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*WHELF/HEWIT Colloquium 2014*

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**Conference contribution :**

Williams, S. (2014). *The Well-known Solution: neat, plausible and wrong.* WHELF/HEWIT Colloquium 2014,

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Based on a talk given at the WHELF/HEWIT Colloquium 2014 at Gregynog Hall, Newtown, Wales.

**The well-known solution: neat, plausible and wrong**[1]

Steve Williams, Deputy Director Information Services and Systems, Swansea University[1].

**Abstract**

The title of this Colloquium, 'Rethinking the Future: satisfying staff and students in times of diminishing resources and rising expectations', challenges us to ask and reflect on unthinkable 'what if…' questions that frequently lead us into speculation, conjecture and disagreement. These may consider service development and expansion, what we might have to start, continue or stop doing and so on. Doing more with less is often stated as if it was the sole option, frequently referring to the breadth of services and support offered. Doing less with less, but doing it better, with more depth, is an alternative; but can be a significant organisational challenge. Our discussion today reflects on these types of questions and situations; the problems that we should address, but maybe too often we put off for more urgent, but less important issues.

We will consider why these 'problem situations' seem to be harder to deal with than everyday issues, and why their solutions are often elusive. What can we learn from these problems, these situations, and how do we avoid falling into the trap that Mencken identified[2].

Rittel and Webber, Ackoff, and Schön have classified these hard to solve problem as wicked, messes and swamps, and in various ways suggest that our approach to them needs to reflect their complex, dynamic and interconnected nature. Schön says that it is in these swampy lowlands that the truly interesting and valuable problems exist, and this is where we need to apply our effort in order to make a real difference. (Rittel and Webber, 1973; Ackoff, 1974; Schon, 1995)

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[2] "Explanations exist; they have existed for all time; there is always a well-known solution to every human problem — neat, plausible, and wrong." H. L. MENCKEN, "The Divine Afflatus," *A Mencken Chrestomathy,* chapter 25, p. 443 (1949)

**Acknowledgements**

**Introduction**

I think this talk should begin at the end. The point that I want to emphasize is that when we are driven by the needs of day-to-day busy-ness, when e-mails pile up on our electronic doormat, when answers are always urgently needed, and when there is a long, long list of tasks to navigate, it is hardly a surprise that we find it challenging to balance these pressures while also making progress in less concrete but more important activities. In the midst of this pressure, the counterintuitive but essential thing that we must find time to do is to step away from the mad rush to do things, and to consider what we each, as individuals, what we as a team, what we as an organisation could and should *best* spend our limited but valuable time doing today, tomorrow, and subsequently.

This stepping away is a real challenge, and it should not be underestimated that it can be hard; but we have the ability to *Choose our Voice*. By this I mean that we recognize i) that we have the ability to make choices in how we approach our work, and ii) that we can improve the choices we make by improving the way we make choices.

What we often find though, when we make this first choice, to step away from the day-to-day and make more strategic choices about what we spend our time doing, we often find that there are problems, or situations, where it is surprisingly difficult to make any choice or even any effective progress. These *problem situations* almost have a life of their own, and twist and turn as we grapple with them. As we learn more about them it becomes harder, rather than easier, to come to any firm decision. At this stage, unfortunately, human nature dictates that faced with such intractability, we mere mortals often resort to the well tried and tested method of putting our head in the sand saying that we will come back to the problem later. Later becomes even later and suddenly the problem becomes urgent, we have to make a decision, and we still don't know what to do.

This talk is about facing up to being strategic, and through reflection and practice reducing the wrongness of decision-making; it is about not making assumptions, and about being aware of what we don't know, rather than the 'little' that we do know. Mencken's words, abused as the title of this talk, remind us to consider carefully as we become aware of other people's problem situations how much we really know about the situation they are dealing with; have we walked a mile in their shoes?

It is only through stepping away, through thinking, planning and starting over, through listening and understanding, that we make progress. If we do not do this, if we continue as we are, it will simply get busier and busier, the list of things to do will get longer and longer, and the quality of the choices and decisions we make will suffer as a result.

To set the scene of this talk around library strategy, we'll use four reports on libraries from 2007 to 2012 to help us explore the situation for discussion. We are considering here strategic planning in library services. I should emphasize that in the following literature I am deliberately picking on the more challenging areas within the reports – simply as we learn from these challenges – from the things that our user community say we are not doing, or doing poorly.

