CHAPTER 5

5 FINDINGS FROM THE REVIEW OF COMPANY DOCUMENTATION AND INTERVIEWS WITH KNOWLEDGE MANAGEMENT DIRECTORATE STAFF

5.1 Introduction

Chapter 5 discusses KPMG's plans for the development of the UK intranet (UKnow) as part of its knowledge management implementation. It covers the period from 1995, when the idea of a corporate intranet was first mooted within the firm, to late 2001, when the interviews with the distributed knowledge management staff were conducted for this research. The primary source of data from which the details of this chapter are drawn is the archive of company documentation, supplemented by data derived from two interviews with Knowledge Management Directorate staff (Goody, 7 November 2002; Goody & Simpson, 16 June 2003).

Since Kling and Scacchi question whether "the formal goals of an organization are a good guide to telling what it does" (1982, p. 7), the primary data sets examined for this chapter are also used to provide evidence on the *outcomes* of the plans for the knowledge management implementation, the intranet and knowledge sharing. The extent to which expectations of the plans were met, as recorded in the company documentation, is discussed. This is matched against the distributed knowledge management staff's perceptions of the actual implementation, as outlined in the previous chapter.

The findings on the knowledge management and intranet implementation at KPMG, as derived from the data generated from distributed knowledge management staff interviews, have already been discussed in Chapter 4. This has been achieved in the terms of the first element of Kling and Scacchi's (1982) web model: lines of work and going concerns. In line with this, Chapter 5 considers the KPMG implementation with reference to the other three elements of the web model. Highlighted throughout the discussion in this chapter is the *infrastructure* of the implementation under examination, i.e. the human and inanimate resources that supported its development. Allied to infrastructure are the *macrostructures of the computing environment*, i.e. the external factors, such as constraints, that impact the work of those concerned with an implementation's deployment. Macrostructural factors of importance to the case study examined for this research are also drawn out in the analysis of the implementation, as presented below. Kling and Scacchi (1982) argue that both infrastructure and macrostructure are important to the remaining concept of the web model, the implementation's *production lattice*, i.e. the multiple linked elements that contribute to service delivery. In the analysis that follows attention is drawn to the production lattice of the knowledge management and intranet implementation at KPMG, its dependence on local infrastructure, and its vulnerability to the influences of the macrostructure.

Of particular interest in this chapter are the staffing arrangements for the broad knowledge management implementation. These were a large component of the implementation's infrastructure and had a significant influence on the sharing and reshaping of the firm's knowledge management implementation actor-network (to be discussed further in Chapter 6). Equally, elements of the macrostructure of the environment can be seen in records of externalities that influenced the work of those concerned with the intranet's deployment, i.e. its production lattice. In adding to the information presented in Chapter 4 on lines of work and going concerns this analysis helps build a fuller picture of the intranet implementation at KPMG through consideration of the three other elements of the web model framework (Kling & Scacchi, 1982).

The chapter concludes with a set of observations. These act as a preface to the main discussion of the full data set which is presented in Chapter 6.

5.2   Background on knowledge management at KPMG UK

Some background details on the centralised knowledge management function, and the goals for the knowledge management implementation from 1998 onwards (see page 121 below), are provided first. These set a context for the main discussion of the plans and implementation of knowledge management, and the intranet, at KPMG.

The UK was the first national practice in KPMG to have a knowledge management function with devoted resources. It was established in 1995 with the appointment of Peter Chivers as head. Having persuaded the senior management of the growing importance of knowledge management, Chivers built his initial team in 1995 by selecting key individuals considered to possess the requisite skills to launch the new function in the UK. The most important of these was Donald Tether from Information and Communication Technologies (ICT), whose main duty was to look after the UK information architecture. Tether came to be regarded as the father of the UKnow and as the person who sold the concept of the intranet to the rest of the firm. He was particularly revered for his foresight in envisioning the power of intranet technologies ahead of everyone else (Goody & Simpson, interview, 16 June 2003).

The initial focus of this new knowledge management function was to investigate networked collaborative tools such as Lotus Notes, both for internal purposes and for use with clients. For the first three years those working in the knowledge management function reported to the partner responsible for IT, whose interests were "very much on IT rather than KM" (Goody, interview, 7 November 2002). Indeed, it would appear that intranet developments initially drove knowledge management development at the firm, rather than the other way round (Goody, 2002, April). Furthermore, interest in collaboration tools indicates hopes that the intranet would be deployed as a boundary object in the guise of a standardised form (Star & Griesemer, 1989, p. 411). As a factor that impacted the work of those concerned with the firm's knowledge management implementation in the mid-1990s, the interest in IT and computerised information

systems served as an element of the macrostructure (Kling & Scacchi, 1982, p. 16) in which the broad knowledge management implementation was placed.

In 1998, knowledge management provision in the company was reviewed and a number of significant changes made. Centralised knowledge management staff now reported to a newly appointed Partner for Knowledge Management, Sarah Charles, and she in turn reported to the Chief Operating Officer for the UK firm. The staff in the Research and Information Services group, led by Goody, moved into what became the Knowledge Management Group (KMG). The centralised KMG started promoting knowledge management across the firm. It campaigned for the distributed functions and lines of business (LoBs) to employ local knowledge management staff. By September 1998 the functions and lines of business had started to respond to this recommendation, with the functions taking the lead (Goody, interview, 7 November 2002). Most had assigned some staff to knowledge management roles (UK Knowledge Management Group, 1998) albeit that in a number of cases this was achieved by rebranding existing staff and providing them with new job descriptions. For example, former members of the Tax Advisory function, and of the Audit Research and Development team, took on the knowledge management roles in their respective business units. This strategy of redeploying staff, rather than making new appointments, hints infrastructure compromises (Kling & Scacchi, 1982, p. 18) for the firm-wide knowledge management implementation.

The seven-page policy document *Knowledge centres briefing pack* (UK Knowledge Management Group, 1998, October) (introduced above in Chapter 4) was the main tool for clarifying and formalising the role of local "knowledge centres" in the functions and lines of business. A "knowledge centre" was not a physical place, but "the role of formally co-ordinating knowledge sharing within a line of business or discipline covering the intranet, external information, the Knowledge Repository and the HR/behaviour issues". The document was distributed to employees across the firm, many of whom were unfamiliar with the term "knowledge management" and what it implied. The document itself reads like a manifesto for KPMG's concept of knowledge management in 1998.

Knowledge management was defined in the pack as "the purposeful management of knowledge, know how and best practices within an organisation". The third element in this definition – "purposeful management of best practices" - is wide-ranging, and assigned to knowledge management in the firm a very broad agenda. The specific goals of knowledge management were presented in the context of meeting the needs of both colleagues and external clients. The benefits of building knowledge centres within the firm were summarised as:

- people-to-people sign-posting;
- time savings;
- cost and frustration savings in "information/knowledge" gathering and retrieval;
- support for new staff;
- staff development and the retention of know how;

- increased knowledge sharing across virtual teams.

As far as external clients were concerned, the document argued that improved knowledge management within the firm would facilitate fast responses to client needs and that "harnessing collective knowledge generates greater client value hence greater client satisfaction". This would lead to an improved proposal success rate in winning new work and clients, and enhance the market perception of KPMG. An examination of this document reveals that it did not articulate the benefits of knowledge management in the terms of two of the broad themes evident in the literature. There is no explicit mention of organisational learning, nor of knowledge creation and innovation. The focus is on knowledge reuse. It is also important to note that in this document the focus on knowledge sharing was *within* business units, rather than across multiple business units.

Explicit references to these corporate goals of knowledge management were echoed in later documents. For example, in a presentation to Knowledge Managers in Germany in 2001, Chivers highlighted how knowledge management could support processes that lead to better sales and revenue for the firm, and introduced the notion of innovation and organisational learning (Chivers, 2001, June). He developed these arguments more formally in a policy document issued later in the same year (Chivers, 2001, August). Knowledge management activity, it was stated, should:

- facilitate current and future client engagements;
- enhance the skills and reach of KPMG staff so that they learn from working with distributed contacts and can apply what is learnt both in their own work and for the benefit of others;
- lead to the development of new products and services;
- speed up the induction period of new staff;
- improve internal decision making when information can be used "more proficiently to make decisions, implement those decisions, learn so future decisions can be made and implemented more effectively".

The second of these documents (Chivers, 2001, August) reads as more sophisticated than its early counterpart (UK Knowledge Management Group, 1998, October), indicating an extension of the firm's approach to knowledge management and its promotion over the period 1998-2001. For example, the *Knowledge centres briefing pack* identifies benefits of a knowledge management implementation in operational terms such as efficiency savings, whereas Chivers argues broader business benefits such as improved client relationships and innovation in products and services.

5.3 Plans for staffing to support the knowledge management implementation 1998-2001

Two sets of staff were to be responsible for the broad knowledge management implementation: (1) staff in the centralised Knowledge Management Group (KMG) and (2) distributed knowledge

management staff working in business units across the firm. Each set of staff is discussed in this chapter with relation to the plans for their roles in the knowledge management implementation.

5.3.1   The UK Knowledge Management Group (KMG)

Goody describes the growth of the centralised Knowledge Management Group as "organic" rather than planned (interview, 7 November 2002), hinting that formal infrastructural requirements (Kling & Scacchi, 1982, p. 18) for staffing were not assessed, nor met, in the period under examination. KMG grew out of the original UK knowledge management function when it was joined by the former Research and Information Services group in 1998. In this year there was further recruitment and a number of staff transfers to the group, and its composition changed markedly in a short period of time. Two more sets of staff joined KMG in 1999: (1) the group responsible for the firm's contact database and (2) the group charged with the national client database. The former found only a temporary one-year home with KMG. It was removed from the function in 2000 on the grounds that its duties of marketing events and preparing mailings did not comprise core knowledge management work. Further bids were made to enlarge KMG to provide a formal help desk service for KWorld and UKnow users (UK Research and Information Service, 1999, 25 October).

Up until the end of 2000 the majority of KMG staff was distributed across several locations in London, with the exception of the client database staff who were based at Watford. In November 2000 it was announced that all London KMG staff would be relocated together at the firm's Dorset Rise offices in the City. By the point at which data was collected for this research in the interviews with distributed knowledge management staff there were forty-seven individuals working in KMG, the majority of whom were based on one floor at Dorset Rise. The move marked the end of a turbulent period for KMG as a group actor in the knowledge management implementation actor-network.

The broad goals of KMG are described in a variety of ways in the company documentation. The focus varies according to the timing of the description and the audience for whom it was prepared. For example, in November 2000 the work of KMG was summarised in *kmnews@kpmg* as providing:

> best practice advice, process, KWorld/UKnow operational support and policy formation to all LoB and all functional Knowledge Managers. The UK KMG also has a role as a broker to facilitate effective communication on best practice between functional and LoB Knowledge Managers.

> (UK Knowledge Management Group, 2000, November.)

It can be seen here in the centralised KMG's own newsletter that its focus was on supporting the distributed knowledge management staff on general issues related to knowledge management and the firm's global and UK intranets. This contrasts with evidence from the interviews with distributed knowledge management staff which showed that operational support

of intranet work was the main reason for contact between the two sets of knowledge management staff (see Chapter 4).

In the knowledge management policy document for the UK, published nine months later in August 2001, Chivers outlined the group's purpose as:

> to support the business with the development of its knowledge sharing capability and to provide certain specific services such as specialist research and UKnow support. In addition, it sets the knowledge management strategy, guidelines, frameworks and policies in conjunction with the business.

(Chivers, 2001, August.)

This statement indicates how knowledge sharing had become a key issue, highlighted here ahead of mention of broader knowledge management themes. In the same document the goals of the group were expressed in terms of the firm's values: "Our aim is to turn knowledge into value for the benefit of our clients, our people and our communities" (Chivers, 2001, August). This indicated a desire to promote KMG's work as highly relevant to the firm's purpose. The provision of UKnow support, prioritised in this list, reflects the finding reported in Chapter 4 that the distributed knowledge management staff had most reason to contact KMG over intranet issues. There was little evidence, however, of the message of the second sentence being delivered in practice.

Chivers' reference to the general promotion of knowledge management across the business echoes earlier identification of the group's responsibility to raise its profile. For example, in late 1999 KMG members were charged with identifying sponsors for UKnow presences (KWorld/UKnow editorial panel, 1999, November 25). One year later Nevin (the UK Partner for Knowledge Management) encouraged KMG staff to generate awareness of knowledge management across the firm. He identified a number of fora in which this could be achieved, including periodic updates to the UK Executive and "events" in KMG's communications plan (UK Knowledge Management Group, 2000, November). These plans show recognition that the knowledge management implementation required political support.

KMG's main responsibility for the intranet lay in making it possible for content to be added to the resource by the distributed knowledge management staff. Iain Simpson, the UK Intranet Manager, summed up the UKnow team's core business as "to support the ever-growing number of content providers and web-site developers throughout the UK" (UK Knowledge Management Group, 2001, February). Support of the distributed knowledge management staff took the form of:

• writing, publishing and disseminating best practice guides on the design of web pages with the primary purpose of to improving adhesion to protocols;

• e-mail updates to Presence Producers;

• the organisation of internal Presence Producer conferences and training days

(UK Knowledge Management Group, 2000, June.)

The other main role of the UKnow team was to provide an interface to two further sets of resources. These were material held on KWorld (Nevin, 2000, October 19), and the commercial online sources managed by the Research Services and Information Resources staff (UK Knowledge Management Group, 2000, November 16). The former role included the duty of initial "tidying up" of UK content on the global intranet before passing the responsibility for its maintenance to the distributed knowledge management staff (UK Knowledge Management Group, 2000, December 21).

A further major responsibility of KMG of importance to this study was liaison with the distributed knowledge management staff in the business units. As already indicated in the analysis of interview data in Chapter 4, the relationship between KMG and the distributed knowledge management staff is an interesting one. In some respects KMG managed the work of the distributed knowledge management staff in terms of their output, but there was not a line management responsibility between any member of KMG and any member of distributed knowledge management staff. For example, distributed knowledge management staff had to present their business plans to KMG so that their impact on the knowledge management work of the firm as a whole could be assessed (UK Knowledge Management Group, 2001, July 19). However, KMG had no management *control* over distributed knowledge management staff as individuals or of the "knowledge" that they managed. Goody explained:

> We believe that we should set standards and protocols, act as catalysts, drive change and encourage change, but what we don't do is own content… The intellectual capital sits with the functions and markets… We establish policies and are meant to ensure that they are applied.

