CRANFIELD UNIVERSITY

Innovation & Technology Assessment Unit

International Ecotechnology Research Centre

SIMS

P.h.D. THESIS

Academic Year 1992-1996

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THE VARIETY OF INDIVIDUAL ATTRIBUTES AS A BASIS FOR ORGANISATIONAL ADAPTIVITY: A CASE STUDY

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ABSTRACT.

A growing literature has emerged which calls for organisations to become more adaptive in the face of complex and uncertain operating environments. This thesis reviews literature dealing with organisational learning and argues that individual attributes are undervalued. There has been an emphasis on the mechanistic features of the individual within the organisation to the detriment of other attributes such as personal skills and knowledge. A case is made for a more human-centred approach to managing change which focuses upon the exploitation of these particular human factors as one of the central sources of adaptive potential. While some of these factors are formally recognised in the workplace it is argued that many others are acquired outside and therefore do not always appear to have immediate relevance or value. Evidence for this is drawn from a case study in the Commission for Local Administration. This employed a multi-method investigative approach to identify the variety of individual attributes and results are presented in the form of personal process maps which represent individual perceptions of the process of change. These support a broad classification of individual variety to be described. Findings are exploited to both identify the role of individual attributes in managing change and to construct a typology of individual attributes as a basis for adaptive capability. A number of concluding inferences are made regarding implications for management and future work.

ACKNOWLEDGEMENTS.

"There are more things in heaven and earth,
Horatio, than are dreamt of in your philosophy."
WILLIAM SHAKESPEARE.

There is an infinite variety of ways in which to look at things, and this thesis provides only one. However, this could not have been achieved without the constant nurturing and attention from my supervisor -Mark Lemon- who combined friendship and guidance in a unique way.

I would also like to thank Paul Jeffrey for his constructive contribution and friendship during the final stages of the writing of this thesis.

I am also indebted to my colleagues, both staff and students, at INTA/IERC. These include: Roger Seaton, Phil Longhurst, Martyn Cordey-Hayes, Myrna Gilbert, Peter Allen, Maureen Mahoney, Jan Evans, Noemi De La Ville, Nenia Blatsou, Jackie Fry and Linda Hadfield. These people provided both intellectual and emotional support, and kind friendship in a way that has enriched my life. Thanks also go to Paul Macey, Peter Hiett and Thomas Buchendorfer for attempting to demystify the world of computers for me. Particular thanks go to those who did not disturb my peace and tolerated my silence.

Thanks also go to Peter Hart, a former Director of the Commission for Local Administration (CLA), and to all the other members of staff at the Coventry office of the CLA. These people made the fieldwork a most enjoyable experience.

Thanks also go to my family who set me on this journey of discovery by imbuing me with a sense of curiosity and concern for the world around me and the people in it.

My final thanks go to my partner -Phil Clemas- who has supported me in every way throughout this process. He has endured my 'highs and lows' and always put my needs before his own.

This thesis is dedicated to the memory of my father -Victor Scamans- (1919-1984)
who would have been proud of his daughter.

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Chapter One: Introduction.

"*Every business suffers from the same chronic disease - the shortfall between human potential and corporate achievement.*" **(Heller, 1995).**

1.1. Introduction.

This chapter provides an introduction and some background to the issue for research, the approach taken to understand the issue better and a guide to the structure of the thesis.

The speed with which change affects modern organisations makes it an inevitable feature of organisational life. During recent years there has been a considerable level of debate regarding the management of this process. The importance of 'successfully' managing change in order to maintain sustainable organisations has been increasingly recognised in the literature. It is an evolving area of interest both at the policy level and as the focus of scientific enquiry. However, research on the matter has been fragmented and no consensus has been established as to how organisations can improve the effectiveness of the way in which they manage change. This thesis argues that if managers and those responsible for change recognise the importance of individual variety within the workforce they can develop their organisation's adaptive capability.

1.2 Background to the Research Problem.

Managers need to develop ways to manage change in an organisational environment which is inherently unpredictable (Bessant et al., 1995). There is a tendency to engage in programmes of planned change designed to meet specified targets, often at the expense of responding to unanticipated situations (Grossmann and Watt, 1992). Historically, this change has been managed in a mechanistic and prescriptive manner which treats organisations as closed systems, i.e. as if the components of the system, people, do not interact with their environment. This approach makes no allowances for the unpredictable nature of change and leads to projects being managed as if the end-state is pre-determinable irrespective of uncertainty (Emery, 1981). Managing change in such a procedural manner highlights a failure to recognise the implications of unanticipated events that arise and are outside of the expected parameters of a project. As a result managers often fail to manage the full implications of specific change

programmes because they are too structured and ignore the external implications of the dynamic change process. It is argued that this occurs for two reasons: firstly, there are no adequate strategies available to managers to help them to deal with the 'predictable' externalities of change due to the perception of projects having predetermined end-states; and secondly, strategies are not available to enable managers to adapt the process of change to in order to deal with 'unpredictable' and 'emergent' events.

Organisations and their environments are inherently complex and unpredictable and our inability to predict the future must be taken into account as we attempt to manage change (Allen, 1994). Therefore, instead of utilising a mechanistic approach to the change process, managers need to consider a more adaptive one that enables them to respond to uncertain environments. This view has become increasingly widespread as organisations have become better understood as "*non-linear, network feedback systems*." (Stacey, 1995). It is not the intention of this thesis to deal in any depth with 'the science of complexity' under which these terms are grouped. However, it is necessary to provide some background as a result of the developing interest in applying its ideas to social systems. Stacey in particular has made a critical contribution to helping improve our awareness of complexity and its relevance to the organisational framework. Consequently, it is important because it provides the context for studying people within the organisational environment, with which this thesis is concerned.

Feedback is described as the interaction between people and their environment that leads to the emergence of new behaviours, both intended and unintended (Clark et al, 1995). This is because the actions of one person will have repercussions for another, requiring a successive response from the first person and so it continues. Over time the actions taken by one person "*feeds back to determine, in part at least, the next action of that person. Feedback systems are what they are because of the history they have experienced*". Furthermore, Stacey explains that the 'feedback loops' which result when people interact with each other, i.e. when they form a network, are non-linear, i.e. they are:

- because individuals make choices based on their perceptions, this leads to "*nonproportional over- and under-reaction*". Individuals react differently as a result of the different meanings they impose on the events that they encounter.
- there are as many ways of understanding a situation as individuals can devise which means that there are "*many outcomes possible for any action*".
- "*group behaviour is more than simply the sum of individual behaviours*", i.e. as individuals interact new behaviours emerge which are different to the behaviour of those individuals operating independently.

- because people are different, "*outcomes are usually stubbornly individual and often peculiar*".
- even small changes can provoke major effects.