**Library Reports**

In 2007 New York University published the report of their 21st Century Library Project (Marcus et al., 2007) - which aimed to create a vision of the NYU Research Library of the Future. From their interviews with faculty and graduate students they focused on a few key themes:

- Access to Information
    - Interviewees value convenience, special collections and access without restrictions despite highly personalised and often idiosyncratic research needs and interests
    - Physical books are insufficient to support changing expectations of users
    - Many users do not take advantage of the library's full array of services, and would benefit from additional expertise
    - The librarian as mediator of information overload
- Physical and Virtual Space for contemplation and research
    - Library as 'place' for gathering knowledge and for contemplation
    - Supporting the creation and dissemination of scholarly work
    - Supporting collaboration and sharing
- The Library as Gateway
    - Discovery and serendipity
    - Independence and idiosyncrasy

- o Library transparency and seamlessness (what comes from the library and what does not – single sign on/authentication)
- o Social interconnectivity, scholarship and technological innovation

(Ibid.)

While these are ideas we might expect to find and consider, the discussion they create around creativity, serendipity, social interaction and the library as the hub of this activity was, and I would suggest still is, a challenge for most libraries. While we may achieve it for our undergraduate students – how about our graduate students, how about our scholarly staff or our visitors?

In 2008 the Council for Library and Information Research published a highly interesting series of essays, and the proceedings of a 'lively and informed' symposium in *No Brief Candle: Reconceiving Research Libraries for the 21$^{st}$ Century*. (CLIR, 2008) In the report, Paul Courant's essay *The Future of the Library in the Research University* defines the library mission as:

> The library provides essential infrastructure—largely in the form of reliable and well-documented access to prior scholarship, data, the cultural record, and other research materials—that is necessary to the effective practice of scholarship. (p.21)

This report and a number of the essays within it are not for the faint hearted. The library, and librarian, will not survive unless they reskill, upskill, align work with the university and library mission, engage with faculty, manage data, mine data, do web 2.0, web 3.0, digital curation, data cataloguing and hence become mammothly multi-skilled.

Daphnee Rentfrow says

> Faculty … are the single greatest challenge facing the modern research and academic library. Without faculty support and understanding and without their regular collaboration with librarians, the research library will not survive. (p.60)

Let us come back across the turbulent and stormy Atlantic and in 2011 a Research Information Network (RIN) and British Library (BL) report on information handling in collaborative research (Research Information Network, 2011) supports aspects of Rentfrow's claims, saying (among many other things):

- Overall, there was limited awareness of the full range of services provided by library and information services within universities, and very little usage beyond accessing online journals. (p.6)
- Most researchers did not seek out support from libraries, and librarians were not trying to engage with researchers working in these collaborative projects. (p.6)

In 2012 Research Libraries UK (RLUK) commissioned a report by Mary Auckland entitled Re-skilling for Research. (Auckland, 2012) The overall story the report tells is a mixed one, covering concern about researchers bypassing the library entirely (p.77), the need of researchers for data management support but the existence of skills gaps in librarians to provide this (p.78), and a rather long list of the possible skills required by librarians in the future elicited from a survey of library directors and library staff. This ranges from traditional library duties such as cataloguing and subject support to providing support for research funding, data mining, data manipulation, web 2.0 and mobile technologies. (Table 1, p.100).

**Library Strategic Planning**

The issue, really, for us today, is how do we take even this fraction of the literature, add in the rest of the relevant substantial literature, add in the Higher Education funding challenge, the Welsh Government agenda, student experience needs, the Research Excellence Framework, research funding, open access, information literacy… and so on and so on and in the end devise a strategic plan that is meaningful?

This complexity, our partial knowledge, too many facets to the situation applies equally to strategy making, to team workloads and to personal prioritisation; dealing with e-mail or strategic work – or doing both and ignoring the kids… It feels like there should be an answer; that this should not be that hard to resolve, but the fact is that in many, if not all, of these situations there is no single right answer.

In searching for the 'right' answer we do two things i) we keep looking for the right answer and because we don't know what the answer looks like – we don't do anything and ii) we worry that we can't seem to manage this uncertainty without an answer, and spend more and more time and energy looking for this elusive answer.

So, in an academic environment, let us stand on the shoulders of giants for a while.

**Wicked Problems**

In 1973 Horst Rittel and Melvin Webber published *Dilemmas in a General Theory of Planning* (Rittel and Webber, 1973) and this seminal paper discusses the complexities of planning – recognising the multiple worldviews, perceptions, aims that everyone involved in complex, adaptive systems brings to the table. The paper considers:

- Goal Formulation
- Problem Definition
- Planning Problems are Wicked Problems
    o The kinds of problems that planners deal with—societal problems—are inherently different from the problems that scientists and perhaps some classes of engineers deal with. Planning problems are inherently wicked.

(Ibid.)

What do they mean by this and how do we recognise wicked problems?

Tame or simple problems are categorized by having the following conditions:

- a well-defined and stable problem statement
- a definite stopping point
- they can be evaluated as being right or wrong
- they belong to a class of similar problems

(Ibid.)

Note that tame or simple problems can be horribly complex – many large construction projects most of us might consider to be wicked problems, but the remarkable capabilities of today's construction scheduling and project management makes these problems complex, but relatively tame[3].

