A HOLISTIC INFORMATION SYSTEMS STRATEGY FOR ORGANISATIONAL MANAGEMENT (HISSOM), APPLIED TO EUROPE'S LARGEST BANCASSURER

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Abstract: Co-ordination and alignment of Information Systems Strategy, ISS, with organisational strategy has become key to competitive success, as the ramifications of the Internet has shifted control from information providers to information users. Yet, despite over 40 years of research, there remains no established, practical SISP method for strategic alignment, due primarily to a failure to achieve alignment of the interests of the perspective groups that influence organisational direction. HISSOM is a practical, holistic model that co-ordinates the needs of key organisational influence groups, and aligns the organisation's ISS with its agreed needs. HISSOM is applied to the first electronic commerce enabled strategy of Europe's largest bancassurer. The impact of the organisation's strategy on its IS capability, and the emergence of IS-led initiatives, are highlighted. The five HISSOM perspectives, of external stakeholders, executive management, business management, IS management responsible for IS strategy, and the wider IS function, and their roles HISSOM, are also described. The applicability of HISSOM, and its relative success is described.

1 INTRODUCTION

Organisations use strategic planning to ensure their capabilities are fit for purpose, directed, developed and *continuously* maintained appropriate to their foreseeable needs. Accordingly, an organisation's Information Systems Strategy, **ISS**, must ensure its Information Systems, **IS**, capability can support delivery of the strategic plan. Strategic Information Systems Planning, **SISP**, approaches have emerged to attempt to align ISS and organisational strategy.

The rapid and commercial development of the Internet, and the proliferation of personal computers to consumer homes globally, have escalated the need for organisations to manage strategic IS resources in a more integrated manner than in the past, especially in markets that can be accessed by consumers through Web-based IS.

Modern IS, as historically, remain focused on the data-process-output cycle (Green, 2000), but must now recognise the consumer is king. Consumers can now shop the world from their homes, using readily available, low-cost, non-proprietary IS, previously the domain of a few, powerful, information providers, to commercial benefit. The Internet brings consumers global connectivity and near instantaneous responses to generic "search" inputs. The need for organisations to adopt more responsive integration and co-ordination of SISP is evident (Butler Group, 1997).

Research suggests, however, that SISP has often failed due to organisational resistance, poor buy-in and involvement (McGrath et al, 1998), poor communication, and deep-seated attitudes that signify a non-participative IS culture (Hatten & Hatten, 1997). Yet decisions regarding the direction, resource allocation and management of IS have direct performance consequences, highlighting the need for organisations to "think in terms of enhancing IS strategic alignment when allocating scarce IS resources" (Chan et al, 1997).

These dichotomous views can be partially explained by the business competence of IS

executives, which has been found to be a key driver of the successful integration of organisational and IS strategy (Teo & King, 1997). IS executives have acknowledged, moreover, that the key issues they face include "align IS and corporate goals" and "conduct IS strategic planning" (Computer technology Research Corp., 1994), indicating that a co-ordinated, integrated approach is needed.

The historic failure of SISP approaches to bring practical co-ordination of different organisational influence groups must also be addressed. Many organisations regard SISP as a *one-shot* process (Mentzas, 1997), adopting single-perspective, *divide and conquer* approaches to impose SISP. This ignores the fundamental requirement of strategic planning to embrace cross-functional involvement and the dynamic character of economic change and technological innovation, so facilitating a continuous, "shared vision" of organisational and IS strategic planning (Pyburn, 1983).

Research indicates that organisational culture, a difficult area to assess objectively, is an influencing factor when considering the overall strategic planning process (Hatten & Hatten, 1997, Chan et al, 1997, Teo & King, 1997, Mentzas, 1997, Lanc & MacKinnon, 2001).

Fundamentally, IS and organisational strategy alignment methods must address the need for realistic equilibrium between the key perspective groups that influence organisational activity, as well as between traditional resource capabilities and organisational needs. The need for integrated, co-ordinated, and continuously monitored organisational and IS strategy planning is more crucial than ever in the age of the Internet.

HISSOM is a practical, holistic model that facilitates responses to historic weaknesses in SISP alignment with organisational strategy. It delivers an integrated organisational and IS strategy which helps manage and prioritise scarce resources, whilst recognising the influence of organisational culture and the "technology push, market pull" nature of dynamic organisations operating in dynamic markets.

2 THE STUDY

2.1 The HISSOM model

Studies relating the "linkage" of ISS with organisational strategy are relatively rare. Research performed has predominantly observed the strategy process from a distinct perspective. For example, IS managers have favoured SISP processes that typically give them control to develop and communicate to top management (1) a general IS architecture; (2) a method to prioritise scarce resources; (3) a process to identify new opportunities from new technologies; and (4) a relationship between IS and organisational management to ensure critical success factors are understood. Conversely, organisational management has adopted its context from an "organisational strategy set", defining the organisation's mission, objectives, and strategies, which are then passed to IS management to convert into a "MIS strategy set" of IS objectives, constraints and strategies (King, 1978).

