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# Vision and Strategic Information Systems Planning in the UK HE Sector

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## ABSTRACT

Strategic Information System Planning (SISP) is a well-established practice for securing the effective implementation of innovative information systems and technology. There is little in the literature about how vision is related to SISP so this study examines practice in the UK higher education sector where vision statements are regularly constructed in relation to planning cycles. The nature of corporate vision is contrasted with that of organizing vision about IS innovations within the community of IS practitioners. Interpretation of qualitative interviews illustrates how strategic vision, generated in inter-organisational groups by intermediating institutions for the whole sector, requires translation into the university's corporate plan. Understanding the relationship between the organizing vision and the corporate vision process is shown through interviews to be necessary for information system innovations to be implemented in accord with the culture and resources of a university's mission group. IS capability and leadership are required to relate organizing vision to corporate vision. Based on empirical data, the author proposes extensions to SISP to facilitate the effective relationship between organizing vision and corporate vision.

**Keywords: SISP, Strategic Information Systems Planning, Innovation, Organizing Vision, Intermediating Institutions, HE Sector**

## **Introduction**

There is scant research on strategic information systems planning (SISP) in public sector or not-for-profit organizations, and Ballantine & Campbell in (Heeks, 2002) declared that the SISP approach is inappropriate for use in government and public services. However, in the UK public service sector information systems (IS) implementations are heavily planned and in higher education planning cultures exist to expedite central government funds. Without some form of vision in doing SISP, UK publicly endowed institutions will not make the best use of new technologies and IS resources. This paper derives from a larger study with the central research question' *“How do IST Managers in UK universities undertake IS planning and how does their practice relate to models about strategic planning and the vision for use of IS in the HE sector as a whole”* There are two focal questions dealt with in this paper: (i) when and why is vision important in SISP practice and (ii) what are the mediating effects of professional communities and formal bodies on SISP practice.

Literature surveys highlight the development of higher education institutions (HEIs) and the relevance of theoretical models about (SISP) and organizing vision discourse about IS innovation to that development. The research methods involve outlining a whole sector view based on (i) a qualitative analysis of the practitioner perspectives about doing SISP and (ii) an analysis of how organizing vision is enacted within the intermediating institutions of the HE sector. The implications of this view are discussed in relation to particular themes in the literature.

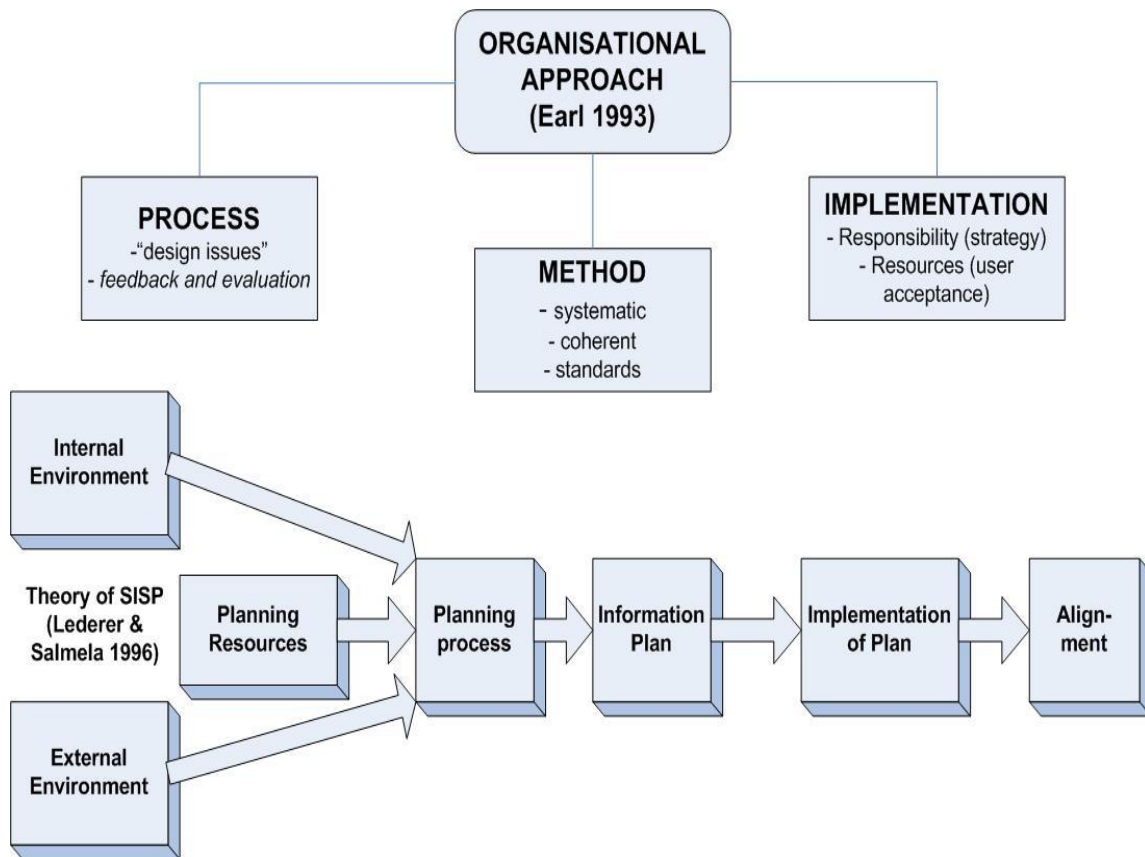
## **University Cultures**

Universities are highly complex organizations formed by different charters within mission groups. They are involved in creating knowledge and business value in an increasingly complex and changing world (Allen & Wilson, 1996, Bargh et al., 1996, Ackroyd & Ackroyd, 1999). Following a government report (Robbins, 1963), two related institutional forces emerged: (i) *marketization*, in which inter-institutional competition for student numbers (MASN) increased and (ii) *massification*, a compartmentalisation of university missions serving political ends. Marketisation invoked competitive values and massification moulded organisational culture and complexity. As universities became more business-like, strategic reorganisations impacted on IT services which had to provide secure management frameworks but also enable innovation in the organisation.

## **Relevance of SISP to UK Universities**

Early SISP thinking (King & Cleland, 1975, King, 1978) was explicated formally as a linear approach to planning (Premkumar & King, 1994, Lederer & Salmela, 1996) (*Figure 1*). An alternate holistic view of the dimensions of SISP (Earl, 1993) conceived the interaction between method, process and implementation of plans in five approaches: business led, method driven, administrative, technological and organisational. The organisational approach would use any fitting method or device, put resources into managing process and keep focus during implementation.

**Figure 1 SISP Theories**



Critical reviews identified a lack of systems thinking about feedback, organisational learning and the effects of power (Baker, 1995, Horton, 2003). Frameworks for effective alignment of IT with the business such as the process-dimensions of SISP were elucidated and tested (Segars et al., 1998, Doherty et al., 1999, Grover & Segars, 2005). In the context of higher education, it was noted that “*a simple-minded transfer of experience in strategic information systems planning from the private sector to the universities will not serve the goal of the institutions.*” and that information strategy was enacted according to different organizational ethos (Allen & Wilson, 1996). The core of SISP, the Information Strategy, was seen as vital to Universities being successful in their mission and delivering value to students and funding agencies. SISP concepts have since evolved: “*SISP is more*

*than a narrow methodology or sequence of steps. It is a complex set of organizational activities that can be characterised by a number of process characteristics, which form an evolutionary pattern as they change as a firm's experience grows in adapting to a changing environment and technological base.” (Grover & Segars, 2005) .*

The HE sector is interesting in that member institutions do not have all the internal information systems & technology (IST) resources to respond to change and are reliant on services provided for the sector as a whole such as the joint academic network (JANET) funded by the joint information systems committee (JISC), or must work together with external suppliers to develop new systems. Traditional SISP studies have been private sector focussed where planning quickly and attending to the efficiency and effectiveness of the process are paramount. In the HE sector, planning and decision-making is greatly influenced through communities of practice and intermediating bodies and different views on strategic vision will be obtained through sharing knowledge in practice. Vision has inside and outside perspectives: the corporate vision (Meadows & O'Brien, 2006, O'Brien & Meadows, 2000), which is translated within institutions is contrasted with the 'organizing vision' (Swanson & Ramiller, 1997) that innovations bring from outside the institution.