(Goody, interview, 7 November 2002.)

In early discussions of the staffing structure the possibility of having distributed knowledge management staff report to KMG was considered. This was rejected due to the complexity of handling employees who had more than one responsibility in a function, line of business/market or infrastructure unit: not all the distributed knowledge management roles were full-time. Had this route been taken, it would have been necessary to divide the distributed knowledge management staff cohort with different reporting mechanisms for different duties (Goody, interview, 7 November 2002). This provides another example of an element of the macrostructure (Kling & Scacchi, 1982, p. 16) that constrained the knowledge management implementation. Equally, limitations on infrastructure (Kling & Scacchi, 1982, p. 18) in the form of staffing compromises can be traced back to a factor of the environment in which the implementation was placed - the organisational structure of KPMG.

5.3.2   Distributed Knowledge Managers and Presence Producers

The *Knowledge centres briefing pack* proposed a "generic structure and standard architecture for the acquisition, storage, retrieval and presentation of information {that} will ensure that everyone has a predictable way to find out where knowledge is stored and what is available". It said that this should be supported by "Knowledge Masters" who would "manage the

implementation and ongoing development of the Knowledge Centre co-ordinating the creation, innovation and use of the firm's knowledge assets and intellectual capital". Skills sought for the role, according to the proposed job description provided in the pack, were:

- a "good understanding and knowledge of the line of business/discipline business issues and drivers";
- "project management skills coupled with a determination to drive the programme through";
- "good diplomacy, interpersonal, organisational and communication skills";
- "ability to influence and persuade people at all levels".

The "Knowledge Masters" would be assisted by "Knowledge Analysts" (UK Knowledge Management Group, 1998, October)..In effect, this set of proposals formed the blueprints for the roles of Knowledge Managers and Presence Producers, and the basis of job descriptions for distributed knowledge management staff as determined by KMG (Goody, interview, 7 November 2002). An analysis of the detail of the proposals shows distinctions between the two categories of distributed knowledge management staff, as well as a degree of overlap, and some anomalies, in their proposed roles. It was stated that Knowledge Masters would oversee the work Knowledge Analysts. Further additional material in the two tables matches the expectations of the supervisor-assistant relationship.

- The Knowledge Analyst would implement the systems developed by the Knowledge Master for managing submissions to the knowledge repository.
- The Knowledge Master would have overall management responsibility for the Knowledge Centre; the Knowledge Analyst would be occupied with the day-to-day management and quality control of the knowledge repository.
- The Knowledge Master would co-ordinate the provision and integration of external material; the Knowledge Analyst would search for and gather specific material for the resources and provide requisite sign-posts to it.
- In some cases, the Knowledge Master would take charge of a duty with the assistance of the Knowledge Analyst, for example the management of knowledge creation processes, the development and enhancement of the business unit's intranet presence.

Some duties listed are expressed in the pack in identical, or near-identical terms:

(1) adherence to the global taxonomy;
(2) promotion of the value of the knowledge centre;
(3) decision making on the degree of push and pull in information provision;
(4) ensuring that the requirements for CVs' availability be met.

It is reasonable to expect staff in each role to participate in the first two of these activities to a similar degree. However, the third implies a higher level of strategic thinking and might be more appropriately assigned solely to the Knowledge Master, as are the duties of determining knowledge repository and HTML file content, and developing incentives for knowledge sharing. Equally, taking care of the CV system sits more comfortably with the content gathering role of the Knowledge Analyst. Two duties allocated to the Knowledge Analyst alone in these

proposals do not fit neatly with this role as a whole and would be better covered by the more senior role. These are the requirements to liaise with other Knowledge Centres and take responsibility for issues related to information risk. A further interesting observation can be made in relation to the expression of the work to be undertaken by the new distributed knowledge management staff: there is a great emphasis on the maintenance of the knowledge repositories. This indicates a lack of vision for the potential of managing a Knowledge Centre comprising multiple information sources. The anomalies in the job descriptions indicate that the specifics of each particular role were not adequately thought through prior to the publication of the pack.

The evidence presented here for plans for the knowledge management implementation from 1995 onwards shows at least three changes in approach. These do not, however, take the form of strategy development. Rather, material on which this conclusion is based is drawn from several documents that contain information that does not articulate with earlier decisions. For example, although the detail of the *Knowledge centre briefing pack* (UK Knowledge Management Group, 1998, October) indicates that the role of the intranet in the implementation could be interpreted as a boundary object (Star & Griesemer, 1989, p. 411), as was hoped to be the case in the mid-1990s, the actual boundary object shape is different in each case. In the mid-1990s the expectation was that it would be a standardised form (see page 120 above), in 1998 it was promoted as a repository. There is also a shift in the implementation's main goals from knowledge reuse in 1998 to learning and innovation in August 2001 (see page 122 above). It can be seen then that up until just two months before the first interviews were conducted for this research, the official line on KPMG's UK knowledge management implementation was heavily based on codification of knowledge for reuse. This explains to an extent the concerns of the distributed knowledge management staff, as expressed in the interviews reported in Chapter 4, that they were practising *information* management as opposed to knowledge management. The official material on staffing also illuminates some of the interview findings on the distributed knowledge management staff's career anxieties. The analysis of the roles in the *Knowledge centres briefing pack* (UK Knowledge Management Group, 1998, October) above on page 125 shows that the initial job descriptions were not sufficiently developed. Equally, the decision for the management of distributed knowledge management staff, as determined by the macrostructure (Kling & Scacchi, 1982, p. 16) of KPMG's organisational topology, had major ramifications on the delivery of knowledge management in the business units and the co-ordination of knowledge management across the firm, as has already been noted in Chapter 4.

5.4   Plans for the intranet implementation

KPMG UK intranet policy development and implementation between 1995 and 2001 can be split into two distinct periods: (1) 1995-1998 and (2) 1999-2001. Major developments in 1998 related to knowledge management and intranets – such as the enlargement of the UK KMG, the employment of distributed knowledge management staff (see page 121 above) and the launch

of KWorld – make it the watershed year. For this reason plans for the intranet implementation at KPMG UK is discussed over the two specific time periods.

UKnow originated as a "small enthusiast intranet" (UK Knowledge Management Group, 2001, February) developed by two people for the firm in London on the basis of a proposal made in summer 1995 (Goody, 2002, April). At this stage, the role of the intranet might be conceived of as a personal project or hobby horse of a closed group. In Autumn 1995 it was demonstrated as OK-Web (Goody, 2002, April). An internal KPMG document entitled *Intranet trial and conclusions* explains how OK-Web was formally evaluated as the prototype UK intranet in summer 1996 (KPMG, 1996, June). Around 420 users in three business areas participated in a trial of the system. The evaluation of the trial was positive: the majority of participants agreed that the web would offer the easiest way for people to find and keep information, it would change work patterns and promote the skills of individuals and groups. The conclusion that the system would be a useful pointer tool (as noted in earlier work on intranets, for example, O'Dell & Jackson Grayson, 1998, p. 164) for finding people is an early indication that end-users would adopt it as boundary object that furnished meta-knowledge. This was the strongest role for UKnow in practice according to the interview findings presented in Chapter 4. The evaluation participants also reported that they had learnt more about KPMG as they took part in the trial. The results of the trial indicated areas of concern for the development of the intranet on a larger scale, namely means of:

- encouraging people to publish intranet resources;
- encouraging people to maintain intranet resources;
- making decisions on technical platforms and tools;
- establishing a consistent look and feel across intranet sites;
- generating buy-in when there was little content;
- managing the web editorial role.

Following the trial, the steering committee charged with looking after intranet development proposed an intranet staffing structure. This comprised Information Providers, Information Managers and Information Publishers. (These roles could be matched to the later structure that consisted of contributing end-users in the business units, Knowledge Managers and Presence Producers.) The steering committee also considered risks of embarking on a full-scale intranet project. Consideration of the cultural environment as a macrostructural constraint (Kling & Scacchi, 1982, p. 16) at KPMG, there were minor reservations that the technology would not be accepted. The workload for content development teams and systems reliability, i.e. the infrastructural (Kling & Scacchi, 1982, p. 18) needs for adequate staffing, were identified as medium risks. Of highest risk were the difficulties of keeping content up to date and accurate (KickIT steering group, 1996, September). Despite these misgivings, plans continued for the roll out of the intranet across the UK. OK-Web was transformed into an enterprise-wide national resource. As well as offering internally generated resources, external content was delivered to

the desktop via the intranet in the form of NewsEdge services. It was at this point that OK-Web became UKnow (Goody, 2002, April).

By 1997, staff in Boston were also developing an intranet[1]. This would be a global resource. The decision to launch such a facility assumed more importance in 1998 in the aftermath of the failed merger with Ernst and Young abandoned in February of that year. It was realised that the firm's work was hampered by the incompatibility of the various communication tools employed across its geographies. For example, at this time there were eighteen e-mail systems in operation, and it was not uncommon for a Senior Partner in one country to be unable to send e-mail to his equivalent in another. The decision was taken to address three priorities in the development of the global intranet: (1) messaging; (2) knowledge sharing and (3) formal collaboration with clients (Goody, interview, 7 November 2002), i.e. elements consistent with the features of a standardised form boundary object (Star & Griesemer, 1989, p. 411). The global intranet was launched in 1998 as KWorld, and became part of the macrostructure (Kling & Scacchi, 1982, p. 16) in which the UK knowledge management implementation and UKnow's production lattice were placed (Kling & Scacchi, 1982, pp. 20-21).

In 1998, when the centralised knowledge management function was formed as KMG (see page 121 above), Simpson was appointed as Intranet Manager with responsibility for UKnow. Web content development was no longer a function of ICT staff (although there would be some later involvement – see page 148 below). The first imperative of Simpson's role was related to firm-wide infrastructural (Kling & Scacchi, 1982, p. 18) issues related to the resourcing of web page development. Simpson's remit was to build a team that could respond to the increasing demand across the business for the construction of web sites. The provision of centralised support was intended to cut intranet costs: £250,000 had been spent the previous year on web development contracts with external consultants. The UKnow team was initially occupied with migrating existing networked resources, such as bulletin boards, to the intranet (Goody, 2002, April) and setting content requirements for the knowledge repositories, i.e. the databases accessed through UKnow.

In addition, Simpson's UKnow team contributed to intranet policy development, such as decisions on the sanitisation and approval of intranet content (UK Knowledge Management Group, 1998, October) and common design protocols[2] (Goody, interview, 7 November 2002). At the end of 1998 the UKnow team was supporting approximately 3700 unique intranet users each working day.

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[1] Staff in the UK had reservations about the Boston approach since the project was being executed without reference to any KPMG intranet developments outside the US. It was felt that the enthusiasm of the Global Chief Knowledge Officer (CKO) for a new, Boston-driven "solution" hampered early development of an intranet that could genuinely be described as international (Goody, interview, 7 November 2002).

[2] These were published the following year (UK Knowledge Management Group, 1999, November).

In the second period - 1999-2001 - and at the broadest level, UKnow policy development focussed on:

- improving intranet functionality and content provision;
- ensuring that the business could capitalise on its intranet investment;
- identifying means of demonstrating the business value of the intranet.

These broad goals are evident in documents such as Chivers' presentation to German Knowledge Managers. Here he gave a retrospective summary of what his group had set out to achieve in the previous financial year (Chivers, 2001, June). The 2000/2001 goals that related to functionality are summarised as moving to greater "e-enablement" within the business, for example through the employment of collaboration tools and extranet applications with clients and the introduction of NetMeeting. In terms of content provision, the development of the new CV system was mentioned as a specific resource requiring attention, whilst general references were made to quality enhancement of UKnow content and greater integration of UKnow/KWorld resources. In the same document plans to extend monitoring and management can be seen as attempts to provide evidence of the business value of the intranet to the firm. Minutes of the UEP show how the goals listed above were detailed on the agenda of those responsible for intranet implementation. According to this committee's meeting minutes of February 2001 a number of priorities for improving intranet functionality were highlighted (KWorld/UKnow editorial panel, 2001, February 15). These included the further web-enablement of resources, the introduction of collaboration tools, increasing search capabilities, the enhancement of knowledge repository indexes and further facilitation of distributed publishing processes. Content priorities that were identified related to extending particular key web sites, improving KNews (the firm's news service) and integrating UKnow/KWorld resources. These efforts to facilitate collaborative working were made without reference to an official policy that sanctioned such work. This indicates that much "policy" for the intranet implementation was not articulated in a form that could be readily communicated across the UK firm: the minutes of the UEP were private and not made available on the intranet. This provides an example of prevalent background knowledge-sharing activity amongst those responsible for the main resource intended to minimise such practice. The minutes of this meeting also list the implementation of better measuring and monitoring tools. This articulates with Chivers' concern to gather data to support arguments of intranet value to the firm at large, and thus strengthen its position in the knowledge management implementation actor-network, and add power to the network as a whole in the context of competing actor-networks within KPMG.

Additional company documents and interview data provide evidence of how specific responsibilities for the intranet implementation were assigned to distributed knowledge management staff from 1999 onwards. The main role of the distributed knowledge management staff was supposed to be rooted in ownership of material belonging to their home units (Goody, interview, 7 November 2002; KWorld/UKnow editorial panel, 2000, January 27). As Chivers put it in the *Knowledge Management UK policies and guidelines* "This is primarily a content maintenance role" (Chivers, 2001, August, p. 7). (Two months earlier he had labelled it "content

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management" and referred to duties such as maintaining the UKnow sites, aggregating internal and external content, maintaining portals and providing some support for KWorld (Chivers, 2001, June)). The role included attending to issues relating to information risk, such as data protection (KWorld/UKnow editorial panel, 2000, March 2). Also important was the sanitisation of confidential data prior to its general release to the firm at large (UK Knowledge Management Group, 2001, January 18; UK Knowledge Management Group, 2001, July 20). Chivers explained: "All material proposed for inclusion in the knowledge repository is checked by a Knowledge Manager for compliance with the firm's policy on confidentiality prior to being approved for inclusion" (2001). (Information risk management became the responsibility of the Knowledge Manager, rather than the Presence Producer as had been proposed in the blue prints for these roles.) The importance of the content management in the portfolio of distributed knowledge management staff skills was also highlighted in a policy document issued by the Global Knowledge Management Group. This recommended that specific incentives be developed to encourage knowledge management staff to remain in post (Global Knowledge Management Group, 2001, July). These findings from the review of the company documentation are at odds with how the majority of distributed knowledge management staff perceived their roles. Possible explanations for this have been presented in Chapter 4. From the perspective of the Knowledge Management Directorate, the mismatch may be seen as an infrastructure issue (Kling & Scacchi, 1982, p. 18) in that the business units were unable to recruit a cohort of staff that was capable of achieving the plans for the intranet.