These approaches are suboptimal insofar as they adopt a single perspective focus reminiscent of early system development methodologies. They also lack an integrated and co-ordinated approach, ignoring the dynamic nature of the technological and organisational context.

Developments from the systems engineering perspective have faired little better when viewed from beyond that perspective. For example, modern, commercially developed systems development methodologies such as the RAD based DSDM (Stapleton, 1998) can, in the absence of a more holistic approach, prioritise IS constraints to the detriment of the wider organisation, resulting in unplanned, higher risk manual workarounds and their operational implications, in terms of time, cost, customer service and knock-on IS support costs. The modern day reality of a dynamic organisation offers little probability of justifying further IS developments to resolve such workarounds.

IS management's ability to push technology innovation to the forefront of an organisation must also be considered from an integrated organisational perspective. Studies have revealed that many IS innovations, despite bringing visible value to organisations and their customers, have been ignored from an overall organisational context, resulting in lost organisational opportunity and stakeholder value (Vitale, 1986). A co-ordinated organisational view involving other functions must be adopted, including that of relevant external organisational influences, to ensure risk and reward are retained in a balance acceptable to the organisation's overall strategic direction.

HISSOM attempts to address the limitations of existing SISP approaches by co-ordinating delivery of an integrated organisational and IS strategy from 5 key organisational perspectives. It is a practical model that considers the impact of organisational culture, an element ignored by existing methods (Lanc & MacKinnon, 2001). HISSOM also recognises the organisation's external context, or *Weltanschauung* (Avison & Fitzgerald, 1995), and considers the perspectives of external stakeholders that influence organisational behaviour. Moreover, it

addresses the weakness of existing SISP methods to recognise that organisations operate within dynamic environments, facilitating continuous improvement feedback methods.

HISSOM's sole rationale is to manage better the key perspectives that influence IS strategy and developments, and to provide a model that accepts each organisational perspective has something to offer and, importantly, something to gain from the other perspectives (Lanc & MacKinnon, 2001).

2.2 Application of HISSOM

HISSOM was applied to the strategy planning phase of a newly merged organisation, Scottish Widows plc, comprising the life, pensions and investments business interests of Lloyds TSB plc, one of the world's largest retail banking groups. HISSOM's 5 perspectives (Lanc & MacKinnon, 2001) are as follows:

- The stakeholder perspective;

businesses, operating within a tightly regulated industry undergoing massive changes associated with the Internet, government forced price transparency, and market consolidation. Importantly, the need to deliver a positive cultural environment from the merger of two very different business cultures (a bank subsidiary and an independent mutual organisation) dictated that a co-ordinated, integrated approach be taken to ensure participation of key management as well as functional alignment of the capabilities necessary to meet the organisation's objectives.

The position of the authors within the strategic planning programme allowed an unusually insightful perspective to be gained of the management and co-ordination of an integrated organisational and IS strategy involving the 5 HISSOM perspectives.
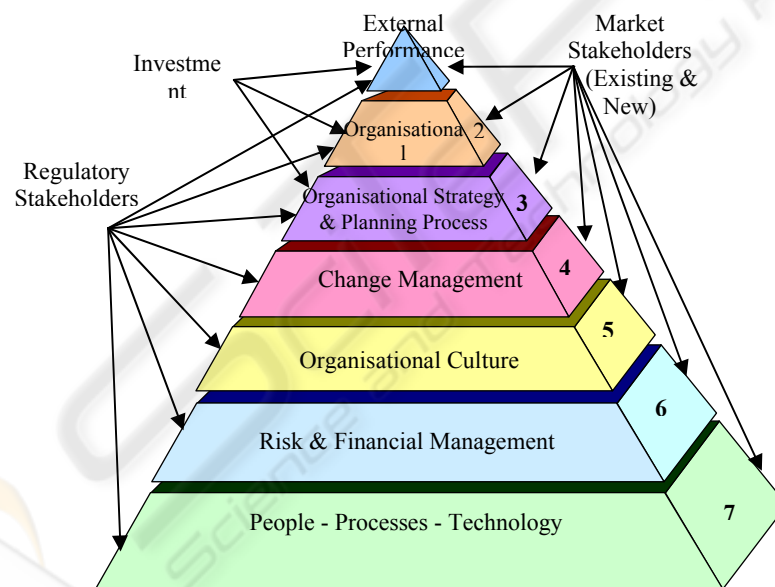

Figure 1: The HISSOM Stakeholder perspective and its impact

- The organisational management perspective;
- The business emphasis perspective;
- The IS strategy perspective; and
- The baseline capability perspective.