(Stacey, 1995).

Using these ideas from 'complexity science' enables us to understand organisations as unpredictable, i.e. non- deterministic, whereby "*wholly accurate predictions of future states can not be made*" (McKergow, 1996). Consequently, it is hard for managers to develop strategies because of the difficulties in trying to align them with uncertain futures (King, 1989; Turner, 1996). However, applying insights from the natural sciences can help to address this problem by focusing on the development of more adaptive organisations. The argument for developing organisational adaptivity has been increasingly identified in the literature as it has become clear that it is inappropriate and unrealistic to manage change in a way that fails to recognise the associated inherent complexities (Crossan, et al, 1996). As a result it has been recognised that the way in which we manage change may be the key to sustaining organisational competitive advantage in the future (Stacey, 1996; Schneider et al, 1996).

This thesis focuses on one particular way of improving organisational adaptivity, namely the effective exploitation of people and the attributes they possess. Individual attributes refer to the formal and informal knowledge, skills, abilities and expertise, etc. that people have or develop and which define the way in which they manage change. Previous research has focused on organisational forms and groups or teams, but has inadequately addressed the role of human capability in the development of more adaptive organisations. In response, this thesis articlulates the role of individuals. The focus is on formal and informal individual attributes, the latter being of particular interest, and the need to maintain a variety of them as the basis for organisational adaptivity. Formal attributes are actively searched for by managers and are identified within job specifications as being necessary for the job function. As such they play a large part in an individual's entrance into, and activities within organisations. Informal attributes are less easy to recognise since they are not necessarily part of specific job functions and so are unlikely to have any formal outlet. They may have been acquired in previous jobs, from hobbies and from other sources more difficult to identify. Because of this they cannot be channelled in the way that formal attributes can be to fit in with the other human and non-human entities that form the structure of the organisation (Huda, 1992). However, the literature suggests that managers continue to attempt to

"*...align the actions of 'free' individuals with specific objectives by enclosing them within a particular calculative regime.*" (Murdoch, 1995).

This view tends to assume that all individuals are passive agents that are prepared to surrender "*their agency to the structures around them*" (Law, 1994). Based on this, managers try to 'absorb' individuals in a number of ways including: strict recruitment procedures that encourage, through the wording in advertisements, people with 'appropriate' qualifications and professional experience to apply for specific jobs; through the re-definition of peoples' roles via training programmes; and through rules and procedures in organisations. These processes may mean that though individuals do not willingly cede their individuality, their contribution, in terms of their knowledge and skills, etc., is 'lost' (Law, 1994). A less tightly defined structure could enable managers to make better use of attributes that are generated and developed within the context of work as well as those that are externally acquired. This creates a resource from which managers can draw to deal with unexpected futures, thus providing adaptive capability.

Developing this capability is relevant because the future cannot be prescribed. There is some certainty about the future, such as the need for particular skills, etc. which enable training to be defined and directed towards specific end-states. However, there are other futures which we do not know about. As a consequence it is not always possible to specify in advance the range of knowledge and skills, etc. required. This thesis aims to assess the importance of both maintaining and expanding the range of individual attributes. It is argued that this will provide a pool of resources to draw upon when dealing with the unforeseen implications of change, thus enabling planned change to be carried out more effectively in an environment of uncertainty.

As the need for developing and maintaining a variety of individual attributes is established, questions are raised about how studies like this can offer insights to managers to help them develop useful strategies. McKergow (1996) suggests that researchers need to consider a number of things. Four of these are particularly relevant to this thesis and are listed below. They are addressed in light of the findings of the study in Chapter Nine.

1. *What does it mean to lead an organisation? If high adaptability comes as a package with 'out of control', are investors, leaders and workers ready for it?*

2. *What are the implications for 'change management'? Does it become stability prevention?*

3. *What structures and organisational forms might be able to use the complex world rather than attempt to go against it?*

4. *What forms and degrees of connectedness and communication facilitate adaptation in organisations? Where is the point at which communication becomes a hindrance?*

In addition to these questions, a range of contemporary management trends, such as down-sizing and de-layering are addressed. It is suggested that these policies have reduced the variety of individual attributes in the search for more 'efficient' and leaner organisations (De Vries and Balazs, 1996). It could be argued that as a result they are fitter and consequently, more responsive to change. However, it is also fair to propose that, by implication, a reduction in the variety of attributes, both formal and informal, also decreases organisational adaptive capability leaving managers with a reduced ability to deal with unpredictability. From this observation it is asserted that management strategies or practices which reduce the variety of individual attributes need examination. However, it is far from clear how practices to retain this variety can be established.

Naturally, it is not possible for managers to allow all individuals time to develop and expand their attributes through formal training. The main aim of organisations is to produce their goods and services and that must be the focus of their operations. However, of little or no cost are the informal attributes that people possess which can only have potential value. Consequently, if strategies were developed that encouraged the development of a culture of growth and learning instead of one where people are structured within inflexible and tightly rigid frameworks then managers might be in a better position to take advantage of the contributions that people can make.

1.3. Outline of the Thesis.

This section outlines the structure of the thesis in order to provide a guide to the organisation of the work and the argument that is made through it.

This thesis aims to explore the importance of maintaining and expanding a variety of individual attributes as a basis for organisational adaptivity. The approach taken begins with an exploration of the value of variety as a basis for adaptivity. Chapter Two describes how these concepts, originally from the biological sciences, are now becoming increasingly recognised in the organisation and management literatures. It is asserted that variety with regard to people is essential to an organisation's ability to sustain competitive advantage. Until recently this concept was largely ignored, but due to the increasing recognition of organisational complexity, it is now receiving more attention. However, it was clear from the assessment of the literature that insufficient

attention has been paid to the role of individual's attributes, particularly relating to knowledge and skills, as a basis for developing adaptive capability. This provides the theoretical structure of the thesis and is developed in Chapter Three through the undertaking of an exploratory piece of fieldwork in a high street bank. This study sought to understand and establish the range of individual attributes (primarily knowledge and skills) acquired externally that were felt to contribute to the individual's work and/or to the functioning of the organisation in a broader sense. It provided a limited number of clear findings but helped to define, with the literature, a more directed search within phase two of the fieldwork activity. This was done through the development of an initial typology of individual attributes and the research objectives. These provided the vehicle for forming a better understanding of individual attributes and their contribution to a specific change process and would enable the development of the typology as the basis for understanding the management of future change.

The central fieldwork activity involved the use of a case study undertaken in the Commission for Local Administration (CLA). An ethnographic approach was employed to better understand how individual attributes were perceived to contribute to a specific technical change. The approach taken, described and justified in Chapter Four, involved the use of multiple-techniques. These included semi-structured interviews, observation (i.e. of meetings) and the tracking of documentation about the implementation process. The data was tape-recorded and personal process maps were drawn to represent each interviewee's own perception of the introduction of the technology to the CLA.