### **The Organizing Vision Concept**

An organizing vision (OV) (Swanson & Ramiller, 1997) is the product of what an inter-organizational community does to make sense of an IS innovation as an organizational opportunity. Specifically, “*an organizing vision is a focal community idea for the application of information technology in organisations*” and, insofar as an IS innovation changes work practices, its OV discourse can be understood to be instantiated in organisational structure and processes (*see Figure 2*). The community is a complex of organisations and within its heterogeneous network of relationships, new organizing

visions are first interpreted then legitimised and mobilised. In addition to this staging of action, the discourse is layered in that there are ‘practical activities and objects’ at the level of technology which through ‘social structure’, the network of relationships are formed by the OV discourse as an ‘interpretive discursive activity’ which is served by cultural-linguistic resources employed by the IS practitioner sub-culture and the business problematic .

There are several institutional forces shaping the enactment of an OV. First, through *community discourse*, an OV exists because a group of actors agrees it does and name it e.g. business process re-engineering (BPR) or application service providers (ASP) (Currie, 2004). It is talked about in the language of different practitioners and its growth may be reflected in publications about it, or buzz words. Second, in relation to ‘commerce’ vendor groups, purchasing consortiums or standards committees may seek to control or dominate the vision while others may ‘trade on its interpretive flexibility’. Through this interpretation it is legitimated groups agree roles and practices for the technology. The more it is talked about the more refined the organizing vision of the technology; the socialising of this knowledge through the network of relationships begins the process of legitimising the new instances of the technology.

Figure 2 The Organizing Vision Discourse



Adapted from Swanson & Ramiller (1997)

Third, the *IS practitioner sub-culture*, whose tradition of practice is affected most directly by the OV, intervenes and arbitrates what makes sense about new organizing vision. Fourth, the OV discourse is defined by shared concerns and its efficiency, reliability and productivity is contested and shaped by the local *business problematic*. Fifth, as the OV is applied, different artefacts in the *core technology* and practices about it will differentiate the application. A “relentless technology push” challenges the IS practitioner sub-culture and others involved in the business problematic to make sense of an OV which may actually preclude the uptake of the core technology altogether. Sixth, adoption of the OV involves a formative shaping in its early stages, which will likely determine whether its innovation will succeed and persist. As the innovation is diffused,



its OV is shaped reciprocally by pragmatic tests of its validity in different instances. For example, community members may buy 'best of breed' IS applications but tailor these to local needs. The OV is said to have a particular history or 'career dynamic': an OV may be collectively forgotten either by becoming institutionalised or abandoned.

### **Sharing vision about IS in the UK HE sector**

UK universities have brand and identity in a financially tightly regulated mission group but look out to an internationally open quasi-market. The HE sector is connected in a network of alliances (UCISA, JISC) and interest groups like the Russell Universities IT Group (RUGIT) which reference other formal bodies and consultancies. Universities are also influenced by various other intermediating institutions, such as HEFCE and the regional development agencies (RDAs) which may act in a regulatory manner. All of these agencies may contribute something to strategic IS planning within institutions and within the sector as a whole.

Allen & Wilson (1996) observed that implementation of IS strategies can reinforce existing structures slowly and inefficiently. As HEIs build consensus by democratic committee structure, alignment of strategies and competitive advantage are constructed in a different manner than in profit making industries. Strategy formulation affects organisational structure and stakeholders intensely and IT services can be centralised, distributed or outsourced with some academic and service departments taking their own initiatives with respect to central institutional concerns (Huotari & Wilson, 2001). Corporate constraints on innovation regarding security of intellectual property and management information mean issues and concerns need to be addressed early in planned IS projects (Doherty & Fulford, 2006). HEIs seek autonomy and distinctiveness and internal political tensions may hinder the methodological, technological and

administrative approaches to SISP meaning a business-led approach may hold sway over an organisational approach (Earl, 1993). Allen & Wilson (1996) observed that where SISP involves managing change in universities, the same stakeholders that articulated strategy were typically involved in its implementation, a condition recommended for the organisational approach (Earl *ibid*).

In the late 1980s there had been an effort to promote the widespread development of improved management and administrative computing systems in universities. The development of a unified system for administrative computing in a new market (the metropolitan area computing (MAC) initiative) met an early demise by 1995 as it did not fit the business needs of all universities. Subsequently, the JISC was focussed on funding academic computing the distributed national electronic resource (Griffiths, 2003) and virtual learning environments (VLE) (Markland, 2003). JISC best practice guides were produced on information strategy to form a 'managed learning environment' linking VLEs to core administrative systems.

(Allen & Fifield, 1999) examined the difficulties of implementing BPR in HE institutions and (Fowler & Gilfillan, 2003) studied cases of enterprise resource planning (ERP) implementations finding that SAP R/3 implementations lacked organisational change management, did not fit with university's formal committee structure and project objectives were not linked to organizational strategy. BPR was thought too radical for universities such that change management strategies should incremental or 'organic'. Other writers were concerned with how enterprise resource planning systems (ERP) can change the shape of universities (Pollock & Cornford, 2004) and conceptualised the ERP implementation as a struggle between customisation and accepting the default values of purchased software.

(Allen & Wilson, 2003) analysed the trust relationships between different levels and groups of management in HEIs. The observed lack of trust between professional service leaders and the senior management team (SMT) such that the managerial system 'excludes professionals from the decision-making process' and in return 'professionals feel SMT has insufficient expertise'. In this context, an analysis of practitioner perspectives on sharing vision about IS within the university and throughout the whole sector is timely and relevant to other public services.

## **Research Methods**

In order to address the research questions, qualitative research with an interpretive methodology was chosen. The research design was conceived as a multi-case study of HEI SISP practices plus a single case study of the professional associations and formal bodies intermediating strategic vision and IS planning in the whole sector. Two kinds of middle-range theory were alternated to understand practitioner perspectives on vision and strategic planning of information systems (Weick, 1989, Johnson et al., 2007). Data collection and analysis involved the use of adaptive theory (Layder, 1998) based on *a priori* knowledge of theoretical constructs and sector knowledge.

In order to take a whole sector view, advice was taken from experienced practitioners that mission grouping would differentiate university planning processes. Selection of cases in each mission group was undertaken using the UCISA membership list for corporate IS directors (*see Table 1 for explanation*). Purposive sampling of approximately a third of the membership obtained a mix accounting for institutional size, mission group and types of IS organisation. The main contacts were Directors or Heads of (Information, IS, ICT or IT) Services. An overview of the SISP research and the required role of informants was presented in a concise letter and some background information obtained through an

accompanying questionnaire. Semi-structured interviews took between 2 -3 hours affording a rich context for interpretation. The whole communication was process-oriented in that informants were invited to use the research opportunity for reflection on their own practice when informed consent was sought. Confidentiality for individuals and institutions was assured and a high response rate was obtained with 20 cases out of 36 invitations participating in the whole process (*Table 1*). Purposive sampling of professional association and intermediating institutions was by recommendation and reference and included in-depth face-face/telephone interviews with programme managers and officers within the JISC, UCISA and the Gartner consultancy group.