One of the authors was appointed head of the first strategy formulation programme for the new organisation. This comprised directing an intensive programme to produce a compelling strategy for the organisation, as well as a credible plan for the integration of the two merged organisations. Both were large, traditional, heavily computerised

3 THE RESULTS

3.1 Stakeholder perspective

HISSOM considers the perspective of the organisation's external stakeholder groups. Each stakeholder group influences the organisation's

ability to achieve its goals and its management's behaviour to varying degrees (figure 1).

An analysis of the external stakeholders relevant to the organisation was performed, and their primary methods of evaluating the organisation. This facilitated a practical assessment by organisational managers of the behaviour and influence of the investor, political, regulatory and market stakeholder environment influencing the organisation when deliberating their strategy options.

The crucial elements highlighted by the stakeholder analysis were (1) a major change from mutual to public company status for Scottish Widows, with a loss of autonomy previously enjoyed by executive management, and the external visibility of organisational results that created; (2) a realisation of the intense market pressure to deliver a strategy proving "bancassurance" can work, as well as delivering publicised merger synergies; (3) the competitive market changes brought through new legislation, Web technologies, pricing transparency (known in the insurance industry as "the 1% world") and a new, branch network based distribution channel; (4) the need to manage a large scale integration of high cost, multiple mainframe legacy

require resources needed for the merger and strategy programme.

The influence of external stakeholders was verified. Analyses were undertaken of the implications for the organisation of UK market consolidation and demutualisation activity, the impact of the merger on the joint venture which existed to that point, emerging government legislation for pension provision and tax free investments, case law implications on the life insurance industry, and regulatory interest in the UK's largest merger of its kind. The realisation that the organisation was no longer independent but a wholly owned subsidiary with a commercial parent which had to deliver its publicised merger benefits was a new perspective with which the pre-merger organisation never had to contend.

3.2 Organisational management perspective

The perspective of executive management, accountable to stakeholders for achieving organisational objectives, focuses upon the need to
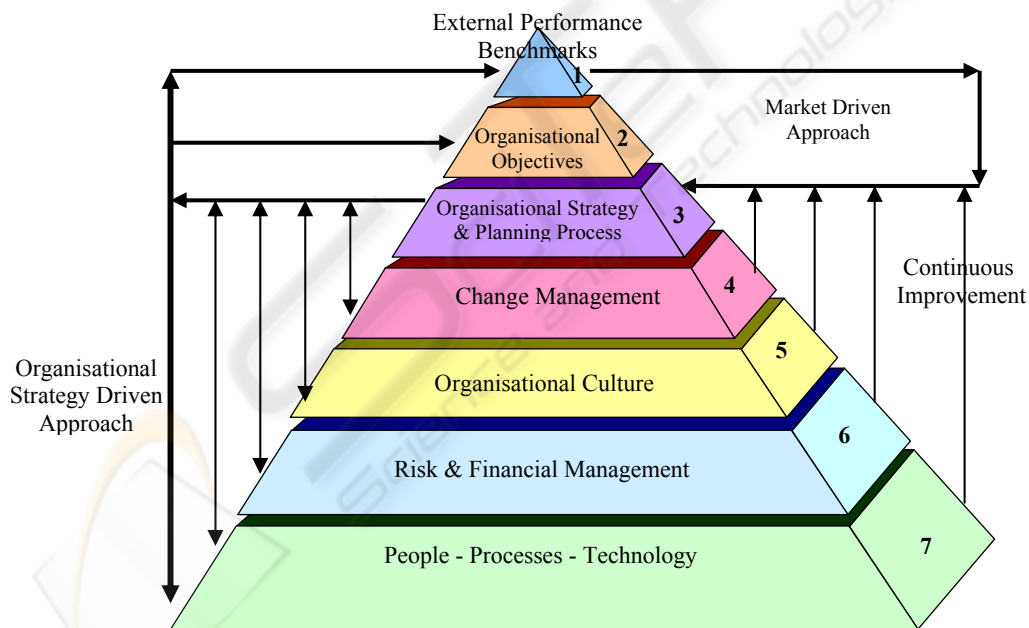

Figure 2: The HISSOM Organisational Management perspective and its impact on the organisation

technologies, as well as deliver merger synergies and a lower cost, unified, Internet enabled technology platform for the future; (5) the merger of two different if complimentary businesses with very different cultures; and (6) the need to unwind a significant joint venture partnership which would

align organisational and IS domains (Alter, 1999).

Figure 2 displays the organisational management perspective, stressing the role of the organisational strategy, whether market or internally driven, in achieving differentiation and competitive advantage (equivalent to *organisational objectives* in the stakeholder perspective model). The success of the

organisation's strategy in achieving the market position sought equates to the performance benchmarks available to external stakeholders, linking the perspectives. The influence of continuous improvement, **CI**, activities on the lower five HISSOM layers, supporting the dynamic, continuously managed nature of strategic planning, is also illustrated.