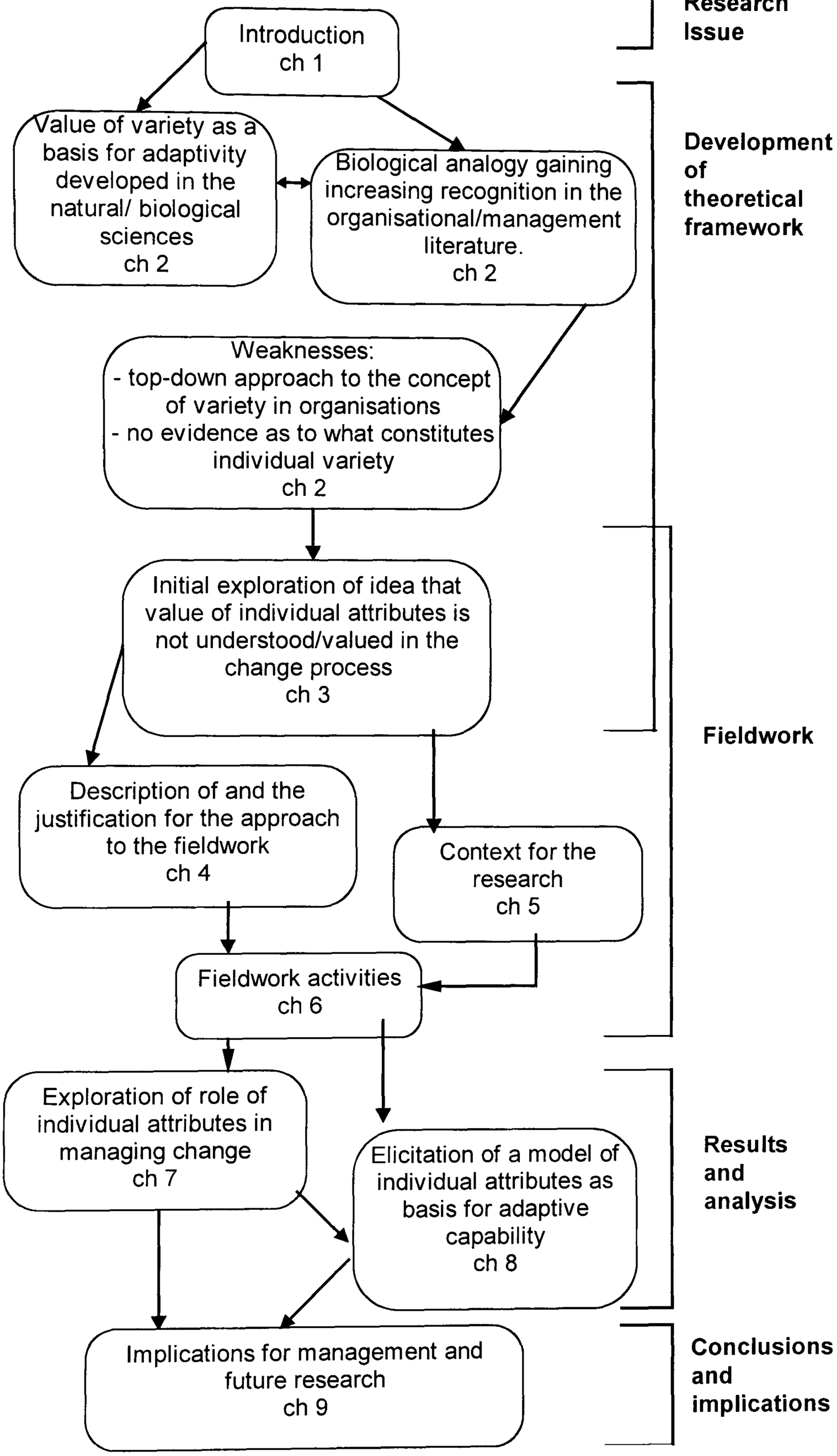
To make sense of the fieldwork activities and the specific change being carried out it is important to describe the context in which it will take place (see Chapter Five). The development of the framework for interpreting and analysing the issues that are of interest is assisted by this description (Perkins, 1988). The implementation of the fieldwork activities is identified in Chapter Six, which describes how both physical and social access were negotiated, how the data was collected and organised, and also provides some initial interpretation.

Chapter Seven describes the different perceptions that individuals had of the change process within its physical and social context. This is in order to represent the variety of individual attributes within the organisational system and whether they were perceived to facilitate or constrain the process of change. The personal process maps assisted this examination and contributed to the identification of a number of themes relating to individual attributes which are further explored in Chapter Eight. The provisional typology developed in Chapter Three is thus amended, with the data from the main case study, in this chapter.

Conclusions about the research and the implications for organisations and organisational change are made in Chapter Nine. Responses to questions, raised in this chapter, about the value of this type of study for managers and practitioners are provided. As well as some consideration of the issues of down-sizing and the need to develop an organisational culture that values human potential. This allows the aim of the thesis, which is: to explore the value of variety in individual attributes as the basis for improving organisational adaptive capability, to be assessed.

Figure 1.1 overleaf provides a pictorial representation of the thesis outline. It is not simply a list of the contents of the thesis but is included to highlight the argument that is made through the text.

Figure 1.1. Structure of the Thesis.



Chapter Two: The Research Background: Variety and Adaptive Capability.

"*We must attempt to find a system, while evolving enough coherence to function, retains enough individual freedom and microscopic diversity to provide a pool of adaptability and innovation so that it can constantly evolve and restructure in the face of change*." (Allen, 1994).

2.1. Introduction.

A number of disciplines, particularly in the biological sciences, have recognised the value of variety and accepted it as a basis for creating adaptive capability and consequently, sustainability (Holling, 1978). There has been a similar movement in the management and organisation literature which uses this analogy to describe how companies may survive in the long term. However, this literature does not articulate variety with regard to the individual or provide evidence of the form it takes.

Some of the literature referred to in this chapter use the term variety to describe micro-difference, while others refer to diversity, when it is clear that what both are actually referring to is the same thing. In order to clear up any confusion, this thesis shall describe the disciplines using whichever term they apply, but in general discussion, the term variety shall be referred to. There are differences between variety and diversity but these have not been identified in the literature considered here[1].