The details on the plans for the UK intranet implementation show how its anticipated role changed over the period 1995-2001. Initially it was a personal project, strongly associated with a particular individual. Gradually it became institutionalised as it was first demonstrated to a small group, then released as a national resource. The early testers of the system identified its potential role as a basic repository boundary object (Star & Griesemer, 1989, p. 411) and as a pointer tool (O'Dell & Jackson Grayson, 1998, p. 164), its most successful manifestation by 2001. The detail presented here also highlights that the position of the main artefact of KPMG's UK knowledge management implementation in the knowledge management implementation actor-network would become subject to the activities of other actors. For example, the negative impacts of KWorld, as discussed by the distributed knowledge management staff in interviews and presented in Chapter 4, can be traced back to decisions taken in Boston in 1997 and 1998.

5.5   Plans for knowledge sharing

The policy documents held in the KMPG archives show the extent to which knowledge sharing was recognised as a key component of the knowledge management implementation, and the plans to motivate knowledge sharing in practice.

One of the main duties of the knowledge centres proposed in KMG's primary knowledge management policy document, the *Knowledge centres briefing pack*, was the co-ordination of knowledge sharing in the firm's business units. It stated that the success of any knowledge management implementation was dependent on "the development of a strong and open

knowledge sharing culture" and listed knowledge sharing as one of the goals of knowledge management at KPMG (UK Knowledge Management Group, 1998, October). The benefits sought from improved knowledge sharing, as articulated in the later documentation examined for this chapter, were increased business efficiency based on informed decisions which would lead to new ideas and insights (for example, UK Knowledge Management Group, 2001, January 18).

Chivers' presentation to German Knowledge Managers in June 2001 provides an indication of the wide scope of "knowledge" to be shared. He referred to internally generated information that can be easily codified - such as staff CV details or contact information - to material that is more difficult to format for wide dissemination, for example engagement summaries and descriptions of methodologies. His listing of "knowledge" also encompassed externally produced information such as current awareness services (Chivers, 2001, June). In common with other documentation held in the company archive, Chivers' work portrays a model of knowledge sharing which focuses primarily on codifying content to be uploaded on to a computer system. This appears to have contributed to the misconception that knowledge management could be equated with the intranet, as discussed as a going concern (Kling & Scacchi, 1982, p. 17) of the distributed knowledge management staff in Chapter 4.

In the same document Chivers considered desirable knowledge-sharing behaviours. These included activities such acquiring new skills or knowledge; undertaking new jobs or responsibilities; contributing to a community or team; and supporting the development of another employee (Chivers, 2001, June). This wide set of tasks reflects the broad definition of knowledge management adopted in the *Knowledge centres briefing pack* (see page 121 above).

Supporting the business in the development of its knowledge-sharing capability was expressed as the main purpose of KMG in August 2001. This priority was put ahead of the two other roles of the group, viz. the provision of specialist research and UKnow support (Chivers, 2001, August). In order to meet the goal of encouraging knowledge sharing throughout the business, particularly in terms of the development of intranet resources, various management interventions were proposed. The recommendations can be categorised into three sets. They relate to (1) the provision of an adequate technical infrastructure; (2) the creation of a knowledge-sharing culture within the organisation and (3) the design of systems to reward knowledge sharing.

The plans for knowledge sharing show heavy reliance on the intranet. The perceived importance of UKnow to knowledge management in the firm in general is very clear in the data gathered for this chapter. Goody stated that the intranet underpinned the knowledge management programme (Goody, interview, 7 November 2002), and it is not an exaggeration to say that UKnow drove early knowledge management developments in the UK firm (see also page 120 above). UKnow's key role as a support of knowledge sharing in particular is

articulated in various places (for example, KWorld/UKnow editorial panel, 2001, April 25). It is not surprising, then, that an adequate technical infrastructure, and support in learning how to use it, were identified as factors that would facilitate knowledge sharing, and that proposals related to these factors were devised. Evidence of this is provided in the *KM lessons learnt* document. Here it was proposed, for example, that the new joiner induction kit should include material on how to extract and submit intranet material. Another recommendation was to make the intranet submission process as simple as possible through the employment of pre-set e-mails and templates (Parr, 2000, April). The Global Knowledge Management Group based in Boston also made a series of policy recommendations related to intranets and knowledge sharing. These were formulated for the document *Barriers to adoption*. Here was set out the requirement for those in content management positions to undertake public relations activities that would help end-users understand the purpose of submitting content to the intranet, as well as facilitate the process of submission. These duties comprised raising the profile of the content management role, making available procedures for others to submit content to the intranet, offering assistance to end-users and publicising the availability of new material. The Group also argued that content management processes needed to be refined. Of particular concern was the confusing proliferation of multiple systems in the firm. The broad recommendation was the integration of material so that it could easily be accessed at the level of KWorld (Global Knowledge Management Group, 2001, July). The suggestions made by the firm on knowledge sharing through the deployment of an intranet in both the UK and US are in line with means of providing suitable ICT infrastructure for knowledge sharing as outlined in the literature.

There are indications in the company documentation that those devising policy for promoting knowledge sharing were aware of management interventions that could be initiated to create an appropriate cultural environment in the firm. This task, however, was not underestimated: "Cultural change takes a long time – it involves breaking traditional ideas and behaviour patterns, while reinforcing and promoting new collaborative working practices" (Parr, 2000, April). Policy statements related to engendering a culture conducive to knowledge sharing were directed at encouraging top level buy-in and support, as well as ensuring wide-spread understanding of the message that knowledge sharing was a responsibility of all staff, and supporting collaboration between individuals and groups. These policy statements on generating a conducive cultural environment reflect the prescriptive messages evident in the literature, as discussed in Chapter 2.

The *Knowledge centres briefing pack* emphasised that instilling knowledge-sharing behaviour was dependant on mentoring and assisting by partners, senior management, line managers and the Human Resource and knowledge management functions within the firm (UK Knowledge Management Group, 1998, October). Later policy level statements show that support for knowledge sharing was sought in senior staff. For example, Parr recommended that "partners should demonstrate commitment by encouraging others to share and by setting knowledge sharing objectives in appraisals", as well as make resources available to support knowledge-sharing work, including time (2000, April). Equally Chivers identified knowledge sharing as a

high priority goal for 2000/2001 for senior staff: "The central leadership team will continue to provide consistent guidance and direction to the business, continuing to develop and maintain policies around knowledge sharing". He listed knowledge sharing as a key objective of team member, manager and leader roles (2001, June). The text of the *Barriers to adoption* document refers to the need for senior management support of knowledge-sharing initiatives, arguing that this could be established through convincing partners of the long term benefits of a shift to a knowledge culture, such as time savings (Global Knowledge Management Group, 2001, July). Recognition of the need for senior level support is widely discussed in the knowledge management literature (for example, Huysman & De Wit, 2002, p. 163).

In parallel with recommendations for attracting top level commitment to knowledge sharing, other strategies were considered for encouraging *all* staff to see knowledge sharing as an explicit individual responsibility. For example, Parr (2000) suggested that the quality assurance check list for each engagement undertaken should include adding content to the KPMG knowledge base, and that new staff should be set knowledge objectives on joining the firm. The goal would be for knowledge sharing to become integrated into everyday tasks (Chivers, 2001, June; Global Knowledge Management Group, 2001, July; Parr, 2000, April). It was also advised that knowledge-sharing success stories be promoted (Parr, 2000, April). Suggestions such as these articulate with advice given in the literature.

A few recommendations relate to the development of working relationships that would accommodate better knowledge sharing through encouraging collaboration (Parr, 2000, April). Chivers (2001, June) remarked that trust would be important to this. Where knowledge-sharing networks already existed, policy dictated that these should be extended by building on extant energy (Global Knowledge Management Group, 2001, July). There are hints of a realisation that the firm may have over-emphasised codification in its early knowledge management efforts. These can be seen in a call for improved person-to-person networking: "You can be good at knowledge sharing and not publish a web site! It's not just about depositing documents in a database. Increasingly it's about putting people in touch with people, not with documents" (Williams, 2001, April). This later evidence indicates interest in building enabling conditions to support knowledge management, a strategy for promoting knowledge sharing that is discussed in the literature (see Chapter 2).

The third main strategy proposed to encourage knowledge sharing in the firm was the design and implementation of a system that would reward such activity. In 1998 KMG recommended that knowledge centres should "ensure that staff are rewarded for sharing qualitative knowledge and for their contributions to the Knowledge Repository" (UK Knowledge Management Group, 1998, October). It was argued that hard rewards, such as financial bonuses and promotion, should be offered and discussed as part of the appraisal process, and at job reviews (UK Knowledge Management Group, 1998, October). These proposals were supported further, for example in Parr's review document *Knowledge management lessons learnt so far* (Parr, 2000, April). Here specific advice was given:

Set knowledge objectives at appraisal and engagement level *and reinforce* them giving specific targets. It should be clearly stated that failure to achieve these may adversely affect bonuses or promotion prospects.

(Parr, 2000, April.)

Parr also advocated the use of soft rewards such as the acknowledgement of key submitters of intranet content (2000, April). In 2001 Chivers restated the view that knowledge-sharing colleagues should be rewarded: "If knowledge sharing is an important corporate objective, then reward systems should recognise this, whether it is through pay or other incentives" (Chivers, 2001, June). He noted that one of the requirements of a system that rewards knowledge sharing through pay should be flexibility (Chivers, 2001, June). These proposals show that the firm was primarily interested in a particular set of rewards for knowledge sharing, with the greatest emphasis on individual economic benefits and career advancement, and some attention to the power of recognising individual profile. Other forms of reward, such as the group benefit of access to information and knowledge and feelings of personal satisfaction - as discussed in the literature - were not acknowledged in the documents in the company archive that set out strategy for to promote knowledge sharing. This is indicative of the macrostructure (Kling & Scacchi, 1982, p. 16) at KPMG, where reward was conceived at the level of the individual, rather than the group, as already discussed with relation to the interview findings in Chapter 4.

The plans for knowledge sharing as articulated in documents held in the company archive, and in comments made by members of the Knowledge Management Directorate, reveal that the intranet was at the heart of the firm's codification strategy for knowledge management. The firm had various ideas about encouraging knowledge sharing, and these match with some of the prescriptive messages found in the literature. It was interested in "culture" as an inhibitor of knowledge sharing. In the material uncovered the language of culture alludes to issues of power within the firm, without discussing power relationships openly. This is most noticeable in the discussions of strategies for generating support of knowledge-sharing initiatives, particularly at a senior level. It illustrates problems identified in the literature related to superficial explanations of difficulties experienced by organisations with knowledge sharing, as discussed in Chapter 2 (Ekbia & Kling, 2003).

5.6 Knowledge management in the business units: the role of distributed knowledge management staff in practice

It has been established that key to KPMG's UK knowledge management implementation was the decision to employ distributed knowledge management staff in the business units across the firm. According to evidence from the company documentation, in practice their roles deviated from what was initially proposed for Knowledge Masters and Knowledge Analysts. In effect, the recorded discussions of the distributed knowledge management staff activity between 1998-2001 indicate that particular issues dominated their working hours. These were:

(1) selling knowledge management to the firm - much of their training effort was focused on this;

(2) facilitating access to intranet content;

(3) discussing knowledge management and intranet issues with others in the knowledge management implementation actor-network;

(4) developing the distributed knowledge management role and addressing career anxieties.

Some distributed knowledge management staff also worked on joint projects with KMG. Each of these activities is discussed in further detail below. The discussion adds to that of Chapter 4 where the lines of work of the distributed knowledge management staff are articulated on the basis of interview data collected in late 2001.

5.6.1   Selling knowledge management to the firm

Although not specified as a key role in the *Knowledge centres briefing pack* (UK Knowledge Management Group, 1998, October), the major preoccupation of the distributed knowledge management staff between 1998 and 2001 centred around the promotion of their work and its value to the business. The goal was to "improve the clarity, development and communication of {the} portfolio of market offerings" (UK Knowledge Management Group, 2000, October 19). The audience of their marketing campaigns ranged from the UK firm as a whole (for example UK Knowledge Management Group, 2000, June; UK Knowledge Management Group, 2000, August 1), to members of the individual function and line of business/market communities (for example, Thomson & Hillier, 2000, October 1). On occasion specific groups were targeted, such as staff in regional offices (UK Knowledge Management Group, 2001, July 20), and new joiners (KWorld/UKnow editorial panel, 2000, November 15). The distributed knowledge management staff's work on promoting knowledge management in the firm had the full endorsement of the Chief Knowledge Officer (Chivers, 2001, June). This is not surprising given that without a healthy interest in knowledge management not only would the jobs of the distributed knowledge management staff be at risk, but so also would be those of KMG, including Peter Chivers.

The tools employed for marketing knowledge management included the following:

* web sites, electronic newsletters and the firm's national news service (for time sensitive information) (UK Knowledge Management Group, 2000, June);

* the data generated for the monthly knowledge management reports (introduced in Chapter 4) (UK Knowledge Management Group, 2000, August 1);

* participation in road-shows and awareness campaigns (KWorld/UKnow editorial panel, 2000, November 15; UK Knowledge Management Group, 2001, May 31).

Individual units devised very specific marketing tools for their own user groups. For example, a glossy leaflet created for one of the lines of business/markets, Information, Communications and Entertainment (ICE) reads "Help us to create a world-class knowledge centre by sharing your ICE knowledge with your KPMG colleagues" (Thomson & Hillier, 2000, October 1). Another Knowledge Manager contributed two and a half hours of content to a line of business/market road-show that ran three times in six locations in 2001 (UK Knowledge Management Group, 2001, December-b).