The output from the organisational management perspective model should provide a set of organisational objectives and strategic themes for the wider organisation to validate. Executive management was cognisant of the stakeholder perspective and, after consideration of the organisation's capabilities in areas such as product development, customer service, technology innovation and brand distribution, considered key internal strategic drivers in addition to market driven strategic themes.

The resulting output comprised a description of the market position sought for the organisation, together with a high level analysis of the strategic drivers, customer and market segments and key organisational objectives. These outputs, reflecting executive management's perspective of its organisational capability, were aligned with the stakeholder perspective, over the strategy time horizon. The executive management strategy-setting phase involved detailed interviews, executive team sessions (some of which were facilitated by external advisors to bring a further, unbiased, external perspective), as well as key research into competitors and general market developments.

Its output was primarily represented in rich pictures, summarised by a simplified operating vision at the end of the 3 year strategy horizon, with objectives for IS and other organisational functions detailed, and a set of high-level financial hypotheses which underpinned the strategy and set the financial targets to be achieved.

The detailed output also provided executive management's forecast on the growth of the business, its broad channel, customer segment and product components and its market position. Importantly, from an IS strategy perspective, the emphasis on automation and IS innovation to deliver the high level strategy was significant.

This phase involved functional (including IS) representation at executive level and an executive management realisation (partially influenced by the stakeholder perspective) that the organisation's products and services were highly IS dependent. The Internet as a distribution and automation opportunity was a key theme that emerged from this phase.

A detailed list was prepared of high-level opportunities, focusing on strategic themes agreed by executive management, which provided the wider management team with direction in line with executive management thinking, whilst maintaining the themes derived from the stakeholder perspective. It also provided an initial opportunity review list for validation by the wider management team. Importantly, an output of the executive also included a skills/competency matrix, identifying the core competences organisational management believed were needed to deliver the opportunities identified, including potential outsource areas.

Finally, key themes covering all areas of the organisation from distribution, marketing and sales, and customer service to IS and operations were defined. These would provide input to the business emphasis phase to be refined into broad vision and mission statements, strategic objectives and, finally, business cases and projects, building on the "organisational strategy set" defined originally by King over 20 years ago.

The external stakeholder and organisational management perspective phases were aided by the central business services function, which acted as a co-ordination agent. Although the organisation did not comprise a large, diversified group of companies, it was spread across many different locations, which retained local practices and cultures in the immediate post-merger period. Adopting a central control and co-ordination approach provided organisational management with consistency in communication and rollout of the strategic themes output from the executive management forum, allowing functional management to focus on validating and developing those themes into actionable projects. This approach, although not necessary for HISSOM to be effective, defined the organisation's strategic management style (Goold & Campbell, 1987, Fowler & Wilkinson, 1998).

Finally, opportunities and threats schedules were prepared, for filtering down to organisational managers during the business emphasis, IS strategy and baseline capability perspective phases, where function-driven innovations, dependencies, risks and issues are evaluated.

3.3 Business emphasis perspective

This is HISSOM's key unifying perspective (figure 3), involving the wider organisational management team. It defines the IS capability the organisation perceives it needs in greater detail than the organisational management perspective.
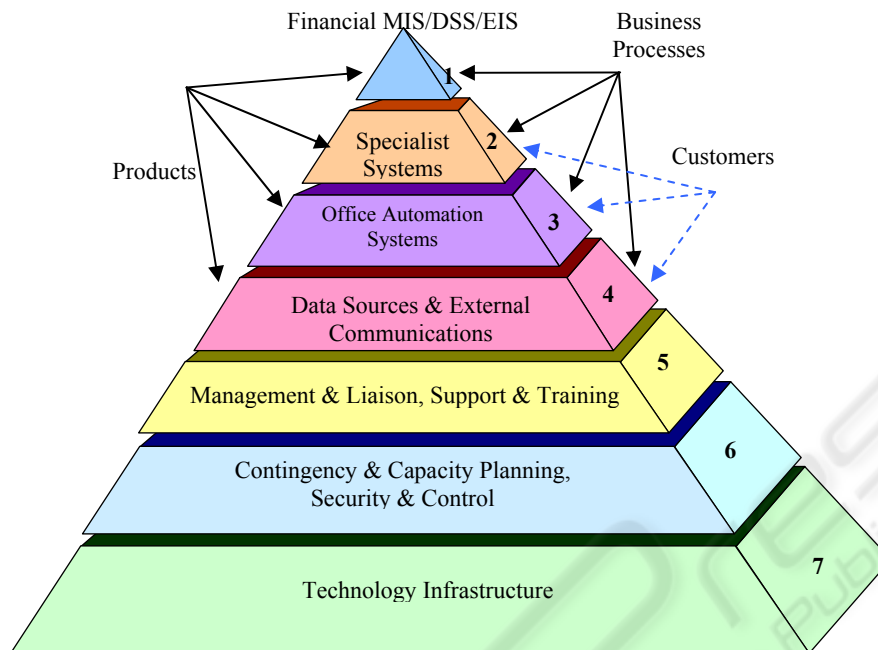
Figure 3: The HISSOM Business Emphasis perspective and its impact on the organisation