All face to face interviews were transcribed verbatim to allow for analysis of nuanced expressions in cross case comparisons. Data collection included public domain documents on HEFCE, JISC and UCISA websites. Each university's SISP practice was taken as a case grouped by mission group and thematic analysis using orienting concepts (Layder *ibid*) was undertaken using ATLAS Ti to code, organize and interpret expected and unanticipated concepts arising from narrative data. Data on whole sector concerns was collected in parallel but coded and analysed after the analysis of universities SISP practice as a single case. In the whole study, emerging concepts were related back to issues identified in extensive literature reviews on SISP and organizing vision discourse. In this paper there is a specific focus on relating organizing vision and corporate vision so maps of SISP practice in universities and the progress of a particular organizing vision are depicted to aid understanding of the findings.

## **Findings**

The first section portrays how 'vision' is interpreted, shared and evaluated by SISP practitioners within their university institutions. The second section accounts for how IS

innovations are interpreted within formal bodies in the HE and how bodies like the JISC envision information systems strategy for the whole sector.

### **IST Management Perspective On Vision**

In the language of thirteen IST Directors, Vision is recognised in terms of ‘Commitment’, ‘Focus’, ‘Leadership’ and ‘Position’ but for the remainder vision was not explicit. Externally, Vision and Mission are clear, but communicating vision internally is more difficult. Strategic IS planners in five out of six universities with international and research based core business treat vision positively: *“Vision has been important for a long time ..., the focus of the vision previously was about increasing research standing but it’s moving to overall excellence and enablement and the Information Strategy is very much the enabling factor that gives all staff and students the tools to work efficiently and effectively.”* (U07); leadership is prominent: *“You definitely need leadership and vision in making strategy but whether you need a vision or mission statement is sort of secondary”* (U01), as is commitment: *“Vision comes in all of the time, everyone has their own. ... IT services may have the same goals in mind and may to decide to push one project over another at any point in time.”* (U20). As such, vision can be interpreted as ‘focus’: when managers handle large concerns for their institutions they appreciate how to relate means and ends toward more distant goals.

In environmental scanning, most IST Directors are unequivocal that the JISC strategy and its advice, despite its having a well developed vision for the HE sector, bears little relevance to their own strategy. Gartner, is the most widely quoted external source of relevance to strategic vision and in the Russell Universities IT Group (RUGIT) such knowledge is vital to market position: *“Gartner brings a US perspective in its HE strand.”* (U06), *“Just reputation and vision.”* (U07) *“American universities are*

*sometimes more advanced and we network across a wider community than just the UK HE sector.*” (U08). The more focussed RUGIT members have ambition for their services to be as good as the private sector and their institutions world-class and some recognize the need to resist the hype cycle: *“Certainly we’d like to move to a point where we don’t talk about vision and it’s embedded in our work with our service reflecting on what needs to be done.”* (U11). In terms of practitioner roadmaps, the most used directional methods are (a) adjusting plans within the strategy horizon; (b) adjusting service delivery or (c) just making things happen. Given that there is a tendency for the IST strategy cycle to be shortened (even where corporate strategy may not change), tactics (a) and (b) are now natural planning positions. One in three practitioners did not believe IST promotes competitive advantage in HE: two used some form of issue management and two had adopted rolling programmes to manage business line of sight.

### **Sharing of Strategic Vision about IS**

In the ‘1994’ and ‘General’ groups directors see vision in the central service departments not being shared with academic departments. Only one Russell Group IST director (U07), claimed to be in a situation where IS vision is shared. For new universities, the post 1992 and SCOP groups, IS vision is shared at the centre of their organisations but it is commonly believed (4 cases) that IS is not a motive for corporate vision at all.

There were three main modes of promoting IS vision: (i) collaborating: *collegiality distributing capability, relevance, sharing perspective*; (ii) informing: *badging, feeding-back, publish success, committees, regular meetings, road-shows, presentations*; and (iii) motivating: *communication focus, action, bring out best, inspire confidence, focus, empower or care, enable or promote message, excite or direct, work on mind-set*. If one looks at what behaviour detracts from vision, the statements of the post 1992 and SCOP

groups indicate that getting 'stuck in practice' is a significant communication issue either between IS and the business: *"I'm operating in an environment where people aren't necessarily talking my language."* (U12); *"It's that lack of vision - a failure to appreciate broader business need, business case for change."* (U14) or within the IS service: *"Those who think in a concrete operational way - it's hard to get them to think about the strategy."* (U15). Collegiality and collaboration is evident in traditional and international research based universities while in the more centrist and managerially styled, newer universities, motivational devices ('getting things done') prevail. These vertical (hierarchical) and horizontal (across strategic business units) effects of trust impinge on strategic planning at the micro level (Allen and Wilson, 2003). Sharing of IS vision is problematic and may not be very useful: some of the Russell Group universities and one or two others are sanguine that vision about IS/IT should not be a motive force and that corporate vision should draw IST into alignment: *"It is not business and IT getting together and saying what our vision is. It's helping those who have the vision to make the university world class. Both of them are supporters of the overall vision of the university."* (U19).

### **Evaluating Vision in Planning Practice**

Devolution of power to academic departments greatly affects how IS planning is done and how organisational vision operates. Devolved power makes it difficult for a university to change quickly and respond to opportunities, but where organizational structure can change, adaptation of central services is required. Rapid organizational changes demand IS/IT service managers absorb and accept change, but where change is slow alignment to organisational requirements calls for adjustment of services and plans.. Highly adaptable directors plan ahead but less adaptable ones can still exercise foresight in prudent ways, hence corporate vision has different organizational effects than foresight

or vision about technology. Thus, the strategy of integrating corporate information systems may have its own shared vision within the IS community of practice, but as sharing of corporate vision depends on mission and culture, the form of relationship management is particular to the university.

While most university IST Directors are able to assess their own capability to meet corporate planning needs, the nature of that assessment varies by how they adapt plans and how they relate technological foresight and business line of sight. There are two linked propositions which help understand alignment (of IT with the business) here: (i) IST directors require a fundamental ability to plan quickly for small changes as well as large ones on slower, longer cycles; (ii) senior managers in universities need to become fully versed in a methodology like Balanced Scorecard to enable correlation of different views (lines of sight) within the organisation. Knowledge and external expert information about strategic planning and IST Management purchased from Gartner encourages IST directors to take distinctive perspectives on their IS/IT strategy roadmaps in relation to their institution's purposes. Taking a long view, approximately 4 in 10 HEIs are neither visionary nor purposeful in their IS planning but a handful have the IS capabilities to govern strategic IS planning and do this in a visionary and purposeful way. Hence the majority of universities do not utilise IS vision because the concept of aligning IS with the business, while understood by most IST Directors, is not an integral part of institutional governance. For three Russell Group universities exhibiting strong vision and alignment, the criterion of success in reconciling vision was expressed as balancing power, combining top management support with motivational IST leadership.

Institutional planning with well-defined IS implementation processes gives administrative and methodological coherence to SISP in a university. There is general acceptance that



technology should not drive university business yet in some cases strong political manoeuvring is required to make things happen. In the planning process, directors have scope to match potentialities of new technology with stakeholder concerns in corporate strategy. The vision about such affordances appears from most accounts to be generated outside the institution and input through environmental assessment in SISP practice.

### **Organizing Vision in the UK HE Sector**

In this section we look at how intermediation of strategic IS is enacted and then how a community of SISP practice is constructed and what issues are dealt with as focal community ideas in organizing vision.