The paper also proposes a set of criteria for wicked problems, including:

- They have no definite formulation
- They tend to not have endings
- Solutions are often better or worse rather than right or wrong
- there is little or no opportunity to learn by trial-and-error
- Each wicked problem is essentially unique

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[3] Within any given tame problem there can hide wicked problems that if not resolved can derail the tame solution entirely.

- A wicked problem can be considered to be a symptom of another wicked problem
- The causes of a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution

(Ibid.)

Why is this important? One way of looking at this could be to recognise that:

Doing things right = Tactical thinking

Doing the right things = Strategic thinking

Which one is easier?

Strategic thinking, planning for the future, whether for an individual or an organisation is hard – because it takes more effort than sitting and dealing with e-mails, a desk full of papers, the phone, twitter, reading blogs and everything else that takes up our time.

In his article *The new scholarship requires a new epistemology*, Donald Schon describes the dilemma of rigour or relevance:

In the varied topography of professional practice, there is a high, hard ground overlooking a swamp.

On the high ground, manageable problems lend themselves to solution through the use of research based theory and technique. In the swampy lowlands, problems are messy and confusing and incapable of technical solution. The irony of this situation is that the problems of the high ground tend to be relatively unimportant to individuals or society at large, however great their technical interest may be, while in the swamp lie the problems of greatest human concern.

The practitioner is confronted with a choice. Shall he remain on the high ground where he can solve relatively unimportant problems according to his standards of rigor, or shall he descend to the swamp of important problems where he cannot be rigorous in any way he knows how to describe.

(Schon, 1995)

We might also consider, if we prefer the heights to the swampy lowlands, evolutionary biology's concept of the fitness landscape. Here we can imagine standing in a three

dimensional landscape of mountains and valleys, green lush grass, woodland, rivers and meadows; but the mist has come down and we can only see the nearby low ground and everything else is obscured. In the fitness landscape the highest territory identifies our 'best fit', and for different species those peaks in the landscape will be located in different places. We therefore strive to find the territory with the best fit for us, where we can do most good and lead the best life by seeking the higher ground – how do we do this?

Imagine you are dropped by parachute into the top landscape shown in Figure 1. You can be blindfolded or imagine it is misty. How do you find the higher ground? Even blindfolded you 'simply' go up. You follow the slope upwards – until it goes up no more and each direction then goes down. Our analogy here is that we strive to get better at doing something – to go up in the landscape.

If you are in the upper image in Figure 1, below, that works. What if you are in a more complex environment where there are multiple competing priorities and pressures? What if you are dropped into the lower landscape in Figure 1 below?
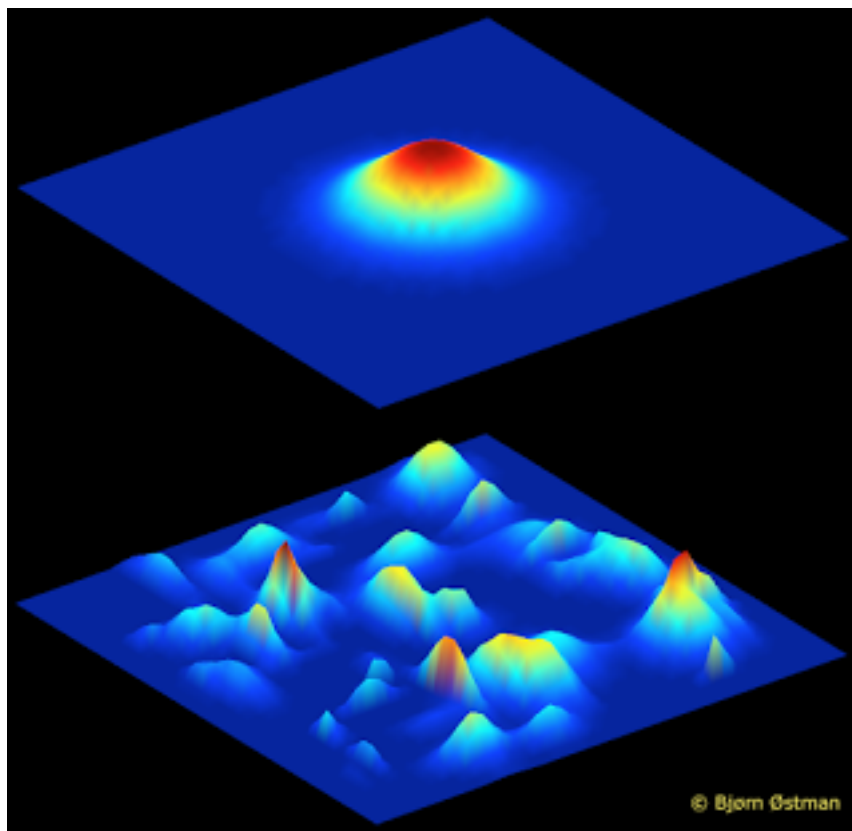


Figure 1: Fitness Landscapes by Bjørn Østman, reproduced with permission

In the lower landscape without knowing the territory and where you are, after you have climbed upwards until all the ground around you slopes down, how do you know if you are at the highest peak or at a local, lower peak within the overall landscape?

