attempt to actively engage staff from across the institution in an ongoing dialogue about the strategic direction of the institution. The purpose of this 'strategic conversation' is to go beyond simply finding ways of effectively communicating messages to staff and other stakeholders (for example, Boards of Governors and representatives of the learner/student body) and towards encouraging their active participation in the debate about strategic objectives, priorities and planning considerations at a much earlier stage in the process.

Clearly lines of communication already exist at all levels within institutions and span the spectrum from formal announcements to unofficial chats 'by the water-cooler' and many institutions now have well established communications and marketing teams to coordinate their internal communications. What we are talking about here is not a replacement of such processes, but an addition to them and one which views each member of staff as a potential participant in the strategic process.

⁹⁰ http://www.bcu.ac.uk/docs/cuc/pubs/CUC_Report.pdf

It is interesting to note that within our Change Management infoKit⁹¹ change is generally met with enthusiasm when:

- we propose the change
- we are involved in the design of the change
- we feel that our opinion/views are heard, and contribute to the new reality

and that Change in education is met with confrontation⁹² **when:**

- we are not involved in the change design
- we feel that our opinion/views are not considered
- we do not see benefits for ourselves, arising from the change

The idea of the strategic conversation is, of course, an abstract one. It does not represent a tool, technique or methodology to be followed to achieve a specific end - though, as we shall see, the advent of new technology, especially social software, does open up new possibilities in this regard. Instead it reflects more an atmosphere and environment within which such initiatives are likely to flourish and, as such, represents both part of the cause and the effect of much that we have written about within this resource.

In some respects it may represent something of a leap of faith for management: an acknowledgement that realising successful strategic activity is equally as reliant on the 'many' of the organisation's staff, than the senior management 'few'. Of course this does not necessarily mean that everyone's opinion is necessarily of equal weight, nor that strategy formation must suddenly become a directionless free-for-all. It is still the task of management to set the strategic agenda, to define the nature of the conversation and to set its boundaries. It also still falls to management to make the final decision. Ultimately, the buck still stops where it always has.

What differs, however, is when, how and on what basis staff and other stakeholders are included within this process: giving them access to the process earlier and a voice with which to influence its direction and form.

"But what if they disagree with what we are proposing?" some critics might argue. Well, if this is indeed the case, they are likely to still hold this negative opinion when they are eventually made privy to what has been agreed. The difference will be, however, that their exclusion from the process of arriving at this decision will increase their hostility towards it, that the institution may have missed out on valuable contributions which may have shaped it for the better and that the staff concerned will be less inclined than ever to positively embrace and work towards the desired outcome.

Surely it is better to air potential plans at an earlier stage (with appropriate caveats) and then to work with the interested/affected parties to hone and polish them into a final state of preparation. Not only is the finished product likely to have benefited immensely from the scrutiny and intervention from representatives of a number of different perspectives, but those who did contribute are likely to have an affinity with, and ownership of, proposals that they have already invested energy in.

Establishing a productive strategic conversation

In the Mission, Vision, Values stage we explore some of the ways in which technology can now assist in establishing a strategic conversation within your institution. These largely revolved around the power and potential of

⁹¹ <http://www.jiscinfonet.ac.uk/infokits/change-management>

⁹² <http://www.jiscinfonet.ac.uk/infokits/change-management/resistance-to-change>

harnessing social software⁹³ to help disseminate ideas and suggestions and to facilitate discussion about them across the entire institution.

Blogging

How about encouraging members of your senior management team to maintain their own blogs? This is an approach which is now common in many organisations, particularly in the private sector, where the Chief Executive and other directors publish their thoughts and musings on a range of subjects broadly relevant to their role and the organisation they lead. The style and tone of these blogs is deliberately informal and designed to give the rest of the organisation (and those outside it) a glimpse of the human face of senior management. It is an opportunity to highlight some of the broader pressures and challenges the institution faces and the factors which are influencing strategic decision making at the highest level. As such it can play an important role in establishing some of the background 'mood music' against which decisions must be made.