Raising awareness of the work of knowledge management staff and its value to the business was also sought as a by-product of knowledge management training initiatives within the firm, for which the distributed knowledge management staff had responsibility. Promotion of knowledge management and training were intimately linked in the minds of the Knowledge Managers. For example, the Consumer Markets Knowledge Manager said in spring 2001 that she was taking advantage of the training season to launch a publicity campaign in her line of business/market (UK Knowledge Management Group, 2001, April 23). The distributed knowledge management staff were involved in two broad categories of training: induction training for newcomers to the firm and on-going training for established staff (UK Knowledge Management Group, 2000, June; UK Knowledge Management Group, 2001, April 19). According to the UK Partner for Knowledge Management, the main aim of the training provision was to ensure end-user best practice (Nevin, 2000, October 19). The output of the training work by distributed knowledge management staff reveals, however, that their priorities in implementing training programmes over this period were primarily to promote user understanding of the services offered by KPMG knowledge management staff, both distributed and centralised (UK Knowledge Management Group, 2000, June). Second, they were keen for end-users to become skilled in the use of specific tools (UK Knowledge Management Group, 2001, January 18; UK Knowledge Management Group, 2001, March). These findings from the company documentation confirm findings discussed in Chapter 4. They reinforce suggestions that knowledge management training was not being delivered at the appropriate level to promote knowledge management as a concept in the firm, and this had a negative impact on perceptions of knowledge management work.

In the archive of material examined for this chapter there is also some evidence of attempts in training sessions to align the corporate culture of KPMG with goals of knowledge management. For example, the following script was proposed for use in induction training across units:

> My role is to assist you in the use of knowledge sharing tools at KPMG… at KPMG you will get rewarded through the appraisal process for sharing and using information.

<div align="right">(Hughes, 2001.)</div>

Individual units created training packages aimed at supporting a knowledge culture. For example, Corporate Finance put together a presentation on knowledge management for new joiners highlighting the "importance of new knowledge sharing initiatives such as the CVs system, the Knowledge Repository, the Global FAS Microweb and KWorld/UKnow" (UK Knowledge Management Group, 2001, July 20).

In some cases training programmes were developed following serious attempts at user needs analysis. For example, in summer 2001 the Assurance function announced that it was planning such an exercise followed by a "big education programme" to encourage the use of its intranet sites (UK Knowledge Management Group, 2001, July 20). Around the same time Consumer Markets reported plans to undertake a survey to understand what its community wanted and

needed from its intranet site (UK Knowledge Management Group, 2001, June 26). The results of this exercise fed into the definition of key objectives for the group in 2001/2002 (UK Knowledge Management Group, 2001, September). Industrial Markets (IM) staff spoke of similar activities a little later when describing an initiative of "knowledge audit" "assessing how IM share knowledge and how to maximise processes and reduce time and effort on tasks" (UK Knowledge Management Group, 2001, October 24). These findings on selling knowledge management to the firm fit neatly with two aspects of the interviewees' lines of work related to the broad knowledge management implementation and concerns of the impact of the approach taken, as discussed in Chapter 4. These are the promotion of knowledge management in the business units and the provision of knowledge management training for end-user staff.

5.6.2   Facilitating access to intranet content

It was explained above on page 124 that it was KMG that set the UK firm-wide protocols for the development of intranet resources. Decentralised content management, however, provided distributed knowledge management staff with the opportunity to experiment with technology to improve access to content. For example, in September 2000, staff from Assurance announced work on the design of a common template to enhance navigation and inter-linking across its intranet resources (UK Knowledge Management Group, 2000, October). At the same time TS was engaged in the "planning and development of a database driven application to help capture tacit knowledge… with debriefing at the end of projects" (UK Knowledge Management Group, 2000, October). This technical aspect of the job also involved user support. For example, in August 2001 Knowledge Managers were asked to consider how to provide support for the use and maintenance of Lotus Notes, and for gateway development (UK Knowledge Management Group, 2001, August 23). The lack of further evidence on the facilitation of access to intranet content articulates with the observation in Chapter 4 that distributed knowledge management staff exhibited a lack of interest in content ownership and editorial control of their business units' intranet resources, and the implications of this.

5.6.3   Liaising with others in the knowledge management implementation actor-network

The distributed knowledge management role in practice included liaising with staff in the centralised KMG. There was some evidence in the company archive of KMG being charged to determine best practice policy for distributed knowledge management staff and disseminating information to them, as well as working *with* them to develop materials (Nevin, 2000, October 19). For example, in November 2000 steps were taken for *joint* formulation of policy through the KMG-directed establishment of working groups on common knowledge management issues. These included knowledge management induction for new joiners, encouragement of KWorld and UKnow uptake, the quality and usage of knowledge repositories, measuring and monitoring of web page usage, collaboration tools and research tools (UK Knowledge Management Group, 2000, November, p. 1). However, according to the material reviewed for this chapter, the degree

to which the two sets of knowledge management staff worked jointly appeared to be limited, as found in the analysis of interview data in Chapter 4.

The regular and more common means of bringing the two sets of knowledge management staff together in the period under examination was through the monthly UK Knowledge Managers meetings. Goody explained that Charles originally set up the meetings with the aim of ensuring that knowledge management staff were "moving in the same direction" (Goody, interview, 7 November 2002). This was viewed as especially important given that the knowledge management staff in the units were physically distributed across the firm. The initial intention was that updates could be communicated from the business by the distributed knowledge management staff to the centralised KMG and vice versa. Work on common problems and the development of best practice could be initiated at the meetings. KMG summarised the system in its newsletter:

> Each month the UK KMG arranges a meeting with Knowledge Managers… to ensure that the UK KMG understand the needs of the business, and also to ensure that we are effectively communicating knowledge management developments to the community.

> (UK Knowledge Management Group, 2000, November.)

Sponsoring partners were also invited to join the meetings on a quarterly basis (UK Knowledge Management Group, 2000, November). Unfortunately the hopes for the Knowledge Managers meetings were not realised (Goody, interview, 7 November 2002). According to Goody (interview, 7 November 2002), the meetings were poorly managed. Too many "extras" with only a peripheral interest in knowledge management, and little to contribute, would attend as spectators. This in turn discouraged serious participation of the main players. This comment on the size of the meetings reflects conclusions on their poor effectiveness as stated by the distributed knowledge management staff in their interviews, and discussed in Chapter 4. The meetings were not as successful in supporting the links between the distributed knowledge management staff and KMG as was originally planned, and the opportunity for them to be used as a form of boundary space was lost. Despite this, in his presentation to German Knowledge Managers in June 2001 Chivers promoted the usefulness of the UK Knowledge Managers meetings as fora for discussing such issues as measurement and monitoring, embedding knowledge sharing in the appraisal process and assessing the impact of London initiatives across the UK (Chivers, 2001, June). Of interest here is whether or not Chivers was aware of the problems with the meetings. If he were, the decision not to acknowledge them may have been a political move to perpetuate a regime of truth to the benefit of the broad UK knowledge management implementation. If he were not, this evidence indicates that Chivers was acting at the margins of the knowledge management implementation actor-network, even though he was nominally its leader. This would have implications for the strength of the network as a whole, especially in the wider environment of competing actor-networks at KPMG.

Allied to the frustrations related to the failure of the meeting structure, there is evidence of confusion and misunderstanding of the relationship between KMG and distributed knowledge

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management staff. For example, *kmnews@kpmg*'s report of the Knowledge Managers meeting in January 2001 reveals that questions were being raised on how the responsibilities of partners, sponsors and Knowledge Managers linked to those of KMG (UK Knowledge Management Group, 2001, February, p. 4).

One issue appears to have been a significant joint concern that interested KMG and members of the distributed KM staff. This comprised (1) individuals' active interest in, and understanding of, the concept of knowledge management; (2) individuals' uptake of desirable knowledge management behaviours, for example willingness to knowledge share; and (3) high level sponsorship of knowledge management. The phrase "buy-in" is employed frequently in the documents to represent these elements of support for knowledge management within the firm. It is clear from documents examined that in the period 1998-2001 members of KMG, as well as distributed knowledge management staff, were convinced of the importance of knowledge management to the company. For example, it was stated "Knowledge Management is considered to be a critical part of the future of the firm – particularly in terms of pushing forward the concept of turning Knowledge into Value" (UK Knowledge Management Group, 2001, June 26). However, there are signs elsewhere that interest in, and uptake of knowledge management, were not universal. For example, in 2000 KMG members and Knowledge Managers questioned whether the firm really had an active interest in knowledge management. The response, issued formally in KMG's newsletter was:

> We believe that the business is adopting knowledge management, but there is still a long way to go to ensure that knowledge management becomes embedded in each of our daily lives/work and processes.

(UK Knowledge Management Group, 2000, November.)

Efforts were made to address the problem of buy-in, by both KMG and the distributed knowledge management staff. Senior staff were identified and courted as possible "Knowledge Champions". For example, TS reported in January 2001 that its Knowledge Manager had started meetings with Knowledge Champions with the main purpose of identifying training needs and facilitating knowledge sharing in the function (UK Knowledge Management Group, 2001, February 15). By April of the same year further functions and lines of business had begun to woo potential Knowledge Champions of their own (UK Knowledge Management Group, 2001, May 31). Another promising avenue for promoting knowledge management widely was to capitalise on the use of the term "knowledge" as one of the firm's three values. Significant corporate effort was channelled into publicising the values. That knowledge was one of them provided a great opportunity to staff whose job titles included the same term.

However, concern over difficulties of embedding knowledge management in the values is evident in reports of a debate at the Knowledge Managers' meeting of 19 April 2001 attended by twenty-six knowledge management staff, the majority of whom were from the distributed business units (UK Knowledge Management Group, 2001, May). This discussion centred around a PowerPoint presentation that posed two main questions: (1) "How do we raise the

profile of KM to enable adding value to reality?" and (2) " What do you see as the major barriers to our success?" (UK Knowledge Management Group, 2001, April). It is interesting that one of the early discussion points given on the slides was whether or not there was an actual need to raise the profile of knowledge management. This was accompanied by the question "do we actually need to 'get rid of' KM?" (an issue raised by one of the interviewees and discussed in Chapter 4 in the context of the distributed knowledge management staff's going concerns) and an associated suggestion that knowledge management as a concept should perhaps be kept within a closed user group of the firm. It might appear rather controversial, if not professionally dangerous, for knowledge management staff to advocate the demise of their area of responsibility. However, it could be argued that the final proof of knowledge management being truly embedded in the firm's operations would be its "invisibility", rather than prominence as an issue requiring separate resources and promotion as argued by two of the Knowledge Managers in their interviews (see Chapter 4)[3].

A long list of bullet points prefaced debate on the difficulties of raising knowledge management's profile at the meeting in April 2001. Some of these, it was argued, could be met by disseminating positive news about knowledge management. These included, for example, combating cynicism that knowledge management was just another management fad to be ignored until it went away; attracting top level sponsorship; and persuading the firm that knowledge had a value even though it was intangible and is difficult to measure. Other solutions focused on addressing more practical problems. These included:

- investing in training so, for instance, individuals were aware of the services offered by the Knowledge Managers and the centralised KMG, and that they understood that knowledge management was not simply a case of submitting content to the intranet;
- sanctioning time on knowledge management activities as time well spent, even if not billable to clients;
- addressing the issue of rewards for knowledge sharing in the official appraisal process.

Actual suggestions made at the meeting for raising the profile of knowledge management included promoting the message that knowledge management was a key process for winning business and that it underpinned the development and work of communities. KMG staff and the distributed knowledge management staff were advised to talk of knowledge management in simple terms and demonstrate competence in knowledge management techniques. The use of the appraisal system to monitor individuals' contributions to knowledge management was also discussed (UK Knowledge Management Group, 2001, May). Further work by KMG on knowledge as one of KPMG's values, completed soon after the debate on profile raising, led to the development of a statement on appropriate behaviours (Rees, 2001, June). There is no evidence in the company archive, however, to suggest that this document was widely

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[3] This view is regarded as received wisdom and has already been discussed in the context of knowledge management (for example, Huysman & De Wit, 2002, p. 1).

disseminated. Some of the suggestions for disseminating positive news about knowledge management also seem rather ambitious in the light of the interview data presented in Chapter 4. For example, talking of knowledge management in simple terms is difficult to achieve if there is not a complete understanding of the term amongst the full cohort of staff positioned in knowledge management roles. This appeared to be the case at the time that the interviews were conducted for this research.

5.6.4   Developing the distributed knowledge management role

According to material held in the company archive, questions on job descriptions for distributed knowledge management staff featured as a topic of common interest of employees based both in the business and in the centralised knowledge management function. KMG staff had involvement because they were charged with writing the original job descriptions. In early 2000 it was recognised by the UEP members that the definitions for Knowledge Manager roles and responsibilities needed to be updated as a result of intranet site consolidation (KWorld/UKnow editorial panel, 2000, March 2). Just over a year later the Knowledge Managers themselves were making the same request (UK Knowledge Management Group, 2001, April 19). By July 2001 the discussion on role redefinition had developed into anxieties over career development for Knowledge Managers, and calls were made that a separate meeting be set up to discuss this issue (UK Knowledge Management Group, 2001, July 19). This was not resolved before the interviews with distributed knowledge management staff were conducted for this study in late 2001, and the consequences of this are evident in the discussion of power issues in Chapter 4. There was better progress, however, on the redefinition of Presence Producer roles. One of Chivers' goals for the financial year 2000/2001 was to develop "greater autonomy and self-support within the UKnow presence producer community" (Chivers, 2001, June). The UEP started this process by embarking on a Presence Producer listing exercise. The goal was to achieve clarity of Presence Producer responsibility (KWorld/UKnow editorial panel, 2000, March 29). By June 2001 Presence Producer competencies were highlighted as future agenda item for the UEP (KWorld/UKnow editorial panel, 2001, June 26). Three months later it was announced that plans were underway to redefine the Presence Producer role (KWorld/UKnow editorial panel, 2001, September 6). The UKnow team and Presence Producer community worked together in Autumn 2001 with the expectation of creating a competency framework and skills matrix by the end of the year (KWorld/UKnow editorial panel, 2001, November 8).

