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An exploratory study into the role of leadership, organisation and technology as knowledge management enablers: implications for local criminal justice boards.

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A management project presented in part consideration for the degree of Master of Business Administration

Executive summary

Political pressure, enforced financial constraints, challenging performance targets; changes in the expected modes of delivery and increased 'customer' expectations are forcing Criminal Justice agencies towards new ways of thinking about the way they are managed; hence the joining up of agencies into Local Criminal Justice Boards to deliver better performance and a customer focussed approach. Fundamental to the success of LCJBs is the creation and sharing of knowledge across organisational boundaries as no agency operates in isolation.

The objective of the study was to identify and explore the main barriers and enablers to effective knowledge management within and across local criminal justice boards (LCJBs) and to identify current practice for future learning. Using a mixed methods approach combining interviews, secondary research and a quantitative survey a research model was developed that identified leadership, organisation and technology as key enablers to effective knowledge management. Within these key enablers a number of critical success factors were identified.

From the findings it is evident that many of the critical success factors identified are in place or are developing concepts within the LCJBs studied. A number of barriers were also identified, such as little evidence of explicit commitment or resource in place to support knowledge management activities. This study also suggests that LCJBs are on the right path to developing a knowledge ecology from which more focussed knowledge management activity can evolve. LCJBs are well positioned within the criminal justice system to take forward and support agencies in developing and using knowledge management approaches to help support service delivery improvements and deliver systemic change. A number of recommendations are provided to enable practitioners to further develop a more cohesive and sustainable approach to knowledge creation and sharing.

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1.0   Introduction

"A Criminal Justice System pulling together as one whole, rather than continuing to work in silos… will bring about a huge improvement to the public's experience of criminal justice."

Baroness Scotland of Asthal QC, *Minister of State for the Criminal Justice System*

Political pressure, enforced financial constraints, challenging performance targets; changes in the expected modes of delivery and increased 'customer' expectations are forcing Criminal Justice agencies towards new ways of thinking about the way they are managed; hence the joining up of agencies into Local Criminal Justice Boards to deliver better performance and a customer focussed approach. However these new forms of multi agency working demand 'far more than simply sitting around tables with joint agendas' (Sutton, 2005). Fundamental to the success of LCJBs is the sharing of information and knowledge across organisational boundaries as no agency operates in isolation. To deliver this requires inter agency, cross hierarchical and inter disciplinarily teamwork; new forms of leadership based on collaborative working; shared autonomy between and across agencies and empowered employees to help 'revolutionise the relationship between the system and the citizen' (Sutton, 2005). Such 'intricate and complex systems need to be managed and purposefully guided. This is where the management component of knowledge management comes into play' (Mohamed et al, 2004).

Knowledge is not subject to the law of diminishing returns; instead the more it is dispersed and shared the more productive and effective it becomes. The main drive between linking knowledge management (KM) and cross organisational working is to achieve "…significant competitive advantage through constructing a whole greater than its parts.   This synergistic effect is especially feasible in the case of intangible capital, namely collective brainpower." (Mohamed et al, 2004).

This report aims to:

1. Identify and explore the main barriers and enablers to effective knowledge management within and across local criminal justice boards (LCJBs) by assessing the results from a concurrent nested research approach.

2. Explore and establish current approaches to knowledge management and identify areas of good practice for future learning. This will be undertaken by interviews and secondary data research.

3. Provide pragmatic suggestions and recommendations for improvement for use by LCJB practitioners.

2.0   Background and organisational context

2.1   The criminal justice system

The Criminal Justice System (CJS) is one of the major public services in the United Kingdom. With more than 400,000 people working in it, it includes everyone involved in the delivery of justice; from Judges and prosecutors to police and prison officers. It involves many more people who come in contact with it as victims or witnesses or who participate as jurors, magistrates or volunteers.

The CJS is responsible for detecting crime and bringing it to justice, then carrying out the orders of the court, such as fines, community and custodial punishment. The top two targets for the CJS are to bring more offences to justice and to raise confidence including victim and witness satisfaction. Together with other partners, the Criminal Justice System works to prevent crime happening in the first place, to meet the wider needs of victims, and to help turn offenders away from crime (CJS Business Plan 2004-08, 2004)

The CJS operates across many different organisational and departmental boundaries. Some of the boundaries reflect necessary specialisation. Others have their roots in the need to maintain the independence of the judiciary and the prosecution. However all are expected to work together seamlessly. The key agencies that work together to deliver what is known as the CJS includes the Police, Crown Prosecution Service, HM Courts Service, National Offender Management Service (Probation and Prisons), Youth Offending Teams and not-for-profit organisations such as Victim Support and the Witness Service.

At the national level a Criminal Justice Board with responsibility for overall CJS delivery exists. Its role is to make sure that central government departments, politicians and officials who are involved in delivering criminal justice act as one and drive and facilitate change. The National Criminal Justice Board (NCJB) includes CJS Ministers, heads of CJS agencies, permanent secretaries and senior policy officials, and supports a Cabinet Committee. The Government is also keen to make sure that it takes account of the views of others working in the CJS and has established a Criminal Justice Council to enable this. Membership includes representation from bodies such as the Commission for Racial Equality, the Law

Commission, Victim Support, as well as members of the Bar, the magistracy and the judiciary.

2.2 Local criminal justice boards

The main purpose of Local Criminal Justice Boards (LCJBs) is to deliver the CJS Public Service Agreement (PSA) targets, improve the delivery of justice and the service provided to victims and witnesses and secure public confidence. These targets are set for all CJS agencies and are jointly owned by the Home Office, Ministry of Justice and Attorney General. (It is important to note that the judiciary are not an agency and cannot have targets for, for example, the number of convictions). Although the PSA targets are set nationally, subject to approval by the Government, LCJBs decide how they will achieve them and, in most cases, also agree the level of improvement they will achieve. In addition to the national PSA targets, LCJBs can set additional priorities and targets in order to reflect local needs and concerns.

LCJBs operate on a non statutory basis and formally came into existence on 1 April 2003. They represented a new way of doing business within the CJS, through better co-ordinated and more cohesive working arrangements. An LCJB consists of the Chief Officers or senior managers from each of the key justice agencies and on an annual basis each board nominates a Chief Officer to act as Chair. Generally beneath each board there are working groups and teams consisting of individuals from each agency tasked with taking forward projects, working towards improved service delivery and problem solving. There is no set structure for groups that work together on behalf of the LCJBs as this is determined locally.

2.3 Support for LCJBs

The Office of Criminal Justice Reform (OCJR) is the cross-departmental team that supports all CJS agencies in working together to provide an improved service to the public and meet public service agreements. The OCJR oversees the 42 LCJBs and provides Performance Officers (sometimes called by other titles) for each LCJB; these posts are managed by regional performance advisors. The role of local Performance Officers is to support LCJBs in their efforts to improve performance and provide a conduit between the centre and local areas.

Figure 1 details the criminal justice system, its stakeholders and where LCJBs fit within in it.

Figure 1. The Criminal Justice System and its stakeholders

National Level	Home Office	Ministry of Justice	Attorney General	Judiciary
	Police	Her Majesty's Courts Service National Offender Management Service Youth Justice Board	Crown Prosecution Service	Criminal Rule Procedure Committee

National Criminal Justice Board

Office for Criminal Justice Reform

Local Criminal Justice Boards

Local Level	Police Forces	Courts Prisons Probation Youth Offending Teams	CPS	Resident Judges Circuit Judges District Judges

Defence			Legal Services Commission	Customers
2,7000 criminal law private firms	Law Society	Criminal Law Solicitors Association		Jurors Witnesses Defendants

2.4   Challenges for LCJBs

LCJB partners have experience of working in strategic partnerships and are aware of the difficulties and challenges that they present. Organisational, political and cultural barriers often need to be overcome and commitment from members can be difficult to maintain if the achievements of the partnership do not outweigh the costs. Partnerships can lead to organisations feeling pulled in several directions and LCJBs are no exception to this. Member agencies can feel overwhelmed at times when trying to balance their own priorities with those of

the LCJB and other existing partnership arrangements. The LCJB as a whole may also experience tensions that result from being part of a nationally driven delivery system and improvement programme, while still meeting individual agency objectives and targets and needing to respond to local issues. Furthermore strategic planning and managing delivery on a cross agency basis is still a developing concept within the CJS.

Accountability is also complex, as the chief officers and senior managers responsible for LCJBs are all employees of independent organisations and have to act as such. Most LCJB organisations have strong links to the NCJB through their chief executive officers; however, not all of them are national organisations – the police, youth offending teams and Victim Support are all local services. To a large extent, the success of LCJBs, like many other partnerships, depends on independent, autonomous organisations committing themselves to shared objectives. Indeed it can be questioned whether partnership is the correct term – collaborative working is a phrase often preferred or as one LCJB member commented "…partnership is the weasel word of the 3rd millennium. Collaboration - that's what we really do".

In 2006, the Government published two major reviews of the CJS which has set the direction for the next five years: rebalancing the CJS in favour of the law abiding majority and delivering simple, speedy, summary justice (CJSSS). The Treasury's 2007 comprehensive spending review has reviewed the existing PSA targets and has set a detailed programme for the next three years. The three key messages from these two reviews are:

- Putting victims and law abiding citizens at the heart of a CJS that is more comprehensible and responsive.
- Protecting the public with a stronger focus on the most serious of crimes, on enforcement and compliance with orders and sentences of the court and on tacking re-offending.
- Delivering an efficient and joined up CJS.

Underpinning each of these messages is the continuing drive to make better use of technology; greater use of evidence led strategy and decision making and

improving the coherence of implementing reform within LCJBs through embedding the capability to manage business change locally and maximising their key resources (Draft CJS Business Plan, 2007)

As 'virtual' organisations or collaborations LCJBs key resource is information and knowledge. An understanding of the environment, the processes and the practices that individuals 'bring to the table' needs to support agencies in working together, make evidence based decisions and learn together in order to deliver the required change and to innovate and improve services. However the extent to which the creation and sharing of knowledge occurs, how this is formally managed and the potential opportunity this provides to support the delivery of another agenda for change does not appear to have been recognised or formalised by LCJBs.

A useful way of conceptualising the creation and sharing of knowledge is through the framework provided by the notion of knowledge management. The following chapter defines the concept of knowledge and knowledge management and identifies and discusses the enablers needed for an effective knowledge management framework.

3.0   Knowledge management barriers and enablers: a review

This chapter aims to explain the concept of knowledge and knowledge management and its relationship with organisational learning theory. Using existing literature and empirical research, it has been possible to identify the key enablers and constraints to the effective creation and sharing of knowledge within and across organisations. These enablers are considered in greater detail and a framework for research developed.

3.1   What is knowledge?

It is important to be clear on the fundamental distinction between information and knowledge. Information is about meaning and forms the basis for knowledge. However, knowledge goes one step further. It encompasses the beliefs of a group or of individuals and it is intimately tied with action (von Krogh, Ichijo and Nonaka, 2000). Knowledge involves not simply knowing how the thing is done, but knowing how to do it, and the two are quite distinct. Explaining a joke is quite different from telling a joke (Fodor, 1968: Duguid, 2005). Duguid (2005) states transforming the knowing _how_ into the knowing _that_ (the tacit into its nearest explicit equivalent) is likely to transform learning from _learning to be_ into _learning about_.

According to Nonaka and Takeuchi (1995) explicit knowledge can be articulated in formal language and transmitted through mediums such as manuals, written specifications, process maps and so on. Tacit knowledge is not as easily transmitted as it is regarded as personal knowledge based upon individual experience and values. "Organisation knowledge creation should be understood as a process that 'organisationally' amplifies the knowledge created by individuals and crystallises it as a part of the knowledge network of the organisation." (Nonaka and Takeuchi, 1995).

Nonaka and Takeuchi (1995) describe a process in which knowledge is created in four different ways.

Figure 2. Modes of knowledge conversion (Nonaka and Takeuchi, 1995)

	Tacit Knowledge to	Explicit Knowledge
Tacit Knowledge **From**	Socialisation	Externalisation
Explicit Knowledge	Internalisation	Combination

Socialisation involves activities such as brainstorming, group discussion and debate where people expose their knowledge and test its validity.

Externalisation involves putting knowledge to use, for example when an organisation sets a goal or target.

Combination is the bringing together of diverse knowledge to produce new insight.

Internalisation is the process where an individual, when exposed to another's knowledge, makes it their own.

3.2   What is knowledge management?

Definitions and perspectives on KM are many but on the whole literature stresses that KM is the application of knowledge through human capital and where technology and processes are in place to capture and distribute knowledge in a way that creates value to the organisation. Von Krogh, Ichijo and Nonaka (2000) argue that knowledge should not be thought of as an asset in the traditional sense, subject to bureaucratic administration and isolated in a separate staff function. "Knowledge creation is a dynamic process that can involve contributions from hundreds of people in an organisation. Because it is vital for sustainable business performance it should be considered a general management responsibility, one that originates at the top of the company and is distributed through middle management to all operational levels" (von Krogh, Ichijo and Nonaka, 2000).

Malhotra (1998) posits that KM "…caters to the critical issues of organisational adaptation, survival and competence in the face of increasingly discontinuous environment change…Essentially, it embodies organisational processes that seek synergistic combination of data and information processing capacity of information technologies and the creative and innovative capacity of human beings." More succinct is Davenport's (1994) suggestion that "KM is the process of capturing, distributing and effectively using knowledge." Kalseth's (1999) definition references strategy and culture as important influences with KM "...our experience is that the human resources elements, information technology and information incorporated into the strategic business process, must all be tightly incorporated into the management and working culture of the organisation. It is the synthesis of the KM components that creates the organisational ability to exploit the total information and knowledge potential of an organisation."

According to Bhatt (2000) a key element of KM is the "requirement to address people, process and technology issues in tandem and not focus on any one element", with 10% of effort being spent on technology, 20% being spent on processes and 70% of effort on people and cultural issues. Finally, in his conceptual framework of KM, Stankosky (2000) writes of the four pillars of KM namely; organisation, leadership, technology and learning. Although there is no formula to the extent to which each of these pillars must be operating in order to contribute to an organisations competitive advantage, it is suggested that each need to be operating to some degree. Von Krogh, Ichijo and Nonaka (2000) surmise that 'knowledge management has been myopically interpreted a simply information management'. They warn that knowledge management initiatives will fail unless there is an understanding of the fundamental distinction between information and knowledge and the different management styles and activities needed by both. However for the purpose of this study knowledge management, when referred to as a concept, will mean:

"The creation and subsequent management of an environment which encourages knowledge to be created, shared, learnt, enhanced, organised and utilised for the benefit of the organisation and its customers. "

BSI Knowledge Management Vocabulary (2006)

This definition assumes that knowledge can not be managed in the traditional sense but that an organisation can optimise the value of its knowledge through an appropriate blend of leadership, values, culture, processes, tools and skills to support knowledge access and use. Managing this stock of intellectual capital in an organisation as it flows and grows is the domain of knowledge management. The way that stocks of intellectual capital change and evolve over time is then dependent on knowledge management strategies in knowledge creation, access and use.

3.3   Benefits of knowledge

With knowledge being recognized as a critical resource for organizations, it is important to identify what benefits knowledge offers. The overarching benefit that knowledge provides is the ability to create and sustain a competitive advantage (Davenport & Prusak, 1998; Drucker, 1993; Nissen, 2006; Nonaka, 1991; Zack, 1999). The main way that knowledge provides a competitive advantage is through innovation. This is expressed by Wayne Toms, "The single differentiator that is likely to last is innovation, and the raw material of innovation is knowledge" (Hibbard, 1997). The power of innovation lies in knowledge creation. Creating new knowledge sparks innovation and that new knowledge combined with the time it takes competitors to acquire similar knowledge results in a competitive advantage for the organization (Nonaka & Takeuchi, 1995; Zack, 1999). "In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge" (Nonaka, 1991). In addition to competitive advantage, knowledge allows organizations to improve performance efficiencies, problem solving, product development, and decision making (Bixler, 2005; Nonaka & Takeuchi, 1995; Skyrme & Amidon, 1998).

One aspect of knowledge that truly separates it from traditional resources is that knowledge increases through use, where traditional resources are depleted through use (Ballow et al., 2004; Davenport & Prusak, 1998; Nissen, 2006; Tirpak, 2005). The ability to produce an indefinite potential for market growth makes knowledge an organization's most valuable and powerful resource (Davenport &

Prusak, 1998; Grover & Davenport, 2001; Nonaka, 1991). As a sustainable resource with growth potential, many organizations are beginning to attribute their successes to knowledge.