Tactically you have done the right thing by going up, but thinking strategically asks for more; it ask us to consider whether we might need to step back, to understand the landscape better and then decide whether we might have to go down the slope before climbing back up to a higher peak.

T.S. Eliot, in Little Gidding, sums this up:

> We shall not cease from exploration
> And the end of all our exploring
> Will be to arrive where we started
> And know the place for the first time.

Wicked problems need us to spend time reflecting on, and exploring, where we are in the landscape, or the swamp, exploring the territory around us and finally, when we understand as best we can, making decisions about where we want to go and about the route we take to get there.

Most hill walkers will be familiar with the false summit – as you approach what you think is the summit, suddenly the vista opens up as you see over or around it, and you realise that this was just blocking your view of the actual summit that is higher up and farther away than you thought. The fitness landscape takes this a step further – it may turn out, when the mist finally lifts, that we may have been climbing the wrong hill altogether[4].

**Tackling Problem Situations**

Recognising a wicked problem is one part of the story – dealing with it is another. How do we get from a false peak in the fitness landscape to another, higher peak? How do we navigate through the swamp?

I would say that there are two issues here:

1) The quality of our actions are based on the quality of the thinking that goes into formulating those actions

2) Knowing what to do when we don't know what to do.

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[4] *Who Moved My Cheese* by Spencer Johnson is an entertaining but serious look at this issue.

In a manager's toolbox there are usually information gathering and problem solving methods that have been learnt over time. These can be brought out and applied to the problem at hand, and in the first case it may 'simply' be that this is a time management issue: we must set aside enough, undistracted, high-quality time to address these problems with the consideration that they require and deserve. In this case there are are a number of well-known methodologies, journey and cycle based, that will help us work through the process – almost all of them require the basic steps of: information gathering, planning, implementation, review.

However it may also be in the second case that there is no suitable tool in hand to address the current problem. Or what seemed tractable and manageable has had another dimension added to it that takes it out of our comfort zone. Tackling these problems almost always involves structured, systematic and often systemic approaches. These are not usually overnight problems to solve, but like playing the piano, we improve with practice and time spent learning to play new and different pieces.

A respected colleague of mine, who also is a very good musician, brought this into sharp focus when he talked about the steps required in learning to play an instrument. It is necessary to separate practice from playing, he said, and I have thought about this a lot ever since. Playing is what we do to enjoy what we can do. Practice is hard work, striving for perfection in areas in which we are far from perfect. Practice should be hard, it can hurt, it takes time we often don't want to give it. At the end of it though, the reward is that we can 'just' play – for enjoyment in whatever way we please.

As a rule managers and leaders often have two main competing threads in their work, their professional speciality area, and leading and managing a team or service. After becoming leaders or managers they will often maintain their speciality area through self-development or in a similar way to as before. However they also now have a new area of professional practice – that of leading and managing – and in some cases are new to this area. *Being* a manager and leader takes the same effort as being a specialist – or more. But time is usually squeezed by specialist learning and work and through the busy-ness of being a manager and leader rather than in developing the leadership and management skills and role.

This comes back to the point we started with – it is hard to carve out time to improve our professional practice in complex areas – and wicked problems are definitely areas that need

practice and time to be devoted to them. Avoiding them, not experimenting with different approaches, not exploring the literature, not expanding a toolbox of approaches, will almost certainly lead to further frustration and a poorer decision making process.

Now we begin to stray into areas that are highly individualistic. What works for me will almost certainly not work in the same way for you, but there are certain ideas and approaches that might help us each add new facets, viewpoints and approaches to our armoury. My usual approach to these problem involves two aspects: ruthlessly carving out time to work on them, and using a mix of methodologies, including visual (see Appendix 1 for some examples) and text-based (hermeneutic) approaches.

In managing or facing problem situations the importance of methodology can easily be overlooked. Methodology to some is a scary area of research practice, however all it is asking us to do is to approach a problem in a structured way and to consider how we are going to approach the problem before we approach it. Methodology is almost always iterative – what we set out to do initially may need to be adapted or radically altered based on our experience. Methodology emphasises understanding both a problem and our approach to the problem; as opposed to some tickbox approaches that suggest if you follow 'this checklist' the outcome will be everything you want and all your problems will be solved.