It is typically defined in terms of new customer, product, channel and service objectives, and the processes that support their delivery. It is therefore driven to lower levels of detail from each functional perspective, with a more complete interpretation of the IS strategic domain being created, building on prior HISSOM perspectives.

The participative nature of HISSOM is at its most crucial in the business emphasis perspective. It transforms the organisational high-level strategy into tangible actions, a business plan and an operating model design that represents the end (and potentially interim) state organisation. It will involve functional heads (e.g. Head of IS/CIO) with the executive as sponsors of change activities. Any imbalance in organisational IS capability and needs is detailed during this phase.

Business emphasis perspective outputs were driven by an intensive work programme, divided into process based, multi-functional workstreams, organised under a central programme office. Executive management chaired each workstream, facilitating communication and validation of the strategic themes developed from the stakeholder and organisational management perspectives. Cross-functional workstreams for e-commerce and Customer Relationship Management, **CRM**, were established, recognising the need for multi-functional skills representation. Part of the mandate of these workstreams was to recommend the most

appropriate end-state functional organisation for e-commerce and CRM, reflecting management's recognition of the need for a different cultural approach.

Co-ordinated management participation was facilitated by cross-workstream forums, executive review presentations, and centralised co-ordination of the creation of the organisational operating design and financial model. A central Business Planning team co-ordinated transfer of workstream initiatives into an integrated plan. This approach resulted in creation of a central information repository available to all.

Summary output of the HISSOM business emphasis perspective phase included the following:

• Market, customer, operational and financial targets agreed as attainable by the organisation's management team;

• Key customer value propositions for specific customer segments;

• Product profiles for each customer segment;

• Distribution channel strategies for specific customer segments and products, emphasising large-scale, centralised processing with flexible, customer facing, front-end IS;

• A new customer service strategy based on differential service propositions, utilising higher levels of automation for lower value segments;

• E-commerce and CRM strategies utilising centralised legacy technologies with heavily customised front-end functionality; and

• An operational design and plan supporting delivery of the strategy as well as consolidation of the heritage organisations' operational capabilities.

Co-ordination of joint workstream sessions and executive forums facilitated involvement of the management group. A detailed Client Service operating model for the business was agreed, comprising a multi-customer segment, multi-distribution channel, customer-centric sales and servicing description. Figure 4 identifies the IS application architecture elements aligned to the operating model.

The Client Service operating model was enabled through a number of key IS developments and initiatives, some of which came from internal strategic IS drivers, such as Web to legacy developments output from the organisational management perspective.

Risks and issues associated with the detailed design and its high-level initiatives were included within the initiatives. Skills shortages (e.g. Web developers) and training needs (e.g. new systems training) were identified, developing a cultural change theme from an IS perspective. Management appreciation of the cultural change needed to adopt

IS-led, customer-centric developments was typified by a critical focus on IS training for staff.

Resource constraints and dependencies were also identified. For example, reliance on the parent group IS function for infrastructure support and development was significant (rendering the Group IS function an external stakeholder), as well as the implications and costs of attaining compliance with the holding company's IS standards and policies.

For the first time, and at the most appropriate HISSOM phase in the strategy planning process, estimates of the cost of investment and associated investment return were defined, redefining the high level financial model previously set by executive management. These formed the basis of the overall strategy programme business plan that was presented and signed-off at parent level.