Speaking in 2002, Goody regretted KMG's weak management control of distributed knowledge management staff. This was for a number of reasons. For example, she believed that centralised reporting would help ensure consistent standards of skills and competencies among the knowledge management staff. Second, she would welcome KMG having greater input in the recruitment of Knowledge Managers and Presence Producers (Goody, interview, 7 November 2002). Since the functions, lines of business/markets and infrastructure units funded the Knowledge Centres and Knowledge Centre staff (Chivers, 2001, August) KMG had little control over the staff employed. This caused problems when the staff recruiting in the functions and

lines of business/markets made inappropriate appointments to knowledge management vacancies, such as an enthusiastic secretary or administrator, and KMG was left to deal with the incompetences of such employees. Goody stated that "Some are very good at their jobs and others should not have been appointed… In some cases I'm afraid that {the units} used the need for a Knowledge Manager as a cop out to shift people who weren't very good at one job out of that job and into something that is regarded as non-threatening" (Goody, interview, 7 November 2002). It proved almost impossible for KMG to complain about the distributed knowledge management staff due to the structure of the firm. In a firm such as KMPG, which is a partnership, individual business units operate like independent companies with their own management, budgets etc. A complaint to one of the units that a function or line of business/market had appointed an incompetent Knowledge Manager would appear very trivial (Goody, interview, 7 November 2002). The macrostructure (Kling & Scacchi, 1982, p. 16) of KPMG's organisational form impacted power relations of the knowledge management implementation actor-network. KMG had no power over the appointments. When inappropriate new appointments were made the weaknesses of the staff in post led to deterioration of links between KMG and the business units. Equally the relationship between knowledge management as a concept and the members of staff in the business unit that the knowledge management implementation and intranet were meant to serve was also fractured.

Perhaps as a consequence of the failure of the UK Knowledge Manager meetings, some of the key distributed knowledge management staff sought alternative ways of operating collectively as communities distinct from the official staffing structures. Evidence in the company documentation archive reveals that from early 2001 onwards the line of business/markets Knowledge Managers held their own separate meetings (UK Knowledge Management Group, 2001, July 19). Their efforts met with success as they were "working more closely together to share best practice and achieve growth across all LoB sites" (UK Knowledge Management Group, 2001, June 26). In a similar way smaller partnerships were achieved. For example, in August 2001 staff from Consumer Markets and IM were establishing how they would work together in the future (UK Knowledge Management Group, 2001, September). This was neither planned, nor articulated, in policy. In effect staff were adapting the knowledge management implementation beyond the stated goals of promoting knowledge management and knowledge sharing *within* business units, whilst building small actor-networks as off-shoots of the wider knowledge management implementation actor-network.

For some distributed knowledge management staff their efforts at working with their peers extended beyond the confines of the UK firm. For example, staff in IM reported the continuing alignment of their activities with that of their counterparts in the US (UK Knowledge Management Group, 2001, August 17); by late 2001 the Knowledge Manager for ICE UK was meeting with ICE Netherlands. They negotiated on how to share industry information and make joint purchases of market research reports (UK Knowledge Management Group, 2001, December 21). Key Presence Producers also found ways to work across teams. After complaints that the size of Presence Producer meetings hindered opportunities for discussions

(KWorld/UKnow editorial panel, 2000, August 31), towards the end of 2000 those who ran the largest twenty intranet site were branded "Power" or "Lead" Presence Producers. They started meeting regularly with the goal of forming their own community where new trends could be discussed and hints and tips shared (UK Knowledge Management Group, 2000, December, p. 1). In effect, non-local influences were beginning to inform local knowledge sharing.

By highlighting their *operational* duties allusions have been made above to the relationships between the distributed knowledge management staff and the end-users that they served. To the members of the functions, lines of business/markets and infrastructure groupings, distributed knowledge management staff promoted knowledge management, offered knowledge management and intranet training, and acted as knowledge brokers. By the middle of 2000 distributed knowledge management staff were being encouraged to play a more active role as full members of their business units, as opposed to merely servicing the units' knowledge management needs. For example, it was suggested that they took a greater interest in local finances (UK Knowledge Management Group, 2000, June 26). Consideration of the distributed knowledge management staff's feelings of loyalty in the interviews conducted in late 2001, this appears to have been achieved. This may not have been entirely beneficial to the knowledge management implementation and its actor-network for the reasons discussed in Chapter 4.

5.6.5   Conclusions on the distributed knowledge management role in practice

In broad terms it could be argued that together the Knowledge Managers and Presence Producers covered the duties outlined for them in the 1998 plans for their roles (UK Knowledge Management Group, 1998, October). However, according to the material examined for this chapter, in practice the jobs of distributed knowledge management staff comprised two main roles: sales representative for knowledge management (largely through low level training activities) and custodian of intranet resources. Of greater interest to this research as a sociotechnical analysis is the quantity of material held in the company archive that reveals details of the context in which the knowledge management staff carried out their duties (as opposed to material on the duties per se). This brings to the fore how power relations determined the health of the knowledge management implementation actor-network, and how political alliances were important to the execution of knowledge management activities. This adds to the arguments on power relations already presented in Chapter 4 on the going concerns of the distributed knowledge management staff, and will be developed further in the discussion of the knowledge management implementation actor-network in Chapter 6.

5.7   Intranet development in practice: evidence from the company documentation

The examination of policy documentation shows that from 1998 until August 2001 UKnow's main purpose was to support knowledge sharing as a repository boundary object (Star & Griesemer, 1989, p. 411) for local groups within individual business units. Here are presented

details of UKnow's development *in practice* with reference to functionality and content provision, its shape, KWorld, measurement and efforts to increase intranet usage.

5.7.1 Development of UKnow functionality

Although it was not articulated in any policy documentation after 1998, ambitions to improve UKnow functionality through the provision of collaboration tools are found in the minuted discussions of the UEP. For example, in March 2000 streaming video/audio, threaded online discussions, NetMeeting, facilities for online co-creation of documents in chat rooms and secure areas were discussed. In practice, the progress on improvements in UKnow functionality in this period was not so extensive. The UKnow team based in KMG devoted time in this period to investigating, selecting and launching intranet tools for co-operative working. KClient, an e-room application for client work, was available for testing by April 2000, and at the same time extranet applications were under consideration (Parr, 2000, April). In September 2000 Knowledge Managers were encouraged to ask for demonstrations of the experimental work completed to date (UK Knowledge Management Group, 2000, September 1). Six months later KClient was being deployed to priority UK accounts for account management (UK Knowledge Management Group, 2001, March), with the first going "live" at the end of May 2001 (UK Knowledge Management Group, 2001, May). By November 2001 there was a site on UKnow dedicated to the promotion of the use of collaborative tools (UK Knowledge Management Group, 2001, November). The provision of collaborative working tools for clients was worth pursuing since it was obviously tied to maintaining the firm's revenue streams. In effect, demands of the macrostructure of the computing environment (Kling & Scacchi, 1982, p. 16) in the form of client requests, drove this innovation.

The UEP was reluctant, however, to meet requests for tools to support *internal* collaboration. From the documentation examined for this chapter it would appear that users were interested in applications such as discussion fora. For example Presence Producers suggested that their planned web site, due to go live in April 2001, should have a chat room (UK Presence Producers, 2001, March 15). The hesitations in the UEP response to such requests were tied up with concerns about protocols and senior management buy-in. For example, the minutes of the UEP in May 2001 stated "There is high demand throughout the business {for discussion forums}. Guidelines and 'Best Practice' need to be formulated. Forums should not be implemented until usage protocols have been put in place – and a proper business case has been approved" (KWorld/UKnow editorial panel, 2001, May 24). Four months later the issue was revisited with the recognition that "the business has expressed an interest in using e Discussion boards" and unanimous support from the UEP for this as "another platform to share knowledge", yet a number of reasons were given for stalling a decision for implementation. These included problems in attracting senior management support, notably persuading them to take responsibility for discussion groups (following the established system for web pages as described on page 147 below). This ties up with comments made at his interview by one of the Knowledge Managers who was concerned about the firm wasting money investing in

sophisticated tools when even the most basic were ignored (see Chapter 4). Added to this were questions of how to resource such an initiative, how to moderate discussions (to guard against legal problems) and how to transfer any valuable information exchanged in discussions into the firm's knowledge bases (KWorld/UKnow editorial panel, 2001, September 6). Towards the end of the year staff in the firm's Internal Communications department had become embroiled in the debate. They were reported as being in the process of reviewing documentation and issues related to discussion fora (KWorld/UKnow editorial panel, 2001, November 8). The protocols and best practice for e-discussions were finally published in December 2001 (UK Knowledge Management Group, 2001, December-a). The belief in the level of interest in collaboration tools contradicts evidence from the interviews. This indicates the failure of distributed knowledge management staff to communicate to the centre messages from the business on knowledge management and knowledge sharing, or the centre's failure to take messages conveyed into account when taking decisions.

After the drive to facilitate collaboration, practical efforts to improve intranet functionality at KPMG in the UK were directed towards improving search capabilities offered by UKnow, both in terms of the retrieval of relevant search results, and their speed of return. The software package Verity was selected in late 2000 to create an appropriate search environment (Mahon, Hourican, & Gilchrist, 2001, p. 139). Work on its implementation over the period under examination was expected to result in better information retrieval facilities and provide further features, such as personalised intranet interfaces (KWorld/UKnow editorial panel, 2001, September 6; UK Knowledge Management Group, 2001, November 22). Despite the interest in more advanced features of sophisticated search software, reports of page load times of twelve seconds were a higher priority to the UEP at the end of the period covered by this research (KWorld/UKnow editorial panel, 2001, November 8; KWorld/UKnow editorial panel, 2001, December 12).

In some respects intranet functionality was actually deliberately restricted in this period. For example, there was concern that the intranet was being used as a gateway to Internet sites that encouraged employee time-wasting. Access to sports pages was therefore blocked from summer 2001. (Knowledge Managers pointed out that this posed a problem for legitimate sports page users and requested a review of policy (UK Knowledge Management Group, 2001, July 19)). For similar reasons, discussions on intranet best practice updates to be made in early 2002 (KWorld/UKnow editorial panel, 2001, December 12) led to the conclusion that "the protocols should not permit games on websites" (KWorld/UKnow editorial panel, 2001, November 8). Functionality was also restricted unintentionally due to technical reasons. The most severe disruption in this period was in the week beginning 17 September 2001 when UKnow was out of commission for almost four days. This was due to the attack of the Nimda virus (KWorld/UKnow editorial panel, 2001, November 8; UK Knowledge Management Group, 2001, October 24). This set-back was something over which KPMG and many other companies had no control and illustrates the power of elements of the macrostructure (Kling & Scacchi, 1982, p. 16) to disrupt plans for computer implementations.

From the time that the KPMG UK intranet became UKnow it comprised content generated within the firm, combined with access to content purchased from external suppliers. In the period under investigation the amount of content grew, as did the set of procedures to manage it. By early 2000 a solution was sought that could address numerous calls to improve quality control and limit information risk. Problems to be addressed included poor web site design (KWorld/UKnow editorial panel, 2000, January 27), lax adherence to copyright rules, inadequate sanitisation of data and the failure of content owners to maintain material after it had been uploaded (Parr, 2000, April), i.e. complaints all raised in Chapter 4. It was also recognised that some kind of system was required to prevent the unnecessary proliferation or duplication of intranet content, and to help KMG with decisions on the content of UKnow pages so that, for example, informed decisions could be made about the creation of new web sites. Site sponsorship, where senior staff would take responsibility for all intranet resources in their area, was proposed and adopted (Pratt, 2000, April 20). Once sponsors were identified it would be much easier for UKnow staff based in KMG to threaten to close down non-compliant resources (KWorld/UKnow editorial panel, 2000, May 29). The problems associated with quality control and information risk may be connected to the confusion over content ownership and editorial control responsibilities as discussed in Chapter 4 and highlighted again on page 138 above.

5.7.2   Development of UKnow shape

Some changes to UKnow's shape were implemented from 1999 onwards. Documented decisions show how attempts were made to bring together fragmented (or potentially fragmented) resources to improve access to content. This might be regarded as an attempt to control and, in some cases cut back, the proliferation of web-based resources. For example, in early 2000, one debate centred on the provision of intranet content for individual UK offices. Eventually "it was agreed there should not be separate web sites for specific offices – these sites are national and will cover regional content within it (sic)" (KWorld/UKnow editorial panel, 2000, May 29). Similarly content mergers of existing material were conducted at the level of business unit. For example, Assurance announced its plans to consolidate its repositories by the end of November 2000 to highlight "the overlap and/or synergy between common services/solutions" so that "searching time will be reduced and results will be more effective" (UK Knowledge Management Group, 2000, October 19). TS aimed to achieve the same by rationalising the content of its UKnow resources (UK Knowledge Management Group, 2001, August 17). Multiple business units also found arguments for combining their sites. For example, at a meeting in July 2001 it was announced that "As a result of collaboration between industry knowledge managers, ICT and Knowledge Management, the five LoB based repositories… have been merged into a single repository" (UK Knowledge Management Group, 2001, August 17). In December 2001 a further set of resources were brought together: "KM representatives from Sales and Marketing and the Markets groupings have initiated a project to bring their intranet presences together under one common 'umbrella' site. This is intended to iron out the inconsistencies of navigation and content between the various sales-related sites" (UK Knowledge Management Group, 2002, January). The later merging of resources indicates

a realisation that the provision of resources to date was, in fact, too localised. The collaborative work that pulled them together is a reflection of the splintering off of small groups from the main knowledge management implementation actor-network as distributed knowledge management staff loosened their ties with KMG.

While distributed knowledge management staff were seeking means of uniting their intranet content, the UKnow team joined ICT and Creative Services staff to discuss collaboration. The UEP was told "Meetings have been organised between the UKnow team, ICT and Creative Services. The purpose is to provide joint web development within the firm to turn off the tap of funds going external. Processes will need to be set up to ensure that the three are not competing" (KWorld/UKnow editorial panel, 2001, January 18). The catalyst for this had been the Lead Presence Producers who were concerned for their careers (Simpson, interview, 16 June 2003). The example shows how a non-technical concern can impact technical developments. Simpson reported the following month "the three groups have established a joint forum with a view to combining best practice and ideas {for the intranet}" (UK Knowledge Management Group, 2001, February). The first joint project to result from this initiative was a new site for Market Offerings (KWorld/UKnow editorial panel, 2001, March 15). The next was the establishment of the Presence Producer competencies (see page 142 above). This realignment of UKnow, ICT and Creative Services reflects the parties that created OK-Web in 1995 (see page 120 above). However, it was not entirely successful in stimulating true collaborative work. Rather, the value of these efforts were an improvement in the UKnow team's relationships with the other groups, which up to this point had been rather uncomfortable (Simpson, interview, 16 June 2003). This could be seen as an example of protecting the knowledge management implementation actor-network by keeping detractors quiet.