If we take one common challenge when facing a problem, it is often difficult to decide what is inside or outside a problem situation. This can manifest itself as scope creep, where a problem gets bigger and bigger and is never resolved, and also causes us to bury our head in the sand to ignore particularly challenging aspects of a problem. This 'problem boundary' is explored in depth by Werner Ulrich's Critical Systems Heuristics (Ulrich, 2005) which proposes a series of 12 questions designed to elicit: those involved in a situation; those who have power in a situation; those who will be affected by the situation but are not represented in the discussions about it; and experts on the situation. This kind of systemic approach allows us to explicitly manage the boundary of the problem situation and, importantly, to be aware of the potential consequences of decisions to include or exclude certain aspects of the situation and those involved in it.

Whatever methodology we choose to deploy, it will likely involve a set of methods or techniques that we may often use without thinking about them as part of a wider

methodological approach. These may be: workshops, focus groups, surveys, interviews, writing, diagramming, and so on.

These methods will fit into the overall methodology that will almost certainly involve stages such as:

- defining – the boundary of the problem, those involved, those that should be involved. Writing a 'statement of the problem' can be surprisingly helpful to clarify exactly what it is we are trying to achieve.
- listening – to participants to gather information. This is often through an exchange of ideas and thoughts among the participants working within the problem situation, rather than a set of interviews with individuals; but both approaches can be useful.
- understanding – deep reflection on the overall situation and the points of view of participants. This may be informed by the literature available on the area and it may indicate where further information needs to be gathered before progressing. This stage usually involves some significant analysis, writing and diagramming.
- planning – considering how to change the situation towards a range of preferred outcomes
- testing – the plans with participants, the implementation and the outcomes. 'Pilot' activities can be useful in areas where that is possible.
- implementing – making changes. This stage usually is always more work than expected and is often skimped. Communication, engagement, participation are all key. Change is difficult for some more than others.
- reflecting – how well did the process work, what might need further improvement, did the methodology help or does it need changing as well?

Most approaches or methodologies, will usually involve each of these stages in one way or another, but be prepared to jump back and fore between sections. Our understanding of a situation is always imperfect, and flexibility *within the methodology* is important throughout the process. Always be prepared to crowd-source ideas from participants, colleagues, the wider community, everywhere you can find someone to talk to. When you are deeply studying a problem situation, help can often come from a chance discussion with someone in an unrelated field.

**Final Thoughts**

There is no single 'right' way to approach a wicked problem, but there is a wrong way and that is to ignore it. The literature is full of problem solving approaches that can be used and adapted to individual circumstances, but none of this will happen without the will to do something and without taking time to do it.

Leading and managing is, like playing the piano, something that requires practice; refreshing and challenging ourselves to do better. We started at the end: taking time out to step back and do these things. Maybe we should end at the beginning: pick a problem situation and start work on it today.

> "My fingers," said Elizabeth, "do not move over this instrument in the masterly manner which I see so many women's do. They have not the same force or rapidity, and do not produce the same expression. But then I have always supposed it to be my own fault—because I would not take the trouble of practising."
>
> Jane Austin, *Pride and Prejudice*

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**Appendix 1: Diagramming**

Freehand drawing allows easy and quick expression and analysis of situations, the environment and participants. There are many different types of diagram that may help in any situation. The ones shown below are mostly relatively high-level views of situations that have been transferred to a more formal diagram for clarity. Scraps of paper and backs of envelopes are often better. Whiteboards are your friend.