### **Intermediation by the JISC**

JISC strategy identifies IS innovations and services for the whole sector before individual HEIs may recognize the need to provide them. Long-term strategy and interventions may take years to realise and JISC vision takes place in an attitude of ‘continuous evolution’:  
*“Vision tends to be written when we do new things. I’m told the vision shouldn’t change though the means to do it may.”* (Programme Manager). JISC embraces strategy with minimal, ‘known’ risk using methodologies such as ‘managing successful programmes’ (MSP) and ‘managing information across partners’ (MIAP). MSP defines where people fit into the model: JISC executive officers are not directly involved in the implementation of the JISC strategy but steer and moderate, making decisions at key points and managing programmes of projects without being directly involved in implementation.

While it is not a regulatory agent, JISC is funded to provide the highly reliable network service for the whole HE community that would require huge capital and recurrent expenditures were universities to run as completely autonomous businesses. The provision of other services to HEIs entails both collaboration and competition for top-

sliced funded projects, yet these are not regarded as ways of influencing SISP in HEIs by IST directors and in tandem, JISC aims not to affect an institution's identity but provide better services for the whole community.

For example the *Unique Learner Number* facilitates quicker processing of student applications through UCAS, permits authenticated access to selected learning resources at an individual level and gives the higher education statistical agency (HESA) the capability to provide student demographic and achievement data to address DfES/ DIUS agendas. JISC has sought broad alignment with the DfES and newer DIUS strategies. In the context of developing sustainable development of IST to support teaching and learning, JISC has developed an e-framework with partners in other countries – Netherlands (SURF) and Australia (DEST - Department of Education, Science and Training). According to JISCinonet: *“Our role, infoNet, is to synthesize things in practical programmes across the piece and lessons learned from projects which haven't been successful.”* InfoNet is an intermediary between what the customer sees on the outside of JISC and what JISC does both internally externally. Recognition of the integrative role of JISC was demonstrated in the JISC conference 2007 where the development of service oriented architecture (SOA) to shared services was a main theme.

### **Influence and intermediation of UCISA**

While JISC products are public domain, UCISA members have institutional interests which need to be safeguarded. UCISA shares knowledge as an interest group but also inter-networks and mediates power with other top management interest groups like Universities UK (UUK) Membership of UUK includes Vice Chancellors and senior university administrators and UUK concerns are more likely to influence government directly than those of IST Directors. UCSIA produces HE IT statistics ('HEITS'), 'IT

Trends’ and ‘Top Concerns’ for members and public interest. Some concerns touch everyday strategy such as the ‘maintenance of flexible IST infrastructure’ while others have more long-term strategic trajectories. UCISA has not been historically predisposed to pool member resources so this indicates a high degree of trust within the IS practitioner community to share information and knowledge.

In the ‘shared services’ context, promoted by JISC, UCISA intermediates with suppliers priming their understanding of appropriate business models for sharing services and facilitating this with a ‘suitable license arrangements’ affordable to HEIs. Cost benefits of sharing services is attractive to some VCs/CEOs, but legal and technical issues need to be addressed for HEIs to have autonomy and flexibility to act within any framework agreements. It is UCISA, rather than JISC, that intermediates these concerns with other bodies in the sector and brokers strategic solutions. UCISA will interpret which JISC services are not delivering. Members also look beyond the UK to professional associations such as EDUCAUSE (US based) and EUNIS (European based) interest groups in IS/IT in HE. In the US there is no equivalent of JISC; instead, EDUCAUSE and its ‘think tank’, ECAR, do everything for a mixed profit and not-for-profit sector. EDUCAUSE provides leads on new technology but the UK HE sector has a lead in sector governance and project management.

UCISA recognizes the need to bridge the gap between understanding IT potential that exists between CIOs and CEOs and facilitated the introduction of the Gartner EXP programme into the RUGIT and UCISA groups. UCISA promotes leadership through its staff development group. Such groups are strongly influential because they enhance information services about good practice with value-added, high cost services helping chief information officers (CIOs) interpret and leverage strategic IS over time. Gartner

regards its own company structure as a 'Community of Interest', a form of collaboration which helps transfer of knowledge to academic CIOs in two ways: (a) adapting industry IT knowledge to the university sector and (b) developing IS maturity and capable IST resources and services.

### **The community of SISP practice**

Analysis of the community of SISP practice brought out a set of orienting concepts: branding; centralised coordination and control; strategy feedback cycles; IST governance; growth, integration and sustainability; and vision for the sector .

Gartner sees brand is a positioning factor for any university with a post 19<sup>th</sup> century charter but not for the oldest universities. Universities need to define mission, vision and KPIs to demonstrate how they are envisioning and enacting that mission. The useful KPIs are not likely to be determined using the IS community's benchmarks (HEITS), but from a particular corporate approach to aligning IT with recognizable, achievable objectives appropriate to a university's mission grouping.

JISC may brand its services even though they are a 'free resource'. In consumer terms, JISC services do not have desirability but in a 'quasi-market', need to be promoted for HEIs to appreciate what they are. JISC advisory services are valued because institutions have been involved in developing good practice; the institutional input is remixed and given the 'JISC infoNet' brand, which is refined through long experience of knowing what will work for the sector. Commercial suppliers of IS promote a certain methodology or service but they do not deal with the cultural issues which is where the JISC advisory services add value. In contrast, UCISA has a brand in being a membership organisation and embodying several communities of practice but it has very few products.

Not only are CIOs expected to exert a high degree of central coordination and control to spend funds wisely on IS/IT but interpret the HE sector agendas and issues. From Gartner's perspective, "*the common problem for all universities is how to deal with lack of focus.*" The JISC project on IST governance, a self-assessment toolkit may improve centralized coordination and control in HEIs. However, the JISC Information Environment (IE) strategy is not so much a prescription of what HEIs should do but a declaration of what their environment shall be: '*JISC needs to provide active evidence of what the landscape of the future will look like*' and demonstrate the range of services and '*the validity of new approaches*'. Therefore, for a university institution, Gartner regard standards like COBIT, and ITIL and a balanced scorecard approach as tangible goals for adoption, They regard the UK has '*one of the most developed bureaucratic and KPI information bases serving the government's interest*' but that most UK universities lack the organizational maturity to make the best use of balanced scorecard.

The JISC strategy cycle creates a context for UK universities: "*I would say we're all sort of moving into a more ongoing review of strategies and visions because things in the technology world move so fast - our strategies get out of date, our strategies tend to be written so broad they become meaningless, anything specific gets dated very quickly.*" (JISC programme manager). Recently, JISC defined objectives with milestones in short, medium and long-term cycles, its strategy (2007 - 2009) states a norm of gradual reduction from 5 to 3 years in strategy cycle> Further, it focuses on current concerns of the sector and feeds back outcomes (of its own funded projects) to inform its own future planning. Given JISC's holistic response to the HEFCE strategy 2006, UCISA exercised its critical influencing role advising that capital funding of large infrastructure projects entailed HEIs having to cover recurrent charges for new services. As a whole, JISC

strategy declares seeking of broad community engagement in its development processes and the critical friendship of UCISA creates engagement in practice.

The JISC Information Environment (IE) Strategy 2001-2005 was an initial step in the ongoing transformation of technology and cultural change, comprising learning, teaching and research. HEIs must make integration decisions ensuring interoperability between information systems which is problematic without investment in change management. The concept of sustainability is a central concern for HEFCE who see this as an end toward which the whole UK HE sector must work in a global context and in this broader context, organizational, industrial and whole sector fields are involved. The JISC strategy 2007 states that JISC should remain part of the funding council structure (HEFCE) *” for at least the next few years.”* with advisory services being an increasingly crucial part of how JISC governance provides leadership, advice and guidance for the community. UCISA noted ‘greying’ of IS management as a global problem and JISC was encouraged to promote development of individuals through the Leadership Foundation and the HE Academy to fill mission-critical positions in the sector.