2.2. The Relationship Between Micro Variety And Adaptivity: An Established View.

The biological sciences, in particular, have recognised the value of micro variety as a basis for creating adaptive capability. Within the biological sciences, variety is defined as the "*richness of the number of species in an area*" (Dictionary of Ecology and the Environment). Species adapt in response to ongoing changing physical circumstances and variety is regarded as essential because it enables communities to be more resilient

[1]A discussion relating to the lack of understanding about the difference between variety and diversity is emerging in the field of environmental perception and policy making (Seaton, 1996). This is addressed in Chapter Ten.

to these changes and thus improves their chances of survival in a complex world (Begon et al, 1986; Colinvaux, 1990; Cousins, 1994(a)). Resilience is defined as the strength of a system "*to stand up to shocks*" and readily recover (Collin, 1988). Non-uniform differences that exist between individuals enable species to adapt to fit into particular environmental conditions. (Begon et al, 1986; Cousins, 1994(b)).

Variety is regarded as a resource which must be preserved since every species is "*unique and intrinsically* valuable" (Wilson, 1988). Communities would suffer if there was no variety or if there was a significant reduction because "*the loss of any species amounts to an irretrievable loss of unique resource*" (Myers, 1979). On a small scale this may not affect the stability of the community in question but on a larger scale it may have serious consequences for the "*adequate functioning*" of the whole system. Utilising these principles, systems scientists have recognised the value of genetic variety and that the greater variety available in the system, "*the very much greater the permutative capacity of the machine's possible states*" (Beer, 1967). Variety was described as "*...distinguishable differences in an ensemble...*" (Buckley, 1981). This ensemble make up the system, which is defined as a combination of parts which form a complex whole (Kast and Rosenzweig, 1977). It was then speculated that if social systems, for example organisations, could make available a broader range of variety from which to "*...select new orientations*" then a pool of potential new responses could be drawn upon (Buckley, 1981). It is this redundancy, or excess capacity, which acts as a "*powerful protective mechanism*" in situations where managers are dealing with the unexpected (Beer, 1967). This provides flexibility which in turn provides the capacity for organisations to

"*...readjust to new configurations, with renewed complementarity and sustained or renewed communication.*" (Buckley, 1981).

This adaptability is dependent on the constituent parts of an organisation being able to reassemble into new patterns of activity in response to change. A system with the ability to "*...modify its internal state or structure*" in response to changes in the environment is described as having adaptive capability (Open University, 1981). This provides the basis for developing learning organisations which has become increasingly the focus of management during the last few years. This has developed from a movement in the management literature to examine nature's way of addressing uncertainty and change and to explore how we might mimic that process in order to try and ensure that organisations survive (Allen, 1995). This movement has utilised the 'variety-adaptivity' analogy from the biological sciences and is addressed in the next section.

2.3. The Management/Organisational Approach To Variety.

Using the biological analogy, there has been a movement in the management and organisational literature that increasingly recognises the value of variety.

Evolutionary management theorists have argued that communities are inherently complex as a result of the "*constant dialogue*" they engage in with their environment, and that this is related to their "*underlying diversity*" (Clark et al, 1995). Complexity within human communities has been regarded as a problem by many writers, however, it is now increasingly argued that heightened complexity provides organisations with extended internal variety (Stacey, 1994; Allen, 1989). This gives them the ability to evolve and the capacity to adapt and change in response to uncertain futures in the same way that "*genetic diversity appears to give an ecological system an ability to adapt to stress*." (Clayton and Radcliffe, 1996).

Organisations need features which allow them to "*withstand the impact of expected as well as unforeseen and erratic events*", consequently, they need to be able to adapt (Grossmann and Watt, 1992). Central to this is the notion that systems can only develop adaptive behaviour if they have variety (Clark et al, 1995; Grossmann and Watt, 1992). For an organisation to evolve and develop there must be a variety of behaviours and responses to changing situations. This then provides a "*broader spectrum of answers*" from which to select in order to deal with events (Grabher and Stark, 1996). Multiple approaches to dealing with situations is provided by people who, as a result of their differing backgrounds and experiences, etc. "*react in different ways and at different rates to change in their environment*" (Jeffrey and Lemon, 1996). These differences were identified in the ecology literature as being important because they enable species to adapt to fit particular environmental conditions (Begon et al, 1986). Maintaining a variety of different human behaviours may enable managers to deal with changing situations, both anticipated and unanticipated. Two examples of specific behaviours required to facilitate the management of change are the ability to collect information and theability to exploit that information. Theseare described as attributes and they may not necessarily be the property of any one individual (see Chapter Three for a full description of individual attributes).

The distinction between the two particular types of behaviour identified in the example above, i.e. the knowledge seekers and the knowledge exploiters, has been most clearly made in a study of fishing fleet dynamics by Allen and McGlade (1987). They identify 'Cartesians' as people who only go to areas where they know there are fish. However,

'Stochasts' disregard the information they are given about fishing areas and instead they take risks by going out into 'unknown' fishing territory to search for fish. 'Stochasts' seek new opportunities, and 'Cartesians', working on the knowledge that they will receive about these will move in and exploit them. Essentially, though it is the interaction between both behavioural groups that was perceived as central to the fleets ability as a whole to exploit the available resource.

Leaders and managers of organisations need to be able to exploit variety as they would any resource. In particular, they need to be aware of 'non-average' behaviour, i.e. behaviour which is different and stands out. Non-average responses to change provide new knowledge opportunities for managers of organisations, and thus have the potential to produce creativity as a result of their novelty. These must then be exploited in order to modify the internal "*behavioural configuration, thereby achieving adaptivity*" (Jeffrey and Lemon, 1996). Consequently, we do not always want consensus and homogeneity in terms of the generation and use of knowledge and ideas, etc. Conflict or "*radically deviant ideas may be the means to survival*" (Grossmann and Watt, 1992).

Prior to the evolutionary perspective on organisations which values variety, a more mechanistic approach was prevalent which tried to restrict and control variety and its inherent complexities. Mechanistic approaches to managing change are now more commonly described as bureaucratic, which, as a result of the populist definition of bureaucracy, has become a somewhat pejorative term. During the latter half of this century bureaucracy has been criticised as an inefficient model of organisation. This is as a result of "*unprecedented change, complex technology and an ethos of personal individuality*" which bureaucratic structures are not able to deal with (Child, 1983). However, such structures were popular because it was thought that tighter controls and a more centralised planning function would create a simpler and less complex, and consequently a less uncertain, system (Chakravarthy, 1982; Morgan, 1986). Management looked to create a "*precise, obedient and tireless low-variety machine*" where great effort was "*expended on reducing (ideally eliminating) variety in the workforce*" (Espejo and Harnden, 1989). Describing organisations as machines developed out of an image of them as orderly, routinised and predictable, with clearly defined hierarchical structures, where the emphasis was on a systematic set of procedures and rules. The aim was to rationalise organisations through the use of formal planning techniques in order to

"*help circumscribe idiosyncratic behaviours and keep them conformant with the rational plan of the organisation.*" (Tannenbaum, 1967).