One of the simplest diagrams is an Input-Output diagram as shown in Figure 2 below. Here we explore the black box that in this case is the library and consider what resources and inputs we have to the library, from staff and students to budgets and information resources.
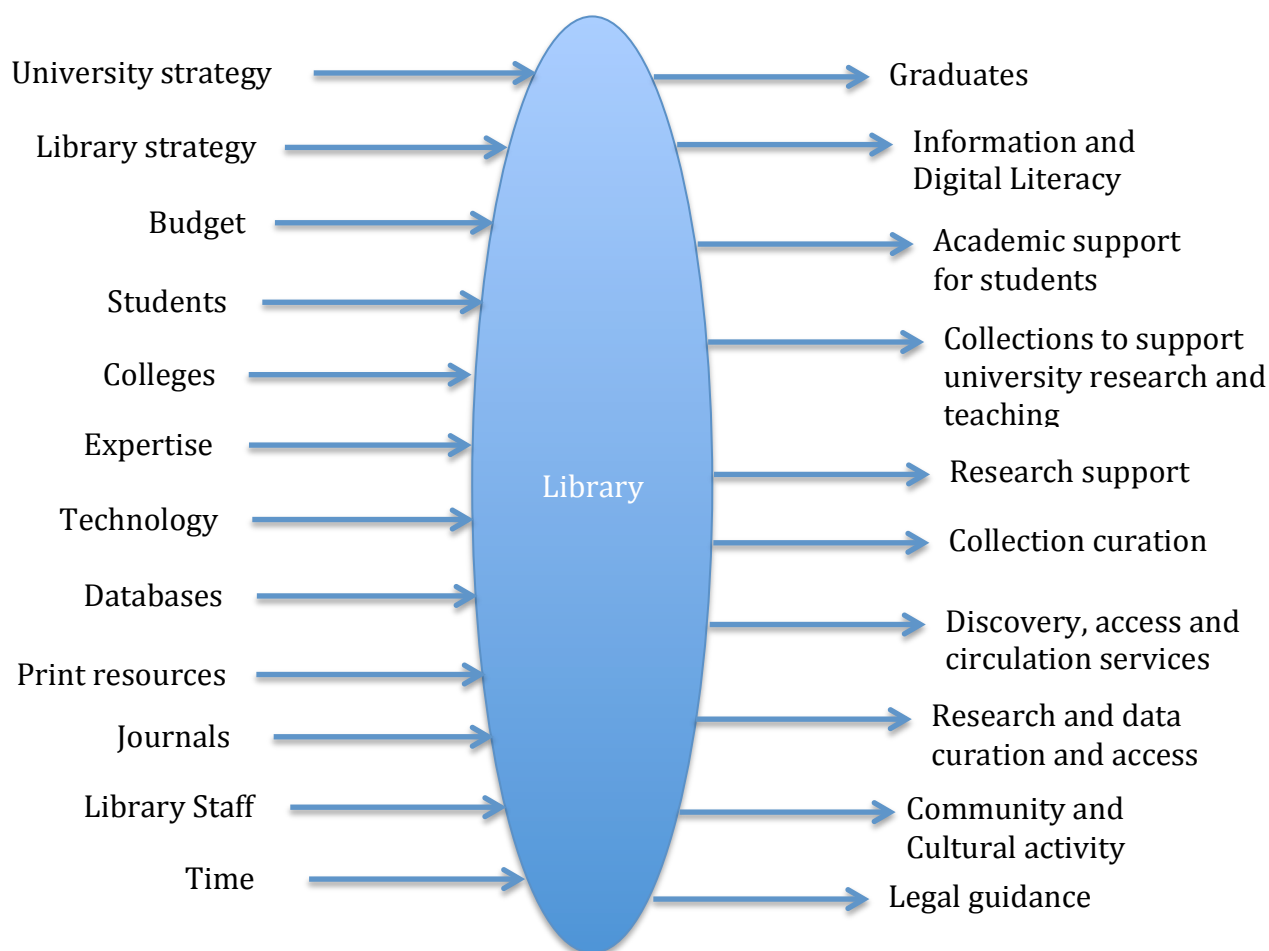
**Figure 2: Input Output Diagram of the 'Library'**

To help consider who, or what, we might want to involve in a project or activity, or to help understand the environment of a particular situation, a relational diagram can be used, as shown in Figure 3 below. Whether about stakeholders, resources or other aspects of the

situation, the diagram encourages thought about who or what is needed, included or excluded, accidentally or deliberately, from the activity.
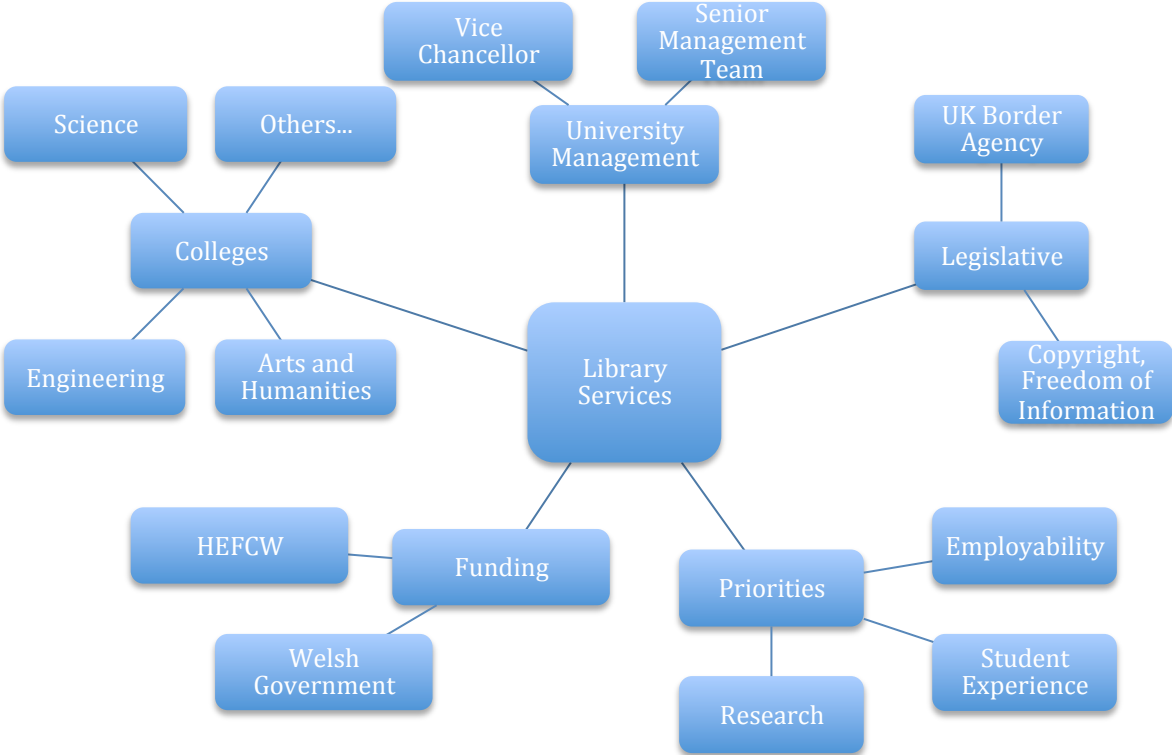