Most blogs also provide the facility for readers to also submit their own thoughts and comments in relation to posts they have read - thus providing an opportunity for all staff to bring their thoughts and ideas to the attention of management.

Wikis and online collaborative tools

The collaborative nature of the wiki makes it the ideal vehicle for publishing early drafts and allowing a large number of people to comment on them or make changes, all within a secure, controlled environment. Wikis give people the opportunity to not only leave comments, but to actually make changes or additions to the content directly, whilst also preserving audit trails and logs of changes. The content of a wiki and/or editing rights to it can also be restricted to particular groups or individuals making it possible to keep any discussions accessible to members of the institution only.

Alternatively, increasing numbers of institutions are beginning to take advantage of 'free' access to online collaborative environments such as Google Docs⁹⁴ which enables individuals to collaborate on the same document and can provide a shared workspace which transcends organisational barriers.

Wakefield College, a leading FE college situated in the north of England helped overcome their previous 'silo mentality' to strategic planning by giving each of their Academy Directors additional responsibility for a cross-College area, for example, enterprise, advanced level programmes etc. This forced them to think about working right across the organisation and to collaborate with colleagues accordingly. GoogleDocs provided the vehicle which would allow that collaboration to take place.

Academy Directors identified their three key priorities for their cross-College area of responsibility and two specific actions under each priority. These were then represented as a grid in Google Docs. Each Academy Director and Service Area Manager then used Google Docs to identify how they would contribute to the achievement of each priority and its associated actions, resulting in a matrix of priorities and specific actions from right across the College. This ensured a shared understanding of where each strategy was aiming to take the organisation and also that actions were formally logged and factored into plans.

This approach was also adopted at a headline level with the College's strategic priorities to enable each Academy/Service Area to easily see how they could best contribute to the achievement of strategic priorities without duplication and without missed opportunities for synergy.

What use of such Web2.0 technology gave the College was an easily accessible method of enabling everyone to access to everyone else's plans to ensure that they were all travelling in the same direction. It's been really well received with staff appreciating how this access to what other areas in College were aiming to achieve enabled them to plan in a more informed way.

⁹³ <http://www.jiscinfonet.ac.uk/infokits/social-software>

⁹⁴ <http://docs.google.com>

Social Networking

Most people are now familiar with popular publicly available services such as Facebook or LinkedIn. However, it is also possible to establish your own private social networks which provide most of the functionality of these public sites, but for a closed, invited membership only. Such technology provides another informal and dynamic forum for debate with members either responding to discussion topics started by others or starting their own subjects themselves. Members' profiles can also act as a form of 'expertise index' allowing staff to identify people within the organisation who may have the skills or knowledge they need but who are not known to them personally and informal groupings of staff can be established regardless of their place in the organisation chart to achieve a desired outcome.

Other techniques and approaches

We should not, however, assume that adopting new technology is the only way to establish an effective 'strategic conversation' within your institution. In truth a range of approaches are likely to be required and whilst some will be willing to rush enthusiastically down the IT route others may wish to continue to rely on more traditional approaches.

Workshops, focus groups and senior management 'surgery sessions' are all tried and tested approaches which place a value on personal, face-to-face communication. They are, of course, more resource-intensive and less scalable than some of the more technology-orientated approaches listed above, but do have the merit of producing freer, richer discussion and providing the opportunity to forge personal links and relationships which can be far harder to achieve in an online world.

Our Influencing Others infoKit⁹⁵ includes guidance on persuading people to do things when you have no direct control over them - an important management skill and one still very much required, even within the collegiate atmosphere encouraged by the strategic conversation.

Get creative

Workshops needn't revolve around leaden presentations, 'death by PowerPoint' and illegible flipchart notes. Use the opportunity to get creative and engender some fun and enthusiasm into the proceedings. Explore some of the ideas included within our Creative Thinking resources⁹⁶ to encourage fresh new perspectives and to invigorate debate or consider the potential for using metaphors and stories⁹⁷ to communicate new visions of what might be possible.