Studies into clarifying the links between KM activities and corporate objectives and benefits suggest that KM tasks have an impact on business processes – therefore KM can contribute towards organisations achieving their goals (Firestone, 2001). Davenport (1999) relates that progress in KM activities affects 'intermediate variables' such as project performance indicators, indicators of the capacity of employees to carry out tasks related to knowledge and ultimately leading to the generation of ideas. Marques et al (2006) study into the relationship between KM competences and firm performance highlighted the necessity of the 'human dimension…for developing an effective KM strategy.' On the whole previous research has established that the generation of new ideas and innovations, due to an improved use of knowledge, could have an effect on processes. Similarly, the improvement in processes can develop employees' capabilities (Marques et al, 2006). In a 2000 report, KPMG consulting surveyed 423 organizations across the United Kingdom, Europe, and the United States regarding knowledge management issues, including KM benefits achieved. They found that the top six benefits of KM realized by organizations were: better decision making, better customer handling, faster response to key business issues, improved employee skills, and increased profits (KPMG Consulting, 2000).

3.4   The relationship between knowledge management and the learning organisation

In order to begin to locate the concept of knowledge management in general within the existing theoretical framework of organisational learning, it is helpful to attempt to define what a 'learning organisation' is. Definitions and perspectives on learning are numerous; however the literature would seem to agree that learning is the acquisition and development of new knowledge and new ways of learning (Peltonen & Lamsa, 2004). Learning itself can be adaptive or generative. Adaptive or 'single loop' learning is that which enables an organisation to apply existing methods to the efficient completion of tasks, that is, to do better what the organisation is currently doing (Argyris and Schon, 1978).

On the other hand generative learning or 'double loop learning' challenges the basic requirements of tasks and how they should be done. Such learning occurs when an organisation's members are 'prepared to question long-held assumptions, standards, objectives and working methods. Designing the future rather than adapting to it. Thus generative learning enables an organisations management to look ahead, identify opportunities and threats, and reduce the frequency and magnitude of disruptions (Day, 1994: Bennett, 1998).

 An organisation learns when the knowledge of each individual who is part of the group is shared beyond the temporal, spatial or structural limits (Yeung et al, 1999; Sarabia, 2007). According to Starkey *et al* (2004) the learning organisation "…is a metaphor with its roots in the vision of and the search for a strategy to promote individual self development within a continuously self-transforming organisation." The learning organisation has so many desirable qualities, the quintessential nature of the learning organisation is hard to describe (Bennett, 2004), however features of a learning organisation would appear to include: an understanding that competitive advantage stems from unique capability; that in order to sustain and develop this capability the organisation needs to nurture and develop 'structures that enable dialogue and boundary crossing'; recognise and reward experimentation and allow for greater autonomy rather than bureaucracy; has common values and vision and which regards learning as an emergent process of sense making and interaction rather than an enforced, external phenomena (Peltonen & Lamsa, 2004. Virkkunen and Kuutti, 2000). Garvin (2003) explains that an organisation which learns is 'expert in five activities: systematic resolution of problems, experimentation of new focuses, use of their own experience and past in order to learn, learning from experiences and more appropriate practices of other companies (benchmarking), and transmitting the knowledge to the whole organisation, all quickly and efficiently.'

Nonaka and Takeuchi (1995) recognise that 'although we use the term 'organisational' knowledge creation, the organisation cannot create knowledge on its own without the initiative of the individual and the interaction that takes place within the group'. Social learning theory 'posits that people learn from observing other people. By definition, such observations take place in a social

setting' (Merriam and Caffarella, 1991) or as Brown (2000) suggests: "We participate. Therefore we are…In participation with others, we come into being. " Lave and Wenger's (1991) situated learning model, rather than looking to learning as the acquisition of certain forms of knowledge, places it within social relationships – through participation. As William F. Hanks puts it in his introduction to their book: 'Rather than asking what kind of cognitive processes and conceptual structures are involved, they ask what kinds of social engagements provide the proper context for learning to take place' (1991). Situated learning therefore refers to the type of learning that takes place in everyday life, including the workplace (Fox, 2000).

3.5   Knowledge management keystones

Based on the literature surrounding the concept of knowledge management it is possible to identify three key enablers which organisations need to take into consideration when planning and maintaining any form of knowledge management activity. The three key enablers are:

1. Leadership
2. Organisational environment
3. Technology

This following chapters explore in more detail these potential enablers (and possibly potential barriers) to knowledge management and organisational learning.

3.6   Leadership

Knowledge isn't power; the ability to act on knowledge is power.

Michael Schrage (2002)

The meaning of leadership has never been packaged into one tightly defined statement. The term leadership is ambiguous, with an array of different connotations. Indeed there are many different ways of interpreting leadership and its meaning: a behavioural category, authority for decision making; the ability to bring about improvements in performance in others or an attribute of position or power, which 'then in turn acts upon their environment in an effective or ineffective manner' (Agashae and Bratton, 2001: Giddens, 1999). Parker (1999) concedes "leadership is one of those elusive priorities, an area in which there is no absolute, guaranteed model." Leadership can occur at any level of an organisation where people are able to shape the direction and motivate teams and individuals towards a vision or set of goals and is not necessarily an individual but a collective, relation based activity (Fairholm, 2000). As a key theme of this paper is the management of change towards knowledge oriented organisation, the approach to leadership will focus upon the management of influence, rather than the position or the person. For this reason the following definition of leadership will be adopted '*a relationship through which one person influences the behaviour or actions of other people*' (Mullins, 1999).

Many studies of leadership have focussed on the belief that managers and leaders should adapt to any situation (Landrum et al, 1999), others have suggested that leaders have different characteristics and as such leaders should be matched to the organisations needs (Fielder, 1967; Vroom and Yetton, 1973; Vroom and Jugo, 1988). One of the dominant areas of leadership theory which has come under considerable scrutiny is Burns' (1978) 'transformational leadership'. Transformational leaders are seen as engaging followers to broaden and elevate the interests of the employees, when they generate awareness and acceptance of purposes and mission of the group and when they stir their employees to look beyond their own self interest for the good of the group (Bass, 1999). There is considerable empirical data to support the effectiveness of

transformational leadership. For example, such leadership has been associated with follower satisfaction (Hater and Bass, 1988; Koh et al, 1995), commitment to the organisation (Barling et al, 1998), deemed to instil trust amongst followers in management (Fairholm, 2000; Kouzes and Posner, 1995; Barling et al, 1998) and belief in the espoused culture of the organisation. Critics of the theory propose that transformational leadership is not without its pitfalls. Conger (1996) suggests that negative outcomes can occur as a result of the leaders' vision, communication, 'impression management' skill and managerial practices. Indeed there is the danger that the unity of the purpose will be achieved by silencing the voices of a minority" (Keeley, 1995). In contrast to transformational leadership, there is 'transactional leadership'. Often described as having a "quid pro quo" nature, the transactional leader "approaches the followers with an eye to exchanging one thing for another" (Burns, 1978). According to Burns these exchanges can be economic, political or psychological. Primarily the transactional leaders' power emanates from the ability to control reward, such as pay, punishment and through the setting of objectives and goals.

Leaders can influence the choices people make about the extent to which they engage with the organisations activities. According to Senge (2006) leaders are responsible for developing guiding ideas about purpose, values, and vision for the enterprise as a whole...they must take responsibility for ensuring the existence of credible and uplifting guiding ideas in the organisation. They are responsible for "building organisations where people continually expand their capabilities to understand complexity clarify vision and improve shared mental models – that is, they are responsible for learning" (Senge, 1990).

Leaders' actions send a signal about the kind of behaviour that is needed within an organisation and can greatly influence the culture and motivation throughout an organisation. Leaders can lead by example through demonstrating their own curiosity, by questioning assumptions overtly and by encouraging others to step out of the 'comfort zone' (OPM, 2005). Davenport et al (1998) in their study of 31 management projects conclude that one the key success factors is the support of senior managers and this includes:

- Conveying the information that knowledge management and organisational learning are keys to the success of an organisation;
- Providing financial and other resources to build the fundamental building blocks of knowledge management; and
- Clarify the kind of knowledge that is important to the organisation.

Pan and Scarborough (1998) summarised the role of leadership within KM as overcoming resistance to change and dismantling barriers to communication, both across the organisation and between different levels of management. Furthermore, leaders are vital for 'dealing with structural impediments to innovation, such as poorly designed measurement and reward systems' (Senge, 2006). According to Mohammed et al (2004) in order for cross functionality and KM to work together, leadership needs to promote relations that "bring people together and reward them for taking shared corrective actions or reaching mutually viable solutions. Leadership needs to stay away from meddling and forcing mechanisms, whilst at the same time foster the learning environment to motivate employees to experiment."

This blend of transformational and transactional leadership to which Taffinder (1995) refers to as 'renaissance leadership' would appear to be supportive of the key characteristics identified in the literature. Indeed Bass and Avolio (1993) recommend that organisations maintain an effective base of transactional leadership but utilise transformational leadership to effect changes in organisational culture'.

Senge (1990) and Kofman and Senge (1993) have developed a framework of interpretation which seeks to understand how leadership practices can help bring about change and 'renew organisations through learning' (Agashae and Bratton, 2001). Senge (1990) defines an organisation's ability to survive in terms of its ability to learn. He argues that this learning occurs through five "disciplines". These disciplines are personal mastery, mental models, team learning, shared vision and systems thinking. This rhetorical vision of the learning organisation emphasises the importance of social relations and in particular the role the

leader takes in facilitating a learning environment. Senge (1990) identifies three roles namely designer, steward and teacher:

As designers, leaders build into the organisational structure the antecedents for effective learning, for example policies, work processes, communications channels. A critical skill for designers is the ability to piece together different structural factors and processes that fit together to facilitate learning. In essence, 'the leaders task is designing the learning processes whereby people throughout the organisation can deal productively with the critical issues they face, and develop their mastery in the learning disciplines' (Senge, 1990).

As stewards, leaders have a personal vision or "purpose story" that supports the organisational vision - 'the overarching explanation of why they do what they do, how their organization needs to evolve, and how that evolution is part of something larger' (Senge 1990); thereby leaders must "naturally see their organisation as a vehicle for bringing learning and change into society" (Senge, 1990).   In implementing this vision, the leader becomes the steward of that vision (Agashae and Bratton, 2001). Leaders have to learn to listen to other people's vision and to change their own where necessary. Telling the story in this way allows others to be involved and to help develop a vision that is both individual and shared (Infed, 2006).

Finally, as a teacher the primary role for the leader is to "develop a more empowering view of the current reality" - that is to recognise that an important capacity is lacking in an organisation (Senge, 1990). Teachers achieve this through enabling people to see problems in terms of underlying systemic structure and mental models. "Leader as teacher is not about "teaching" people how to achieve their vision. It is about fostering learning, for everyone. Such leaders help people throughout the organization develop systemic understandings" (Senge 1990: 356). A key success to this is to be able to conceptualise insights and share this with others, so that they become public knowledge and therefore open to challenge and scrutiny (Senge, 1990).

Senge's model for leadership is highly dependant upon the individual having the right disposition to deliver this approach. The individual is required to have high levels of understanding and commitment to personal mastery, vision, systems thinking and team learning to achieve this and remain committed to their and the organisational vision regardless of their role as designer, teacher or steward. It calls for high levels of personal and public scrutiny of leaders own personal performance both of which are uncomfortable and threatening experiences and it also suggests that the role of leader is far more than a paid job – it's a lifestyle. How many managers have this or would be prepared to commit to such an undertaking?

Of course leadership is not the sole preserve of senior management. Von Krogh, Ichijo and Nonaka (2000) recommend the use of a knowledge activist responsible for 'energising and connecting knowledge creation efforts throughout a company…knowledge activists help to establish the right enabling context'. Knowledge activists do not control the generation or sharing of knowledge, instead they encourage the right context or knowledge ecology for this to happen and ensure that this fits with the organisations strategic and business need. Knowledge activists take a lead in identifying with 'imagined communities', identifying and understanding micro-communities and their knowledge stores and aligning this with the knowledge requirements of the organisation and communicating the sense of shared vision or belonging to a wider community. The knowledge activist's position enables them to have a perspective on the knowledge levels and knowledge needs within an organisation. They can also have the overview of the different communities, networks, initiatives and projects within an organisation and is in a unique position to be able to put groups and individuals in touch with each other to form a 'map of co-operation' to help groups to engage is knowledge exchange and cross levelling of knowledge (Von Krogh, Ichijo and Nonaka, 2000). In a practical sense this can be through providing the right social structure for individuals to come together and exchange knowledge; sharing knowledge explicitly through established medium such as newsletters or intranets.

It is evident from the literature that leadership is a critical enabler in encouraging knowledge creation and sharing within and across organisations and this encompasses leadership at all levels, not just senior management. The leader is crucial to ensuring the right context or 'ecology'; however it is evident that the disposition of leader is critical to achieve effective KM. From the literature the following critical success factors have been identified; providing a vision of the future; developing external relationships with potential knowledge providers and partners; valuing people and their ideas by encouraging a climate where self expression and challenge is seen as positive; encouraging learning amongst individuals and groups; understanding and communicating what and why knowledge is important to the organisation and leading by example through actively demonstrating a commitment to knowledge creation and sharing. Figure 4 details some of the critical success factors identified within the literature.

Figure 3. Critical success factors - leadership
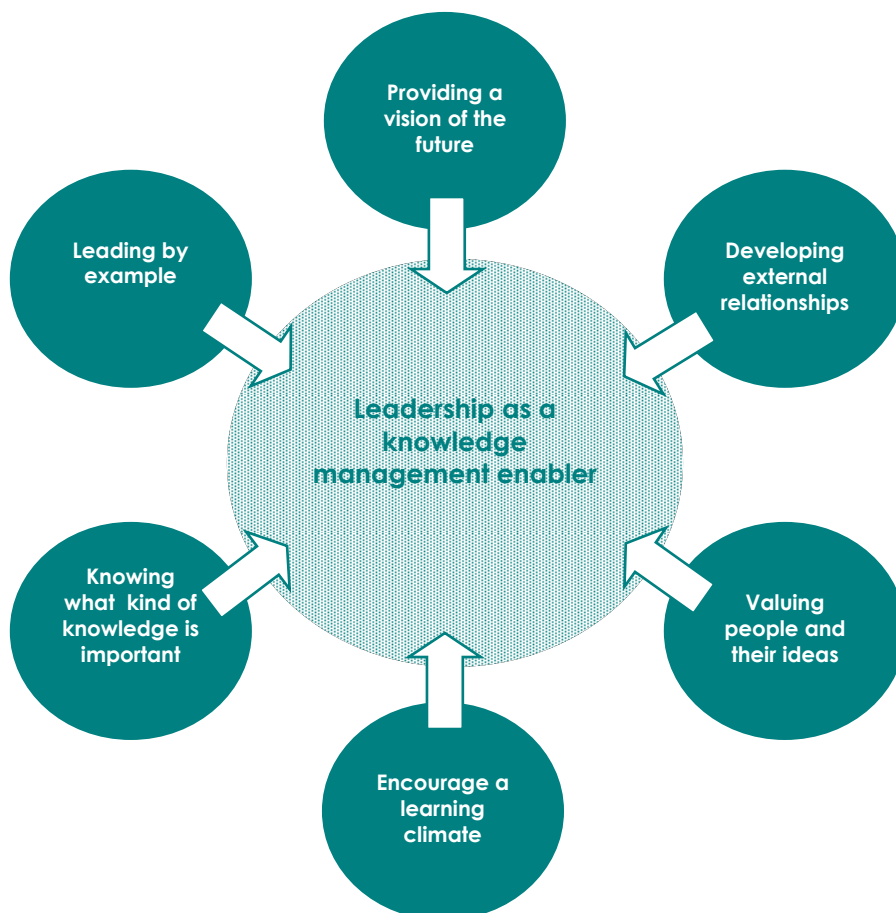
3.7   Organisation

"Knowledge is what we know how to do, and we do things with one another. That is how the work gets done. Collaboration is the flip side of knowledge management. You can't talk about one without the other. So, to manage knowledge you need to address collaboration and tools that help people collaborate." Anne Murray Allen, Hewlett Packard (Senge, 2006)

The knowledge ecology is the component of KM that focuses on human aspects and their relationship to the organisational environment. Understanding the knowledge ecology of an organisation requires the study of work habits, values and organisational culture and its impact on knowledge creation, sharing and use with the aim to create the right 'ecological' conditions for KM such as zones for collaboration, sharing, learning, context and community (BSI Knowledge Management Vocabulary, 2006). The term organisation within the context of this study refers to the softer element of organisations such as social structures, systems and culture. Pulling in elements of human relations and systems theory, rather than the rational, mechanistic approach of organisational structural theory, this chapter discusses the knowledge ecology of the organisation, in particular organisational culture and social structures for learning and systems thinking.