**Figure 3: A Relational Diagram of some things that affect library services**

As shown below in Figure 4, a more detailed process model can be used to drill further into activities within a specific area.
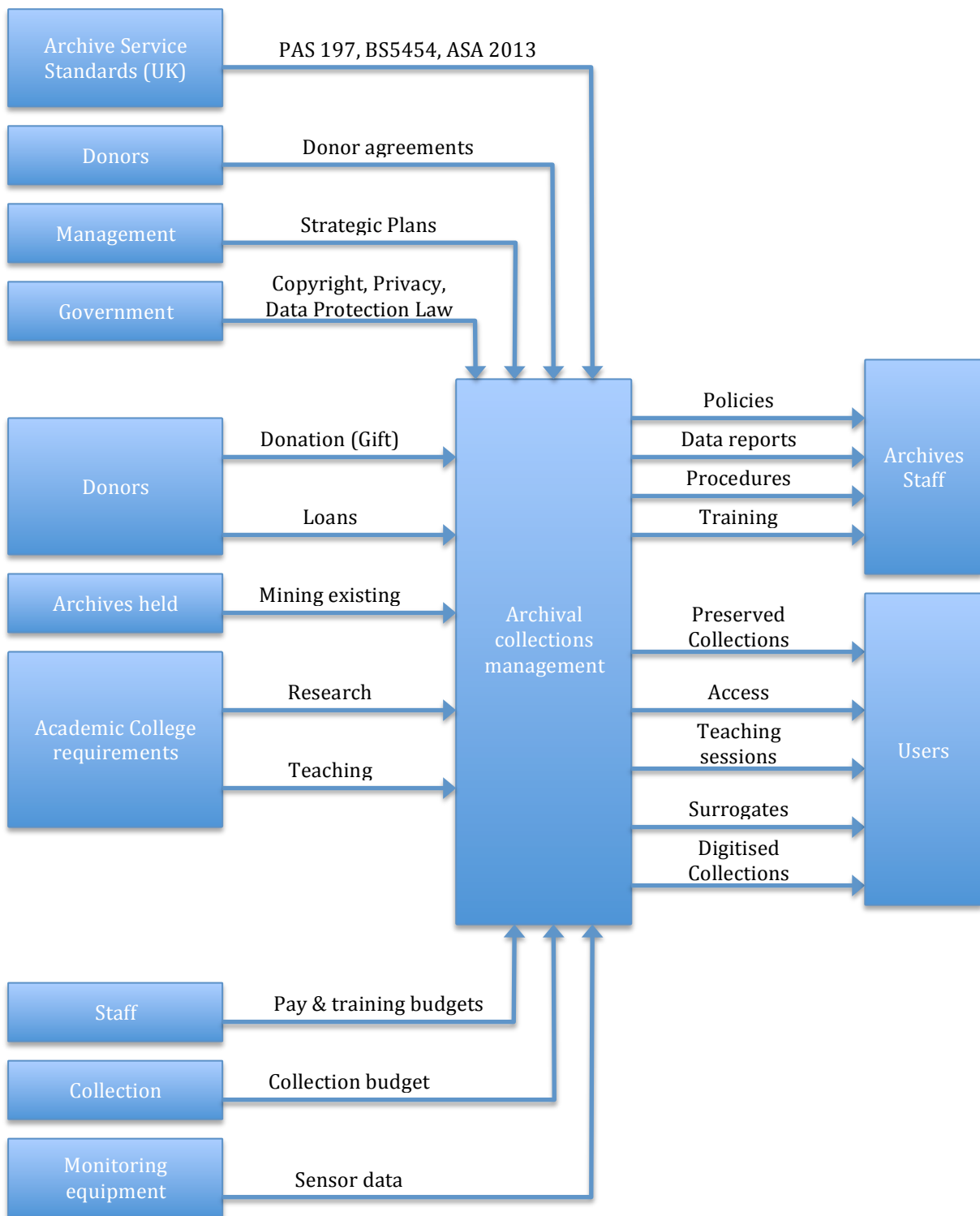
**Figure 4: A Process Model of Archives Collections Management (BSI Standards, 1992)**