JISC focuses on supporting institutional capability by collaborating with the funding bodies but also seeks to improve its own internal collaboration through regional, national and international partnerships. IST directors do not see JISC projects as necessarily conducive to VfM or sustainable IS development within institutions. Both the JISC and HEIs are committed to develop and maintain (sustainable) flexible IST architecture using ‘open standards’ to improve alignment of IS/IT with core business. In the JISC strategy 2007-2009, principles of open standards and modularity are promoted to interpret ‘shared services’ through service-oriented architecture. Standards like ITIL are the norm for

managing such information environments. While Gartner may promote ITIL standards to CIOs who intend to build capability, they advise that ITIL alone will not help the CIO with business focus and leadership but its use should enable IT departments to be managed in a more efficient way.

JISC strategic vision is closely aligned with that of HEFCE and in working towards UK HE as a sustainable resource JISC will (i) tighten up on delivery; (ii) deal with technological change and (iii) seek feedback on whether its aims have efficacy for HEIs. In contrast, the UCISA e-vision for 2010, written in 2002, represents a collective (multi-stakeholder) projected view of ICT services while the JISC vision declares a strong normative statement of direction for all. However, universities have to construct this from the ground up so in this light, JISC vision does not translate readily into corporate vision in HEI senior management teams. Instead, it is moderated by UCISA then translated into institutional IST strategies as directors seek to relate strategic choices made by others in their reference groups.

Sector analysis has highlighted the foremost focal community ideas about aligning IS/IT with the business. Notably, a former organizing vision of joined-up, shared systems has been supplanted by the notion of sharing services on service oriented architecture. The Russell Group universities have had a relative advantage in terms of prestige and resources in taking the lead on strategic IS planning issues while other institutions struggled to leverage IST and manage relationships due to size and culture. Intermediating institutions share knowledge about IS innovation that builds IS capability and entails a high level of trust between IST directors in a period of growth and expansion for the sector. For example, *“I think away from the institution, because you get the*

*double-perspective - you get the influence of others and how they're doing and also you get the physical looking back at the institution from a distance and seeing it through others' eyes.*" (U01). The implication is that organizing vision discourse about strategic information systems may start outside the HEI but influence corporate decision-making of both universities and sector intermediating institutions only where the IS planning process challenges the corporate planning process.

## **Discussion**

The first part of the research question considers when and why vision is important in SISP practice and how organizing vision relates to corporate vision via SISP. Here we explore how organizing vision is recognized within the elements of the SISP process for UK HE (*taken from the larger study*) highlighting points of engagement. Secondly we determine what the mediating effects of professional communities and formal bodies are on SISP practice, reflecting on how organizing visions are organized within the HE sector and considering implications for practice.

### **Bridging SISP and Organizing Vision**

Internal relationships are primarily business-led and restricted by administrative arrangements in university processes. However collaboration in situations of high trust within professional associations and formal bodies channelizes focal community ideas for aligning IS with the business. We can map out what IS planning in HEIs looks like in relation to elements of the SISP framework using institutional forms of planning (*see Figure 3 below*) and then link these with the sector organizing visions.

(1) Inputs to Planning Process (Internal): three kinds of business drivers were identified: managerial (*IST infrastructure and process plus radical business change*); informational



*(developing the IS applications to support the business)* and financial *(running the business)*. The internal process involves: (i) weighing risk of existing and proposed IST plans; (ii) planning for maintenance and development of IST and (iii) adjusting service standards with respect to feedback.

(2) Inputs to Planning Process (External): knowledge of student expectations and effects of regional and national issues and globalisation (market intelligence) together with commitment to brand and reputations is paramount for maximising student recruitment. Two major national organisations (JISC and UCISA) provide focus for strategizing with a significant and increasing amount of inter-institutional working and consultation with IS/IT suppliers.

(3) Planning (Resources): rationalisation of funding streams (block grants for teaching and research and third stream funding) is common to all HEIs and constrains the implementation of plans, though not necessarily the planning process. Universities invest staff time for IS planning in existing processes within the institution and may add think tanks and temporary project teams about IS issues.

(4) Planning (Process): the role of the IS/IT Director mediates influence in terms of positional power. Strategic decision making occurs through internal working groups and committees and environmental scanning (assessment) about external IS/IT issues can influence corporate planning.

(5) 'The Plan': universities have an Information Strategy to relate information management needs to existing IS. New requirements for ICT Infrastructure are proposed where gaps in informational needs are identified.

(6) Plan Implementation: interpreted as ‘deliverables’ or ‘strategic elements’ and usually described as ‘outputs’ in annual operating statements.

(7) Alignment: shaped by informational drivers and advantages in serving the student experience. In the formative stages of planning this is conceptualised as ‘business efficiency’ but as ‘service efficiency’ when inquiry focuses on the context of service level agreements and IS capability. Alignment is achieved when Information Strategy outcomes meet themes or principles in the corporate plan / strategy.

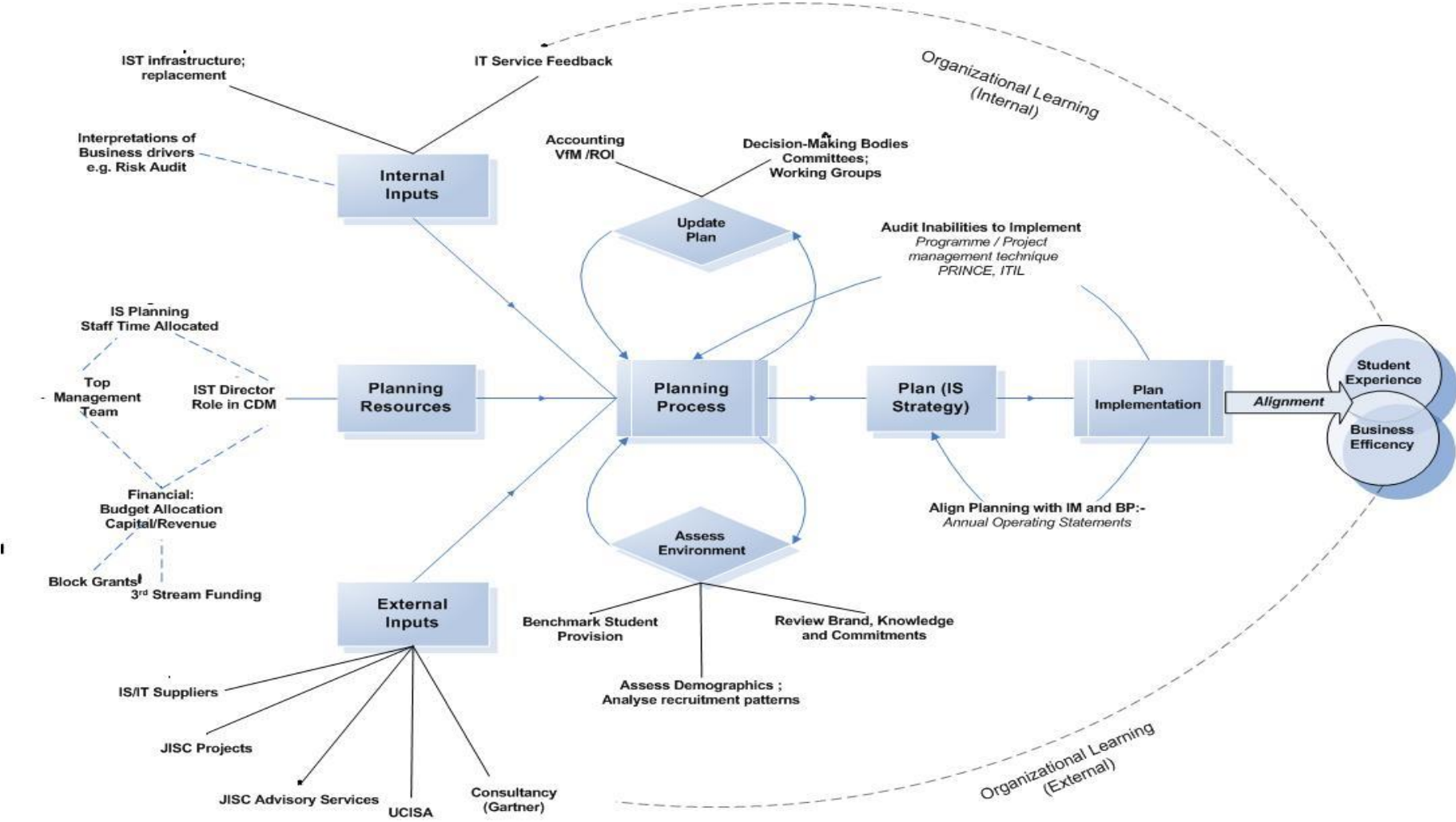
The perspective on alignment may change during IS plan implementation affecting various stakeholders and their strategies. Critical knowledge of the planning process takes longer to be affected by feedback from plan implementation than plan formulation. The diagram shows the elements of the SISP framework and proposed feedback loops on planning (*update plan, assess environment*) and implementation (*objective alignment, adjustment of process*) instantiated with HE activities and objects. The outer loop represents organizational learning, which is incurred on reflection from ongoing feedback process such as are induced by improved IT service management and plan updating, together with perspectives given and taken with respect to environmental assessment and external reference.