A good framework for innovative ways of thinking and assumption-busting can be found in the work of Michael Michalko. His book, 'Cracking Creativity'⁹⁸, provides a rich source of approaches to thinking differently and his Thinkpak1 is a practical tool for getting groups to experiment with their ideas. A summary of this approach is available.

Our Scenario Planning resource⁹⁹ also has a useful section on how to apply creativity to workshops.

Signs of success

So how can you tell when you have succeeded in establishing a vibrant and constructive 'strategic conversation' within your organisation? Well, if you can point to examples of some of the following patterns of behaviour it is likely that you are heading in the right direction:

- active and vibrant discussion within the various online spaces provided

⁹⁵ <http://www.jiscinfonet.ac.uk/infokits/influencing-others>

⁹⁶ <http://www.jiscinfonet.ac.uk/tools/creative-thinking>

⁹⁷ <http://www.jiscinfonet.ac.uk/tools/metaphors>

⁹⁸ http://www.creativethinking.net/WP01_Home.htm

⁹⁹ <http://www.jiscinfonet.ac.uk/tools/scenario-planning/creativity>

- staff starting their own discussion topics and contributing with their own ideas rather than just responding to others
- discussion within teams (i.e. at team meetings) about elements of the strategic plan
- requests for members of the senior management team to attend team meetings to discuss elements of strategic activity
- discussion about how the process of strategic planning and activity is conducted, not just about the contents of its current iteration
- proposals (for funding, additional staffing etc) clearly demonstrate their relevance to agreed strategic objectives

Monitoring

"One of the great mistakes is to judge policies and programmes by their intentions rather than their results"

Milton Friedman

Many of the pertinent issues relating to monitoring have already been raised throughout the earlier stages of this guide. This is inevitable and serves to help illustrate that monitoring is not simply the final stage in a linear process, but one which is continuously addressed during all stages and woven into the processes of identifying your mission, vision and values and undertaking strategic activity. In many respects it is the counterpart to the continuous environment scanning¹⁰⁰ that is required to ensure that you are aware of changes within or outside your institution that have the power to affect its strategic activity. Monitoring measures are likewise required to alert you as to how your activities are faring, where changes may be required and where operational necessities may demand an alternation to your agreed strategic objectives. The sooner any issues can be addressed (or indeed successes lauded) the better.

But at the same time it is a topic which is so important that it also warrants a particular focus of its own in order to complete the integrated and interdependent set of processes which are required to identify and achieve your strategic priorities.

What should we be monitoring?

The type of monitoring activity that we discuss in this stage are designed to help the institution to answer the following three questions:

1. how well are doing in pursuit of our agreed strategic objectives?
2. are we still pursuing the right strategic objectives?
3. are the ways in which we are pursuing our strategic objectives still fit for purpose

These can be summarised as:

1. monitoring progress
2. monitoring direction
3. monitoring means

Institutional Experience from Beaumont College

More from the pilot projects¹⁰¹

Monitoring progress

Data sources

KPIs & the senior management dashboard

The importance of KPIs in enabling you to keep a constant check on progress against agreed strategic objectives has already been covered in an earlier section of the infoKit, so too advice on how to ensure that your KPIs can be easily and regularly monitored. Though practice varies from institution to institution, most seem to appreciate the value of regularly reporting on their KPIs.

¹⁰⁰ http://www.jiscinfonet.ac.uk/infokits/strategy/environment-scanning/index_html