3.7.1 Culture

An organisation's culture is a phenomenon in that it is unique, and exceedingly difficult to change. An organisation's culture determines how an organisation thinks and behaves and is shared by members of the organisation (Nonaka and Takeuchi, 1995). Schein (1985) defines culture as a model of basic assumptions and beliefs that define an organisation's view of itself and its environment. Schein suggests that these beliefs and assumptions are the result of learned responses to 'a group's problems of survival in its external environment and its problems of internal integration' (Lopez et al, 2004). Therefore the relationship between culture and learning is one of reciprocal interdependence – the rate at which the organisation learns is dependant upon culture and the culture is influenced by the rate and content of the organisation's learning (Brown, 1995).

Culture is reflected in the visible aspects of an organisation, like its mission, philosophy and espoused values however culture also exists at a deeper level, embedded in the way people act, what they expect of each other and how they make sense of each other's actions (McDermott and O'Dell, 2001). Culture is rooted in an organisation's core values and assumptions and these are often unarticulated and often so embedded that they are invisible to organisational members. Because of these deep set layers of culture, organisational members can act in ways that are inconsistent with the organisations articulated values; but consistent with its core values. Therefore according to McDermott and O'Dell (2001) "…in an organisation with a knowledge sharing culture, people would share ideas and insights because they see it as natural, rather than something they are forced to do."

People are a key component in knowledge management activities; therefore the type of culture existing within the organisation is crucial to the success of knowledge creation and sharing (Lai and Lee, 2007). Davenport and Prusack (1998) suggest that as organisations ' interact with their environment, they absorb information, turn it into knowledge and take action based on it in combination with their experiences, values and internal rules'. Therefore culture must be considered when introducing knowledge management activities as it can affect how the organisation accepts and develops such a concept (Ndela and Toit, 2001). Organisations that are serious about knowledge foster an environment and culture that supports continuous learning. Lai and Lee (2007) acknowledge the difficulties in engendering a knowledge friendly culture and suggest that if knowledge related activities are to be an integrated aspect of how work gets done within the organisation, then strong leadership and a change in behaviours and attitudes are needed.

According to Davenport et al (1998) adjusting culture is critical if an organisation is to effectively manage knowledge. In a study of 431 organisations, culture was found to be the largest single obstacle to knowledge transfer, with 54% of respondents identifying it as a critical impediment (Ruggles, 1998). Similarly, Gold et al (2001) suggested that culture was the most significant barrier to change. In

their study of the relationship between organisational culture and knowledge activity Lai and Lee (2007) identified that an entrepreneurial culture had a positive impact on knowledge related activities. Organisations fostering an entrepreneurial culture are more aware and proactive toward changes in their environment and have key features such as non hierarchical, self organising and flexible structures (Lai and Lee, 2007; Yu et al, 2004). Conversely Lai and Lee's study also identified that task goal orientated and smooth running, bureaucratic cultures did not significantly affect knowledge activities as hypothesised.

Assessing organisational culture is notoriously difficult and time intensive. McDermott and O'Dell (2001) explain that it is not necessary to do an in-depth study of an organisation's culture. It is sufficient to identify those core values that would have the most potential to shape and support knowledge creation and sharing. Organisational climate is thought to be the direct behavioural manifestation of organisational culture. Although culture and climate measure the same phenomena, climate is thought to be the most visible and adaptive of the two (Balafas, 2004; Janz and Prasarnphanich, 2003). In their study of socio-technical factors on knowledge sharing Lin and Lee (2006) identified that organisational climate significantly influences perceived advantages of knowledge management activities; in particular a socially orientated organisational climate which promotes open communication, has top management support and appropriate reward systems. In their study of east-west joint ventures von Krogh, Ichijo and Nonaka (2000) identified strong evidence that a climate which fosters trust, care and personal networks amongst employees is one of the most important conditions for spreading knowledge effectively.

In their research of organisations with perceived successful knowledge cultures McDermott and O'Dell (2001) identified that critical success factors included links to both the visible and invisible dimension of culture. In terms of the visible dimension of culture these organisations demonstrated a visible link between sharing knowledge and solving practical business problems; the approach, tools and structures to support knowledge sharing matched the overall style of the organisation and finally reward and recognition systems supported knowledge

sharing. The sharing of knowledge is tightly linked to pre-existing core values of the organisations and networks for sharing knowledge that were built upon existing networks people used in their daily work were manifestations of the invisible dimension of culture.

De Long and Fahey (2000) identified four ways in which culture influences behaviours central to knowledge creation, sharing and use:

- Culture shapes assumptions about what constitutes knowledge and what knowledge is worth.
- Culture defines the relationships between individual and organisational knowledge, such as who is expected to control specific knowledge, who can share it and who can hoard it.
- Culture creates the context for social interaction which determines how knowledge is used in particular situations.
- Culture shapes the processes by which new knowledge is creation, legitimised and distributed throughout the organisation.

Cultures that favour knowledge sharing and integrating into the organisation encourage debate and dialogue in facilitating contributions from individuals at multiple levels within the organisation (Davenport and Prusak, 1997). Furthermore, enabling and involving organisational members to contribute to knowledge creation and sharing without close and frequent supervision requires a certain degree of trust. According to De Long and Fahey (2000) "…the level of trust that exists between the organisation, its subunits, and its employees greatly influences the amount of knowledge that flows between individuals and from individuals into the firm's databases, best practices, archives and other records."

Lopez et al (2004) identified that a collaborative culture provided a 'good fit' for organisational learning. The eight key values within a collaborative culture are as follows: a long term vision and advance management of change; communication and dialogue; trust and respect for all individuals; teamwork; empowerment; ambiguity tolerance; risk assumption and respect and diversity encouragement.

The discussion so far raises the question if an organisation has a culture that is not conducive to knowledge management can it still be effective at knowledge management? (Feliciano, 2007) The literature would indicate that it is preferable to implement a culture change programme before embarking upon a KM initiative, however realistically this is not practicable many organisations who would find it difficult to secure the time and investment for such a complex exercise (Balafas et al, 2004). A more realistic approach would be to adapt the KM effort to in accordance with the existing culture in order to achieve timely business results (Ellis, 2003; Balafas et al, 2004). McDermott and Dell (2001) add that 'even when knowledge sharing is being used as a means of changing the organisation, it is more effective to first match the design of the KM scheme to the core values and style of the organisation. By building on these core values, there are more chances of creating a culture that supports knowledge sharing.' From their study McDermott and Dell (2001) noted that most of the organisations that implemented KM effectively did not describe it as a new direction, a change program or a shift in values, instead they described it as a way to enable people to achieve the organisation's core values more fully. Balafas et al (2004) recommend that as the KM effort is implemented and the culture evolves then the KM effort should also be re-adapted and the relationship between KM and the culture should be continuously evolving.

3.7.2 Social networks

Von Krogh, Ichijo and Nonaka's (2000) key enabler to knowledge management, the creation of the "right context" involves ensuring the right structures to encourage solid relationships and effective collaboration through collectivism and individualism. Creating the right context 'has the most impact on how concepts are justified organisationally – that is whether a broad range of perspectives is used to match new concepts with a company's strategic objectives – and how new knowledge is cross levelled throughout'. The right context is one that fosters "emerging relationships within micro communities, cross group boundaries, throughout an organisation, whatever it takes to unleash tacit knowledge….one that is often defined by a network of interactions" (Krogh, Ichijo and Nonaka, 2000) also referred to as *ba*. Von Krogh et al (2000) are keen to

point out that *ba* is not a structure but an enabling environment – a shared knowledge space.

Figure 4. Creating a shared knowledge space. Four interactions in a knowledge spiral (*Van Krogh, Ichijo and Nonaka, 2000*)

	Individual	Collective
Face to Face	**Originating** One to one. Captures physical sensations and emotional reactions – inspires care, trust and commitment Words, gestures, jokes, scribbles	**Conversing** Having group conversations to form concepts Allows groups to share mental models and skills of members- reinforces the conversion of tacit knowledge into explicit knowledge Discussion and analyses of individual and group mental models; conversation
Virtual	**Internalising** Making explicit knowledge tacit once more. Internalisation of knowledge from explicit form. Acquisition of new knowledge; skills; values	**Documenting** Converting knowledge into explicit forms. Collaborative transmission of explicit knowledge Written documentation or electronic media; groupware; on-line networks;

An enabling environment can be created intentionally, senior management can provide the resource and support to facilitate through the provision of meeting space, technology or encouraged social / networking interactions amongst organisational members or it can arise spontaneously. As Von Krogh et al (2000) note 'leaders have to understand how organisational members are interacting with one another and the outside environment in order to quickly capture emerging *ba*'.

3.7.3 Communities of practice

Addressing the kind of 'knowing' that makes a difference to practice requires the identification of people who are engaged in the process of creating, refining, communicating and using knowledge within the workplace and Community of Practice (COP) theory provides a vocabulary that enables this. The basic argument made by Jean Lave and Etienne Wenger is that COPs are everywhere and that we are generally involved in a number of them - whether that is at work, school, home, or in our civic and leisure interests. In some groups we are core members, in others we are more at the margins.

A community of practice defines itself along three dimensions:

- **What it is about** – its *joint enterprise* as understood and continually renegotiated by its members
- **How it functions -** mutual engagement that bind members together into a social entity
- **What capability it has produced** – the *shared repertoire* of communal resources (routines, sensibilities, artefacts, vocabulary, styles, etc.) that members have developed over time.

According to Wenger (1998) "…communities of practice exist in any organization. Because membership is based on participation rather than on official status, these communities are not bound by organizational affiliations; they can span institutional structures and hierarchies." They can be found:

- *Within organisations:* COPs arise as people address recurring sets of problems together.
- *Across business units/departments:* Important knowledge is often distributed in different business units. People who work in cross-functional teams thus form COPs to keep in touch with their peers in various parts of the organisation and maintain their expertise.
- *Across organisational boundaries:* In some cases, COPs become useful by crossing organizational boundaries.

COPs are different from other forms of organisation such as project teams and informal networks. The following table summarises the key differences.

Figure 5. A snapshot comparison of informal and formal groups: summary of characteristics (Wenger and Snyder, 2000)

	What's the purpose?	Who belongs?	What holds it together?	How long does it last?
Community of practice	To develop members' capabilities: to build and exchange knowledge	Members who select themselves	Passion, commitment and identification with the group's expertise	As long as there is an interest in maintaining the group
Formal work group	To deliver a product or service	Everyone who reports to the group's manager	Job requirement and common goals	Until the next reorganisation

Project team	To accomplish a specific task	Employees assigned by senior management	The project's milestones or goals	Until the project has been completed
Informal network	To collect and pass on business information	Friends and business acquaintances	Mutual needs	As long as people have a reason to connect

COPs are informal. They are self organising, they set their own agenda, and they establish their own leaders. Furthermore membership is self selecting – 'people in such communities tend to know when and if they should join.' (Wenger and Snyder, 2000).

3.7.4 The paradox of communities of practice

The paradox of COPs is well discussed within organisational learning literature. Indeed Wenger himself questions: "If communities of practice are so effective, why aren't they more prevalent?" (Wenger and Snyder, 2000)

According to O'Donnell *et al* (2003) communicative action is a fragile process and anything that negatively influences or seeks to control this process will reduce, or even destroy, the effective functioning of COPs. Indeed, Wenger and Snyder (2000) admit that the 'organic, spontaneous and informal nature of communities of practice make them resistant to supervision and interference'. This is evident in Thompson's (2005) empirical study of the 'e-future' community of practice where an organisationally nurtured and extremely successful COP wilted and died as a result of later attempts by management to directly control structures and outputs through the use of best practice, targets and introducing consultants. Organisations ability to interact constructively with COPs will involve finding a difficult balance between 'encouraging the COP dynamic without compelling the COP dynamic' (Thompson, 2005). To support the existence of free flowing collaboration, O'Donnell *et al* (2003) suggest that 'management must be willing to relax its strong bias towards goal-oriented activity for some portion of operational activities. Leaders must demonstrate commitment to the freedom of communicative action, and manage in a way that aligns the relevant…structures and processes needed to support CoPs'. Conversely, Alevsson and Willmott (2002) point out that by encouraging the growth of COPs, organisations could stand accused of 'manipulating employees' personal identifications and motivations as a tool to increase productivity'.

Boud and Middleton (2003) in their study of workplace learning found that a community of practice that has strongly framed boundaries – that is where there is clarity on what can and what cannot be transmitted in a learning relationship – results in greater transmission of knowledge within the network. However Duguid (2005) argues that these same strong boundaries can also "divide knowledge networks from one another. These boundaries may prevent communication despite all the obligations of goodwill and social capital that connect them, or indeed, all the incentives of financial capital that may entice them".

Peltonen & Lamsa (2004) purport that whilst communities can be an important source of social integration and unity; they can also divide and exclude (Bauman, 2000). Contu and Wilmott (2002) remind us that if knowing is a social activity then it is not 'excluded from the power relations with which social activity is saturated'. Lave and Wenger's (1991) concept of legitimacy recognises a social order from which the 'illegitimate are excluded', just as the 'existence of a periphery requires a centre'. Thompson (2005) suggests, as newcomers increasingly participate in and identify with COPs they are likely to raise their own profile by challenging social relations and norms previously accepted by the group. Gordon-Till (2003) points out that even where COPs exist, they are likely to be far from optimal. Differing cultures, professional identities and society all 'seek to distinguish and separate us, weakening a COP lying across any of them'. However it can be argued that it is through this constantly shifting environment of changing membership and changing circumstances that COPs are 'significant sites of innovating' (Brown and Duguid, 1991). Therefore the exchange of knowledge is intimately linked to power relations within the social structure of the community and its relationships with other communities.

Boud and Middleton (2003) comment that an 'exhaustive focus on communities of practice as an organising concept may limit accounts of workplace learning which reflect the complexities of actual practice'. However they do concede that COPs provide a useful conceptual tool for examining workplace learning. These sentiments are also voiced by Lindkvist (2005) who states "while the current widespread use of this [COP] notion is mirroring the need to account for group

level processes in new way, its dominance may lead to reduced sensitivity in identifying other group level constructs. When the COP notion is used, it seems that alternative notions are almost never mentioned..."

Individuals in knowledge communities learn whilst participating in activity – where they are able to learn in situ and see and sense how activities should be carried out. This enables participants to pass on tacit knowledge where it is hard to articulate or has developed over time, is culturally embroiled or complex. This is beneficial in a relatively stable, secure environment, however the majority of organisations are in a continuous state of change and for those that recognise the benefits of knowledge communities and are able to identify them, this may be too slow a path to enter or they risk destroying its very being by 'coming on too strong'. This raises the question of what other alternative group level constructs are available as a complement to existing COPs and organisational structures.

3.7.5 Knowledge communities and other organisational forms

According to Lindkvist (2005) whilst comfortable in a relatively stable environment, the COPs notion does not always fit squarely with all types of organisations, particularly temporary organisations and those which operate on a project basis. The strong social bond and the high level of shared cognition characteristic of COPs are not shared by all groups yet they are by no means less valuable. To some extent this is recognised by COP theory where groupings too broad to be considered COPs are instead classed as 'constellations of interrelated communities of practice' (Wenger, 2000). Wenger also mentions that formally constructed groups, with a specific goal such as task forces or project teams are not COPs.

Lindkvist (2005) suggests 'knowledge collectivities' as a complementary, yet alternative approach to 'knowledge communities'. With a collective, the knowledge base is dispersed and individualised amongst collective members and knowledge is activated and exchanged at the point of time that it is needed. Rather than a communal knowledge base, collective members remember their individual part. Relying on their own knowledge of 'who knows

what' collective members are able to approach others about their problems and solutions with the aim of gaining further experience, criticism, intuition or knowledge with the intention of stimulating new lines of thought. 'By using each other as external memories and partners in the co-evolution of knowledge…members are able to engage in deliberate, goal directed, trial and error processes (Lindkvist and Soderlund, 2002). In contrast with knowledge communities, the 'self-organisation' of knowledge collectives develops within a context of 'hierarchical goals and restraints , supported by the use of milestones, practical testing and other feedback measures signifies the need to monitor what actually works and what does not (Lindkvist and Soderlund, 2002).