5.7.3   UKnow and KWorld integration

It was noted on page 129 above that KWorld was to become a significant actor in the UK knowledge management implementation actor-network, even though it was not officially part of the implementation. In 1998 it was launched "in a blaze of publicity" (Goody, interview, 7 November 2002). It was intended to be "a product and catalyst of KPMG's globalization strategy" that would encourage knowledge sharing both amongst employees, as well as between KMPG and its clients through externally accessible web sites (Office of the Global Chief Knowledge Officer, n.d.). The failure of the KWorld development team to take into account ideas from interested parties across the firm resulted in a system that was deemed a "complete bloody disaster" (Goody, interview, 7 November 2002). It lacked the functionality of the existing national intranets that it was supposed to replace, and it failed to address the needs of staff in countries where English was not the first language. The Global CKO "could not accept… that a global intranet needed to be able to accommodate non-English language material. His view was that English was the language of business and therefore a global intranet would be in English" (Goody, interview, 7 November 2002). Boston's expectation was that the national intranets would be closed down in favour of KWorld. Some national firms, for example Canada and

Australia, followed this instruction. However, staff in the UK refused to replace something which worked (UKnow) with something that did not (KWorld) and continued to maintain their national intranet. The Dutch found a novel solution. They simply *pretended* to close down their intranet, thus giving an impression of compliance (Goody, interview, 7 November 2002).

By 2000 there was obvious confusion amongst the wider community of knowledge management staff over the relationship between UKnow and KWorld, particularly with reference to future developments. This was because the knowledge management staff knew that the original goal of KWorld was to replace the national intranets. UKnow was in danger of becoming a legacy system. Whether or not this continued to be the long-term strategy had significant impact on the daily work of knowledge management staff in the UK. For example, if UKnow content were to be migrated in its entirety to KWorld, systems to permit this would need to be established. Equally, decisions to develop ambitious local solutions needed to consider their potential life-span. To provide a link between the distributed knowledge management staff and KWorld, and to help to resolve such issues, Jacqueline Rees was appointed to KMG in the role of Business Support in summer 2000 (UK Knowledge Management Group, 2000, September 1). This additional infrastructural support (Kling & Scacchi, 1982, p. 18) was intended to help protect UKnow as the main artefact of the UK knowledge management implementation.

In November 2000 knowledge management staff were being advised to treat UKnow and KWorld as an integrated resource. *kmnews@kpmg* announced that "it could be argued that KWorld and UKnow are already one platform as the resources are available within a single secure intranet environment to KPMG end-users (UK Knowledge Management Group, 2000, November). The same document outlined plans for the migration of selected UK content to KWorld over the next twelve months (UK Knowledge Management Group, 2000, November). In effect, national firm intranet content was being absorbed into KWorld. Three months later however, after complaints that "the KWorld system was not yet delivering what had been hoped and… doubts that it would in its current form" (KWorld/UKnow editorial panel, 2001, February 15), it was indicated that any plans for full-scale integration were likely to be abandoned:

> Current thinking is that KWorld should become a more flexible "gateway" than "king". It is unlikely that we will be required to migrate all our content to KWorld but to make what is already available in national systems more widely available. We should, however, use global applications when they are suitable.

> (UK Knowledge Management Group, 2001, February 22.)

Even so, both Chivers and the UEP outlined the need to achieve greater integration of UKnow and KWorld resources in their policy statements (as given above on page 130) (Chivers, 2001, June; KWorld/UKnow editorial panel, 2001, February 15).

The eventual decision to abandon full-scale integration was reached for several reasons. First, some KWorld applications were not meeting end-user needs. One such application was the CVs database. As early as June 2000 it was deemed "unacceptable" (UK Knowledge Management Group, 2000, June 26). By September the same year criticism was stronger. The system was

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considered unusable: "there is recognition and agreement with ICT that the present system cannot continue" (UK Knowledge Management Group, 2000, September 1). Discussions of the CV database continued beyond this time. For example, its business value, purpose, use and future were debated in May (UK Knowledge Management Group, 2001, May 17) and July 2001 (UK Knowledge Management Group, 2001, July 19). A new release of the application was due in December 2001 (UK Knowledge Management Group, 2001, November 22).

Local application development on UKnow might have been more adventurous were it not for the confusion over the KWorld/UKnow set-up. Hesitation to develop resources locally on the basis of future direction being determined by KWorld implementations stunted innovation on UKnow. For example, Notes databases intended to be held on UKnow as a temporary measure became a permanent feature (KWorld/UKnow editorial panel, 2001, November 8). As well as the limitations of the KWorld implementation to support applications, staff with interests in intranet development in the UK had some reservations about global intranet purchasing decisions. Of particular concern was a substantial figure paid for an IT system which was simply unsuitable for the KPMG infrastructure (UK Knowledge Management Group, 2000, November 16). These examples add to the evidence of the power of KWorld as a "rogue" actor, as discussed in Chapter 4.

A new approach to intranet development was realised in the redesignation of KWorld as a portal with country-specific points of entry (UK Knowledge Management Group, 2001, May 17):

> KWorld is being developed into a portal which accesses information stored in the KWorld system… and existing intranets such as UKnow. The existing KWorld Home page {is} to be discarded and replaced by a series of Home pages based on function, LOB etc.
>
> (KWorld/UKnow editorial panel, 2001, May 24.)

Thereafter the priorities for migrating material from UKnow to KWorld related to popular material (UK Knowledge Management Group, 2001, July 20).

The idea that KWorld would replace the national intranets was finally dropped in late summer 2001. Indeed, the UEP reported that the decision that KWorld would subsume other national systems had been *reversed* (KWorld/UKnow editorial panel, 2001, September 6). National firms world-wide were now encouraged to run their own intranets. This included Canada, one of the geographies that had closed down its intranet three years earlier at the time of the KWorld launch (see page 148 above) (UK Knowledge Management Group, 2001, December-b). At the same time staff losses from the office of the global Chief Knowledge Officer were announced. It was reported at a meeting of UK Knowledge Managers in August 2001 that thirty people had already left the firm, twenty-five were planning to leave by the end of September 2001, and another forty were either being reassigned to roles in marketing or expected to leave within six weeks. The remaining twenty-eight staff held contracts until the end of March 2002 (UK Knowledge Management Group, 2001, August 23). Simultaneously the global knowledge management budget was cut (KWorld/UKnow editorial panel, 2001, September 6). Meanwhile a

review of knowledge management activity - including collaboration, sharing, knowledge management products, resources, roles, responsibilities and embeddedness in the business - conducted in nine European countries and South Africa was published (UK Knowledge Management Group, 2001, August 1). By December 2001 it was known that the knowledge management function at Boston would be closed in March 2002 and that the remaining staff transferred to Toronto and Mountvale (KWorld/UKnow editorial panel, 2001, December 12).

This summary of activity related to KWorld demonstrates the volatility of the environment in which decisions on UKnow were made. Reassurance was offered to UK KMG staff and Knowledge Managers as they observed what was happening in the broader environment. It was declared that in the UK knowledge management was "not going out of business" and that UK staff were "more insulated to some of the impacts" (UK Knowledge Management Group, 2001, August 23). The UK knowledge management function was protected from such drastic outcomes for a number of reasons. The most significant of these was that the UK knowledge management function had responsibility for UKnow. The UK intranet had a track record of relatively heavy usage in comparison with the global intranet, and held a reputation outside the UK for meeting the needs of the business in spite of low investment. Were the firm to lose the UK function, UKnow would be at risk. The UK knowledge management function was also better established than its global counterpart – the UK was well-known as the first national practice to have set up a dedicated knowledge management function - and this longevity was to its advantage (Goody & Simpson, interview, 16 June 2003). For those working in knowledge management in the UK, the dissemination of "truth" about the centralised function, UKnow and/or the work of the distributed knowledge management staff (as noted on page 139 above) were important to their international standing in the firm. This also shows how actor strength is not necessarily related to actor size. UKnow was a more powerful actor as a local implementation than KWorld as a global initiative.

5.7.4   UKnow measurement

From early in the period under examination end-users in the UK had high expectations of the KPMG intranets. The UEP noted that "However unreasonable it may appear, the business is expecting 24 x 7 availability and 100% reliability for both KWorld and UKnow" (KWorld/UKnow editorial panel, 1999, November 25). High availability and reliability of UKnow were important to users in the course of their daily work. For example, the intranet was noted as the primary communication tool of staff in Consulting by April 2000 (Parr, 2000, April). Equally, Information Risk Management (IRM), a group of the Assurance function, made it clear that that the intranet was fundamental to communication in the business unit by implementing a communication strategy which stated that the intranet was "the key medium for finding information" (UK Knowledge Management Group, 2000, October). To the UKnow team high availability and reliability were crucial to encouraging end-user access and uptake, and to generating usage statistics that could be used to justify further intranet investment.

The system for communicating monthly intranet usage statistics was introduced in July 2000 as the biggest component of the monthly knowledge management reports for KMG (UK Knowledge Management Group, 2000, October). These reports listed the number of hits to the main resources on UKnow, including the knowledge repositories and engagement summary databases, and, to a lesser extent, details on material submitted for uploading. Over the period under examination for this research, access to intranet resources grew steadily, doubling in the 36 months between the beginning 1999 and end of 2001, from approximately 4000 to 8000 daily users. The "record" day was Monday 12 November 2001, with 8282 unique UKnow users (UK Knowledge Management Group, 2001, December 21). The statistics collected revealed seasonal patterns of usage of resources. For example, the Tax function reported in May 2001 that "April's usage fell back to the February level after the huge March increase due to Budget pages" (UK Knowledge Management Group, 2001, May 31). In other cases they appear to have been erratic. For example, engagement summary submissions peaked in June 2000, slid for seven months to January 2001 and then picked up again in February 2001 (UK Knowledge Management Group, 2001, March 16). The statistics show that the most popular material on the system over this period was of two types. They comprised support resources, such as Human Resources' "Distribution of total reward statement" or commonly used templates, such as Corporate Finance's standard engagement letter (UK Knowledge Management Group, 2002, January). These statistics reveal that UKnow was deployed primarily as a container of generic, centrally designed content rather than a space where repository documents could be used to create new knowledge. This puts into question its role as a repository boundary object (Star & Griesemer, 1989, p. 411) since the term "boundary object" implies that the resources held on the repository should be used for the purposes of knowledge creation. The intranet was therefore sub-optimal when matched against the original plans made for it.

What to measure and how it should be measured featured as a topic of debate amongst the knowledge management staff at KPMG in this period. There is evidence of this in minutes of the UK Knowledge Managers' monthly meetings. In September 2000, for example, it was reported that Knowledge Managers requested more detailed statistics than those provided by ICT. ICT's response was that it was not possible to meet this request. This was due to resource limitations (UK Knowledge Management Group, 2000, September 1). The following June there was a further long discussion of the value of measuring intranet usage. This demonstrates a desire to understand whether the intranet was creating value for the firm, and how further investment should be directed (UK Knowledge Management Group, 2001, June 21). This was important for those responsible for the intranet in order to persuade people to join the knowledge management implementation actor-network, and confirms the finding presented Chapter 4 that in an indirect way the intranet was used as a barometer of knowledge management activity within the UK firm.

5.7.5   Efforts to capitalise on UKnow investment and increase usage

Throughout the documentation examined for this chapter there are references to under-use of intranet resources. Various reasons are offered to explain why the full potential of the intranet was not being realised. These can be classed as both technical and social, and some can be related to the quality of actual content held online.

For example, a recurrent complaint related to technology was the low download speed of web pages (KWorld/UKnow editorial panel, 2001, January 18). An episode from 2001 illustrates how maintaining user confidence in an intranet becomes a struggle when functions are liable to go out of commission, albeit temporarily. In this case a technical problem caused the loss of a substantial number of documents from the Assurance Knowledge Repository in April 2001. This generated a large number of broken links. Pop-up messages appeared on-screen to warn that the problem would not be fixed for a month. As users waited until the end of May for the problem to be eradicated, general intranet usage was deterred (UK Knowledge Management Group, 2001, May 31). The impact was evident a full two months later. In the July 2001 UK Knowledge Management report it was stated "users' confidence in the Knowledge Repository is still low due to the disaster" (UK Knowledge Management Group, 2001, August 17). Similar difficulties were encountered due to users commonly (and mistakenly) associating poor KWorld performance with UKnow (KWorld/UKnow editorial panel, 2001, September 6; Parr, 2000, April). A more "genuine" set of reasons suggested for low usage relates to the usefulness of the content provided on the system. For example, the action of stripping reports of sensitive data was regarded as a means of devaluing information content: "We can't control access by 120,000 people so our intranet is effectively public, yet sanitisation means lower usefulness" (Williams, 2001, April). This issue was also reported in the interviews with distributed knowledge management staff and discussed in Chapter 4.

UKnow staff, and their colleagues working in knowledge management roles across the business, employed a range of strategies in an attempt to increase intranet usage. For example, knowledge management staff in IRM considered strategies for addressing content quality issues. They saw better engagement with their UKnow resources after simplifying the process for both submitting and retrieving content. They reported that regular review of content held, combined with rapid deletion of out-of-date material, improved quality control (UK Knowledge Management Group, 2000, October). It was also concluded that static web site content deterred interactions with UKnow: a site which had established a dynamic presence from the start had considerably better usage that those which had not. Presence Producers were therefore encouraged to find ways of making their intranet resources more dynamic (UK Knowledge Management Group, 2001, May 31). These strategies match up with some of the prescriptive advice offered in the literature on knowledge sharing (see Chapter 2).

On page 136 above the initiatives taken by distributed knowledge management staff to promote knowledge management within the UK firm have been described. Some of the same opportunities and events, such as induction training (KWorld/UKnow editorial panel, 2001,

December 12), were used as platforms for publicising the intranet. The intention was to boost future visitor numbers. The UEP reported how these efforts translated into better intranet uptake, referring to the success of road show demonstrations (KWorld/UKnow editorial panel, 2000, May 29); knowledge management staff from Assurance planned to encourage future submissions through presentations to individual departments (UK Knowledge Management Group, 2001, February 15). In some cases distributed knowledge management staff delegated part of the job of publicising the intranet to others. For example, IRM attributed its success in attracting users to two years' worth of senior partner sponsorship and commitment, and to keeping Knowledge Champions up to date with intranet developments (UK Knowledge Management Group, 2000, October). Knowledge of these "successes" was likely to have influenced those distributed knowledge management staff who implied that the promotion of knowledge management and UKnow was not one of their roles (se Chapter 4). Assurance tackled the problem of poor intranet submissions through targeting specific managers working on key engagements (UK Knowledge Management Group, 2001, February 15). Other business units focused on information collection exercises. For example it was reported that the "number of documents in the ICE knowledge repository rose sharply following a proactive gathering of content by the Travel, Leisure and Tourism industry segment" (UK Knowledge Management Group, 2001, August 17). This articulates with the suggestions in the literature on generating critical mass for a system (See Chapter 2).