Among the main contributors to this theory of organisation were Max Weber, Frederick Taylor and Henry Ford (Pugh et al, 1983). They perceived that the systematic ordering and routinisation of jobs, subject to centralised management control, would enable change to be managed completely. This view fails to recognise that because of the uncertainty associated with with change, the activities related to it often do not map onto the static functional roles of individuals (this is developed in section 2.5). It became increasingly clear that structured approaches to managing organisations were not appropriate for undertaking change that needed a more adaptive environment. This led, in part, to the development of organic structures which were regarded as more suitable than mechanistic ones for describing increasingly complex environments. This was because they were less reductionist and more holistic in nature, and they did not prescribe that there was 'one best approach' to organisation; a perspective known as 'contingency' theory (Lawrence and Lorsch, 1967; Lawrence and Dyer, 1983).

This 'new' perspective on organisations developed from the field of human relations and delivered a different and more sophisticated understanding of workplace behaviour and action. Research included Elton Mayo's Hawthorne Studies during the 1920's which were instrumental in bringing attention to the importance of human factors in organisations. Eric Trist and the work of the Tavistock Institute were the first to conceptualise organisations as 'open socio-technical systems'. This was based on the biological concept of open systems described by Ludwig Von Bertalanffy. Systems have been broadly defined as something made up of interrelated elements which have a boundary that separates them from the environment. Open systems recognise that these boundaries are artificial in nature and take into account, unlike closed systems, the interactions between people and their environments. Studies into other areas such as human motivation and personal development were carried out by Abraham Maslow and Chris Argyris, as well as other human behaviourists such as Rensis Likert, Douglas McGregor and Frederick Herzberg (Pugh et al, 1983). These focused on individuals in organisations more than previous studies because problems of efficiency were now perceived to lay in the social order of the workplace. This led to increased intervention by managers who attempted to improve efficiency by addressing the perceived needs of employees. This offered a broader perspective on individuals at work, but it was not concerned with people at a broader level, only as organisational members. This simply resulted in the introduction of standardised social controls instead of standardised technical controls (Perrow, 1979; Monahan, Meyer and Scott, 1994).

During the 1980's and 1990's further organisational structures began to emerge. These reflected the growing trend towards more flexible and adaptive organisational forms that were being discussed in the literature. One example is the 'adhocracy', which involves

the grouping together of individuals with specific skills and knowledge into a project group for a specific task. Once that task was over the group would melt back into their organisation (Buchanan and Boddy, 1992). Morgan (1986) describes 'adhocracies' as being suitable for carrying out change in complex organisations. Another example is the 'matrix' organisation, which is also team oriented and gathers support for its teams from the specialist functions. Again, the focus is on the end-product rather than on the individual contributions made to the process.

It is clear from this discussion that flexibility has increasingly been regarded as a necessary requirement for organisational survival. Due to our growing experience of unstable environments, organisations now need to begin to expect the unexpected (Murdoch, 1995). However, many of these approaches have continued to be deterministic in nature, where the aim is to reduce the uncertainty associated with change through prescriptive planning processes. Attempts to 'control' complexity like this have proved inadequate and have not supported a culture of sustainability. It is in response to this that the evolutionary approach to management has emerged.

2.4. Limitations Of The Evolutionary Approach.

Previous, mechanistic, approaches to management and organisation attempted to reduce variety, either as a goal in itself or in an effort to meet other goals. It was perceived that the goals of economic and social advancement could be best achieved by suppressing variety. However, using the biological analogy, the evolutionary approach to the management of complex systems recognises that variety is valuable because it appears to provide communities with an ability to "*absorb and utilise (or even benefit from) change*" (Holling, 1978), i.e. makes them more resilient. Despite these advances made by the new evolutionary approach, the contribution that it has made with regard to the recognition of variety, and consequently its more human-centred approach, it does have limitations.

In common with much of the management and organisation literature, the main weakness associated with the recent evolutionary material is the 'top-down' approach it takes to the concept of variety. Despite the developments that this literature has made with regard to its recognition of variety, little attempt has been made to articulate what is meant by this in terms of the individual (see below). Consequently, issues of variability in individuals have not been considered in the same way as they have in teams and organisations. As a result, the value of developing individual variety as a way

to build up redundancy (excess capacity) in knowledge and skills, etc. has not been determined.

The concept of variety in organisations was initially discussed at the level of the organisation in terms of diversification and acquisition strategies. Organisations diversify into and acquire or merge with other areas of business in an attempt to ensure corporate security while still trying to gain maximum benefits for the company. This usually involves reorganising available resources into business operations that are "*substantially different from those followed in the past*" (Baynes and Burman, 1971). It is argued that variety makes organisations more resilient and flexible in the face of changing circumstances, thus enabling the maintenance of stability (Ansoff, 1971; Rockwell Jr., 1971). Variety at this level has become an accepted part of an organisation's strategy to encourage and achieve long-term development (Ansoff, 1971; Moss-Kanter, 1989).

Following on, variety has been discussed at team and group level. Teams are assembled with some purpose in mind, namely for the sharing of knowledge, etc. between people who have the same and/or different capabilities. We have teams because we want interaction, but we also want some synergy to arise from this variety. The literature on this subject has shown that teams are an important part of the knowledge accumulation process (Trott, 1993; Gilbert, 1995). Despite the recognition of the dynamics of variety at the organisational and group level, little attention has been paid to issues of variability in individuals.

It has been recognised by a few writers that we will need to exploit and utilise individual variety in the future, but as yet this has not been developed (Espejo and Harnden, 1989). Some attention has been paid to the management of the diversity of individuals in the human resources management literature (Rosen and Lovelace, 1994). However, the concern is primarily with developing programmes for managing the transition of different people, for example from different ethnic backgrounds, into the organisational culture as a result of equal opportunities employment programmes. There is some recognition of the fact that variety is acquired as a result of this (Williams and Green, 1994) but how that may be exploited as a benefit to organisations is not developed. Individuals continue to be addressed as extensions of the formal functions and processes in which they are involved (Sulek and Marucheck, 1994; Berardinelli et al, 1995). Studies have tried to define the personal characteristics of specific functional roles in an attempt to make them transferable to other people via the training mechanism (Johnson and Ma, 1995). However, certain aspects of a person's character cannot be formalised and passed on to other people in this way. Many attributes, particularly

informal ones such as those that relate to perception, are inherently individual and not easily identifiable or transferable.