Universities do not plan quickly ‘*with alacrity*’ (Lederer & Sethi, 1996) but emphasize implementing requirements on-time and within budget rather than seeking all-inclusive grand plans. Adherence to the university’s schedule of delegation constrains articulation of IS with corporate plans and this is characteristic of the *administrative approach* (Earl, *ibid*). Drive for business efficiency in HEIs may be leading to shorter strategy cycles and to a change in periodicity (Salmela & Spil, 2002). Universities have unique strategy cycles relating the information strategy to the corporate plan, but while they may not be

so agile, their IS planning takes a top-down (rational) approach dealing with focal concerns. 'Top Concerns' are shared through the IST Director's community of practice (UCISA), so the rational choice is qualified by trusted external reference. The articulation of IS and corporate plans affects the concept of alignment but evaluation of planning resource is affected only indirectly *via* long cycles of organisational learning. Administrative planning and delivering to business led stakeholders may inhibit full technological line-of-sight where IST Directors divide time between managing service standards, appeasing stakeholders and keeping up with technological change. Holding to the corporate vision may preclude full consideration of the range of vision about IS innovations that may 'organize' a strategic episode/phase. This suggests a dislocation of vision about IS from corporate vision at the time and place where alignment of IS/IT with the business is supposed to occur.

Environmental assessment aids rational choice in planning but also keeps implementation on track during periods of uncertainty (Chi et al., 2005, Kearns & Lederer, 2004). External reference may affect SISP implementation process weakly where universities pursue enterprise level solutions for efficiency rather than quality. Having selected strategic IS fitting corporate vision, most of the effort in managing external relationships is with suppliers but the most difficult part is in managing internal relationships during implementation. Adaptability of SISP in implementation is conceived as a composite of rational (*following institutional practices*) and adaptive (*managing IST services in as lean a way as possible*) approaches.

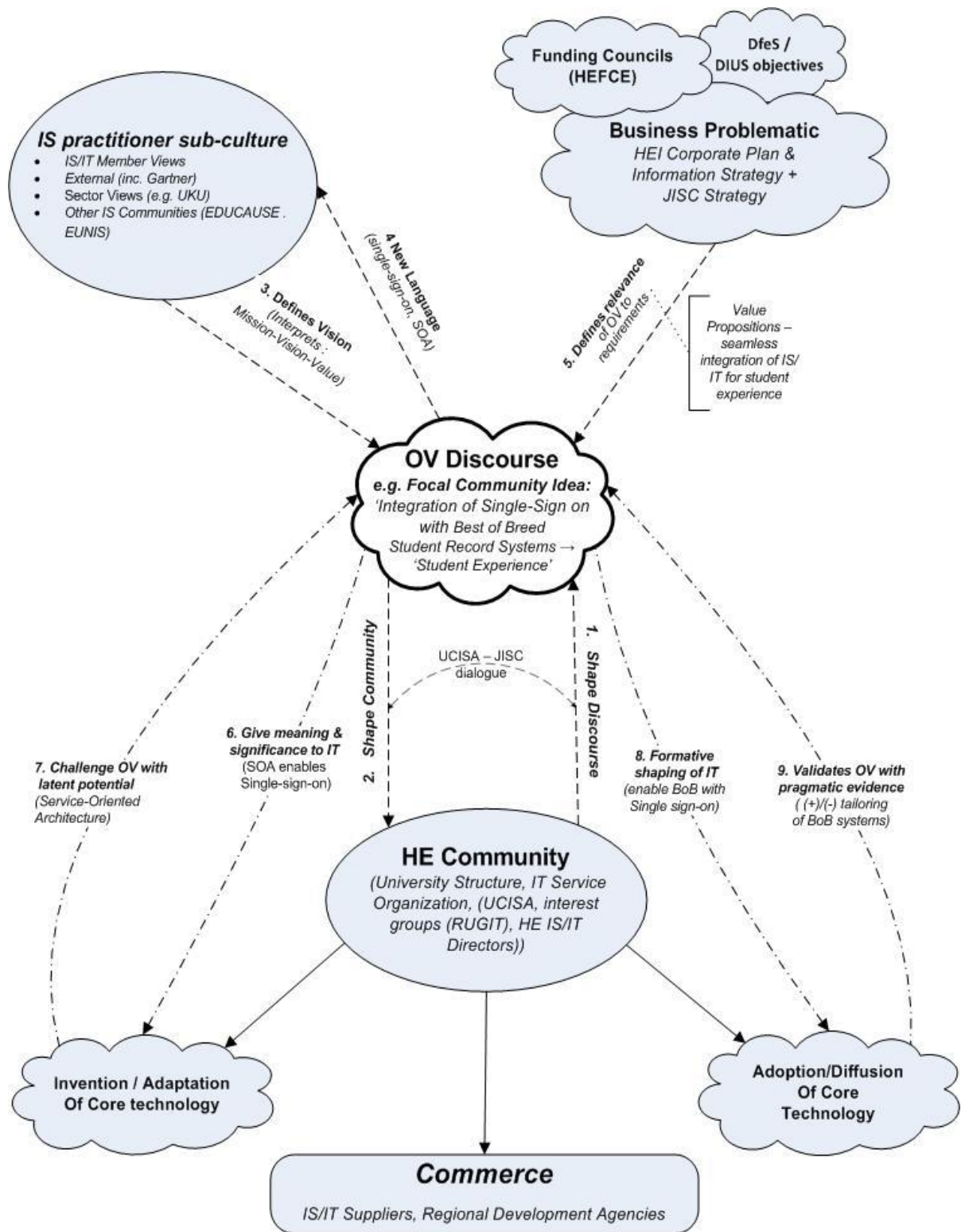
Figure 3 Heuristic of HEI Planning Process Activities viewed through SISP Theory



## **Organizing the Organizing Visions**

In the field of IS, changes in tradition may be frequent but are nonetheless constrained by institutional pressures. There can be a ‘pervasive institutional logic among industry members’ (Chiasson & Davidson, 2005) that acts as an organizing vision to decide goals for new technology at the edge of institutions. Effects of organizing visions may be felt less by mature organizations and are more likely to be sensed by HEI representatives through formal groups hosted by intermediating institutions than in university corporate planning. First, the governmental agendas (starting from Departments for Education Science and Trade & Industry) have increasingly emphasized knowledge transfer and growth of the university and skills sector as earlier anticipated (Allen & Wilson, 1996). Second, both Gartner and JISC recognize that SISP and IT governance are required to achieve step-change and organisational maturity (Smits & vanderPoel, 1996). This account fits with the idea of reference groups in impartial and often external intervention creating dialogues that induce organisational learning (Lacity & Hirschheim, 1995). There is evidence of high levels of trust (Galliers et al., 1995, Allen & Wilson, 2003) in mission group based IT interest groups exchanging good practice (*focal community ideas*). The university CIO acts as information broker internally and externally and in the JISC-UCISA alliance there are people in roles who facilitate the exchange of views between IS knowledge-rich hegemonies. These are ‘*boundary spanning*’ roles that have “*the capability of penetrating inter-organizational networks*” (Newell et al., 2001).