As well using face-to-face interactions to promote the intranet, other publicity tools were employed, such as posters (UK Knowledge Management Group, 2001, February 15) and newsletters (UK Knowledge Management Group, 2001, May 31). The intranet itself provided a platform for encouraging users to benefit from investment in its resources through, for example, extensive cross-linking and the strategic placement of home page information (UK Knowledge Management Group, 2000, October; UK Knowledge Management Group, 2001, August 17). In some cases, however, online advertising did not always deliver the anticipated results. For example, hits to the UK Clients and Targets site remained static in a period when it was being heavily promoted over KNews in summer 2001 (UK Knowledge Management Group, 2001, August 17). Nevertheless, in general, attempts to raise internal awareness of what was offered through the intranet had the desired effect. Usage high points coincided with promotional efforts such as e-mail prompts (UK Knowledge Management Group, 2001, June 26) and were demonstrated in figures presented in the monthly knowledge management reports. For example, Assurance showed how sending "knowledge flashes" by e-mail led to increased usage. The managed re-launch of a web site was guaranteed to generate additional hits. For example, in July 2001 two lines of business/markets reported improved web hits since re-launch. One of these, Owner Managed Business, saw a figure of 408 visitor sessions in the month before re-launch more than double to 1004 in the following month (UK Knowledge Management Group, 2001, July 20).

There is recognition in the archived material examined for this chapter that capitalising on intranet investment depends heavily on continued funding, i.e. infrastructure resources (Kling &

*The knowledge trap: an intranet implementation in a corporate environment – Chapter 5:
Findings from the review of the company documentation and interviews with knowledge
management directorate staff*

Scacchi, 1982, p. 18). IRM, frequently cited for its examples of good practice in this chapter, demonstrated the benefits of such investment. Staff in this group attributed their success in encouraging intranet uptake to the provision of dedicated knowledge management staff resources: IRM employed its own Knowledge Manager from 1998, a web designer from summer 1999 and an administrator for its knowledge repository from early 2000 (UK Knowledge Management Group, 2000, October). In contrast, the experience of other units showed that lack of investment was detrimental to realising hopes of intranet uptake. This is evident, for example, in a discussion of projects initiated in 1999/2000 that were forced to a standstill in March 2001 due to budget cuts (KWorld/UKnow editorial panel, 2001, November 8). This issue of investment became further complicated for those managing UK intranet developments as uptake was gradually boosted by usage from outside the UK. This was recorded in February 2001:

> Having held back from investing in UKnow for a long time we now {need} to look at
> improving UKnow in the context of the wider KPMG environment – other parts of KPMG are
> finding much useful content on UKnow.

<div align="right">(KWorld/UKnow editorial panel, 2001, February 15.)</div>

Examples of subsequent international visitors to UKnow included users of the Financial Advisory Services (FAS) and TS sites from the USA and Australia (UK Knowledge Management Group, 2001, August 17). IM staff found themselves dealing with enquiries on mining and aggregates for South African and Australian users towards the end of the period covered by this research (UK Knowledge Management Group, 2002, January), yet according to the policy documentation that was current at this time, they were meant to be meeting local needs. These approaches illustrate how users operate as social actors, adapting computer implementations in ways that are unintended (Lamb & Kling, 2002), in this case adopting resources not actually intended for them.

5.7.6   Conclusions on the role of UKnow in practice

The *Intranet trial and conclusions* document (KPMG, 1996, June) and *Intranet roll out plan* (KickIT steering group, 1996, September) accurately predicted that encouraging people to publish and maintain intranet resources would be problematic. The minor reservations regarding technology interest, as noted in these two documents, hinted at potentially poor levels of intranet uptake and participation. These further risks were realised and became especially pertinent to the deployment of the intranet as a tool for knowledge sharing. Some other early fears related to intranet development turned out to be irrelevant in the context of KPMG UK. For example, the model of distributed publishing adopted ignored any requirement for consistent look and feel across KPMG UK intranet resources because decisions on interface design were delegated to individual business units. In their place, however, unexpected outcomes limited the deployment of the intranet. For example, the failure of the majority of distributed knowledge management staff to deliver on the intentions of their roles in, for instance, serving as communication channels from the business units to the centre (see also Chapter 4) and taking

responsibility for content management and editorial control of intranet resources (see page 138 above and Chapter 4) harmed UKnow.

Later efforts for the intranet implementation, as outlined on page 130 above, look over-ambitious in the context of what was actually achieved in the period 1999-2001. A particular disappointment was the delay in the development of tools for internal collaboration, despite supposed demand from the business (see page 145 above). The initial refusal to meet these calls can be explained by a consideration of other evidence in the company documentation related to infrastructure elements of (1) intranet investment and (2) the struggle to engage high level support of the work of knowledge management staff. The additional functionality was requested in April and May 2001, almost immediately after announcements of the shelving of some major intranet projects due to budget cuts. It worth pointing out that those formulating the original plans for UK intranet development may not have anticipated infrastructure limitations such as this. They may also have assumed better support from the rest of the firm, for example in terms of access to intranet usage statistics (see page 152) and a swifter path through the KPMG bureaucracy for proposed initiatives to become company policy. The request also came at a time by which it had become clear that eliciting support of knowledge management in general, and knowledge sharing in particular, were major obstacles to the work of the distributed Knowledge Managers (see page 157 below). Even if there were resources available to develop tools for internal collaboration, those with the power to authorise such work may have felt it was not worth the investment. It is likely that they were not prepared to watch another set of projects fail due to a lack of senior level sponsorship, especially at a time when the most basic of intranet requirements, such as acceptable download times and virus protection, were higher priorities. Allied to the reservations related to investment and support were two practical concerns: how to archive valuable material generated in fora, and how to moderate discussions. The prominence of these issues in the documentation examined for this chapter hints at limited trust in the firm – a requirement of successful knowledge management initiatives according to the literature (Dyer & Nobeoka, 2000, p. 352; Huysman & De Wit, 2002, p. 133 Nahapiet & Ghoshal, 1998, paras 41, 62 and 64; Teigland, 2000, p. 156; Von Krogh, 1998) – and indicates a strong emphasis on codification to underpin the firm's knowledge management strategy.

Elements of the macrostructure (Kling & Scacchi, 1982, p. 16) were also significant, most notably KWorld. Once work on the global intranet began, the success of UKnow's implementation was hindered in its position as a resource dedicated to a small portion of a global enterprise. Although not stated as such in the documents held in the company archive, there is evidence of a power battle between those managing the global intranet implementation in Boston and the guardians of the national intranet in the UK. The confusion over the relationship between UKnow and KWorld, and the place of each system in planned intranet developments limited the success of the UK intranet implementation in a way unanticipated in the early policy documentation. Other elements of the macrostructure over which those responsible for the implementation had no control included client demands (page 145), virus attacks (page 146) and the career anxieties of distributed knowledge management staff (page

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142). These all had a part in shaping UKnow and determining its role. In cases where they undermined the success of the UK intranet implementation when matched against initial plans, the power of externalities is clear.

5.8 Knowledge sharing in practice: evidence from the company documentation

5.8.1 Knowledge sharing at the level of the firm

Two years after the proclamations on creating a knowledge-sharing culture at KPMG, and the identification of strategies to achieve this, it was evident that these efforts were not delivering the anticipated benefits. The results of the firm's annual "Values Survey" in 2000 made depressing reading for the distributed knowledge management staff. They learnt of a "lack of belief that as an organisation we share information and knowledge freely with each other" (UK Knowledge Management Group, 2000, August), despite their efforts to implement the plans to encourage knowledge sharing, as outlined on page 132 above. The issue of poor organisational knowledge sharing attracted comment of the UK Chief Operating Officer eight months later. His view was that employees were failing to share knowledge (as opposed to information), particularly at the level of communities (as opposed to small teams). His presentation was made in the context of KPMG's values. He admitted that knowledge, as a value, was "the hardest to live" (Williams, 2001, April). Further discussion of resistance to knowledge sharing across the firm was documented in a publication of the Global Knowledge Management Group in July 2001 (Global Knowledge Management Group, 2001, July).

5.8.2 Attempts to promote knowledge sharing within business units

The interventions employed by the distributed knowledge management staff to facilitate knowledge sharing can be matched against the three categories as outlined on page 132 above. These are (1) the provision of an adequate technical infrastructure; (2) the creation of a knowledge-sharing culture within the organisation and (3) the design of systems to reward knowledge sharing.

Various strategies were taken by the distributed knowledge management staff to make the technical infrastructure more conducive to knowledge sharing. Those reported in documents held in the company archive included making the intranet easier to use through improving the means of searching for content. For example, the TS knowledge management team reported "working to improve the volume of submissions to the Knowledge Base by improving search techniques" (UK Knowledge Management Group, 2001, July 20). Similarly efforts were made to facilitate the process of submitting content. For example, Assurance reported work on template design (UK Knowledge Management Group, 2000, October) and the new ICE site launched in October 2001 allowed, with training, for "content owners to create and update their own news stories without the intervention of the central web master" (UK Knowledge Management Group, 2001, October 24). These efforts match with the advice provide in the literature, as discussed in Chapter 2. Training sessions were also important in the campaign to encourage colleagues in

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the business units to use the intranet for its intended purpose as a tool of knowledge sharing (for example, UK Knowledge Management Group, 2001, July 20; UK Knowledge Management Group, 2001, September).

Efforts to create a knowledge-sharing culture within the firm - ranging from special events to attempts to embed knowledge sharing into everyday activities - are referenced in the company documentation. The special events included PR exercises, for example a "knowledge sharing event" organised by TS (UK Knowledge Management Group, 2001, August 17), and knowledge-sharing lunches in Sustainability Advisory Services (UK Knowledge Management Group, 2001, November). Planned strategies to integrate knowledge sharing into working practice were most obvious in the Tax function. The material examined for this chapter portrays a unit keen on building a knowledge-sharing community based on strong social infrastructure. This function's work pre-dates the interest in knowledge sharing expressed by Williams (2001, April) and the Global Knowledge Management Group (2001, July). Tax reported identifying Knowledge Champions to promote the use of the Tax Knowledge Database and linking FS students with managers for training purposes (UK Knowledge Management Group, 2001, January 18). Other business units followed suite (UK Knowledge Management Group, 2001, February 15; UK Knowledge Management Group, 2001, May 31). Tax later established a Knowledge Network (UK Knowledge Management Group, 2001, September). According to the documentation reviewed for this chapter, Tax appears to have been the only business unit to have taken *significant* steps to develop a knowledge-sharing culture using techniques proposed in the company documentation examined.

There is limited evidence in the archive of business units following up the policy recommendation to link rewards to knowledge sharing (as outlined on page 134 above). There appear to be only two instances of this. In 2000, IRM tied individuals' willingness to provide intranet material to performance indicators (UK Knowledge Management Group, 2000, October). In Assurance top intranet content submitters were highlighted in monthly "knowledge flashes" (UK Knowledge Management Group, 2001, May 31), thus acknowledged with the soft reward of reputation enhancement. This lack of evidence on the implementation of the policy on knowledge sharing is not surprising, however. It was not until June 2001 that the announcement was made that rewarding knowledge sharing would become official company policy, and this policy was not introduced within the period under investigation for this research. No reasons were discovered in the archive of company documentation for the delay, but they are likely to be those expressed by the distributed knowledge management staff in their interviews, as discussed in Chapter 4.

On the basis of details provided in the archived company documentation, it is difficult to assess whether any of these attempts to implement recommended policy brought about genuine improvements in knowledge-sharing practice. Despite accolades bestowed by the Global Knowledge Management Group on UK knowledge management staff (Global Knowledge Management Group, 2001, July), only two units appear to have reported positive outcomes of

initiatives taken. First, Tax was able to show that technical improvements to its Knowledge Base completed at the end of 2000 were beginning to pay dividends within a year (UK Knowledge Management Group, 2001, September). Second, staff in ICE boasted the benefits of senior level support to their intranet resources. They reported "We've got some very good industry segment managers in ICE who are supportive of the intranet – this has helped keep the site fresh over the past 6 months" (UK Knowledge Management Group, 2001, August 17). There were, however, no attempts to determine actual return on investment in knowledge sharing. The difficulty of achieving this was recognised with reference to knowledge management PR work (Global Knowledge Management Group, 2001, July). Statistics collected were limited to raw data on page hits and submissions for inclusion in the monthly Knowledge Management reports, as described above on page 152.

5.8.3 Accounting for prevalent knowledge-sharing practice

A set of complaints in the documentation relates to the distributed knowledge management staff's difficulties in encouraging colleagues to knowledge share. These feature prominently from mid-2001 onwards (for example, UK Knowledge Management Group, 2001, September). The issues noted are in common with those identified from the interview data as discussed in Chapter 4. Problems were encountered in spite of attempts to respond to the recommended interventions to promote knowledge sharing. There are many attempts in the documentation to account for the *failure* to create a genuine knowledge-sharing environment at KPMG. These can be related to the technical infrastructure, cultural characteristics of KPMG as an organisation, and the degree to which the proposals related to rewarding knowledge sharing were implemented.

Earlier material outlines the chicken and egg dilemma associated with generating critical mass for the intranet:

> People use the technology, but there is little content so they don't return and submit. Submissions are clearly needed in order to improve content, attract people and encourage repeat visits! ***Content does not miraculously appear!***

> (Parr, 2000, April).

Further frustrations with the intranet as the primary vehicle for knowledge sharing are expressed throughout the documentation. A single document (Global Knowledge Management Group, 2001, July) neatly summarised limitations of the KPMG systems:

- *poor search capabilities*, for example, complicated navigational structure, failure to retrieve information that matches search requests, poor taxonomy;
- *lack of accessibility*, for example, difficulties of access from remote sites, slow download times, complex procedures to print out material as hard copy;
- *patchy content provision*, for example, the limited availability of material due to confidentiality concerns, duplication of resources.

Even in cases where tools were actually considered easy to use, knowledge management staff were burdened with changing a mindset that believed the opposite to be the case (UK Knowledge Management Group, 2001, September). This task was especially difficult in an environment where other strategies for obtaining knowledge and information, such as professional development programmes and the Internet, could be employed (Global Knowledge Management Group, 2001, July) and users had poor general IT knowledge (UK Knowledge Management Group, 2001, November). It was suggested that inadequate training meant that staff in the business units were unaware of the potential of the intranet as a resource. Since there was no clear definition of intranet "good practice" even though evidence of it existed in some units, for example in the Tax function, it was difficult to promote such a concept (Global Knowledge Management Group, 2001, July).