Taking this a stage further, the concept of a 'knowledge market place' offers another mechanism for co-ordinating and growing knowledge. Lindkvist (2004) suggests that we should think of market interaction 'not merely as a matter of exchange, but as a discovery process, in which we develop new knowledge by articulating and receiving criticism' and the knowledge marketplace as an experimental space where ideas compete for attention and where new knowledge is tested (Potts, 2001: Loasby, 1993).

Another emerging notion to consider is the evolution of COPs into communities of competence. A community of competence is made up of 'competent, goal driven people who take full responsibility and ownership of their work' (Smith, 2005). Members of communities of competence apply their tacit and explicit knowledge and ideas, creativity, work experiences and best work processes and practices to new problems and challenges in order to achieve both team and organisational goals. According to Smith (2005) these 'cohesive, tightly knit communities foster and reward flexibility and innovation…promote further achievement and continual learning' and are quick to respond to their changing environments. Whilst this notion sounds like the management ideal of self managing, goal driven groups of motivated staff, there is as yet little empirical evidence to support their existence within the workplace. Smith (2005) also recognises the roles of corporate universities or enterprise academies as similar concepts in that they all seek to align or match resources , expertise and

competencies with business opportunities and threats in the environment in order to maximise strategic fit and strategic alignment (Dealtry, 2000).

The following table seeks to identify some of the key differences between these emerging typologies.

Figure 6. Comparison between knowledge communities, knowledge collectives and communities of competence: some important dimensions on how they differ *(developed from Lindkvist 2005 and Smith 2005)*

	The knowledge community	The knowledge collective / marketplace	Communities of competence
Type of Knowledge Development Process	Paradigm driven Normal science process	Goal directed Trial and error Market like process	Solving problems and achieving common goals
Membership	Self-selected	Self-selected Recommended	Highly selective based upon unique competences
Main repository of knowledge	Knowledge as practice Communal activity Narrative	Individual knowledge Individual activities	Individual competences Collaborative activities
Integration principle	Participants have similar knowledge base	Participants are well connected to different knowledge bases	Participants have expertise as needed but with common goal
Way of learning	Socialisation	Problem Solving	Problem solving Collaboration
Operating basis	Transfer knowledge	Articulate knowledge	Apply knowledge

It is evident that organisational environment is a critical enabler in encouraging knowledge creation and sharing within and across organisations. The challenge for organisations is in creating the right context that enables people to create partnerships and collaborations and unleash tacit knowledge and convert it into an explicit form. Based on the literature, the critical success factors that organisations need to consider have been identified as establishing a culture where individual and team learning is the norm; a climate of trust and openness; where formal and informal knowledge networks and communities are identified, resourced and encouraged; where good practice is identified, shared and benchmarked and where systems thinking is applied.

Figure 7 details some of the critical success factors identified within the literature.

Figure 7. Critical success factors - organisation
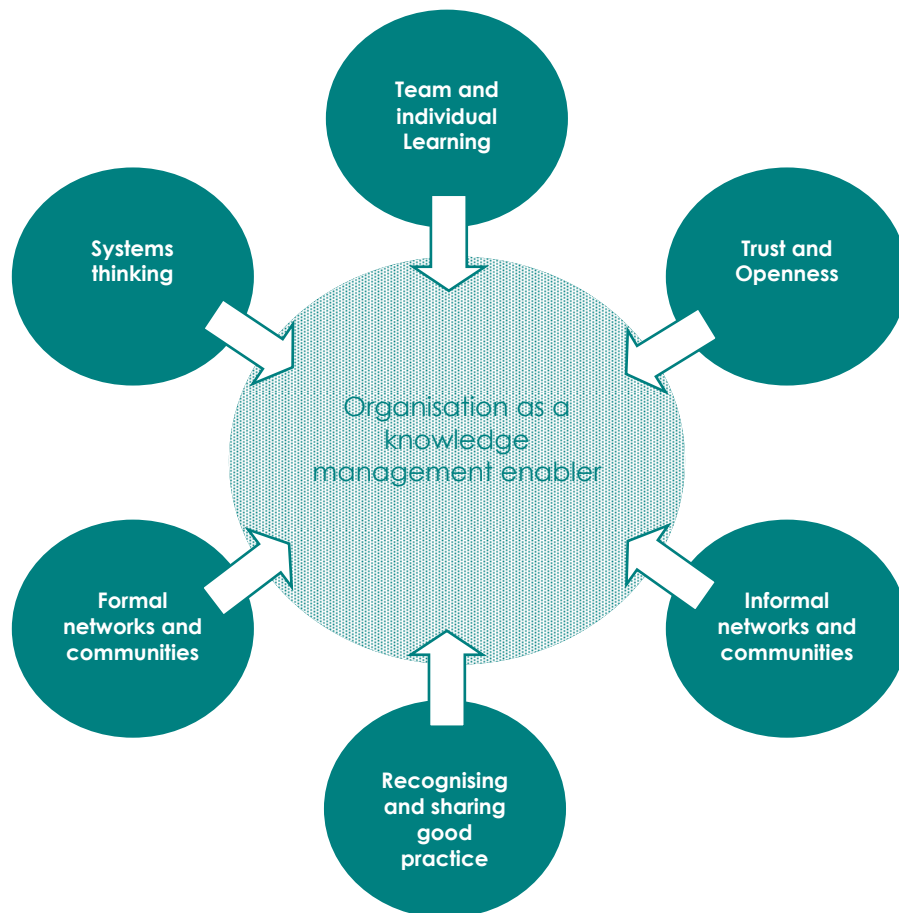
3.8   Technology

"…[people] dispersed physically but connected by technology are now able, on a scale never before imaginable, to make their own decisions using information gathered from many other people and places."
Thomas Malone, 2004 in Senge (2006)

This section concentrates on the technological aspect of KM.

Davenport and Prusak (1998) describe KM as involving organisational, human and technological issues with the advice that 'the technological should be treated as the least important of the three' (Edwards et al, 2005). Some would argue that KM initiatives can be successful without IT tools (McDermott and O'Dell, 2001; Hibbard and Carillo, 1998) and should only be adopted as necessary, whilst others argue that IT is strategically essential, particularly as organisations are increasingly geographically distributed (Duffy, 2000; Lang, 2001). As Edwards et al (2005) acknowledge there has been a 'particular stream of thinking that stresses the use of knowledge-based systems software in knowledge management'. The ultimate goal of a knowledge management system is to get the right information to the right people at the right time. Typically knowledge management systems break down information into smaller pieces that can be moved around an organisation, stored for later use, manipulated through being combined with other pieces of information and transferred to where it is needed (von Krogh, Ichijo and Nonaka, 2000). Strapko (1990) was discussing the use of knowledge based systems before the term knowledge management was coined, whilst Leibowitz (1999) argued that expert systems have a crucial role on institutional memory because they capture business rules (Edwards et al, 2005). Indeed information technologies can play an increasing integrative role in knowledge intensive organisations as a way of encouraging mutual learning (Tenkasi and Boland, 1996).

**Figure 8. Different types of technological support for knowledge management (*Edwards et al, 2005)*

AI Based	Conventional
Case based reasoning	Bulletin boards
Data mining	Computer supported co-operative work
Expert systems	Databases
Generic algorithms	Data warehousing
Intelligent agents	Decision support systems
Knowledge based systems	Discussion forums
Multi agent systems	Document management
Neural networks	Electronic publishing
"Push" technology	e-mail
	Executive information systems
	Groupware
	Information retrieval
	Intranets
	Multimedia / hypermedia
	Natural language processing
	People Finder "yellow pages"
	Search engines
	Workflow management

There is no doubt that technology is indispensable in the modern organisation, however 'information systems may have a limited usefulness in facilitating peoples commitment to a concept; sharing emotions tied to tacit experience or embodying the knowledge related to a certain task' (von Krogh, Ichijo and Nonaka, 2000). Indeed Halbin-Herrgard (2000) state that whilst a great deal can be done to diffuse explicit knowledge through IT, but tacitness is hard to diffuse technologically.

Lin and Lee's (2006) study into the socio-technological factors of knowledge sharing and creation found that unexpectedly IT support does not significantly influence perceived advantage to KM activities. This phenomenon could be explained by the earlier discussed theory that knowledge is embedded in the myriad of communities and networks that make up organisations as well as in the

work practices, values and systems within organisations. Technology does not have the capability to 'react quickly and effectively to outside influences' due to such change depending upon a 'deep understanding of external environmental parameters and the free flow and exchange of contextual information to ensure that expertise is available where and when it is required' (Mohammed et al, 2006). The role of IT in KM is described by McDermott (1999) who claimed what whilst the 'knowledge revolution is inspired by new information systems; it takes human systems to realise it'.

Information technology can help the storage, retrieval and sharing of explicit knowledge through the provision of a structured framework, thus enabling people to put forward ideas and encourage response in a way that can be shared, for example via intranets. However as Mohammed et al (2006) acknowledge the existence of a type of technology does not turn a knowledge hoarding organisation into a knowledge sharing one. Technology and cultural change must go together hand in hand and introducing technology provides the opportunity to change behaviour.

Mohammed et al (2006) have developed a simple metaphor to describe the key elements to achieving harmony between IT and KM. They recognise that many failed attempts at marrying the two are due to forcing one paradigm to operate within the realm of the other. Both "islands" speak different languages and use different currencies (measures). Instead of forcing a "hostile takeover" or "merger", organisations should look at ways to build "bridges" between the two islands. Just as bridges can connect, but not necessarily unite, two distinct economies, KM and IT can be similarly inter-connected. Some key "arteries" that have been discussed include: collapsing the time factor through "fast lanes" (algorithmic optimisation), or "high occupancy vehicles – HOV lanes" (communities), knowing when to apply binary logic versus continuums; knowing when to switch "transportation modes" from tacit to explicit, knowing when to remove "trade barriers" understanding what "cargo" is being stored and shipped (content), and what to measure (qualitative versus quantitative).

Whilst technology has been identified as a key enabler for knowledge management it is apparent that it takes the human input to realise the benefits. Technology can help to change behaviour and influence culture and it's effectiveness in a knowledge management context is highly dependant upon the other two enablers. Technology cannot always extract the tacit knowledge embedded within social systems and practice, however once tacit knowledge has been extracted by other means technology becomes the vehicle convert data to information which then allows the human aspect to convert information into knowledge. Technology allows the distribution of knowledge across geographical, organisational and cultural boundaries. The critical success factors that organisations need to consider are how does technology support knowledge sharing; how technology can support the creation of knowledge and new learning; and how technology can facilitate knowledge networks and communities.

Figure 9. Critical success factors - technology
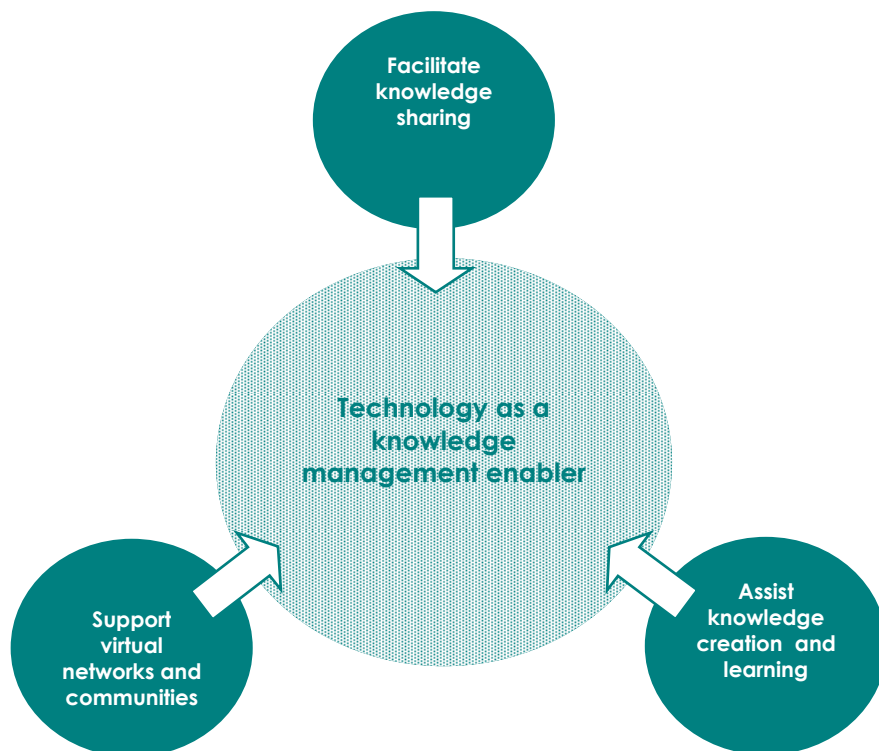
3.9   Knowledge management: a framework for research

Knowledge is considered a key asset by many modern organisations; yet KM approaches are notoriously difficult to implement.   Based on the literature surrounding the concept of knowledge management it is possible to identify three key enablers and the critical success factors which organisations need to take into consideration when planning, implementing or maintaining any form of knowledge management activity.

Figure 10. The research framework

Leadership – providing a vision of the future; developing external relationships with potential knowledge providers and partners; valuing people and their ideas by encouraging a climate where self expression and challenge is seen as positive; encouraging learning amongst individuals and groups; understanding and communicating what and why knowledge is important to the organisation and leading by example through actively demonstrating a commitment to knowledge creation and sharing.

Organisation – establishing a culture where individual and team learning is the norm; a climate of trust and openness; where formal and informal knowledge networks and communities are identified, resourced and encouraged; where good practice is identified, shared and benchmarked and where systems' thinking is applied.

Technology – technology to support knowledge sharing; technology to support the creation of knowledge and new learning and technology to facilitate knowledge networks and communities.

The three key enablers will form the basis for the fieldwork model. In particular the fieldwork will seek to identify whether the enablers and the identified success factors enable or constrain knowledge management within LCJBs.

The following chapter sets out the research methodology used for the fieldwork.

4.0 Research Methodology

The purpose of this study is to identify those influences which act as barriers and enablers to KM within Local Criminal Justice Boards. A mixed methods approach has been used to determine the current practice and to test and explore further findings. This chapter provides an outline of the research objectives, the research philosophy and strategy, an explanation of the components of mixed methods research design and detail on the research approach.

4.1 Research objectives

The main research objectives to be addressed are to:

1. Identify and explore the main barriers and enablers to effective knowledge management within and across local criminal justice boards (LCJBs).

2. Establish and explore current approaches to knowledge management and identify areas of good practice.

4.2 Research philosophy

A research philosophy is concerned with the way knowledge is developed and this influences the way the research is conducted (Sanders et al, 2000).

Whilst debating the best approach it became apparent that as this was to be an exploratory study, to adopt a purely quantitative approach would not yield the depth of knowledge required. Recognising that all research methods have their limitations, the mixed method approach or 'triangulation' of quantitative and qualitative data collection in a study was considered as potentially the most suitable option as it seeks to neutralise or cancel out the biases of other methods (Cresswell, 2003).

The matrix in Figure 11 details which mixed method or strategy of inquiry (Cresswell, 2003) are available and this was considered when deciding which approach to adopt.

Figure 11. Decision choices for determining a mixed methods strategy of inquiry (Cresswell, 2003)

Implementation	Priority	Integration	Theoretical perspective
No sequence concurrent	Equal	At data collection	Explicit
Sequential – quantitative first	Qualitative	At data analysis	Explicit
		At data interpretation	
Sequential - Qualitative first	Quantitative	With some combination	Implicit

This illustrates the four decisions required when selecting a mixed methods strategy: The implementation sequence of quantitative and qualitative data collection; the priority given to the data collection and analysis; the stage when the data findings are integrated and the overall theoretical perspective.

Having considered the advantages and disadvantages of mixed methods research, the concurrent nested triangulation strategy approach as identified by Cresswell (2003) was adopted. This enabled both qualitative and quantitative methods to be implemented both of which have equal priority, allow both approaches to offset the weakness of the other and enable integration of the data and findings to take place at the interpretation stage. As this was an exploratory study, this approach also enabled a broader perspective to be gained by using different approaches with groups of people all of which have some involvement with knowledge creation and sharing within the LCJB arena. Aware of the possible difficulties to be encountered whilst analysing and interpreting the findings from a nested concurrent approach, it was evident that clear objectives for each data collection method needed to be developed and adhered to.

In addition, a concurrent nested approach suited the wide geographical spread of the study population and also allowed for identification and greater investigation into good (and bad) practice vignettes identified during the quantitative data collection exercise in order to explore perceptions, beliefs and attitudes. From a practitioner perspective, they also provide evidence of good or bad practice in an easy to interpret format.