Figure 4 Elements of the Organizing Vision of Shared Services



Some organizing visions are about innovation in practice at the institutional level. For example, universities increasingly collaborate to share common practice but the memory of the 'Management Administrative Computing' (MAC) initiative (1988 - 1995) may be strong enough to disconfirm similar new initiatives. This initiative was contentious for IS practitioners as there was pressure from marketisation of the HE sector after 1992 as new HEIs sought their own distinctive capabilities. It has been inferred that organizing visions have careers (Currie, 2004; Swanson & Ramiller, 1997), and in the current context an organizing vision of 'shared services' may be translated differently. (JISC Infonet 2012). In the past decade, the development of mature technologies for integration of systems for shared services was achieved with service oriented architecture (SOA) affording secure authentication for single sign-on. The elements of a 'shared services' organizing vision are depicted in Figure 4.

The invention or 'interpretation of core technology' depends not only on JISC and UCISA as intermediating institutions but community interest groups such as RUGIT and external consultancies, notably Gartner, which have latitude and longevity. This context resonates with the interpretation of organizing vision at all levels in an organisation (Chae & Poole, 2005) as a dynamic that relates pre-existing practices within the firm to new industry and institutional standards.

### **Implications for practice**

SISP has several interpretations (Earl, 1993, Lederer & Sethi, 1996, Segars & Grover, 1999), but more could be made about managing feedback and articulating alignment of IS to corporate vision and the process of organisational learning (Baker, 1995, Duhan, 2007, Wang & Ramiller, 2009). Through much of the SISP literature, alignment has been interpreted largely as IT-business fit rather than a coordination of direction and process relating to vision. The formal SISP model could be extended to include aspects of feedback in which non-linear

and interactional aspects of innovation are used to articulate the strategic vision. Having examined strategic IS planning in universities, the OV discourse presents a complementary theory to SISP indicating how vision about innovation (which is expected of universities) changes the alignment of IS with each institution's business. The OV discourse affords an interpretation of activities in the macro inter-institutional community and a mapping of shared perspectives (like top concerns about IS management) to particular issues within a university's business problematic. There are a variety of existing strategy tools and techniques which IST managers may call upon to get things done but the organizing vision discourse has an unplanned quality and is more akin to craft knowledge. Arguably, vision should be about giving and taking perspectives at an institutional and community level and IS professionals should seek to understand whole institutional issues (Currie, 2009) if they are to exercise leadership in strategic IS change initiatives. Promoting IS vision was evident in institutions that professed to share corporate vision but less so where institutional norms did not permit an organizational approach to SISP. This suggests that methods for inducing corporate vision will work better if they carry interpretive flexibility rather than normative pressure. In the context of managing knowledge across boundaries (Newell et al *ibid*), further work on organisational roles that facilitate shared vision would be fruitful. The challenge for a firm or institution is how to engage vision about innovations derived from networks of practice with corporate vision in its own unique way.



## Conclusion

This paper has examined how university IS planning practice and the vision for use of IS in the HE sector as a whole fits with SISP theory and the Organizing Vision discourse. UK universities practise SISP in ways that are similar to the theoretical forms (Earl, 1993, Lederer & Salmela, 1996) yet the dynamics of SISP in HE are quite different from those in other industries. Every institution has to provide a sustainable, renewable and stable information environment for delivering the best possible learner experience across teaching, learning and administration. The definition of sustainability is articulated in sector level strategy so alignment of IT with the business has a *pre-ordained* quality obtaining from normative pressure. The process of maintaining 'sustainable and renewable ICT infrastructure' is cemented sector-wide through strong intermediating institutions that provide shared services for the whole sector which would otherwise present large overheads for a single university. The network of relationships in JISC and UCISA transect and overlap with other HE sector interest groups and funding regimes and as a whole provide a form of governance of SISP in the sector.

SISP is planned for the sector and within HEIs but vision is seldom co-located in the planning phase and is largely absent during implementation. The organizing vision concept articulates the different cultural issues within HEIs and thinking about how feedback occurs in planning and implementation. The relationship between corporate and IS vision produces a particular dynamic for SISP in the HE sector. Organizing visions are translated by IST Directors, who interpret environmental assessment of external reference group knowledge within their own university planning process. On reflection, the JISC provides a blending of strategic themes and a directional process at sector level while most HEIs are induced into directional processes without spending enough time on the organisation of activities to facilitate creativity, innovation and smoothing out implementations of IS through appropriate alignment. Formal standard bodies have been used by both HEIs and the intermediating institutions to develop new forms of IS/IT governance yet as universities increase in IS capability maturity, their planning processes need an adaptive approach to bring organizing visions into line with corporate vision. Intermediating institutions translate IS innovations facilitating second-order feedback on universities' SISP process. The interviews with IST managers in universities show that if corporate vision is strong, the internal feedback process in planning will be effective. However, if SISP is to be both comprehensive and effective, it

is necessary that vision is shared between both internal and external assessments in the IS planning process and throughout implementation. Practical recognition of OV discourse could help decide the route or pathway of alignment of IS/IT to be taken in SISP and obviate understanding of (a) how the IS practitioners interpret an innovation's OV, (b) how the business problematic is determined and (c) how knowledge about the innovation is adopted and diffused through an organisation. Where improved relationship management is required to enhance performance or organisational stability is required, a rational-adaptive perspective that comes from an elision of complementary theories may be most useful.

## References

- Ackroyd, P. & Ackroyd, S. 1999. Problems of university governance in Britain: Is more accountability the solution? *International Journal of Public Sector Management*, 12, 171-185.
- Allen, D. & Fifield, N. 1999. Re-engineering change in higher education. *information Research*, 4, 4-3.
- Allen, D. & Wilson, T. 2003. Vertical trust/mistrust during information strategy formation. *International Journal of Information Management*, 23, 223-237.
- Allen, D. K. & Wilson, T. D. 1996. Information strategies in UK higher education institutions. *International Journal of Information Management*, 16, 239-251.
- Baker, B. 1995. The Role of Feedback in Assessing Information-Systems Planning Effectiveness. *Journal of Strategic Information Systems*, 4, 61-80.
- Bargh, C., Scott, P. & Smith, D. 1996. *Governing Universities: Changing the Culture?*(Buckingham, SRHE/Open University Press).
- Chae, B. & Poole, M. S. 2005. The surface of emergence in systems development: agency, institutions, and large-scale information systems. *European Journal of Information Systems*, 14, 19-36.
- Chi, L., Jones, K. G., Lederer, A. L., Li, P. T., Newkirk, H. E. & Sethi, V. 2005. Environmental assessment in strategic information systems planning. *International Journal of Information Management*, 25, 253-269.
- Chiasson, M. W. & Davidson, E. 2005. Taking industry seriously in information systems research. *Mis Quarterly*, 29, 591-605.
- Currie, W. 2009. Contextualising the IT artefact: towards a wider research agenda for IS using institutional theory. *Information Technology & People*, 22, 63-77.
- Currie, W. L. 2004. The organizing vision of application service provision: a process-oriented analysis. *Information and Organization*, 14, 237-267.
- Doherty, N. F. & Fulford, H. 2006. Aligning the information security policy with the strategic information systems plan. *Computers & Security*, 25, 55-63.
- Doherty, N. F., Marples, C. G. & Suhaimi, A. 1999. The relative success of alternative approaches to strategic information systems planning: an empirical analysis. *Journal of Strategic Information Systems*, 8, 263-283.
- Duhan, S. 2007. A capabilities based toolkit for strategic information systems planning in SMEs. *International Journal of Information Management*, 27, 352-367.