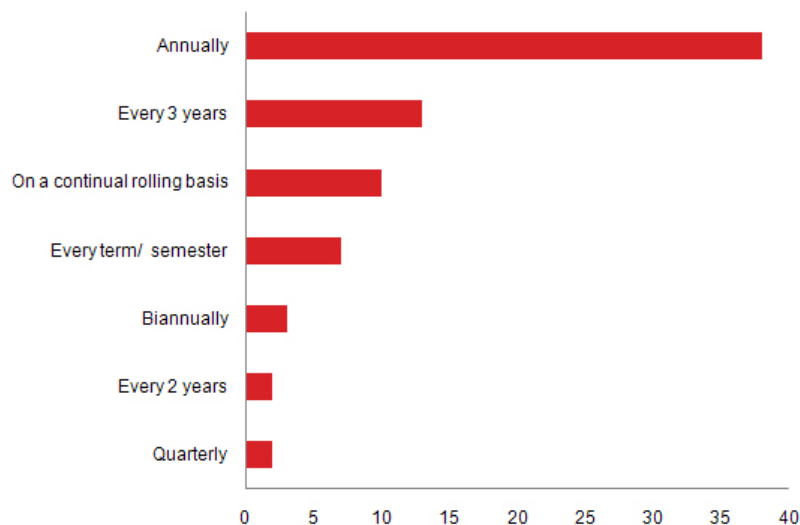
¹⁰¹ <http://www.jiscinfonet.ac.uk/infokits/strategy/monitoring/monitoring-pilots>

Some institutions, however, are beginning to move beyond the production of regular, pre-scheduled progress reports and towards a 'self-service' model whereby senior managers are provided with direct access to the raw data, plus the tools with which to 'slice and dice' the data as they require to answer specific questions, or to check on progress as and when they want to.

The University of Northumbria's Northumbria World¹⁰² is one such example and includes dashboards, scorecards, KPIs and advanced drill down capabilities to provide holistic, up to date reliable information in an easily accessible framework.

Such an approach enables managers to view the institution's performance in real time and to obtain answers to the specific questions that they need to address, when they need to address them.

Figure - How regularly do you update and/or renew your strategic plans?



Other sources of performance measurement

Of course, KPIs represent only one means of assessing your institution's performance available to management and members of the governing body. The CUC Report¹⁰³ on the implementation of Key Performance Indicators: case study experience (June 2008) also lists the following sources of performance data:

- National Student Survey
- The Times Good University guide
- The Sunday Times League Table
- HEFCE Performance indicators
- Student recruitment and retention
- Employment data
- Health and Safety data
- Research grants and contracts

¹⁰² http://www.microsoft.com/casestudies/Case_Study_Detail.aspx?casestudyid=4000004670

¹⁰³ http://www.bcu.ac.uk/docs/cuc/pubs/CUC_Report.pdf

Though its HE focus denotes its origins many of these are also applicable to FE institutions or have similar equivalents.

Nor should we overlook other, well established, sources of progress information including reports from committees, reports from the Vice-Chancellor and reports from internal and external audit.

Of course what is also required is a shared agreement of exactly what it is that is to be monitored and what the targets are that you are striving to meet. Without shared agreement on these the risk of 'comparing apples with pears' may well undermine your efforts to provide an accurate indication of performance.

Approaches to analysis

Having access to a broad range of reliable data sources, such as those indicated in the previous section is clearly essential but not, alone, sufficient to ensure effective monitoring of progress is achieved. If the data generated and gathered represents the 'ingredients' then what are required are the equivalent of 'recipes': different approaches to combining them in order to achieve a desired result.

The activities and initiatives being carried out to make progress towards achieving your agreed strategic objectives in pursuit of your stated aims will be occurring at different levels across the institution. The monitoring of KPIs may provide evidence of the 'big picture' across the institution but may not alone present the complete picture - especially when it comes to tracking progress at a programme or project level which may in themselves be considered 'operational' in nature, but upon whose successful completion the realisation of strategic aims depends.

The JISC-funded Benefits of ICT Investment - Landscape Study (BILS)¹⁰⁴ conducted by the University of Strathclyde identified a range of evaluation methodologies, each with their own strengths and weaknesses.

These include:

Financial Evaluation

Financial Evaluation involves identifying increased revenue streams or cost reduction that can be attributed, in whole or in part, to the investment. While increases in income streams or reductions in cost are often claimed for ICT investment projects, there are often difficulties in using Financial Evaluation as an evaluation methodology.

Target Setting

Evaluation of an ICT investment may be made against specific, measurable targets, where a desired benefit is identified, a measurable value placed on it and measurement of that target is built into the ICT implementation. SMART (Specific Measurable Achievable Realistic and Time-Constrained) Targets can be used. More information on setting SMART targets¹⁰⁵.