Based on above rationale a combination of quantitative data survey, analysis of secondary data, semi structured interviews and observation techniques were selected as the most appropriate methodology in order to explore and develop an overview of current practice with the opportunity to explore further findings and observations made.

4.3   Research Approach

Having established a pragmatist knowledge philosophy the quantitative and qualitative methods undertaken were based upon the concurrent nested strategy (Cresswell, 2003). The methods chosen, their development and strengths and weaknesses are discussed in this section.

4.3.1 Documentary secondary data

To help guide the development of the primary data collection methods and to also supplement and provide context for the findings from these approaches a review of written documentation was undertaken.

These documents were sourced from interviewees, some were provided by respondents to the survey; the majority were already within the 'public' domain of the field of study; and some were researched using organisational intranet and internet web pages.

4.3.2 Interviews

An interview is a purposeful discussion between two or more people (Cresswell, 2003). A number of interviews were conducted with key players representing different elements of the LCJB and OCJR relationship. Those interviewed represented the Research and Analysis Unit of the OCJR, LCJB Board member

(also Chief Officer); one OCJR performance advisor; two LCJB performance managers and three working group members. Figure 12 details the interviewee, the interview style chosen and the main objective for each interview.

Figure 12. Summary of interviews

Interviewee	Interview Style	Objective
Head of Research and Analysis Unit, OCJR	Face to face Unstructured	• To establish the relationship between LCJBs and the OCJR • To identify and explore the knowledge approach adopted by the OCJR
LCJB Board Member	Face to face Unstructured	• Exploratory to gain insight into behaviours, culture and existing KM activities
OCJR Performance Advisor. The role of the performance advisor is to manage the relationship between the OCJR and LCJBs	Face to face Semi structured	• Exploratory to identify current KM practice and behaviour
Two LCJB Performance Officers[1]	Face to face Semi structured	• Exploratory to identify current KM practice and behaviour
Three LCJB working group members (CJS practitioners)	Face to face / Telephone Semi structured	• Exploratory to understand KM practice and behaviour at operational level

A mixture of semi structured and unstructured interviews were used due to the varying objectives.   Questions were prepared in advance and used as aide memoir during the interview and interviewees were provided with an outline of the interview theme and clear objectives. The approach was followed with each interview in order to mitigate concerns about reliability. Furthermore, having an understanding of the organisations being researched enabled some assessment

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[1] For the purpose of this study the title Performance Officers will be used, although this title varies across LCJBs. However, the role and relationship to the board is broadly consistent

as to the accuracy and credibility of the answers given. In addition, a conscious effort was made not to offer personal opinion during the interview in order to avoid introducing researcher bias and potentially influencing an interviewee's answer.

An unstructured non-directive interview was used to explore the relationship between LCJBs and the OCJR and to gain a general understanding of existing knowledge approaches. Whilst there were no formal questions prepared, the objectives of the interview were communicated to the interviewee and conversation moved freely around the subject matter.

Each interview was recorded with the interviewee's consent in order that full attention and assessment could be given to their narrative. This was possible as the issues being discussed were not commercially sensitive. Also it had been agreed that no quote or information source would be used or attributed to the individual or their organisation within this report without their express permission.

Quantitative data survey – Survey of Local Criminal Justice Board support managers

A quantitative data survey technique was selected in order to reach a geographically spread survey population within a limited timescale and was considered relatively cost effective and straightforward to administer and analyse. The objective of the survey was to establish the extent to which the key enablers identified from the literature were in place across the LCJB community and to identify areas of good practice for further investigation. Weaknesses that were recognised with this approach included the potential for a low response rate due to other pressures and the survey being put to one side and forgotten about or simply ignored, thereby increasing the margin of error; misinterpretation of the questions due to not 'understanding' the subject matter; and resulting in high level findings which may necessitate further research in order to validate results.

4.3.3 Survey development

The key items within the survey have been developed from existing literature and empirical research and information gathered from the initial exploratory interviews. Leadership is measured based on the knowledge context generated by the LCJB, the level of vision and purpose, their attitude towards failure and lessons learnt; creating the right context for developing new ideas and challenging existing practices; and reward systems for inducing knowledge sharing and creation. Organisation was measured in terms of culture and structure and is based on the support for individual and group learning activity; the awareness and exploitation of informal and formal networks, communities of practice; the level of trust and openness and the extent to which knowledge and practice is shared. Technology refers to the degree to which IT use enables and influences LCJBs to share knowledge with those within and outside of the organisation. Figure 13 details the construct, the anticipated evidence and supporting literature or empirical research.

Figure 13. Constructs, evidence and supporting literature

Construct	Evidenced by	Literature / empirical data
Leadership	- Clear vision and purpose - Encouragement to challenge - Recognition and reward - Review projects / initiatives for lessons learnt - Joint working protocols - Bring in knowledge facilitators from outside CJS	- Senge (2006) - OPM (2003) - Davenport et al (1998) - Mohammed et al (2004) - Kofman and Senge (1993)
Organisation	- Working groups / teams organised around business need & skill set - Learning & development activity - Use of formal and informal networks / communities of practice - Culture of trust and openness - Encourage networking / social relations	- Davenport et al (1998) - Von Krogh, Ichijo and Nonaka (2000) - McDermott and O'Dell (2001) - Delong and Fahey (2000) - Lopez et al (2004) - Wenger (1998) - Lindkvist (2003) - Smith (2005)

	• Understanding and sharing good practice	
Technology	• Use of technology to communicate and disseminate information and knowledge within and outside of the CJS • Proactive approach to sharing knowledge electronically • Exploit on line knowledge facilities	• Tenkasi and Boland (1996) • Mohammed et al (2004) • Edwards et al (2005)

The majority of items were measured using a five point Likert scale as follows; 1= Agree, 2 = Tend to agree, 3 = Not sure, 4 = Tend to disagree, 5 = Disagree. Where the answer required a yes or no response the following options were used; Yes, No, Not Sure. This scale was chosen following examination of previous research methodologies where it was identified that this scale was commonly used namely OEPD (2003), Lin and Lee (2006), Benett (1998), Lai and Lee (2007).

The original questionnaire contained a total of 40 statements. Following rigorous pre-testing which focussed on clarity, wording and presentation by two experienced CJS practitioners and one LCJB performance officer, a number of revisions were made. It was recommended that the questionnaire be reduced length in order to encourage completion, also language was modified so that reference to the term knowledge management was not included as it was felt that there may not be sufficient understanding of the term, even with a definition and this may make managers apprehensive about completing it. A copy of the questionnaire can be found in Appendix A.

The study population comprised a 100% sample of 42 LCJB performance managers, representing every criminal justice board in England and Wales. The performance officers were selected because of their conduit role between the LCJB and with the OCJR and because they were in a role supporting the board, but not a member of the board, it was felt they would bring a level of objectivity in their answers. Furthermore, in order to test the aspect of knowledge sharing and transfer via technology across LCJBs, performance managers were

necessary as they have access to and in many instances manage such flow of information both in and out of the LCJB arena.

The initial request for assistance with the research was raised at a national meeting for LCJB performance officers. A 'flyer' was prepared and this was presented to the Performance Officers by a lead Performance Adviser. The flyer explained the purpose of the research, the study population and asked managers to make contact should they wish to participate in the research. This approach was decided following discussion with two Performance Advisers, who advised this was a proven means of generating interest amongst the study population(previous research had been marketed in this way and had generated an 83% response rate). This first trawl resulted in a 19% response rate. The response rate was significantly lower than expected, however follow up communication had already been planned.

A follow up email and electronic attachment of the questionnaire was sent approximately 2 weeks after the meeting to the entire study population. This follow up also included the offer of inclusion into a prize draw with two £20.00 shopping vouchers as the prizes to those who returned the completed survey within the deadline. Those who had already responded were included in the prize draw. A total of 20 questionnaires were returned with a response rate of 47.6.3%.

5.0 An empirical analysis of learning and knowledge issues within LCJBs

This chapter will provide the findings from the fieldwork. The research was based on the premise that there are three main enablers to knowledge creation and sharing: leadership, organisation and technology. The findings are discussed thematically and draw upon the results of the quantitative and qualitative research to establish what, if any, current knowledge management approach is in practice and the extent to which the three main enablers are in existence. More detailed survey results can be found in Appendix B.

5.2   Leadership

Within the context of this report, a key theme of leadership is the management of change towards knowledge oriented organisation. Therefore the research approach focussed upon the management of influence, rather than the position or the person. In particular, the research sought to identify whether leaders provided a vision for the future; lead by example; valued people and their ideas; delegated responsibility and gave freedom; and developed and maintained external relationships.

Providing a vision of the future

LCJB Chief Officers have a clear vision as to their strategic direction and what needs to be achieved; however the fieldwork did not establish the extent to which a shared vision extended beyond board level. On the whole LCJBs have a clear vision as to where they are headed and what needs to be achieved. This is communicated through business strategies and delivery plans developed by the board. These plans stem from the CJS business plan and it is the intention, although not always the reality, that they cascade into agency business and delivery plans. This clear vision gets blurred by conflicting targets at agency level**.** As one LCJB board member explains *"One of the real challenges for LCJBs is working with the conflicting targets that are set for individual agencies. Whilst we are all working towards a desired outcome, the way the agencies are measured on specific activities can influence where resources are directed – usually to whatever is the current political hot potato - and this detracts from the longer*

term goal." Another barrier affecting maintaining a clear vision is the on-going organisational restructuring of some of the key players, as an LCJB board member stated "so far in the past three years HMCS has formed and restructured twice, the CPS have regionalised, we've had potential police area boundary reforms, though of course that didn't happen…this means instability for agencies and also results in changing board members and more pressures for board members".

Knowing what kind of knowledge is important

There is a clear understanding of what kind of knowledge is important at national level with regards to policy development and this is made explicit and communicated in business plans; policy development frameworks; policy and initiative evaluation approaches, although no formal knowledge management strategy or framework is in place. As one interviewee explained government research has tended to be criticised as too "purist" and "academic" and although its standard has never been called into question the extent to which it influences business decisions has been. In its Business Plan for 2007-08 the OCJR makes direct reference to developing its knowledge management capacity to support evidence based decision making. "The overall philosophy that I'm looking at for knowledge management is about…I've got this good stuff [knowledge], I've got people with PhD's working for me, bright as buttons, that's all very well and good but if they're not communicating what we're doing in a way that makes it usable then we are not doing good knowledge management."

Furthermore, at a national level the delivery strategy for the 2008-2009 Criminal Justice Business plan states: "Identifying effective practice (through the Government Office network, work with local partnerships and contact with other stakeholders such as the National Community Safety Network), collating and sharing this practice (through the Effective Practice Database, the Partnership Improvement Programme and the annual Problem Orientated Partnerships Conference and the Tilley Awards), and feeding key lessons learned into practice, policy and strategy development."

The new Justice for All PSA and indicators which underpin it "…set the agenda for our research and analytical work and for our knowledge management agenda. So what the OCJR requires knowledge on really is described by these indicators....it needs knowledge on the efficiency and effectiveness of the CJS, it needs knowledge around public confidence; it needs knowledge around victim and witness satisfaction and certainly needs knowledge around the data that's available to address issues of ethnic disproportionality which we know is a problem in the CJS and last but not least it needs knowledge on the processes that underpin the recovery of criminal assets…at the beginning of each CSR we identify what are the knowledge gaps."

Such direct reference to knowledge management activity was not evident in previous years CJS business and delivery plans and as such was not reflected in local LCJB business and delivery plans.

There is a lack of understanding of what kind of knowledge was important and why at LCJB level. It was evident that the concept of knowledge management was not clearly understood at LCJB level. " Knowledge management is one of those phrases…that in my experience people use a lot but without necessarily understanding what lies beneath." Knowledge management was generally seen as the management and storage of data and technology based. An explicit commitment to knowledge management activity was not made within current year (2007-08) business plans or delivery plans studied, yet reference is made to 'understanding lessons learned', the 'sharing of good practice' and "knowing what we do well and why'. However whilst KM is not explicitly referenced KM activities and concepts are being driven by the OCJR and gaining profile at LCJB level.

A change management initiative known as the Beacon Approach which incorporates knowledge management activities is currently being piloted amongst ten LCJBs. A fundamental part of the Beacon Approach is to provide LCJBs with the tools and the skills to make what is currently tacit knowledge about the end to end CJS process explicit and from this enable LCJBs to make

evidence based decisions to drive local improvements. The understanding and learning from this approach will then inform whether national roll out is viable.

The Beacon Approach

LCJBs are increasingly being asked to implement various reform projects locally by the National Criminal Justice Board. The ability of LCJBs to deliver the projects varies due to the other demands placed on boards centrally, their own local change agendas and their capability to implement them. The result is that the available resources do not always meet the delivery demands. The aim of the Beacon Approach is to enable LCJBs to drive local change and from this to deliver improved local services by providing them with the following tools:

- a business process modelling and analytical tool to identify and understand issues in their local processes and which assists with identifying solutions;

- the opportunity for LCJB support staff and CJS practitioners develop the skills and knowledge needed to apply and maximise the model;

- a holistic approach to management and implementing priority national reforms and local change.

The approach will involve the streamlining of initiatives down to a core programme of reform projects, to allow LCJBs the opportunity to manage change effectively. LCJBs will apply an analytical tool to analyse the criminal justice process from end to end and identify blockages and weaknesses. With this knowledge, they will prepare a reform plan which will also support delivery of the core programme. The experience and benefits gained from this approach will be gathered by the OCJR to inform the national business case for possible roll out the core programme to all LCJBs.

"…the Beacon Approach allows for a whole system approach to delivering change and improving services, which has never been tackled before within the CJS. The analytical tools will enable us to identify where we need to focus to make improvements and help us to model how changes in policy or in process made in one part of the system will impact other parts of the system."

Knowledge management activities are not explicitly resourced at LCJB level.
The lack of understanding of KM as a concept and its potential benefits results in
no recognition of or resource appropriated for KM approaches. Resource in the
context of this report refers to financial and human. Lack of understanding by
leaders and those who can influence where resources are allocated can result in
knowledge management activities not being identified correctly and resourced
appropriately. Formally identifying and committing resource to KM activities
sends the message across the organisation that leaders are committed and this
filters down to all levels. Although Beacon Approach pilots receive some
additional resource at the outset, this is not ongoing and individual agencies are
left to deliver within existing resources.

**Resource implications at agency level are a barrier to knowledge management
approaches.** Each organisation participating within the LCJB is subject to its own
pressures and the expectation to deliver year on year improvements with
diminishing resources. The national agencies in particular are under pressure to
meet Government headcount targets. This is already impacting upon agencies
ability to deliver LCJB objectives and initiatives such as the Beacon Approach
due to the resource intensive methodology needed to identify and fill knowledge
gaps. As one practitioner stated "…I know we should be investing in this kind of
activity as it will help deliver efficiencies and improve service in the long term but
the reality is we have a day job to do and I can't afford to release staff to
participate because of the immediate impact it has on the business."

Encourage a learning climate

**There is a formalised process for monitoring, evaluation and learning at a national
level.** The ROAMEF (rationale, Objective, Appraisal, Monitoring, Evaluation,
Feedback) model has been pushed by the Research and Analysis Unit in
response to poorly managed initiatives.   Using the Treasury's ROAMEF cycle, the
Unit systematically delivers appraisal and evaluation into key stages of policy
development according to a coherent and standardised framework.

"We try to get people to think about what kind of knowledge they need in order to make an effective evaluation before they actually start rolling the thing out. The biggest bane in my life, from a knowledge management perspective, is when people come to you and say 'we've been doing this in court for the last three years the funding runs out in three months and we need to evaluate it. Can you tell us whether it's worked or not? To which the answer is generally 'no'. You haven't got any baseline data, it's all been rolled out, we don't know what's happened or how it's been rolled out. Why didn't you talk to us three years ago before you started?!"

LCJBs recognise the importance of lessons learned and have processes in place to support this. Project documentation which referenced learning reviews, evidence of action learning sessions following successful project completion and references to organisational learning "learning what we do well and why" were found. Indeed 90% of survey respondents confirmed that their LCJB routinely review the progress of projects and initiatives and identify lessons learned. This was supported by 95% of survey respondents who agreed or tended to agree that their LCJBs were willing to tolerate failure provided learning was gained. "It's all very well people sitting in Whitehall saying to courts in X this is what you do but it's like a game of Chinese whispers, by the time it gets to Fred or Doris in court they do what has come down the management chain. So it's really important that we evaluate what is actually happening in the court rather than what you told them to do because often the two things are not at all similar…often in this business it's not about did it work or not, it's what bits worked and under what circumstances." However, sharing of lessons learned amongst LCJBs tended to apply to national pilots or initiatives. There was no mechanism identified for the sharing of learning from local projects and initiatives beyond the individual LCJB.