When we get to the stage of considering the implementation of changes, sometimes a Force Field Analysis can be useful. Change can be challenging and the FFA, as shown in Figure 5 below, asks us to consider the areas of greatest and least resistance. That can lead us into considering what change is culturally feasible at any point in time, and whether to focus on easier areas of change sooner with the hope to bring along other areas later once momentum has built up.

The diagram below is built from contrasting impelling (on the left) and impeding (right) forces, ranging in strength from high to low (top to bottom of the diagram). Again the purpose of drawing the diagram is not to have a diagram, but to listen, to understand and to predict what areas will be more or less challenging.
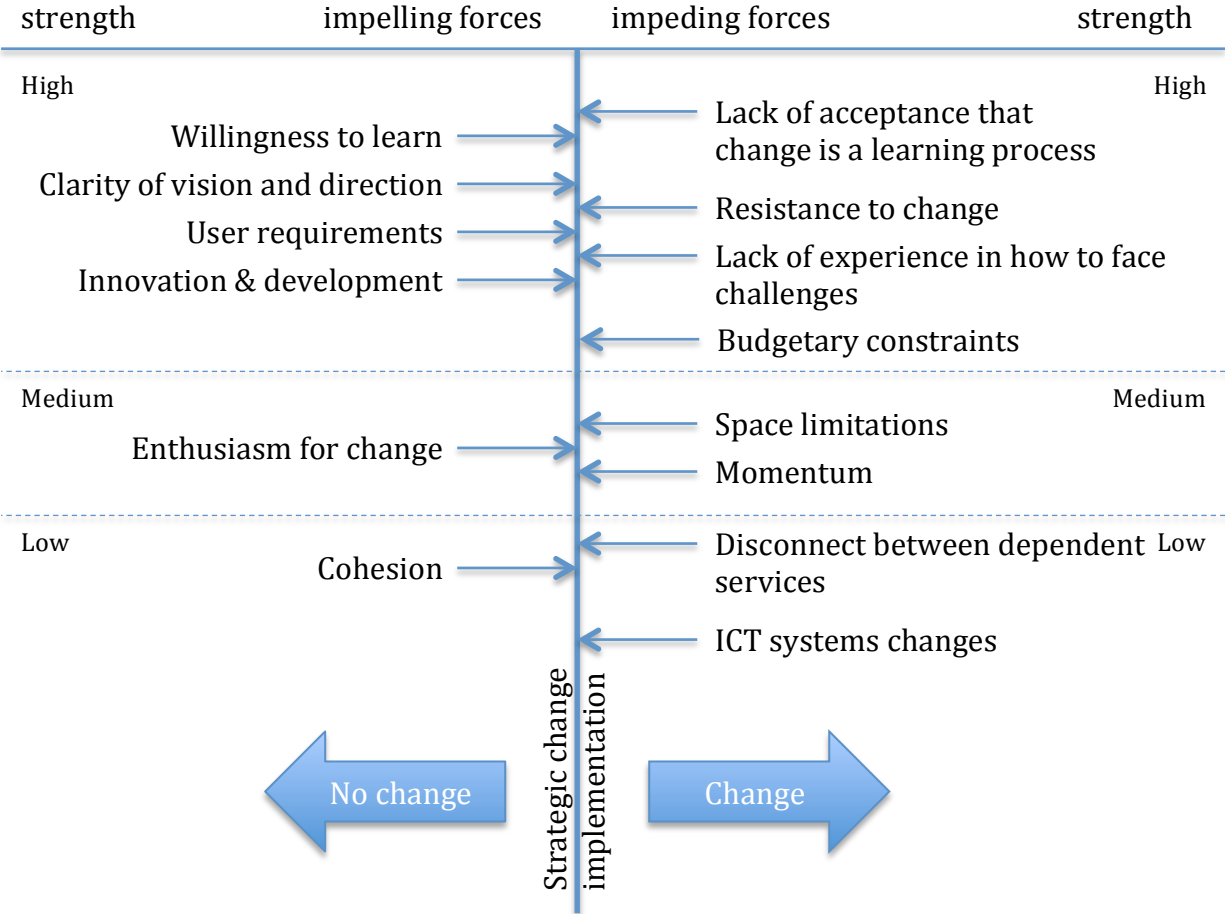


**Figure 5: Force Field Analysis or T Diagram**