Benchmarking

The strength of benchmarking is that it provides a methodology from which institutions can exchange ideas and best practice, whilst also evaluating progress. However, the value of benchmarking is variable depending on the context of the activity being benchmarked. For example, a technical benchmark (i.e. processing capacity) may be well-defined and easy to replicate. However more caution is required in drawing comparisons in more context-specific and complex activities, such as e-learning.

Information Review

This can be defined as evaluation through review by management committee, comparing perception of outcomes against expectation. Often this may be based on no more than anecdotal evidence, narrative reports and the judgement of the staff involved.

¹⁰⁴ http://www.strath.ac.uk/learningservices/innovation/innov_projects/biils/

¹⁰⁵ <http://www.jiscinfonet.ac.uk/tools/smart-targets>

Investigative

Some investment is speculative in nature i.e. where an investment is made to allow a technology or approach to be piloted, or where a pilot service is offered to build capacity or test demand. In these circumstances, it would be inappropriate to set targets, as the investment is exploratory in nature. However, it is important that sufficient information is gathered during the investigation to allow an evaluation to be conducted at its conclusion and to ensure that future decision-making is properly informed.

Customer-focused

In FE and HE, customer-focussed evaluation focuses primarily on canvassing student and/or staff opinion of ICT investments and resultant services through the use of tools such as questionnaires, surveys and focus groups. The strength of this approach is that it focuses on the view so the service recipients, the most important stake-holder group. It also allows a range of views to be gathered. However, the results are inevitably subjective and, if the evaluation is poorly designed, they can be misleading.

Compliance

Investments can be evaluated in the context of compliance with legislation and/or internal policy, through techniques such as sample testing (e.g. website compliance with disability legislation) or exception reporting (e.g. security breaches).

External Accreditation

Evaluation can be conducted in the context of external quality control procedures such as External Audit review of information systems, quality assurance of teaching, compliance with ISO standards of other quality Kitemarks (e.g. COBIT, etc.)

It is clear that no institution will adopt all of the above and that there is a need to adopt the most appropriate framework for the task in hand.

The Benefits of ICT Investment Landscape Study (BILS) categorises the evaluation models listed above based on two differentiating factors:

- Evaluation Type. This describes the spectrum of methodologies that ranges from entirely quantitative in nature, to those that are entirely qualitative in nature
- Context. This describes the type of comparison that is made as part of the evaluation, and this ranges from an entirely internal comparison (where benefits are measured against internally-developed comparators such as targets or key performance indicators) to external comparisons, where results are measured against externally derived benchmarks

According to the BILS study, if these two differentiating factors are used as axes in a quadrant diagram, the individual evaluation methodologies can then be mapped as individual points (see Figure 1 below). While the list of Evaluation Methodologies included in this diagram is not exhaustive, this framework will accommodate any relevant methodology. It should be noted that this mapping is not an exact science, but is instead intended to show a relative positioning of the methodologies in relation to the two differentiating factors.