 It was also evident that although failure was tolerated 'in house', learning experiences from projects or initiatives that failed to realise expected benefits

were not shared more widely nationally or locally, thereby losing another learning opportunity.

A learning climate does not exist in all participating organisations. Although a learning climate would appear to exist within the LCJB environment, it does not always extend back to individual agencies and this may have an impact on delivery of LCJB objectives. As one interviewee said "I think we do genuinely want to learn from our mistakes and our successes and to a certain extent working within the LCJB enables that because they build it into the project management process but in my organisation we don't really take the time out to reflect and go through that process – its talked about but not done. If others are doing that I certainly don't see any evidence of it…I suspect it's because managers are under pressure to get things done." Not all organisations could demonstrate a formal commitment or understanding of knowledge management. There was no evidence of a 'knowledge is power' culture; however people "…are just not prepared to take the time out of their day to reflect, share their knowledge or learn from others. That would be a real luxury!"

Systems thinking

There is limited use of systems thinking, however this approach is developing**.** The CJS is complex in terms of structure and process and is currently trying to assimilate a raft of centrally driven change initiatives. Some of these initiatives are driven by political aspirations rather than business needs or customer demand. Unremitting change is taking its toll on staff morale, resource overstretch and agencies capacity to deliver. One important casualty of this environment is the quest for continual improvement. Work is underway to consider the end to end CJS process, however it is just that, end to end, rather than being interpreted as an integrated system of work flows. The perspective of the customer, what value means to them in real terms, is still a relatively new concept within the CJS. However greater focus is now placed upon the experience of the victim and witnesses. At present the business metrics do not wholly support a systems thinking approach; they are relatively short term; focus upon issues which do not add value to the 'customer', forces CJS managers to fire-fight and report on activities rather than on progress towards longer term

outcomes. "The real challenge would be to embed systems thinking into managerial mindsets…any switch would represent a major sea-change in how the CJS currently conducts its business."


Leading by example

LCJBs provide an environment where people feel able to challenge and innovate. Discussion and debate at board level is robust. As one Performance Manager stated "…discussion at board meetings is usually quite lively and considering the seniority of the people in the room they aren't afraid to express their views or throw ideas into the discussion..."   However, it was also noted that discussion and decision making tended to be dominated by the three major players in the LCJB – the police, CPS and courts. Overall, 90% of survey respondents agreed or tended to agree that sub-groups and project teams working to LCJBs are encouraged to question existing policies and working practices, to innovate and challenge current systems. However, from a practitioner perspective this environment did not always extend back into the individual agencies. This may have been because, as one CJS practitioner stated "…it's usually the same people who participate in these groups…those who are really interested in making it work…sometimes it's not easy going back and trying to sell what you know is going to be seen as yet another LCJB initiative."   LCJB sub and project groups consist of a variety of roles and levels of seniority and members of LCJB working groups and sub groups are felt to be equipped with the right knowledge and skill set appropriate to the group. Generally members are of sufficient seniority to be able to make decisions on behalf of their organisation.

Valuing people and their ideas

Excellent contribution towards improving standards are service are recognised and rewarded. National staff awards 'Criminal Justice Awards' are held annually (amongst other recognition schemes such as Honours) and these are gaining momentum each year with more individual and team nominations. These awards recognise, celebrate and share innovation and excellence in service delivery. LCJBs are not responsible for pay or the terms and conditions of

employment for CJS staff they are not able to influence directly financial reward and recognition as a result the fieldwork did not establish the extent to which individual CJS agencies linked reward and recognition to staff who participated in LCJB work. However, 80% of survey respondents agreed or tended to agree that their board recognises and rewards excellent contribution to improving standards of service delivery and innovation in service delivery, although 20% of respondents were not sure.

Figure 14. Example from Justice Awards web page
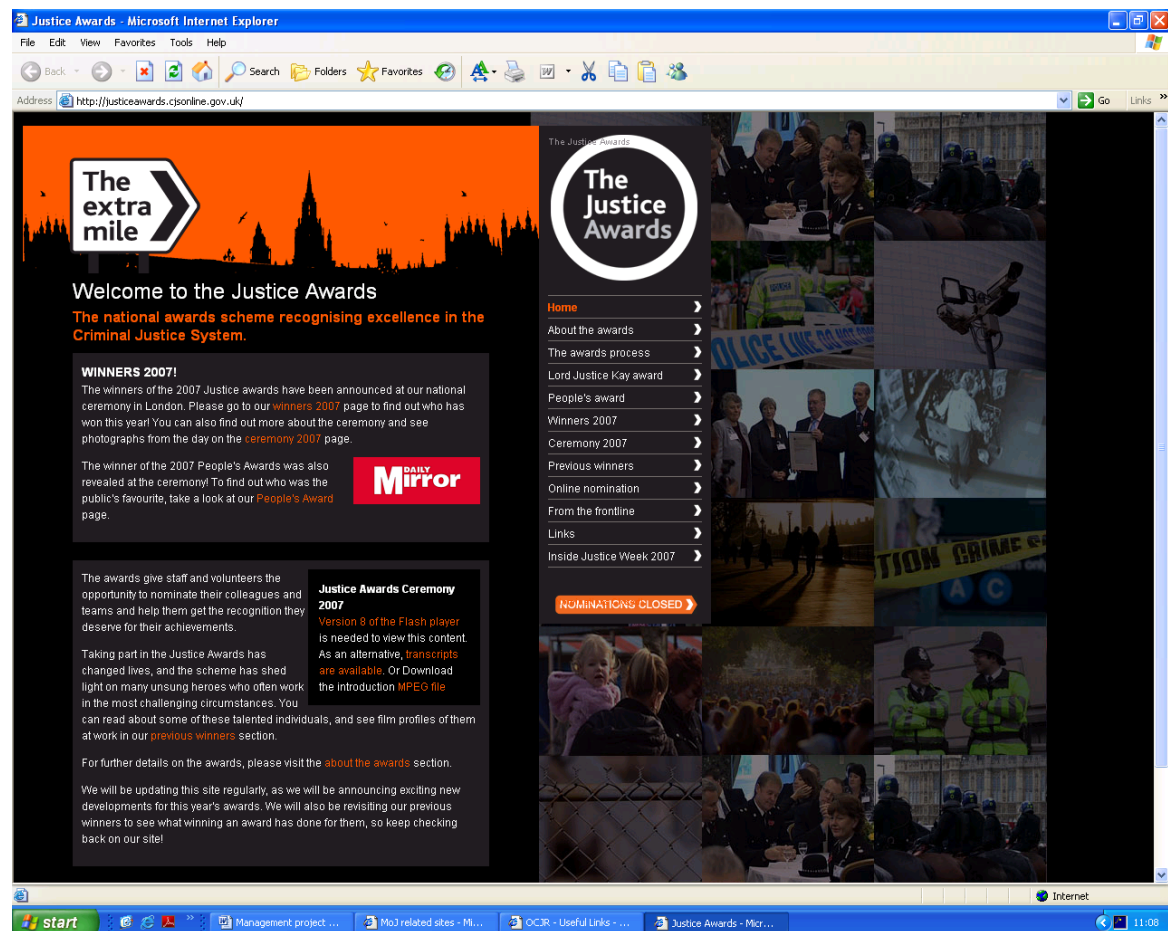
Developing and maintaining external and internal relationships

There is little formalised guidance for agencies engaged in partnership or collaborative working. Although LCJBs are 'virtual' organisations that operate on the basis of collaboration and a shared vision, beneath board level there is little evidence of formalised guidance to assist or encourage partnership working with stakeholders and organisations outside of the criminal justice arena. Of those LCJBs studied the success of KM related activities, such as cross agency problem

solving teams; joint agency learning and development events etc was due to the excellent relationship management between the participating agencies and this was largely attributed to the working relationships between the LCJB chief officers and the support of the LCJB Performance Managers and their colleagues. Despite the heavy reliance on collaborative working of the survey respondents, 63% identified that their LCJB did not have a joint working protocol which is in operation and actively promoted to sub-groups, project teams and to wider CJS staff. Lack of resources was cited as a key inhibitor to collaborative working. It was recognised that investment in terms of time and people was needed to develop and maintain relationships. Working in partnership is immensely time consuming and both LCJB support teams and agencies lacked sufficient capacity – in terms of staff time, skills and funding – to meet all the expectations placed upon them.   However despite this partnerships and collaborations were being forged and sustained across the CJS agencies.

Good use is made of consultants, universities and other knowledge sources by the OCJR and LCJBs. LCJBs and the OCJR make regular use of consultants and local universities to fill knowledge gaps. Academic and organisational research is used to inform national and local policy. As one LCJB performance officer stated "…we don't have the expertise or the time to undertake some of this kind of work…our links with the local university are good and it benefits us both. We get good quality research undertaken and the students get the research opportunity."   At a national level, the research and development unit have instigated a new reporting format to make the information from these sources more palatable. The   1 – 3 – 25 reporting format consists of 1 page of bullet points which details the policy implications, followed by a 3 page executive summary and then 25 pages for the main report. "…people insist on providing a 200 page report which evaluates the outcomes of a project such as telephone text reminding…the bad news is that no-one will read it. They haven't got the time or the technical expertise…you tend to get great wedges telling me what the difference is between logistical regression and long linear modelling and why they've gone down that route and not the other. I don't care…all I want to know is: telephone text reminding. Does it work? What makes it fall over? If I'm going to roll it out what do I need to know?"

5.2   Organisation

Organisation in terms of culture and structure was identified as a key enabler to the creation and sharing of knowledge. In particular, the research sought to identify the extent to which LCJBs encouraged a learning and development environment; the use of formal and informal networks and whether such networking and social relations were encouraged to support business needs; to establish the level of openness and trust; and the extent to which practice was understood and shared with others.

Team and individual learning

The majority of survey respondents do not have dedicated learning or training plans for CJS staff who participate in LCJB working groups. LCJB board members do not receive any feedback or performance management as part of their role. Individual agencies take responsibility for learning and development for their staff and the remit of the fieldwork did not establish the extent to which these linked with LCJB learning needs or knowledge gaps or to which skills in knowledge sharing and creation were recognised or addressed by individual agencies. Overall only 11% of survey respondent's LCJBs have developed and implemented dedicated learning and training plans for individuals and / or teams, with 89% not having any formal approach. A number of LCJBs are developing cross agency mentoring and job shadowing schemes for CJS staff to develop greater understanding of the work of the CJS as a whole and the environment and challenges faced by their colleagues working within a different part of the CJS. Where such schemes have been implemented benefits realised have included greater awareness amongst staff of how what they do impacts later in the process; helped forge links and contacts across agency boundaries and stimulated discussion and action for improvement.

In one LCJB area Magistrates' Court Civilian Enforcement Officers (CEOs) who are responsible for enforcing fine payment job shadowed police officers for a day. This resulted in improved relationships between CEOs and Police Officers and improved joint operations resulted in individuals being able to share 'intelligence' and the sharing and adoption of practice.

There is limited training provided at LCJB level in knowledge management skills.

Training provided at LCJB level tends to orientate towards operational skills and knowledge gaps. There has not been any training offered or provided to address gaps in knowledge management skills such as sharpening personal skills such as listening and questioning; coaching skills or more specialised courses such as facilitating communities of practice. However a successful programme for developing learning skills through action learning programmes has recently been utilised by a number of LCJBs.

Action Learning Programme

Action Learning is a technique used primarily in leadership and management development. It is a very simple idea – that leaders and managers learn best by working together as a group (called an Action Learning Set) to help each other to find solutions to real work problems by discussion. Action learning is a powerful form of problem solving combined with intentional learning which will bring about change in individuals and the organisation.

The Action Learning Set is at the heart of the process. The set meets at regular intervals (every four to six weeks) for each member to explore a challenging open-ended problem or opportunity. The aim is to help each person both to tackle the task and to learn from the group. The members can then go off to make progress on their problems (by taking action, hence the name) the group will meet again to discuss and review the outcomes of their actions. Action learning is not intended to be problem solving by committee, but to help each individual to acquire a wider range of skills, understanding and models for action that can then be used and refined when dealing with future problems.

"Meeting and discussing problems with managers from other organisations has helped me reflect on my style and effectiveness."

'It is difficult to quantify the benefits as I think most are subtle changes to style and approach. I will leave the process with greater confidence as a manager and leader.'

All survey respondents provide some form of joint-agency training. LCJBs provide joint-agency training events on specific issues particularly where there is a national policy directive, for example victim and witness care. Furthermore joint training events are arranged to address local gaps in knowledge such as diversity or understanding sentencing. However these events tend to be reactive to an emerging need rather than planned activities to address known knowledge gaps. In addition, all survey respondents organised joint induction events for new staff where each CJS agency and what they do is introduced. The aim of these events is to encourage networking across organisational boundaries and to encourage new starters to understand the CJS system in its entirety rather than only being aware of the part they work in. As one LCJB Performance Manager stated "…initially the take up from agencies was low but now we have managed to get each agency to build this event into their induction process. We evaluate the feedback from staff who attended and so far it has been really positive…"

Trust and openness

There is a feeling of trust and openness amongst board and sub group members for 85% of survey respondents, with 15% not sure. As one LCJB board member stated "there are always going to be power struggles and each agency does have its own agenda, that's always going to be the case. I think the relationship at X works so well is because we are all aware and acknowledge this." However not all LCJB relationships run smoothly , "In my experience working with a number of different boards, how effective they work and the level of trust depends on personalities involved and this isn't easy to overcome." There is evidence of strong cultural boundaries and professional identify across the agencies and whilst this did not always manifest itself in the LCJB arena it was acknowledged by practitioners that it can have an impact on the delivery of projects and initiatives at operational level. There has not been any guidance or support from the OCJR for boards on facilitating working relationships at board level or for operational staff.

Networks and communities

Opportunities are available for board members and practitioners to meet face to face from other LCJB areas. The OCJR hosts regular board member events; LCJB Performance Managers and Advisors meet quarterly; project managers for specific initiatives meet to discuss and share ideas and issues on progress.

The benefits of COPs and knowledge networks are recognised at a national level; **but they are not facilitated directly by LCJBs.** The concept and benefits of communities of practice and knowledge networks has been recognised by the OCJR "…we are aware that there is a lot of tacit knowledge and experience out there and recognise that one of the best ways to extract that is to get people together and have them talk about it."   Advice and guidance on facilitating communities of practice is available on the Ministry of Justice web page which is accessible by all LCJBs. Of the LCJBs surveyed 80% respondents claimed to agree or tended to agree that the LCJB is aware of and uses the expertise of formal and informal networks and working groups that exist outside of the formal LCJB structure, the remaining 20% were not sure or did not agree. However, this finding was not substantiated further by qualitative techniques. As one CJS practitioner said "…I don't think agencies are fully aware of their own working groups and networks."   At one LCJB some work had been done to identify formal groups and networks as part of a strategic landscaping exercise, however nothing had been done subsequently with this information. Furthermore, 70% of survey respondents agreed or tended to agree that inter-agency networks and knowledge groups are encouraged outside of the formal LCJB structure. However there was little evidence to suggest that LCJBs directly facilitated or resourced such communities. Task oriented teams or working groups outside of the LCJB structure tend arise out of need, to address a particular problem or work on a particular initiative and these are usually resourced and led by the lead agency.

However, 80% of survey respondents agreed or tended to agree that peers are helping peers across agency boundaries. This sentiment was echoed by a number of CJS practitioners "…having a formal structure under the LCJB has opened up boundaries between the agencies…just by meeting people face to

face, getting contacts has helped, now if I need some information or need to deal with something I can contact my colleagues I know from the LCJB meetings and if they can't help they can usually point me to someone who can." Another CJS practitioner stated "…those who are at the frontline have always helped each other to get things done, that's nothing new… if we didn't the criminal justice system would grind to a halt! " and "… [COPs]…sound like jargon for the networks and relationships you have to build with people on a day to day basis so you can help each other get things done."

5.3   Technology

Technology was identified as a key enabler to the creation and sharing of knowledge. In particular, the research sought to confirm the critical success factors how technology can support knowledge sharing; the creation of knowledge and learning and facilitate knowledge networks and communities.