It can be seen that valuing differences and managing diversity in the workplace is gaining currency in terms of research but is not yet developed. Very often, individuals are only referred to if they occupy senior management positions. Herriot and Pemberton (1995) suggest that, despite the lack of diversity at the senior and board level, that is where they would expect it to be most valuable. As a result, the idea that individuals in non-managerial positions have little to offer beyond their tightly defined role is preserved and variety at the 'lower' hierarchical levels is ignored. This is limiting because it is at these levels that operational activities are most clearly defined. Consequently, operational staff are more able to relate to those activities and to potentially understand how they fit into the functioning of the organisation at the wider strategic level. The value of a strategic understanding of operational work, and vice-versa, in the case study organisation is developed in Chapter Seven.

Despite the lack of understanding about people, claims are still consistently made that organisations will only "*truly excel in the future*" if they "*discover how to tap people's commitment and capacity to learn at all levels*" (Senge, 1990). The top-down approach presented in the literature has made a contribution to the concept of variety in organisations. It has recognised the value of difference at the micro-level and presented a more human-centred approach. However, little has been done to show us what is meant by individual variety, what constitutes it, where it can be utilised, and what could potentially be achieved as a result of it. Consequently, this thesis responds to this deficiency, where the focus is on the contribution that people make as individuals and not as members of teams or organisations. It seeks to identify and provide evidence of the dimensions of difference salient to the individual.

'Knowledge' as one dimension of difference has been identified by Gilbert, Seaton and Cordey-Hayes (1997). They recognise that the way in which knowledge is managed is "*crucial to the innovation process and the ability of the organisation to respond to change*". They present a human-centred approach to the transfer and assimilation of knowledge which they recognise originates with individuals. By harnessing the variety of knowledge owned by individuals, they suggest that managers may be better able to deal with issues of organisational complexity and uncertainty. Two distinct types of knowledge emerge from their research. The first is 'instrumental' knowledge, which is the functional and procedural knowledge that is necessary to be able to do a specific job. The second is 'developmental' knowledge which enhances structural knowledge, is strategic and includes personal development. It is creative and explorative and

incorporates the process of innovation (Gilbert, 1995). This distinction provides a very important development in our understanding of knowledge dynamics. However, it does not appear to take into consideration the value of knowledge acquired outside of organisations which this thesis will show makes a critical contribution to the management of change. Despite this, Gilbert, Seaton and Cordey-Hayes (1997) have begun to unravel the dynamics of knowledge as one dimension of difference between individuals and have shown that it can contribute to improving the management of complexity and uncertainty. There are, however, potentially many others, including; social skills, individual flexibility and personality. These are addressed in Chapters Seven and Eight as a result of the case study carried out in the Commission for Local Administration.

The Commission for Local Administration (CLA) provided the vehicle through which it was possible to identify dimensions of difference. These relate to what are described as attribute sets (see Chapter Eight) which are a typology of individual attributes available for managing future change. Observation of the introduction of a piece of technology into the CLA allowed an examination of the contribution of different individual attributes (knowledge and skills, etc.) to a specific change process. Of particular interest were the informal, externally acquired attributes that appear to remain latent until situations arise that call for their use. It is asserted, based on the biological paradigm, that better utilisation of individual attributes will enable managers to cope with the unexpected (Holling, 1978).

In order for this approach to be relevant, the information requirements must reflect the uncertainty of the environment in which organisations operate and incorporate that uncertainty into its planning process, i.e. it must possess 'requisite variety' (Ashby, 1958). Too rigid a definition of what constitutes appropriate information may result in the loss of adaptive capacity and lead to the reduction of knowledge that is outside of the formal information requirements of organisations.

2.5. Synthesis Of The Work.

It is important to understand when we are talking about variety, why it is a significant route by which organisational adaptive capacity may be developed. It has been suggested that variety at the individual level has been largely ignored. If, instead, it was exploited it could provide managers with the capacity to adapt to the unexpected and thus manage some of the uncertainty associated with change. This thesis is an attempt to find evidence to support this.

There are problems with managing change based on the formal characteristics of organisations, i.e. the structured functional roles. These roles are set up at the inception of the organisation to fulfil its business operations and are essential. However, when addressing change it is often the case that the activities required for dealing with it do not map onto the static functional roles that individuals hold, i.e., the requirements needed to deal with the change are not the same as those supplied by the formal roles which are set up to perform the functions of organisations. However, there are continual attempts to match up these activities through the updating of formal roles.

The role and functions of most organisations are usually very clear and explicit and, uncertainty aside, fulfil the operations and activities of the formal organisation, that is they enable goods to produced and services to be provided. However, we are dealing with uncertain and complex environments where we cannot foresee the future (Stacey, 1992). Consequently, it is the informal attributes (of which one, 'developmental knowledge', was identified by Gilbert, Seaton and Cordey-Hayes, 1997) where the argument for maintaining and expanding variety is made. If we can develop spare capacity (redundancy) within organisations, we will be more able to adapt to the unforeseen futures associated with change. What form that spare capacity takes has not been developed in the literature, however, this thesis begins to theorise on what it might be. That is, people's personal attributes, such as informal knowledge, social skills and individual flexibility which are often developed outside of organisations irrespective of the functional role that a person holds.

If we accept the value of individual attributes we need to look at how managers might identify, (recognise) and assimilate them. This may sometimes be problematic, since it is likely that in some cases individual attributes will remain latent until situations arise that lead to their manifestation. However, once this happens they can be drawn upon to deal with unforeseen change in the same way that managers already draw upon formal attributes. Not all individuals will wish or be able to contribute to the development of redundancy, and managers will need to be able to identify individuals willing to make available their particular attributes and those who are not. The ability to recognise other people's knowledge and skills, etc. and to act upon them is described as an attribute in itself (see Chapters Seven and Eight). The trick will be in managing the balance between individuals who are tightly bound to their role, i.e. they are not willing to contribute to the wider organisation, and those who are more flexible. Having a balance of both types of people is important for two reasons. Firstly, we are not yet sure how different we can afford individuals to be. Secondly, linked to that is the need to ensure that the primary functions of an organisation are carried out. Too much variety could

interfere with that, whilst too little could reduce adaptive capability. The tension between too much and too little variety in a system is something which must be balanced. Too little means that the system will not evolve, whereas too much can lead to a situation where knowledge and ideas, etc. are 'crowded-out', consequently they are not utilised and are often lost because it is too difficult to make any sense of (Stacey, 1995). Variety may also be both expensive and difficult to develop, but it is vital if organisations, through their employees, are to develop the ability to deal with the unexpected as a result of the greater choice it provides.