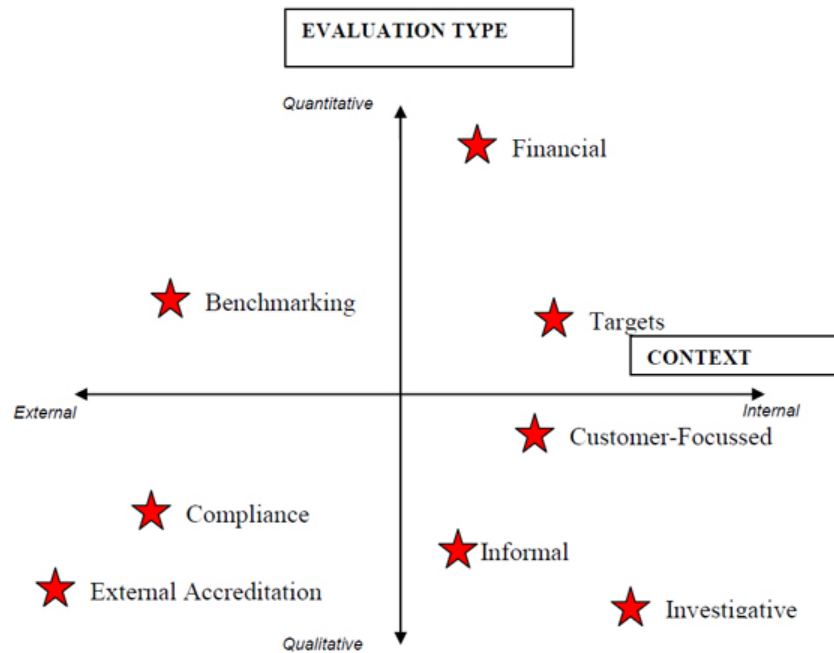


Figure 1 : Evaluation Framework - Taken from *Benefits of ICT Investment - Landscape Study (BILS¹⁰⁶)* conducted by the University of Strathclyde, 2008

The BILS study also suggests consideration of the following factors when choosing the most appropriate approach in a given context:

1. Type of Investment
2. Scale of Investment
3. Type of Benefit
4. Scope of Benefit
5. Complexity
6. Alignment
7. Availability of Comparison Data
8. Type of Decision
9. Institutional Culture

Monitoring Direction

When?

Having various means of monitoring progress against the objectives you have set for yourself, as explored in the previous section, is clearly essential. But the value of such activities is only realised if you remain confident that the objectives you have set out to achieve remain continue to be the right ones. In short: are you still heading in the right direction, or is it time to revisit the strategic direction you have set for yourself?

In previous stages of this resource it has been suggested that your vision statement should routinely be reviewed every 3-5 years 'or in the light of any major changes affecting your institution or the sector at large, such as a change in government or a radical change in government's strategic priorities'. The same advice holds true for the other component elements of your strategic documentation: your mission and values statement and the strategic plan itself.

However, given the more directional and applied nature of the strategic plan the advice given earlier in this infoKit is to adopt a 'multi-layered approach' with the plan receiving a major review and re-issue every three, four or five years but between these major reviews also incorporating a regular, often annual, process of review and more detailed planning to set the priorities for the year ahead and to keep the institution on track to achieving its goals.

Such regular, scheduled review processes should not, however, preclude immediate review and amendment where risks or issues are identified of such potential severity as to warrant an immediate change of strategic direction.

Who?

It is likely that the process of reviewing your main strategic documents is likely to be a task instigated and coordinated at a senior management level. Giving each such member not only responsibility for assessing the aspects of these plans which specifically relate to their own area of organisational responsibility, but also for particular themes which cut across the entire institution can help to ensure a more joined-up approach to the review process.

It is also suggested that, as with their original drafting and approval, that the review and any amendments required to these plans and statements should be an open and collaborative process, adopting many of the characteristics of the 'strategic conversation' outlined throughout this resource. Members of the Board of Governors also have an active role to play here as 'critical friends' so too, in a similar vein, representatives from funding or inspection bodies, contacts from local industry and research partners.

Monitoring Means

Having paused to reflect on whether your intended destination is the right one and how well you are progressing towards it, the last element required is to consider whether the way in which you are travelling is still fit for purpose. What is therefore required is a constant review of the effectiveness of the measures you have put in place to achieve your strategic objectives.

Further Education institutions will be well versed in the concept of annually reviewing the effectiveness of their leadership and management as part of sector-wide Self Assessment Reporting (SAR) which is submitted to the primary FE funder. Further information on this is available from the Ofsted website¹⁰⁷.

There is certainly much to be said for making the monitoring process a regular, annual one. For example, one university has an annual evaluative process owned by Faculties and reporting through the committee structure to arrive eventually at the Governors meeting for their approval; resulting in a feedback loop into next year's planning. In this manner the strategic aims are monitored from student/module level upwards on a pre-planned, annual basis.