Technology to support knowledge sharing

Technology is used widely to support knowledge sharing within and across LCJBs. Every LCJB has access to Criminal Justice Management Information System (CJMIS) "…a computer dump or warehouse for all the latest performance information. So all the LCJB Performance Officers can access CJMIS and get the local performance for their area and compare it to most similar [police] forces and the national picture. We used to produce PIPs (performance information packs) on paper that comprised of 40 odd different slides for each LCJB but know we do it electronically which is clearly better all round."

A concept being developed by the OCJR as a means of knowledge sharing is the use of e-room. The LCJBs participating in the Beacon Approach are currently using this medium to share knowledge and practices. All project documentation; guidance and learning reviews are available on-line for other areas to access and use. So far the site is being well used (activity is currently being monitored) and feedback from the Beacon areas has indicated that to be able to see how another area has tackled parts of the project has been extremely useful.

Figure 15. Example from beacon approach e-room

Technology is used to support knowledge sharing externally albeit inconsistently.
All LCJBs are required to maintain a web site. The variety and depth of content
varied on each LCJB site; however each site was primarily aimed at informing the
public about the role of LCJBs and local progress against targets and initiatives
rather than as a knowledge sharing facility. Interestingly all sites featured
opportunities for the public to comment and feedback on a variety of CJS
related issues. However the extent to which this was used was not established by
this research.

Email is the most commonly used tool for disseminating knowledge; however it is
arguably not the most effective. Whilst 100% of survey respondents felt that email
was the most effective way to disseminate knowledge, CJS practitioners were
not of the same opinion as one commented "…the amount of email traffic from

LCJBs is phenomenal it's impossible to digest it all…" whilst another commented "…it's a fact of modern working life, but what's the alternative? Piles of paper?"

Limited use is made of on-line knowledge and information resources outside of the CJS arena. There are extensive knowledge resources available on-line and available to LCJBs such as the Home Office Electronic library; the Government Knowledge Network facility which is available to all government agencies and provides access to research and academic resources. However their use by LCJBs is limited, partially due to not being able to access them from the host organisations system or through lack of awareness.

Figure 16. Example from Knowledge Network web page

Technology to support knowledge creation and learning

There is extensive use of modelling software by the OCJR to inform national policy and decision making and this is also being increasingly used at LCJB area level to tackle performance issues and improve process efficiency and effectiveness. Business simulation models, computer software programs which allow the OCJR to used predictive algorithms to make predictions about what would happen if changes were made to different parts of the CJS process, "we are working with LCJBs...we'll go in to have a look at a particular process and develop LANNER work around it...for example we've been doing some stuff with X LCJB around the arrest to sentence process and what the process model has shown quite clearly is that there are issues around the amount of paperwork that bounces backwards and forwards between the police and the crown prosecution service and that's a key factor in the time it takes to get someone through from arrest to sentence. .." As a result of this the two police forces have introduced Evidence Review Officers (EROs) to review case files before they go to the CPS to ensure that files are complete. This has significantly cut down the amount of time between arrest and sentence. "One of things that LANNER modelling showed up was that at the busiest time for the police custody suite, Friday and Saturday night where were the CPS on a Friday or Saturday night? So the time that the suite was at its busiest, the crucial people needed weren't at work. It's not an efficient way to run your business is it?" The outcome from the work has been successful to the point which the Chief Constable of that particular police force has insisted that all process changes are modelled first before implementation. "If you are going to increase the number of officers on the beat or increase the number of scenes of crimes teams you've got you can model it and that will tell you what the impact is going to be on burglary clearance rates, for example."

Within the Beacon Approach technology is being used to support knowledge creation through the current testing of the Waterfall methodology. Waterfall is a tool to assist LCJBs in identifying opportunities for improvement.

The waterfall methodology aims to provide an overview of the relative areas of underperformance within the process and promote end-to-end process management focused on reducing rework and unacceptable outcomes. The

waterfall tool is an Excel based spreadsheet which models the process and allows for practitioners to clearly identify areas of underperformance within a process. However, whilst it provides a useful schematic it is only as good as the information that goes into it and this requires extracting the tacit process knowledge into explicit terms.

Technology to facilitate virtual communities and networks

There is currently limited use of technology to support virtual communities and networks within and across LCJBs. Facilitating and making use of communities of practice and knowledge networks is still a developing concept within LCJBs. The benefit of these communities is recognised but as yet limited resource or support has been provided to help provide them with the infrastructure they need to help them flourish.

Virtual Community of Practice

A virtual community of practice is being currently piloted and facilitated by the OCJR. The aim of the community is to identify problems, update on progress and learning experiences and to spark ideas through discussion.

This community 'meets' once a month and connects using conference call technology. Conference call technology is used due to the geographical spread of the participants. Community members invited to participate consist of Performance Managers, Performance Advisors, Project Managers and OCJR staff from LCJBs that are participating in delivering a new initiative called 'Beacon Approach.' Participation is voluntary but already all Beacon LCJBs are represented. There is also evidence that this has triggered informal communications between LCJBs on specific issues.

5.4   Summary

The findings from this study have identified that LCJBs can demonstrate a number of the critical success factors needed for effective KM, for example a clear vision; a learning climate and developing use of technology to support knowledge creation and sharing. However, the findings also show that there are number of

gaps, areas for development and challenges that face LCJBs in the development of a cohesive approach to the creation and sharing of knowledge including greater appreciation of social networks and communities; a clearer understanding of what knowledge is important and why, a commitment to KM activity and the application of systems thinking. The following chapter considers these findings against the research model and existing literature and discusses the implications for CJS practitioners.

6.0   Implications for practitioners

The purpose of this study was to identify and explore those influences which act as barriers and enablers to KM within Local Criminal Justice Boards. Based on the literature, the three following enablers were identified: leadership, organisation and technology. Within these a number of critical success factors were pulled together to form a model for research. This section will consider the findings against the research model and discuss the implications for practitioners.

6.1   Leadership

Leadership was identified as a key enabler in the management of change towards knowledge oriented organisation. As such the study focussed upon the management of influence, rather than the position or the person. Based upon the findings from the literature review, the study sought to identify to extent to which key critical success factors were in place: whether leaders provided a vision for the future; lead by example; valued people and their ideas; delegated responsibility and gave freedom; and developed and maintained external relationships.

The findings reveal that a shared vision for the future; leading by example; valuing people and their ideas; a learning climate and the development and maintenance of external relationships were evident in the LCJBs studied, yet explicit commitment to KM activities was not articulated or resourced by leaders. This would suggest that whilst the majority of the critical success factors are in place, LCJBs have yet to recognise the potential benefits KM activities could bring to the organisation. A number of KM related activities were identified but none were part of a cohesive approach to knowledge creation and sharing and LCJBs did not acknowledge them as KM activities. Reference to KM need not be explicit. Using too much jargon and 'adding hype' is no longer an effective way of impressing an audience and it is suggested that 'nowadays it mostly has a negative effect' (Balafas et al, 2004). Indeed in the initiative fatigued environment in which LCJBs and their participating agencies operate, direct reference to KM activities would almost certainly be misconstrued as "yet

another add-on to the day job", however a clear KM direction and purpose needs to be identified by senior managers if they are to realise the potential benefits. As Ellis (2003) suggests 'KM principles should be explained on a need to know basis and labelled with established business words in order to attract positive attention and gain faster support."

The findings also established that awareness and understanding of the type of knowledge important to LCJBs is limited. Yet this was a key critical success factor for effective KM within the literature. Knowledge creation activities tended to be reactive rather than proactive based upon identified knowledge gaps. This may be due to the complex nature of LCJBs as an organisational form and this is not recognised within the existing literature. Certainly the differing agendas of each agency due to conflicting targets; political vagaries; inconsistencies in data; and largely incompatible IT infrastructure makes it harder for LCJBs to define what knowledge is important to them.

For effective KM there needs to be an intention and open attitude to knowledge sharing, a learning climate, with leaders that have a 'committed outlook towards learning' (Hamel, 19993; Senge, 1993). The complexity of the organisation of LCJBs makes it difficult for leaders to tackle some of the structural impediments to effective knowledge creation and sharing such as reward and recognition as identified by Senge (2006) and Mohammed et al (2004). LCJB leaders are not always in a position to change the differing measurement and reward systems of the participating agencies. LCJBs as an organisational form face greater challenges than single organisations when developing and implementing KM and this is not always recognised in the existing literature on KM enablers and critical success factors.   A KM approach therefore must consider the LCJBs peculiarities (as opposed to simpler organisational forms) such as the shared leadership; the cultural and structural and technological differences of the participating organisations and the dangers and challenges of collaborative working.

An additional challenge for LCJBs is the reliance on individual agencies for delivery. The findings indicated that not all agencies were KM literate and this may have an impact for LCJBs and the OCJR when rolling our KM activities. However, the findings revealed that activities undertaken by LCJBs and their support teams were similar to those identified by Von Krogh, Ichijo and Nonaka (2000) and their knowledge activists. LCJB Performance Managers and Chief Officers are in the unique position develop and influence KM activities within their own remit but also across the wider CJS, in effect to become knowledge activists.

6.2   Organisation

Organisation in terms of culture and structure was identified as a key enabler to the creation and sharing of knowledge. Based upon the evidence from the literature review the study sought to identify the extent to which LCJBs encouraged a learning and development environment; the use of formal and informal networks and whether such networking and social relations were encouraged to support business needs; to establish the level of openness and trust; and the extent to which practice was understood and shared with others.

A key enabler to knowledge creation and sharing within the LCJB arena was through informal and formal networks and communities. It is generally accepted that social relationships are a critical element of effective KM whether informal or formal (Lave & Wenger, 1991; Lindkvist, 2003) and the findings from this study are consistent with the literature. Greater use of learning systems such as COPs and knowledge collectives within and across organisational boundaries can '…lead to the involvement of a wider spectrum of stakeholders and help to satisfy their needs' (Murry & Carter, 2005) thereby resulting in improved collaboration and performance. However this needs to be accompanied by enhanced value culture around knowledge and learning. This study found that despite there not being a strong commitment to KM activities set by leaders, there was KM activity in terms of formal and informal working groups and networks; similarly there is a sense of trust and openness amongst practitioners working together towards a common goal. Certainly, community of practice theory and the knowledge groups challenges the 'traditional' approach to knowledge sharing and creation

as is known within the public sector by calling for the removal of 'traditional management tools' such as targets, best practice and imposed structures to facilitate knowledge creation and sharing. Indeed Smith (2005) comments: "Traditional leaders, both skilled and experienced at performing standard management functions, may be unable to handle adequately the opportunities and challenges, like facilitating team processes, improving interpersonal relationships and applying systems thinking. These traditional leaders will have a hard time managing and motivating members of collaborative, competence based work systems."   However, the learning climate being developed and the increasing opportunities for social interaction amongst LCJBs and practitioners is part of the foundation for future, more formalised KM activity. Traditional management approaches such as imposed structures; targets and benchmarking are not going to go away and the challenge will be for LCJBs to integrate differing KM approaches to best suit the organisation's need. As Senge (1990) comments, 'we learn best from our experience, but we never directly experience the consequences of many of our most important decisions'. It is acknowledged that within the CJS there is a tendency to think that cause and effect will be relatively near to one another. Thus when faced with a problem, it is the solutions that are close by that are acted upon. A lack of longer term systems thinking tends towards to actions that produce improvements in a relatively short time span, for example the decision to implement headcount restrictions on government agencies. However, when viewed in systems terms short-term improvements often involve very significant long-term costs.

A further challenge within the CJS is that the majority of senior managers are professionals rather than managers, so whilst extremely skilled in their profession they can be so operationally focussed that they lose sight of the strategic picture. This was evident in the LCJBs studied along with evidence of strong professional identities and cultural boundaries within and across CJS agencies. To address this, the mindset and preconceptions of current managers about what can and what cannot be achieved needs to be recognised and challenged and LCJBs are in a strong position to be the driver for this and encourage the right context for knowledge creation and sharing or 'ba' (Von Krogh, Ichijo and Nonaka, 2001).

6.3   Technology

Technology was identified as a key enabler to the creation and sharing of knowledge. In particular technological critical success factors such as how technology can support knowledge sharing; the creation of knowledge and learning and facilitate knowledge networks and communities.

The findings of this study found that technology was evident as a key enabler for knowledge creation and sharing. Indeed the use of web based and communications technology facilitates the sharing of explicit knowledge across a wide geographical area and enables LCJBs and practitioners to communicate and share experience. There is also evidence that technology is being used to enhance knowledge creation through the use of expert modelling systems. However it also supports the evidence within the existing literature that knowledge cannot be distributed simply by the use of a database or an intranet because it involves social and human interaction. Knowledge is embedded into the myriad of communities, practices, values and systems within an organisation, or in the case of LCJBs, multiple organisations and access to IT is not to facilitate knowledge sharing. IT provides access to knowledge but 'access is not the same as using or applying knowledge' (Lin and Lee, 2006).

Summary

The findings from this study largely correlate with the research framework developed from the literature, however a key theme emerging from the findings, which is largely bypassed by existing literature on KM is the challenges faced many of today's private and public sector organisations who are working collaboratively or have a strategic alliance. The majority of literature and empirical research into KM enablers and barriers is based upon a single organisation, yet there is evidence that the number of partnerships, collaborations and strategic alliances are growing. The increase in partnerships within the private and public sector is based upon a variety of reasons such as strategic direction or resource dependency. However the one thing that will occur is some level of knowledge creation and sharing. The extent to which this is

supported and channelled to support the strategic direction, the challenges this presents and the benefits to be realised can impact on the effectiveness of the partnership.   Development KM across a single entity is recognised as challenging, developing KM within an organisational form that consists of multiple organisations would appear to be impossible. Yet surprisingly LCJBs are demonstrating a number of the critical success factors identified as necessary to implement effective KM. Whilst it is evident there are barriers which need to be addressed such as lack of resources; strong cultural boundaries and lack of formalised understanding of KM, this study suggests that LCJBs are on their way to developing a knowledge ecology from which more focussed KM activity can evolve. The key factor identified in the findings which would appear to be the 'magic ingredient' is effective relationship management between the agencies. Certainly of those LCJBs which demonstrated a bias towards KM activities cited good relations between participating agencies as essential and formalised.

7.0 Conclusion

The main objective of this study was to identify and explore the main barriers and enablers to effective knowledge management within and across local criminal justice boards (LCJBs) and to identify current practice for future learning. Using a mixed methods approach combining interviews, secondary research and a quantitative study a research model was developed that identified leadership, organisation and technology as key enablers to effective KM. Within these key enablers a number of critical success factors were identified which helped to form the exploratory approach.

From the findings and discussion it is evident that many of the critical success factors identified as part of the three key enablers within the research framework are in place or are developing within the LCJBs studied. A number of barriers were also identified, such as little evidence of explicit commitment or resource in place to support KM activities. This may primarily be due to lack of awareness of the opportunity that KM presents to LCJBs in helping to deliver their agenda for change.

However, this study also suggests that LCJBs are on the right path to developing a knowledge ecology from which more focussed KM activity can evolve. LCJBs are well positioned within the criminal justice system to take forward and support agencies in developing and using KM approaches to help support service delivery improvements and deliver systemic change. They are also in the unique position to act as knowledge activists not only within their own area but across the LCJB community.

LCJBs as an organisational form face greater challenges than single organisations when developing and implementing KM and this is not always recognised in the existing literature on KM enablers and critical success factors.   A KM approach therefore must consider the LCJBs peculiarities (as opposed to simpler organisational forms) such as the shared leadership; the cultural and structural and technological differences of the participating organisations and the dangers and challenges of collaborative working.

The differences that each agency brings into the LCJB provides the opportunity for a more balanced and integrative understanding of the complex problems and challenges faced by the CJS; it can reveal the limitations of individual agencies and identify where collaborative working will have the greatest impact and generate real and lasting improvements. KM can support LCJBs in delivering this systemic change required of them by enabling CJS agencies and individuals to learn with and from each other.

7.1   Limitations

The main limitation to this study was the scale of the research involved. It became evident during the fieldwork stage that many of the enablers and success factors identified were heavily influenced by the agencies that participate within LCJBs. Timescales and resources did not allow for the research to pursue some of these avenues. However this provides an opportunity for further research into the extent to which KM enablers are evident within individual CJS agencies. This would allow for greater exploration into some of the factors which impact upon LCJBs . Not all LCJBs were included in the qualitative or quantitative research therefore the findings from this study are based on the input from twenty two LCJBs out of a population of forty two. LCJBs would benefit from more detailed research into the enablers in order to understand better the complexities within them and to identify additional areas of practice for future learning. Finally, further research is recommended on the challenges and complexities faced by partnerships and collaborations on identifying their KM needs and developing their KM capabilities.