The business emphasis perspective phase delivered a strategic initiative prioritisation schedule agreed by the senior management forum. The co-ordinated prioritisation process helped identify what could, and could not, be afforded when scarce resource issues (e.g. people, money, time) were confronted (see baseline capability perspective for examples).
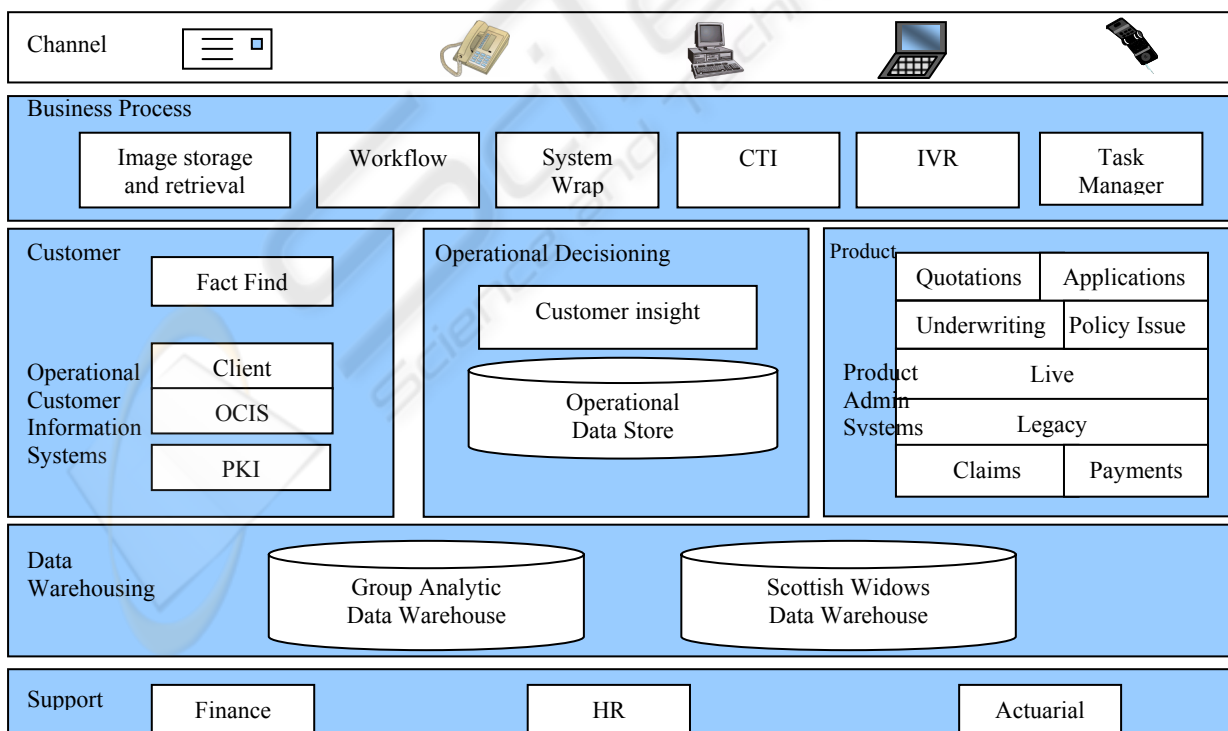
Figure 4: Business Emphasis Perspective – High level IS operating model

3.4 IS strategy perspective

This is the perspective (figure 5) of senior IS management, comprising the IS director and his direct reports for architecture and strategy, development, operational support and infrastructure. The stakeholder, organisational management and business emphasis perspectives influence it. The baseline capability perspective defines its base.

It helps IS management identify the specific IS needs of the organisation within the context of its existing capability, facilitating interaction with the organisation's strategic planning process. Once the *gap* between organisational capability and need has been assessed, identification of the actions, resources and investment, or divestment, required to close the gap can be performed.

The output of this HISSOM phase is the broad range of initiatives, issues, risks and dependencies which support delivery of the IS operating model design, which in turn supports the organisational operating model defined within the business emphasis phase.

This phase was the most intensive of all HISSOM phases, requiring continuous co-ordination between workstreams and integration of outputs through the business planning workstream. Indeed, cross-workstream membership became a dominant facet of this phase, with functional specialists being seconded to the IS workstream (and vice versa) to ensure alignment with the strategic themes was maintained. A number of executive "challenge" sessions were staged to ensure that executive management, as a group (individually, executives sat at the head of each workstream) were in agreement with the initiatives that would form the strategy implementation programme. In addition, design workshops and open "fairs" were staged (some off-site), to ensure the wider management team had the opportunity to participate. This approach ensured that a balance between new innovation and operational realism was maintained.

A number of iterations between this perspective and that of the business emphasis and organisational management perspectives were performed through support and co-ordination from the central support team, allowing an interactive, co-ordinated approach to be taken.

Summary outputs were as follows:
- An IS vision which supported the operational design of the business emphasis perspective;
- Investment, resource and timescale scenarios associated with delivering the IS vision (for prioritisation by executive management);
- A matrix of IS initiatives overlaid upon other functional initiatives to ensure alignment;
- IS function costs and benefits associated with IS team consolidation and reorganisation; and
- An initiatives roadmap.