Nor should we overlook the value of the external perspective. Whether it be from an independent external quality assessor or auditor, or as part of a peer-review process by representatives from another local institution; including the

¹⁰⁷ <http://www.ofsted.gov.uk/Ofsted-home/Forms-and-guidance/Browse-all-by/Education-and-skills/Learning-and-skills/Self-assessment-from-September-2009>

views of dispassionate, detached observers can add an extra dimension to your monitoring processes by pointing out the obvious and seeing through the fog of over-familiarity.

A Monitoring Checklist

To be effective, your monitoring activity must be comprehensive and include all the component parts of your strategic framework and its supporting processes. Although the specific areas that each institution will need to address will vary according to local practice the following checklist might prove a useful starting point.

If you are unable to answer each of the following with a confident 'yes' this may indicate that this particular aspect of your strategic processes is not currently operating as effectively as should be and is, at least, worthy of closer investigation.

Monitoring checklist

Stage 1: Identifying your mission, vision and values

Monitoring Progress	Monitoring Direction	Monitoring Means
Are our staff, students and stakeholders aware of our mission, vision and value statements and in broad agreement with them?	Is our mission statement still current, relevant and useful?	Have we reviewed our mission, vision and value statements within the last 3 years?
Does our website and other relevant promotional literature include the most up to date versions of our mission, vision and values statements?	Does our vision statement still describe a future for our institution that you wish to realise?	Have we consulted widely with staff, students and other stakeholders when reviewing our mission, vision and value statements?
Do staff recruitment, performance review and objective setting processes incorporate the contents of our mission, vision and value statements?	Does our vision statement still look 3-5 years into the future?	Have we disseminated the results of any changes to our mission, vision and value statements to the institution at large?
Is decision-making within our institution actively influenced by the contents of our mission, vision and value statements?	Do our values still describe what is important to our institution?	Have our mission, vision and value statements been officially approved by our Board of Governors or other appropriate governing body?
	Are we confident that no values need adding or removing to reflect the reality of how our organisation actually operates?	

Stage 2: Environment Scanning

Monitoring Progress	Monitoring Direction	Monitoring Means
<p>Is our risk register up to date?</p> <p>Do we currently face a low number of 'severe' risks?</p> <p>Are we faring well in comparison with our main competitors?</p> <p>Does our senior management team have the required balance of skills and experience?</p>	<p>Are we currently collecting information on the right things?</p> <p>Are we benchmarking ourselves against the right institutions?</p> <p>Are we planning for the right futures?</p>	<p>Do we have access to the information we need to make strategic decisions?</p> <p>Are we sufficiently aware of changes in the political, economic, social, technological, environmental and legal environment and what they may mean for our institution?</p> <p>Is the information we rely upon complete, accurate and up to date?</p> <p>Do we have an established framework for identifying, recording and assessing risks?</p> <p>Do we know enough about what our competitors are doing?</p> <p>Do we know enough about how our institution performs?</p> <p>Are we honest in our assessment of our faults?</p> <p>Do we assess the effectiveness of our senior management team?</p>

Stage 3: Managing Strategic Activity

Monitoring Progress	Monitoring Direction	Monitoring Means
<p>Are we currently on target to meet all the targets stated in our KPIs?</p>	<p>Are we measuring the right areas with our KPIs?</p>	<p>Are we happy with the frequency with which our strategic plan is both reviewed and reissued?</p>
<p>Are our Board of Governors happy with the rate of progress against our KPIs?</p>	<p>Have we set our KPI targets at the right level?</p>	<p>Is our strategic plan supported by a framework of policies and procedures which span all areas of the institution?</p>
<p>Are the programmes and projects which support our strategic objectives progressing according to schedule and within agreed tolerances?</p>	<p>Do we have the right portfolio of initiatives to meet our stated strategic objectives?</p>	<p>Do all the objectives stated in our strategic plan have a named owner?</p>
<p>Are staff and other stakeholders actively and willingly participating in our efforts to engage them in a 'strategic conversation'? (e.g. is attendance at workshops high? Are people adding comments to Management blogs? Are people contributing to wikis? Are our surveys drawing a good response rate?)</p>	<p>Do we encourage the right mix and number of stakeholders to be involved in discussions about strategic direction?</p>	<p>Have we consulted with relevant stakeholders when agreeing our KPIs?</p>
		<p>Do we regularly review progress against our KPIs?</p>
		<p>Are plans in place to address any 'amber' or 'red' indicators?</p>
		<p>Do we provide the means for senior managers to interpret the data themselves?</p>
		<p>Do we employ appropriate methodologies for managing our programmes and projects?</p>
		<p>Do we employ objectives techniques to effectively prioritise our activities?</p>
		<p>Do we include regular progress updates as part of appropriate management meetings?</p>
		<p>Do we make effective use of technology to consult and communicate with staff and other stakeholders?</p>