7.2   Personal learning

Undertaking this research has allowed me the opportunity to learn more about LCJBs and the wider CJS, providing me with a more systemic understanding of the environment in which my own organisation operates. This has provided a more holistic approach to supporting my own organisation in planning and delivering its own objectives. Developing my understanding of KM has also enabled me to critically evaluate my own organisation's understanding of and

commitment to KM activities and identify areas for improvement and development.

On a personal level, undertaking this study has enabled me to develop new skills and expand upon existing skills that will support my current role but can also be used to demonstrate competences and experience.

8.0   Recommendations

This section provides a set of practicable recommendations for practitioners to consider.

1. Secure the commitment of LCJB board members to KM by:

   - Introducing KM principles and practices by linking them to business needs through the identification of those goals and objectives that could be achieved faster and more efficiently with the help of KM.

   - Build a commitment to knowledge sharing into LCJB terms of references, partnership working agreements and LCJB Chief Officers and LCJB support staff job descriptions.

   - Ensure KM related activities are implemented with sensitivity to language and awareness of initiative fatigue.

2. Develop a greater understanding of what knowledge is important by:

   - A review of business needs and objectives from knowledge based perspective in order to identify existing knowledge; knowledge gaps; future knowledge needs.

   - Undertaking information and knowledge audit in order to map the individuals, networks, communities, technology involved in creating and sharing knowledge.

- Integration of KM principles into business strategies and operational delivery plans. Defining areas of knowledge to be managed; by whom and the tools and processes to enable this.

3. Provide support and guidance on collaborative working and developing social relationships by:

- Developing guidelines or terms of reference for collaborative working which takes into consideration the strong organisational culture and professional identities of the organisations involved and builds in KM principles and behaviours.

- Improve awareness and understanding of the benefits of communities of practice, peer assist groups and networks through training on initiating and facilitating such collectives.

- LCJBs to continue to develop and promote cross boundary working relationships by facilitating social and networking opportunities for staff.

4. Develop the role and skills needed for LCJB support teams to be knowledge activists with the responsibility for overseeing, communicating and co-ordinating KM activity across the LCJB and to be the conduit for knowledge creation and sharing outside of the local area.

5. Development of KM skills for LCJB support staff and CJS staff through joint agency training opportunities.

6. Continue to develop relationships and work with external knowledge providers such as local universities and think tanks.

7. Consider the development of a national / local staff reward and recognition process to encourage KM oriented behaviours that will cut across LCJBs and CJS organisations.

8. Greater use of technology to facilitate knowledge sharing across and within LCJBs by the use of e-rooms and knowledge directories.

9. LCJBs and agencies to consider developing KM and learning competences within their performance management frameworks.

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Appendices

An exploratory study into the roles of leadership, organisation and technology as knowledge management enablers: implications for local criminal justice boards.

The findings from this questionnaire will be treated with the utmost confidentiality and no source, individual or organisation will be identified or comment attributed to, without the express permission of the originator.

If you have any additional comments or supplementary information, please enter in the space provided at the end of the questionnaire.

Please return the completed questionnaire in the stamped addressed envelope provided or email to r.fanthorpe@btinternet.com by 19th October 2007.

Thank you for your assistance with this research.

Part 1.

Completion of Part 1 is optional.

LCJB Name:	
Questionnaire completed by:	
Position / Job Title:	
I would like to receive a copy of the summary report	☐Yes

Part 2 - Leadership

1	There is a widely shared understanding of and commitment to where the LCJB is headed and what needs to be achieved amongst participating agencies ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
2	The LCJB are willing to tolerate failure provided lessons are learned ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
3	Sub-groups and project teams are encouraged to question existing policies and working practices, to innovate and challenge current systems by the board ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
4	The board recognises and rewards excellent contribution to improving standards of service delivery and innovation in service delivery ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
5	The board and its sub groups routinely review the progress of projects and initiatives and identify lessons learned ☐Yes ☐ No ☐ Not sure
6	Does the LCJB have a joint working protocol which is in operation and actively promoted to sub-groups, project teams and to wider CJS staff? ☐Yes ☐ No ☐ Not sure. If yes please can you provide a copy?
7	Has the LCJB developed a local policy or guidance on sharing statistical data and information between agencies? ☐Yes ☐ No ☐ Not sure. If yes please can you provide a copy?
8	The LCJB engages with organisations outside of the criminal justice arena in order to advance knowledge and understanding, e.g. local universities, consulting firms, think tanks / research centres. ☐Yes ☐ No ☐ Not sure. If yes, please can you provide an example in the space provided?
9	Sub-Groups and project teams have a clear purpose and / or terms of reference ☐Yes ☐ No ☐ Not sure

Part 3 - Organisation

10	Sub-groups and project teams are put together based on each of the participants knowledge and skill set ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
11	Sub-groups and project teams are organised around business needs ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
12	Sub-groups and project teams have dedicated learning and training plans ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
13	The LCJB is aware of and uses the expertise of networks and working groups that exist outside of the formal LCJB structure ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
14	Inter agency networks and groups are encouraged outside of the formal LCJB structure ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
15	Peers are helping peers across agency boundaries ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
16	There is a feeling of trust and openness amongst board and sub-group members ☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree
17	Has the LCJB organised any of the following activities for CJS agency staff? ☐ Joint agency training events ☐ Job shadowing ☐ Cross agency secondments ☐ Mentoring scheme ☐ Joint agency staff conferences ☐ Staff social events ☐ Other (please state)
18	The LCJB and its sub-groups regularly receive and share best practice with

☐ Office of Criminal Justice Reform		☐ Joint Inspections	
☐ Other CJB areas		☐ Other public sector organisations	
☐ Other (please state)			

Please feel free to add comments in the space provided.

| 19 | Do board members and sub group members have the opportunity to network with colleagues from other CJB areas? For example at conferences, training events etc.

☐Yes ☐ No ☐ Not sure. If yes please provide an example in the space below. |
|---|---|

Part 4 - Technology

| 20 | E-mail is an effective way of disseminating knowledge

☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree |
|---|---|
| 21 | E-mail is one of the main ways of disseminating knowledge amongst the LCJB and its sub groups

☐Agree ☐Tend to agree ☐Not Sure ☐Tend to Disagree ☐ Disagree |
| 22 | An LCJB intranet page is available to knowledge across all CJS agencies

☐Yes ☐ No ☐ Not sure |
| 23 | The LCJB has an internet site which is well packaged and delivers relevant, clear and up to date information

☐Yes ☐ No ☐ Not sure |
| 24 | Examples of good practice from other CJBs and national guidance is available on-line

☐Yes ☐ No ☐ Not sure |
| 25 | Do you make use of government on-line knowledge sharing facilities and resources such as the Home Office on-line library, Knowledge Network, Electronic Library for Government?

☐Yes ☐ No ☐ Not sure |

Please feel free to add any additional comments in the space below:

Thank you very much for completing this questionnaire

Questionnaire Results - Leadership

Leadership / LCJB	Question 1 – Widely shared understanding and commitment of direction	Question 2 – Willing to tolerate failure provided lessons are learned	Question 3 – Sub groups and teams are encourged to challenge	Question 4 – The board recognises and rewards excellent contribution and innovation	Question 5 – Progress against objectives are regularly reviewed and lesson learned	Question 6 – Does the LCJB have a joint working protocol?	Question 7 – Is there a local policy for information or statistical data sharing between agencies?	Question 8 – Organisations outside of the CJS are engaged with to advance knowledge creation	Question 9 – Sub group and project teams have clear purpose / terms of reference
A	Tend to disagree	Tend to agree	Agree	Tend to agree	Not sure	No	No	Yes	No
B	Agree	Tend to agree	Tend to agree	Not sure	Yes	Not sure	Not sure	Yes	Yes
C	Agree	Tend to agree	Tend to agree	Agree	Yes	No	No	No	Yes
D	Agree	Agree	Tend to agree	Agree	Yes		No	Yes	Yes
E	Tend to agree	Tend to agree	Agree	Agree	Yes	Yes	No	Yes	Yes
F	Tend to agree	Tend to agree	Not sure	Tend to agree	Yes	No	No	Yes	Yes
G	Tend to disagree	Tend to agree	Tend to agree	Tend to agree	Yes	Yes	No	Yes	Yes
H	Tend to disagree	Agree	Tend to agree	Tend to agree	Yes	No	No	Yes	Yes
I	Tend to agree	Agree	Tend to agree	Tend to agree	Yes	No	No	No	Yes
J	Agree	Agree	Tend to agree	Not sure	Yes	No	No	No	Yes
K	Agree	Agree	Agree	Agree	Yes	Yes	Yes	Yes	Yes
L	Agree	Tend to agree	Agree	Agree	Yes	Yes	Yes	Yes	Yes
M	Agree	Tend to agree	Agree	Not sure	Yes	No	No	Yes	Yes
N	Tend to agree	Tend to agree	Tend to agree	Agree	Yes	No	Yes	Yes	Yes
O	Tend to disagree	Tend to disagree	Not sure	Tend to agree	Yes	No	No	No	Yes
P	Tend to agree	Tend to agree	Agree	Tend to agree	Not sure	No	No	Yes	No
Q	Tend to agree	Tend to agree	Agree	Agree	Yes	Yes	No	Yes	Yes
R	Tend to disagree	Agree	Tend to agree	Tend to agree	Yes	No	No	Yes	Yes
S	Agree	Tend to agree	Agree	Agree	Yes	Yes	Yes	Yes	Yes
T	Agree	Tend to agree	Agree	Not sure	Yes	No	No	Yes	Yes

	Q1 Number	%	Q2 Number	%	Q3 Number	%	Q4 Number	%	Q5 Number	%	Q6 Number	%	Q7 Number	%	Q8 Number	%	Q9 Number	%
Agree/ Yes	9	45%	6	30%	9	45%	8	40%	18	90%	6	32%	4	0.2	16	80%	18	90%
Tend to agree	5	25%	13	65%	9	45%	8	40%	0	0%	0	0%	0	0	0	0%	0	0%
Not Sure	0	0%	0	0%	2	10%	4	20%	2	10%	1	5%	1	0.05	0	0%	0	0%
Tend to disagree	6	30%	1	5%	0	0%	0	0%	0	0%	0	0%	0	0	0	0%	0	0%
Disagree / No	0	0%	0	0%	0	0%	0	0%	0	0%	12	63%	15	0.75	4	20%	2	10%
Total	20	100%	20	100%	20	100%	20	100%	20	100%	19	100%	20	1	20	100%	20	100%

Questionnaire results – Organisation

Organisation / LCJB	Question 10 — Sub groups and teams are put together based on knowledge and skill set	Question 11 — Sub groups and teams are organised around business needs	Question 12 — Sub groups and project teams have dedicated learning and training plans	Question 13 — The LCJB is aware of and uses expertise of networks and communities outside LCJB	Question 14 — Interagency networks and groups are encouraged outside of LCJB structure	Question 15 — Peers are helping peers across organisatioal boundaries	Question 16 — There is a feeling of trust and openness amongst board and sub group members	Question 19 — Do members have opportunity to network with other CJB areas?
A	Tend to agree	Tend to agree	Tend to disagree	Not sure	Tend to agree	Tend to agree	Not sure	Yes
B	Tend to agree	Agree	Tend to disagree	Tend to agree	Tend to agree	Agree	Agree	Yes
C	Agree	Agree	Tend to disagree	agree	Agree	Agree	Tend to agree	Yes
D	Tend to agree	Agree		agree	Not sure	Not sure	Agree	Not sure
E	Agree	Agree	Tend to disagree	agree	Agree	Tend to disagree	Agree	Yes
F	Tend to agree	Tend to agree	Tend to disagree	agree	Tend to disagree	Agree	Tend to agree	Not sure
G	Tend to agree	Agree	Disagree	Tend to agree	Not sure	Not sure	Not sure	Not sure
H	Tend to agree	Tend to agree	Tend to disagree	Tend to agree	Agree	Tend to agree	Tend to agree	Yes
I	Agree	Agree	Tend to disagree	Tend to agree	Agree	Tend to agree	Tend to agree	Yes
J	Agree	Agree	Agree	Tend to disagree	Agree	Agree	Tend to agree	Yes
K	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Yes
L	Agree	Agree	Tend to disagree	Agree	Agree	Tend to agree	Tend to agree	YEs
M	Tend to agree	Agree	Disagree	Tend to agree	Tend to agree	Agree	Tend to agree	Yes
N	Agree	Agree	Disagree	Tend to disagree	Tend to disagree	Tend to agree	Tend to agree	Yes
O	Agree	Agree	Disagree	Tend to agree	Agree	Tend to agree	Tend to agree	Yes
P	Tend to agree	Tend to agree	Tend to disagree	Not sure	Tend to agree	Tend to agree	Not sure	Yes
Q	Agree	Agree	Tend to disagree	agree	Agree	Tend to disagree	Agree	Yes
R	Tend to agree	Tend to agree	Tend to disagree	Tend to agree	Agree	Tend to agree	Tend to agree	Yes
S	Agree	Agree	Tend to disagree	Agree	Agree	Tend to agree	Tend to agree	YEs
T	Tend to agree	Agree	Disagree	Tend to agree	Tend to agree	Agree	Tend to agree	Yes

	Q10	%	Q11	%	Q12	%	Q13	%	Q14	%	Q15	%	Q16	%	Q19	%
Agree/ Yes	10	50%	15	75%	2	11%	8	40%	11	55%	7	35%	5	0.25	17	85%
Tend to agree	10	50%	5	25%	0	0%	8	40%	5	25%	9	45%	12	0.6	0	0%
Not Sure	0	0%	0	0%	0	0%	2	10%	2	10%	2	10%	3	0.15	3	15%
Tend to disagree	0	0%	0	0%	12	63%	0	0%	0	0%	2	10%	0	0	0	0%
Disagree / No	0	0%	0	0%	5	26%	2	10%	2	10%	0	0%	0	0	0	0%
Total	20	100%	20	100%	19	100%	20	100%	20	100%	20	100%	20	1	20	100%

Question 17 — Has the LCJB organised any of the following events for staff?		Question 18 — Has the LCJB organised any of the following events for staff?	
Joint agency training events	15	OCJR	14
Cross agency secondments	4	Other CJBs	14
Joint agency staff conferences	12	Other	
Other		Joint inspections	7
Job Shadowing	3	Other public sector orgs	3
Mentoring Scheme			
Staff Social Events	4		

Questionnaire results - Technology

Technology	Question 20		Question 21		Question 22		Question 23		Question 24		Question 25	
LCJB	E-mail is an effective way of disseminating knowledge		E-mal is one of the main ways of disseminating knowledge		Intranet pages are used to share knowledge		Internet page is used to share knowledge		National good practice is shared on-line		Use is made of on-line knowledge resources such as knowledge network; e-library for government?	
A	Tend to agree		Agree		No		No		Yes		No	
B	Agree		Agree		No		Yes		Not sure		Yes	
C	Agree		Agree		No		Yes		Yes		No	
D	Agree		Agree				Yes		Yes		No	
E	Tend to agree		Tend to disagree		Yes		Yes		No		No	
F	Tend to agree		Agree		No		Yes		Yes		Yes	
G	Tend to agree		Agree		No		Yes		No		No	
H	Agree		Tend to disagree		Yes		Yes		Yes		Yes	
I	Agree		Agree		No		Yes		No		No	
J	Agree		Agree		Yes		Yes		Yes		Yes	
K	Agree		Agree		No		Yes		Yes		Yes	
L	Tend to agree		Tend to agree		No		Yes		Yes		Yes	
M	Tend to agree		Tend to agree		Yes		Yes		Yes		Yes	
N	Agree		Agree		No		Yes		No		No	
O	Agree		Agree		No		Yes		No		No	
P	Tend to agree		Agree		No		No		Yes		No	
Q	Tend to agree		Tend to disagree		Yes		Yes		No		No	
R	Agree		Tend to disagree		Yes		Yes		Yes		Yes	
S	Tend to agree		Tend to agree		No		Yes		Yes		Yes	
T	Tend to agree		Tend to agree		Yes		Yes		Yes		Yes	
		%		%		%		%		%		%
Agree/ Yes	10	50%	12	60%	6	32%	18	90%	13	65%	10	50%
Tend to agree	10	50%	4	20%	0	0%	0	0%	0	0%	0	0%
Not Sure	0	0%	0	0%	0	0%	0	0%	1	5%	0	0%
Tend to disagree	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Disagree / No	0	0%	4	20%	13	68%	2	10%	6	30%	10	50%
Total	20	100%	20	100%	19	100%	20	100%	20	100%	20	100%