Organisations are shaped by both their formal and informal component parts. In order to deal with anticipated change, it has been said that we can draw upon formal attributes that have been accumulated and are known about in organisations. These allow us to respond to 'errors' which can be corrected so as to maintain and stabilise the central features of an organisation's theory-in-use such as the bureaucratic and structural conditions that may exist (Argyris and Schon, 1978). This has been described as 'single-loop learning' and involves a short term response to a short term stimulus, where the focus is on solving problems in the present without examining the appropriateness of current learning behaviours. Other labels have been ascribed to single-loop learning, including 'lower level learning' (Fiol and Lyles, 1985) and 'first-order learning' (March, 1981). They describe it as a repetitive, routine incremental process that builds on previous experiences to maintain existing rules (March, 1981; Fiol and Lyles, 1985).

This type of 'learning' may be appropriate for dealing with anticipated change, however, it is understood that much change cannot be anticipated. Consequently, there is a need to improve our ability to adapt to unknown situations. Increasing the variety of individual attributes, particularly informal attributes, provides a significant method of improving organisational adaptive capability. However, because organisations have successfully adapted in the past does not mean that they will be good at it in the future. The ability to adapt in one situation does not have a cumulative value, but it is possible to accumulate value from multiple adaptations. Having drawn upon individual attributes, for example knowledge, to deal with a specific situation, they must be assimilated into the organisation, putting it in a better position to learn in the future. Once attributes become the organisation's property and are consolidated as part of its 'memory', they can then be drawn upon to deal with subsequent situations (Markus and Robey, 1988). Consequently, managers can begin to develop procedures for dealing with future circumstances. Potentially, these procedures then become part of the stabilising response to change (i.e. 'single-loop' learning). However, this does not mean that everything will become formalised and deterministic as a result of this.

From the point of view of this thesis, learning to stabilise involves utilising the formal procedures available to an organisation. Learning to change and adapt involves utilising a broad range of attributes, both formal and informal to deal with situations as they arise. The next stage involves understanding how organisations learn from adapting and how attributes acquired from experiences are assimilated.

The process and ideas described are not dissimilar to double-loop learning (Argyris and Schon, 1978; Gilbert and Seaton and Cordey-Hayes, 1997). Argyris and Schon (1978) recognised that in some cases single-loop learning is not enough and error correction requires an organisational learning cycle in which organisational norms themselves are modified. This involves employees acting as learning agents, responding to changes in the internal and external environment by detecting and correcting errors in an organisation's theory-in-use, and embedding the results of their inquiry in private images and shared maps of the organisation. The target is long term growth and is dependent on altering the behaviour and values of employees.

As with single-loop learning, various labels have been applied to double-loop learning, including 'higher-level learning' (Fiol and Lyles, 1985) and 'second-order learning' (March, 1981). Both of these suggest that if an organisation's real innovative capability is to be improved, the underlying values of individuals must be replaced in order to effect long term change. The emphasis is on continuous experimentation and feedback, i.e. the interaction between people which leads to the emergence of new behaviours, both intended and unintended (Stacey, 1995; Clayton and Radcliffe, 1996). It is characterised by the exploration of alternative routines, rules, goals, etc., rather than simply learning how to perform current routines more efficiently. This suggests that double-loop learning inherently involves changing the structure of organisations since this is largely based on employee behaviour (Child, 1983). Consequently, structures can be shaped, by altering employee behaviour, in a way that is more compatible with the changing environment.

Changing employee behaviour is broadly achieved through the integration of knowledge and other attributes into organisations. At the formal level this involves activities such as training, etc. This is not explored at the informal level but could involve the assimilation of informal individual attributes so that they become the property of the particular institution. Organisations with flexible structures will be able to continually take on board attributes and potentially incorporate them into their changing frameworks. However, expanding or maintaining a range of different individual attributes is useless without attention to the managerial aspects of developing a culture which attends to two things. The first is that individual attributes are allowed to be

developed without an expectation of immediate or obvious return in order to create redundancy. The second is that error-making is accepted as a way to learn. Organisations need to be designed which legitimise some trial-and-error activities because this allows us to design for uncertainty and to obtain benefits from the unexpected. This approach is at the heart of adaptive management which needs to be an "*interactive process using techniques that not only reduce uncertainty but also benefit from it*" (Holling, 1978).

2.6. Conclusions.

Using an analogy taken from the biological sciences, there has been a growing recognition of the value of variety as a basis for developing adaptive capability and for organisations to become more human-centred. This is in response to an increasing acceptance of the complexity of organisations and their environments. However, despite advocating the importance of variety, it is approached from a top-down perspective with no articulation of the individual and little evidence of what the dimensions of difference related to them are.

Figure 2.1. The Development Of Organisational Perspectives.

Framework	Metaphor	Management Perspective	Elements	Objective	Limitations
Mechanistic	Machine	Taylorism/ Fordism (1920's): focus on efficiency	-Rules -Procedures -Prediction -Maximisation	-Remove complexity through tight controls.	-Prescriptive in nature -No consideration of human element
Deterministic (technical perspective)	Machine/ Organic	Human Relations (1920's) / Post-Human Relations (up to present): culture/conditions /technology/ efficiency	-Prediction -Optimisation -Prescriptive -Flexibility engendered via contingency approach.	-Increase status/ conditions of employees. -More holistic approach.	-Deterministic in nature despite new focus on increasing flexibility
Evolutionary	Organic/ Network	Complex Systems Management	-Human element -Emergence -Creativity -Adaptation	-Use of biological analogy: recognition of variety as basis for adaptivity/ sustainability	-Takes a top-down approach to variety with no articulation of the individual -Provides no evidence of what constitutes variety

(developed from Jeffrey, 1992 and Morgan, 1986).

The figure above summarises both the past and current organisational perspectives described in this chapter. It charts the different forms of organisation that have evolved during the last century, highlighting a growing recognition of the need to develop more flexible structures. This thesis develops this model further through an improved insight into the dimensions of individual difference. A provisional understanding of differences between people, how these relate to individual attributes, and how they contribute to the change process is obtained through an exploratory study which is described in the next chapter.

Chapter Three: Towards an Understanding of Individual Attributes.

"***First .....experiences usually reveal fascinating questions***". (Marshall and Rossman, 1989).

3.1. Introduction.

The last chapter has highlighted a growing recognition of the value of variety as a basis for developing adaptive capability and the need for organisations to become more human-centred. In spite of this the concept of variety has been approached from a top-down perspective with limited articulation of the individual and little evidence of what the dimensions of difference related to individuals are.

This chapter describes individual attributes, their significance and how they will be represented in the thesis. A provisional typology of individual attributes is presented at the end of this chapter. This is based on what has been said, or rather not been said, about individuals in the literature. This includes a small part of the social theory literature. In particular the work of Law (1994) is referenced because of the original way in which he addresses the methods by which people and materials are constructed and ordered in organisations. The typology is also expanded through a discrete, exploratory piece of work which seeks to identify individual attributes in a particular organisation.