Stage 4: Monitoring

Monitoring Progress	Monitoring Direction	Monitoring Means
Is our monitoring activity current and up to date?	Are we happy with the way in which we monitor progress, direction and means?	Do we monitor the effectiveness of our monitoring activity?
Are our monitoring activities currently in line with our statutory requirements and agreed good practice?		Do we include external opinions in our monitoring activity?
Are our Board of Governors or other governing body happy with our monitoring activities?		Are the results of our monitoring activity considered and acted upon as part of the next round of our planning process?

Conclusion

That the final question in the monitoring checklist in the previous section asked '*Are the results of our monitoring activity considered and acted upon as part of the next round of our planning process?*' is no coincidence. For it is a question which succinctly links the last area of guidance offered in this resource with where it began. The process begins afresh, but is - crucially - informed by all that has been put in place and learned already; thus emphasising the interconnected status of all the stages and processes outlined in this infoKit.

The contribution that further and higher education sectors make to the advancement of knowledge, to the growth of the economy and to the cohesion of our society is immense. The reputation of our universities and colleges and the quality of the teaching and research they offer is rightly respected around the world. The future undoubtedly offers many challenges and quite conceivably many threats to that reputation and the many achievements it is based upon. Some of these challenges can be easily foreseen; others far less so. Indeed some may as yet be completely unknown to us today but may prove the most testing of them all.

'Forewarned is', as the old idiom states, "forearmed" and all institutions would be well advised to do all they can to predict possible futures and understand what impact they may have on them and to recognise the first signs that they are, indeed, coming to pass. Hence the prominence given within this resource to the notion of 'environment scanning'. But clearly there are limits to what we can hope to achieve in this regard. For despite our best efforts we have no crystal ball, no means of knowing what, exactly, lies ahead and when and how our institutions must deal with its consequences.

In such circumstances all that we can really hope to do is to ensure that our institutions are as well managed and well run as possible. If we have confidence in the direction we have set for ourselves and are assured of the quality, robustness and fitness for purpose of the mechanisms we have put in place to achieve our goals then we should be well placed to weather any storm; regardless of when or where it strikes.

The aim of this resource has not been to provide some kind of blueprint for how strategy must be defined and achieved. No, instead it is an attempt to encourage those responsible for setting or overseeing the strategic direction of their institution to review how their institution currently performs in this regard. If the answer to this question is 'perfectly well, thank you' so much the better. But even if it causes a small number of institutions to stop and reflect upon just one aspect of their current approach to strategic management and to think 'perhaps we could do it better' then it will have served its purpose: all the more so if you also find some element of the solution too amongst these pages.

"When used in its entirety for reviewing the core strategy of the college the kit becomes more than the sum of its parts and has helped significantly with team development."

**Rohan Slaughter, Head of
Technology, Beaumont College**

The institutional experience - Beaumont College

"The resulting strategy document we have created is more widely understood than it's predecessor. There is a higher degree of ownership and it will be more resonant within the parent organisation. It will be based on a broader understanding of risk than before and it will effectively guide future action. It will coordinate activity across the college in a more comprehensive way than if we had not followed the infoKit. The investment in two away days of focussed; concentrated activity has process benefits beyond the task, although it has revealed that there is still much work to be done to generate a truly effective leadership team."

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