Much of the analyses produced from the IS strategy perspective were iteratively passed between IS senior and line management (who adopted the IS baseline capability perspective) to establish the levels of constraints, investment and infrastructure development required. This iterative approach resulted in two further benefits to the programme:
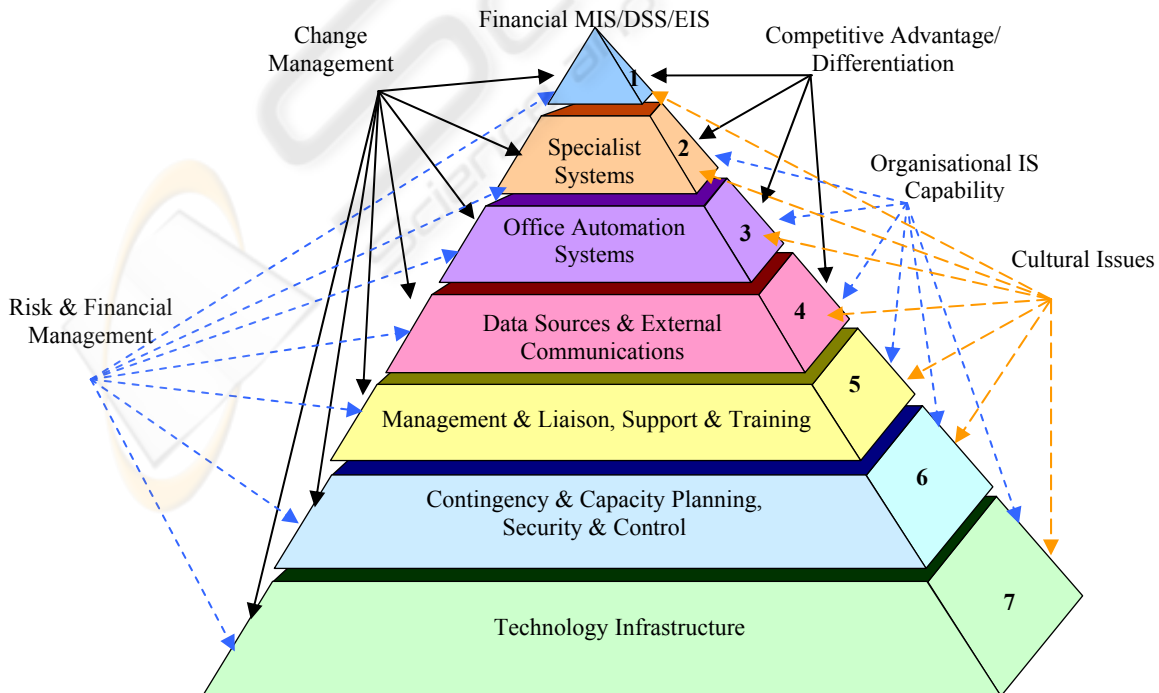

Figure 5: The HISSOM IS Strategy perspective and its impact on the organisation

• The emergence of an automated workflow initiative from within IS which linked operational consolidation initiatives with e-commerce enabled, customer direct sales and service initiatives; and

• The identification of certain business process reengineering initiatives, which could be dealt with through the organisation's Continuous Improvement, activities, which had continued under "business as usual" during the strategy planning programme (and which were funded from different budgets).

3.5 Baseline capability perspective

The limitations of any model need to be understood. HISSOM's building blocks are contained in the *baseline capability* perspective, comprising the basic IS capability for any organisation (figure 6).

This is the perspective of IS line management responsible for activities such as development, network operations, applications support and systems management. It identifies where the IS capability needs to change to support the organisational strategy. IS management must also define the technologies, operating environments, support and training policies and standards that allow the organisation to function within its specific cultural environment. How best to identify and utilise specific skills and expertise within service levels adequate and affordable to the organisation is a key element of the baseline capability.

HISSOM also facilitates IS originated opportunities for IS enabled change (e.g. in this case, workflow, Internet developments and data warehouse capabilities for customer analysis).

In certain instances, liaison with executive management is appropriate (e.g. impacts on organisational culture or whether to outsource or retain direct control over resources) before decisions are made regarding the baseline IS capability.

In the case study, certain initiatives to outsource areas of development were taken, recognising not only the skill base available to the combined organisation, but also the relative time and cost of developing internal skills, such as system migration and Web development skills. In other areas, complete legacy systems were outsourced, enabling the organisation to concentrate on its future IS platform. The organisation's new position within a corporate group boasting the UK's largest internal IS capability brought an opportunity to outsource mainframe infrastructure management and support, and to focus on developing flexible, lower cost, market facing IS.