- Earl, M. J. 1993. Experiences in Strategic Information-Systems Planning. *Mis Quarterly*, 17, 1-24.
- Fowler, A. & Gilfillan, M. 2003. A Framework for Stakeholder Integration in Higher Education Information Systems Projects. *Technology Analysis and Strategic Management*, 15, 467-489.
- Galliers, R. D., Swatman, P. M. C. & Swatman, P. A. 1995. Strategic Information-Systems Planning - Deriving Comparative Advantage from Edi. *Journal of Information Technology*, 10, 149-157.
- Griffiths, J. R. 2003. Evaluation of the JISC Information Environment: student perceptions of services. *information Research*, 8, 8-4.
- Grover, V. & Segars, A. H. 2005. An empirical evaluation of stages of strategic information systems planning: patterns of process design and effectiveness. *Information & Management*, 42, 761-779.
- Heeks, R. 2002. Information systems and developing countries: Failure, success, and local improvisations. *Information Society*, 18, 101-112.
- Horton, K. S. 2003. Strategy, practice, and the dynamics of power. *Journal of Business Research*, 56, 121-126.
- Huotari, M.-L. & Wilson, T. D. 2001. Determining organizational information needs: the critical success factors approach. *information Research*, 6, 6-3.
- Johnson, G., Langley, A., Melin, L. & Whittington, R. 2007. *Strategy as practice: research directions and resources*, Cambridge University Press.
- Kearns, G. S. & Lederer, A. L. 2004. The impact of industry contextual factors on IT focus and the use of IT for competitive advantage. *Information & Management*, 41, 899-919.
- King, W. R. 1978. Strategic planning for management information systems. *Mis Quarterly*, 27-37.
- King, W. R. & Cleland, D. I. 1975. A new method for strategic systems planning. *Business Horizons*, 18, 55-64.
- Lacity, M. C. & Hirschheim, R. 1995. Benchmarking as a strategy for managing conflicting stakeholder perceptions of information systems. *The Journal of Strategic Information Systems*, 4, 165-185.
- Layder, D. 1998. *Sociological practice: Linking theory and social research*, Sage Publications Limited.
- Lederer, A. L. & Salmela, H. 1996. Toward a theory of strategic information systems planning. *Journal of Strategic Information Systems*, 5, 237-253.
- Lederer, A. L. & Sethi, V. 1996. Key prescriptions for strategic information systems planning. *Journal of Management Information Systems*, 35-62.
- Markland, M. 2003. Embedding online information resources in Virtual Learning Environments: some implications for lecturers and librarians of the move towards delivering teaching in the online environment. *information Research*, 8, 8-4.
- Meadows, M. & O'Brien, F. 2006. Under pressure: Visioning in a regulated environment. *Systemic Practice and Action Research*, 19, 537-551.
- Newell, S., Swan, J. & Galliers, R. D. 2001. A knowledge-focused perspective on the diffusion and adoption of complex information technologies: the BPR example. *Information Systems Journal*, 10, 239-259.
- O'Brien, F. & Meadows, M. 2000. Corporate visioning: a survey of UK practice. *Journal of the Operational Research Society*, 51, 36-44.
- Pollock, N. & Cornford, J. 2004. ERP systems and the university as a "unique" organisation. *Information Technology & People*, 17, 31-52.

- Premkumar, G. & King, W. R. 1994. The Evaluation of Strategic Information-System Planning. *Information & Management*, 26, 327-340.
- Robbins, L. 1963. Report of the Committee on Higher Education. *Cmnd*, 2154, 1984-94.
- Salmela, H. & Spil, T. A. M. 2002. Dynamic and emergent information systems strategy formulation and implementation. *International Journal of Information Management*, 22, 441-460.
- Segars, A. H. & Grover, V. 1999. Profiles of strategic information systems planning. *Information Systems Research*, 10, 199-232.
- Segars, A. H., Grover, V. & Teng, J. T. C. 1998. Strategic information systems planning: Planning system dimensions, internal coalignment, and implications for planning effectiveness. *Decision Sciences*, 29, 303-345.
- Smits, M. T. & vanderPoel, K. G. 1996. The practice of information strategy in six information intensive organizations in The Netherlands. *Journal of Strategic Information Systems*, 5, 93-110.
- Swanson, E. B. & Ramiller, N. C. 1997. The organizing vision in information systems innovation. *Organization Science*, 8, 458-474.
- Wang, P. & Ramiller, N. C. 2009. Community Learning in Information Technology Innovation. *Mis Quarterly*, 33, 709-734.
- Weick, K. E. 1989. Theory Construction as Disciplined Imagination. *Academy of Management Review*, 14, 516-531.

**Table 1 Selection Of Cases Ordered By Mission Group**

University Reference	Synonym	Mission Group	Structure	Inst. Size
U03	EAST.G94.MED.JNT	G1994	Joint	Medium
U05	EAST.G94.MED.SEP	G1994	Separate	Medium
U10	STH.G94.MED.JNT	G1994	Joint	Medium
U02	CENT.GEN.MED.SEP	GENERAL	Separate	Medium
U06	NTH.GEN.SM.MRG	GENERAL	Merged	Small
U11	NW.RUSS.MRG.MED.	GENERAL	Merged	Medium
U01	STH.CMU.SEP.JNT	P1992-CMU	Joint	Medium
U04	CENT.CMU.MED.SEP	P1992-CMU	Separate	Medium
U09	WEST.CMU.SM.CENT.MRG	P1992-CMU	Merged	Small
U15	NTH.CMU.MED.JOINT	P1992-CMU	Joint	Medium
U16	CENT.CMU.OTHORG	P1992-CMU	Org. Other	Large
U18	EAST.CMU.OTHORG	P1992-CMU	Org. Other	Medium
U07	WEST.RUSS.MRG.MED.CENT	RUSSELL	Merged	Medium
U08	WEST.RUSS.LARGE,MERGED	RUSSELL	Merged	Large
U13	NTH.RUSS.LARGE.DC.JNT	RUSSELL	Joint	Large
U17	CENT.RUSS.MRG.LARGE	RUSSELL	Merged	Large
U19	STH.RUSS.LARGE.SEP	RUSSELL	Separate	Large
U20	NTH.RUSS.MED	RUSSELL	Separate	Large
U12	STH.SCOP.JNT.SM.CENT	SCOP	Joint	Small
U14	NTH.SCOP.MED.JNT	SCOP	Joint	Medium

The 1994 group of universities are characterised by a commitment to internationalism and, like the Russell Group, are committed to research excellence. ‘General’ type universities are also known as ‘Redbrick’ and have been developed and given charters during the 20<sup>th</sup> century. The newest universities are the post 1992 charter universities which used to be accredited as polytechnic institutions. These have also been named under the Campaign for Modern Universities (CMU) and form the largest single group while the smallest group, the standing conference of principals (SCOP) is the representative body for higher education colleges in England and Northern Ireland which had been first granted taught degree awarding powers during the 1990s.