The general culture of KPMG is also blamed for the poor interest in knowledge sharing. It was recognised in the earlier policy documents that knowledge sharing was not part of the KPMG "tradition" (for example, Parr, 2000, April). Later material shows that although calls made to change behaviours had been heard, they had not been acted upon: "we know that knowledge sharing makes life easier but it is still not part of the business process at KPMG" (Borer, 2001, May 3). The biggest hurdle to embedding knowledge sharing in everyday procedures, according to the documentation (and confirmed in the interview data), was the resistance to allocate time to what was perceived to be additional, non-essential, non-chargeable, administrative work, especially when the alternative of *telling* was so much easier than *codifying*. This view is expressed across the company archive from April 2001 onwards by several parties, including the UK Chief Operating Officer (Williams, 2001, April). Commentary is provided:

- *by individual KMG staff*, for example, Borer (2001, May 3);
- *by distributed knowledge management staff*, for example, UK Knowledge Management Group (2001, September);
- *at UK Knowledge Managers monthly meetings,* for example, UK Knowledge Management Group (2001, June 21).
- in issues of *kmnews@kpmg,* for example, UK Knowledge Management Group (2001, November).

It was argued strongly that senior staff unconvinced of the value of knowledge sharing should be held accountable for the lack of time allocated to knowledge sharing. Their behaviour and attitudes, for example, in showing displeasure at staff devoting time to knowledge-sharing activities rather than client accounts, or making it impossible for staff to knowledge share by having them continuously booked out with clients, were heavily criticised (Global Knowledge Management Group, 2001, July).

In the same period the structure of working relationships was considered as a potential inhibitor of knowledge sharing. For example, Chivers (2001, June) suggested that status differences, such as those between client facing and support staff, created divisions. This is in line with what is reported in the literature (see Chapter 2). The Global Knowledge Management Group

considered whether "traditional lines of authority and administrative structures may impede the evolution of other types of "knowledge communities" (2001, July). Staff in the global unit also pointed out "we boast about being a global firm yet very few high level staff actually behave in a global manner", and here are seen to admit to perpetuating regimes of truth of the nature of the firm. They criticised knowledge management colleagues in the national practices for failing to liaise with the global knowledge management staff: "Many initiatives require close cooperation between global knowledge management and local knowledge management but this does not happen in effect" (Global Knowledge Management Group, 2001, July). Given the unwillingness of staff in Boston to consult colleagues in the national practices over the development of KWorld, this is perhaps not surprising. See page 129.

Attention is drawn to the firm's focus on personal achievement, as evidenced in company documentation produced towards the end of the period under examination. In such an environment staff are accustomed to acting as individuals rather than as members of teams or communities. The implication drawn is that employees operating as individuals are less willing to share than those working as group members (UK Knowledge Management Group, 2001, November). This was also borne out in the interview findings (see Chapter 4). There are also indications that a lack of trust between individuals and their colleagues accounted in part for reluctance to knowledge share. Staff in TS referred to this when they stated that "Often people feel that what they produce is not good enough to be shared" (UK Knowledge Management Group, 2001, September). Commentary produced later in 2001 admitted a general lack of trust between colleagues who were afraid of losing face in exposing their ideas, or concerned that, once exposed, their ideas would be misused by others (UK Knowledge Management Group, 2001, November). These issues have been noted as important in the literature (see Chapter 2).

The recommendations on compensating individuals for knowledge sharing with hard and soft rewards (as noted in on page 134 above) were not implemented successfully in the period under examination. Whilst a few business units were able to report that they operated reward schemes (as highlighted on page 158 above) it is evident that the majority had not even made attempts to do so. This was in spite of rewards systems' prominence as a topic of discussion of knowledge management staff, particularly with reference to encouraging general support of knowledge management initiatives within the firm (UK Knowledge Management Group, 2001, April). In cases where efforts had been made, the schemes devised were not meeting expectations. This was recognised as a problem both within the knowledge management community (for example, Borer, 2001, May 3; Chivers, 2001, June), and by the Chief Operating Officer for KPMG UK, who complained that "We struggle to define knowledge and to recognise and reward knowledge sharing behaviour" (Williams, 2001, April). Knowledge management staff identified various reasons for the failure of the business to adopt the recommendation to create and implement reward systems for knowledge sharing. For example, Parr, who supported reward systems in general (see page 134) was concerned that offering rewards as an incentive to add to intranet resources was not a long term strategy for nurturing knowledge-sharing culture:

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> At first you may consider incentives to encourage people to submit content, but as the programme develops this should be minimised, otherwise people will think that contributing is *"special"* not *"normal"*.

(Parr, 2000, April.)

There was also confusion over whether or not rewarding knowledge sharing was official company policy. For example, the script for induction training devised for use in the business units stated this to be the case (see page 137) when, in fact, it was not. It was not until June 2001, following a meeting between Nevin and Human Resources staff, that it was announced that the 1998 recommendation that knowledge-sharing activity should be rewarded would soon become company policy (UK Knowledge Management Group, 2001, June 21). Knowledge Managers were asked to submit their ideas on how the policy should be devised. The new policy was not implemented by the time that the fieldwork with interviewees was carried out in later 2001. It is perhaps not surprising that attempts to reward individuals for knowledge sharing were unsuccessful given that that it took over two and a half years for the initial proposal to be recognised as a serious policy requirement.

5.9 Conclusion to Chapter 5: General observations on plans and actual practice of the knowledge management implementation 1995-2001

Several observations can be made on the policies devised for the broad knowledge management implementation, the intranet and plans for knowledge sharing at KPMG UK on the basis of the fluctuating discourse presented in the review of company documentation. The main conclusions that can be drawn from the information that has been presented are that:

- the policies appear incomplete;
- the policies were scattered over several unrelated documents;
- the policies were contradictory;
- individual policies were not implemented fully;
- the policies as implemented were not successful in encouraging knowledge sharing;
- operational decisions on the intranet drove the knowledge management implementation in the UK;
- the approach adopted over-emphasised codification of information.

As far as support of the work of the knowledge management staff at KPMG UK are concerned there was:

- limited interest in knowledge management in general;
- limited interest in UKnow;
- a struggle to encourage knowledge sharing across the firm through the deployment of UKnow.

This was despite numerous marketing and training efforts of knowledge management staff in both KMG and the distributed functions and lines of business/markets. The evidence for these

conclusions becomes stronger in documentation from early 2001 onwards. The open discussions of problems associated with support can be aligned with the timing of the knowledge management budget cuts. It may also be that by this stage of UK knowledge management and intranet development the early optimism related to what might be achieved was beginning to pall as anticipated outcomes of initiatives were not being delivered, and the interest in knowledge management and the intranet as novelties had diminished. By this point there would have been a political imperative to raise awareness of problems in order to maintain and/or attract further investment in knowledge management and UKnow. That the problems associated with knowledge sharing were being alluded to at the level of the UK's Chief Operating Officer by April 2001 (Williams, 2001, April) indicates that such complaints were no longer taboo. This gave the knowledge management staff "permission" to start identifying problems in order to address them.

The interplay of various factors lies behind these conclusions. Since this chapter is concerned with stated policy, its implementation and the impact of the implementation, contributing factors are discussed with direct reference to the policies described in the main body of the text. The processes for formulating the policy related to knowledge management and the intranet implementation were flawed for the following reasons. First, responsibility for policy development may not have been in the hands of the "right" people. Only one of the major documents (Parr, 2000, April) was authored by a member of distributed knowledge management staff, whose work was at the "front line" of knowledge management and would include the implementation of policy determined. The contribution of distributed knowledge management staff to the other documents is difficult to judge, but it is suspected that their participation was minimal. Second, it is likely that those preparing the policy were not aware of the prescriptions for knowledge management from the literature given, for example, the narrow set of approaches to encouraging knowledge sharing. Instead plans were built on local practice. The implication is that the policy created was not sufficiently tied to the needs of the business and the realities of what could be achieved in practice, particularly with regards to generating buy-in to proposals. A third problem was that policy was scattered over several short documents. There was no obvious mechanism for updating plans, and apparent limited dissemination can account for its partial implementation, and confusion as to its contents. These limitations meant that as a "licence" for implementation the policy documentation was weak. To an extent this disenfranchised the distributed knowledge management staff in their efforts to improve knowledge management and knowledge sharing in the firm.

Several individual components of the policy documentation as published merit discussion. It has already been noted on page 132 that to Chivers the term "knowledge" was very broad-ranging, as was the definition of "knowledge management" in the *Knowledge centres briefing pack* (UK Knowledge Management Group, 1998, October). If this typifies how knowledge management staff were talking about knowledge management in their daily work – and it proved to be the case in the interviews conducted for this research - it is likely that colleagues in the business units would not have been able to distinguish knowledge management from any other

"management fad". Perhaps a more focused set of definitions would have made it easier to sell the concept of knowledge management to the firm at large and enlist support of the knowledge management staff's work. However, a great deal of lobbying would have been required for this to be successful.

Equally, the codification strategy appears to be all-encompassing to the extent that anyone buying in to knowledge management at the firm would risk the burden of an additional administrative load. This was also highlighted in the interview data (see Chapter 4). The implication here is that the approach determined was unbalanced (at the expense of other strategies for knowledge management, notably those which consider social infrastructure) and difficult to sell. This also accounts for the widely-held misassumption that the intranet equated knowledge management and vice versa, as discussed at the Knowledge Managers' meeting held in April 2001 (UK Knowledge Management Group, 2001, April). Moreover, this emphasis on codification led to the intranet's treatment as an *information* system or publishing tool/platform, rather than a tool for the sharing of *knowledge*, as illustrated by the most popular format of resources accessed, highlighted on page 152. Although the term "sharing" was articulated widely in discussions of knowledge management and intranet development, its meaning was misplaced. The interactive element of sharing was missing in a set-up that promoted a "post-box" approach, and delayed the creation of environments where genuine interactions could be facilitated, such as discussion groups. It is interesting to note that even when suggestions of "competitors" to the intranet were discussed in the company documentation, other codified information sources were cited with no reference to informal sources (see page 160). Explanations as to why a strategy so heavily biased towards codification was proposed and adopted are worth consideration. First, it should be recognised that one the main businesses of the firm is accountancy, with a focus on audit work. Codified information is the key preoccupation and revenue stream for such a company, and work with this form of information is supported by regular reuse of fixed standard information and procedures. Added to this, a large proportion of the staff working in KMG from 1998 onwards, including the Director of UK Knowledge Management Operations, had qualifications in librarianship and information science. Some of the distributed knowledge management staff, responsible for implementing knowledge management policy, also had similar backgrounds. Therefore a large number of those responsible for knowledge management policy development were codification experts and selling into a business where the audit of codified information was a primary concern.

What is *not* expressed in the company archive is also worthy of comment. For example, for all the talk of "good practice" and exaltations to promote and adopt it (for example, Nevin, 2000, October 19) what this was supposed to comprise is not actually communicated in the documents examined for this chapter. This is not to say that there was not "good practice" in knowledge management at KPMG in the period 1995-2001 (see for example, the work of the Tax function highlighted on page 158 above). Rather, it would appear that there was not an explicit strategy for disseminating it.

Another key factor that contributed to the conclusions drawn from the company documentation is the position of the distributed knowledge management staff in the firm. It has already been noted that their role in implementing the plans of KMG was hindered by the means in which the policy was designed and communicated. Of greater importance, however, was the ambiguity in their position in the KPMG hierarchy, particularly with relation to their placement in the business units with no formal line of report to KMG (and the corresponding lack of KMG control over distributed knowledge management staff). They were clearly aware of this, as shown in the discussion of their career anxieties and frustrations at the Knowledge Manager meetings as described above (see page 142). This ambiguity accounts for relatively weak positioning of distributed knowledge management staff in the business units, and limited power in implementing knowledge management and intranet policy. It is suspected that this also gave some distributed knowledge management staff excuses for not executing their role to best effect. The company documentation refers frequently to participation in debates and examples of good practice in two functions - Tax and Assurance (including IRM) – and three lines of business/markets (ICE, IM and CM). The remaining functions and lines of business/markets appear to be relatively inactive, with some not even meriting mention. The question here is whether the members of staff included in this second set of business units were weak because of their position in the firm, or were taking advantage of their position in the firm as an excuse for weakness. Whatever the reason, the staffing structure for knowledge management staff in the business units had a negative impact on efforts to implement knowledge management policy, particularly with reference to generating buy-in and support.

The wider context of the working environment at KPMG, i.e. the macrostructure (Kling & Scacchi, 1982, p. 16) of the production lattice (Kling & Scacchi, 1982, pp. 20-21), can be regarded as an external factor that impacted the work of KMG and the UK distributed knowledge management staff in the design and implementation of policies related to knowledge management and UKnow. Many aspects of these were beyond the control of the knowledge management staff. These include, for example, the lumbering bureaucracy of a large organisation; a staffing structure that emphasised divisions; and an inappropriate technical infrastructure. Some of these divisions are even beyond the control of any multinational in this industry, for example different legal systems and professional bodies for accountancy across geographies. It is clear that these cultural and social inhibitors of knowledge sharing in the firm were recognised by knowledge management staff (see page 160), but no attempts were made to design practical policies to address them. Indeed, the work that went into KWorld and UKnow integration was a misguided attempt to match together two systems that had been built on the basis of two different approaches to intranet content provision. The global system aimed for full integration of world-wide content according to a predetermined structure and set of interfaces, whereas UKnow was a national resource built on the basis of a decentralised federation of web sites. The impossibility of KWorld's ambitions cannot have been ignored in the decision to cut the funding of the Global Knowledge Management Group in 2001.

The examination of documents held in the archive of the case study company provided the opportunity to explore further the role of the intranet in knowledge sharing within the context of the implementation's infrastructure (Kling & Scacchi, 1982, p. 18) and the influence of wider macrostructural patterns (Kling & Scacchi, 1982, pp. 32-36). This adds to the evidence presented in Chapter 4 on the lines of work and going concerns of the staff charged with managing the implementation. From this analysis further evidence can be drawn on the role of the intranet in knowledge sharing. The main conclusion is that it is a form of boundary object, but the subtleties of UKnow's deployment at particular stages of its life suggest that other interpretations may be proposed. These will be discussed further in Chapter 6.