The need to conform to parent group technology standards brought a limitation to the IS function's ability to develop certain systems in isolation, as did the need to define a "single customer view" of all Group customers. However, conforming with Group policies and standards, although constraining in one dimension, brought with significant opportunities to leverage from economies of scale once integration work was complete. For example, the organisation
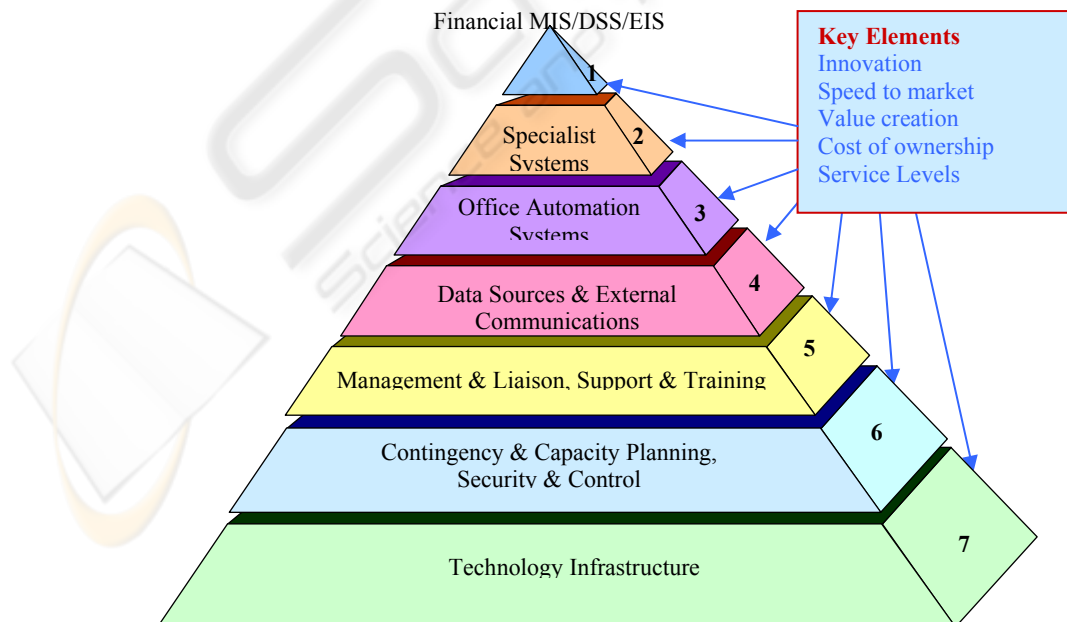

Figure 6: The HISSOM Baseline Capability perspective and its impact on the organisation

had, for the first time, effective access to the UK's largest banking customer base, with superior data mining capabilities.

Significant regulatory constraints, risks and issues were identified, such as the need to compute in real-time pensions and investment checks for new and existing customers across three legacy IS architectures fronted by new, Web-based customer service applications. The need to manage customers by distribution channel factored into new system developments due to the significant risk of damage to intermediary relationships if customers were incorrectly classified as direct customers. The need for a unified Point of Sale, **POS**, system integrated with legacy and new product systems was identified as high risk. It was allocated an appropriate strategic priority for resources, product and compliance training, and technology investment, due to the need to ensure the organisation could sell its new products through its branch network without disruption to customers, intermediaries or the branch network sales force (all external stakeholders).

HISSOM's focus on the baseline IS perspective facilitated the mitigation of significant identified risks and issues, such as the need to consolidate pre-merger business continuity and continuous improvement activities. Migration of legacy IS architectures, policies and standards were co-ordinated, allowing the merged organisation's business continuity, corporate process and continuous improvement programmes to continue with minimal disruption.

All IS capability issues were validated and co-ordinated at the baseline capability perspective phase, consolidated at the IS strategy perspective phase, involving other organisational functions as necessary during both phases. This involvement engendered consensus as line and senior functional management had adequate opportunity to debate key issues of relevance to achieving an integrated and co-ordinated organisational and IS strategy.

The output from the baseline capability perspective comprised detailed initiative charters, initiative roadmaps, resource, investment, investment return and dependency analyses. Much of this information was included in the initiative schedules signed-off by IS management at a IS strategy perspective level and as part of the overall programme initiative schedule at the business emphasis perspective level. Overall resource constraint scenarios were analysed at the baseline capability level to allow senior IS and organisational management to consider key constraints, allowing scenario analysis to be performed so that alignment with organisational strategy could be prioritised on an ongoing basis.

4 SUMMARY

We set out to determine whether HISSOM measured up to its promise as a practical model for integrating ISS direction and IS capability with organisational strategy and objectives.

Applied to the UK's largest bancassurer, HISSOM has validated its relevance, as a practical SISP method, to a large organisational, real-world setting in which strategy management is co-ordinated centrally but integrated within an environment of close liaison and involvement.

The complete programme took almost 6 months and involved over 100 senior staff and external consultants. Much was learned in terms of development of the detailed HISSOM analyses and practical steps that need to be performed, often in parallel, during an intensive strategy planning programme. These lessons will be used to develop a more detailed HISSOM model, with a browser-based HISSOM application planned for wider use.

The essential difference that HISSOM brought was its focus on interaction, providing understanding of the need to align different perspectives and, a surprising but nonetheless beneficial effect, a recognition that strategy centres on co-ordinated and managed processes, a theme in current vogue within the business community (Eisenhardt & Sull, 2001).

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