3.2. Defining Individual Attributes.

Change is initiated through certain individuals within organisations and, consequently, is dependent upon them (Trott, 1993). Despite this people are generally regarded as passive objects as a result of the tendency to describe 'agency' and structure together as 'the organisation' (Law, 1994). One reason for this is perhaps because it is not easy to explain the actions of a free individual (Lagerspetz, 1984). However, attempts to describe the larger phenomena of organisations means that inadequate attention has been paid to the individual (King, 1989). Consequently, it is argued that simply describing organisations does not explain the behaviour of those individuals that comprise and drive them (Law, 1994).

There are obvious and self-evident differences between individuals that are important in the workplace, including knowledge, skills, attitudes and experiences, etc. These are described as attributes and this thesis is concerned with the effect of these differences on the process of change. Therefore, the aim is to identify dimensions of difference relevant to individuals and to develop a system for classifying them (Law, 1994). The identification and assimilation of attributes will have the potential to improve the management of specific change programmes as a result of the adaptive capability they provide.

As managers of organisations respond to legal requirements to employ minority groups, the variety of attributes will expand. A combination of genders and different cultures will provide the basis for the development of a greater range of skills and knowledge, etc. However, this thesis is concerned with the benefits of variety on a broader level. All people in organisations have attributes which have the potential to contribute to the development of adaptivity. Individual attributes are divided into two distinct categories, formal and informal. Formal attributes are essential because they enable individuals to carry out their job function, i.e. knowledge and skills that relate to tasks. They are identified in job descriptions and are usually procedural. Informal attributes are the highly personal and subjective qualities of individuals that are described as being a part of their character and personality. The following sections describe formal and informal individual attributes in more detail.

3.2.1. Formal individual attributes.

Formal individual attributes refer to the deliberate attempts by managers to acquire information, skills and knowledge, etc., through job descriptions, employment policies and training (Trott, 1993). They refer to the 'facts and figures' that people must know about and include procedural activities such as 'word processing', etc. They also include non-procedural activities such as 'report writing', although it is likely that even these will become so after time as a result of company standards. On the whole, people can be trained and developed towards the acquisition of formal attributes that employees take on board in order to 'fit in' with the way individual organisations operate, consequently, there will be a large number of shared attributes (Montgomery, 1996). However, it is likely that people will use 'common' knowledge and experiences in novel ways because people are disposed to react in different ways to the same stimulus (Swan, 1995; Jeffrey and Lemon, 1996) (see Section 3.7).

3.2.2. Informal individual attributes.

Informal attributes refer to the very 'human' aspects of individuals, consequently they are highly subjective and difficult to identify. They include, personal knowledge, social skills, individual flexibility and other intimate characteristics that are not specified by organisations. For example, informal scanning is not specified on job descriptions, but as a result of personal interest in a particular activity, external information may be transferred into the workplace. This provides a latent source of attributes, not consciously acquired by managers, that may be drawn upon if required to deal with future change.

It is hard to define and often impossible to identify how attributes of this nature are acquired. Informal attributes are a combination of what is learned explicitly and absorbed implicitly and consist of individual "*mental models, beliefs, and perspectives*" that are so fundamental to people that we take them for granted (Nonaka, 1991). Consequently, they are not easily articulated and are difficult to share with others (Nonaka, 1991; Kim, 1993). However, it is clear that informal and intuitive attributes exist within our conscious and unconscious minds which have great potential value to the workplace (Linstone et al, 1981).

In addition to the attributes outlined above, a further type has been identified. These are described as emergent because they cannot be anticipted. Emergence may also mean that attributes occur out of the interaction of other attributes, consequently, they may consist of both formally and informally acquired attributes.

3.2.3. Emergent individual attributes.

Emergence is not well defined, since by its very nature it does not lend itself easily to definition (King, 1989). For the purpose of this thesis, emergent attributes refer to those which emanate from attributes that people acquire and develop both formally and informally. They relate to the "*rich pattern of interactions*" between individuals in organisations and across their boundaries that lead to the creation of new behaviour and attributes (Stacey, 1995). This is done by building on and developing attributes that already exist which interact and lead to the emergence of new ones, i.e. it is a cumulative process. Consequently, emergent attributes will be unknown or undeveloped and remain latent until 'unforeseen futures' trigger their manifestation. It is emergent attributes that lie at the core of the adaptive-learning organisation.

3.3. Variety: A Range Of Different Individual Attributes.

Chapter Two described variety in this thesis as relating, very simply, to the differences that exist between people and the attributes they possess. People are

"*capable of learning a virtually infinite variety of things, under a very large number of different conditions*" (Tulving, 1984).

The variety of attributes is a result of the different interpretations that people place on information based on their different backgrounds, education, social experiences, hobbies, abilities, etc. This large variability creates redundancy, that is, a rich reserve of attributes, that will hopefully coincide with future uncertainties. However, managers must acknowledge and respect both the bearers of this knowledge and the meanings that they give to it for it to be useful. It is the acquisition and assimilation of a range of individual attributes at all organisational levels that link it with adaptive capability. It is recognised that there are problems utilising human potential due to its often very subjective and personal nature. Consequently, it may be difficult for managers to identify and use attributes. This may be due to the inability or willingness of both managers to recognise useful qualities, and employees to make them available. The latter being dependent on managers generating a culture in which people feel 'safe' enough to offer skills or contribute ideas, etc.

Different types of change will require different attributes, consequently, maintaining a range of them is necessary. It is not expected that it is possible to develop or recognise an infinite number of attributes. This may be a result of their emergent nature, but also because not all individuals will be prepared to make available their attributes in the first place. However, if there is sufficient range and variability managers will be better able to deal with unforeseen futures brought about by change even if they are not aware of how they do it.

In order to expand and qualify the arguments that have been made about individual attributes an exploratory piece of work was carried out. This study was a component of a university contract, part of which referred to the introduction of a specific technical change. The study served as an opportunity to test some initial research ideas and provided a good method for beginning to understand the role of individual attributes and how variety in them contributes to the development of organisational adaptivity.

3.4. The Exploratory Phase Organisation.

This exploratory study took place within a major high street bank in a large town in Northamptonshire. This was a large branch and was regarded by the bank as being located in a good position for passing customers. It had approximately 100 staff working both full and part time which was equivalent to 70 full time workers. 30% of employees worked in the front office and 70% in the back office. The front office dealt with the provision of services to customers and the back office provided support for those activities. With regard to customer numbers, the bank had 12,300 prime current interest bearing accounts, where one person may have more than one account, for example, a normal account and a savings account. In addition it held 3000 business accounts. The branch provided many products other than the traditional banking (deposits and withdrawals) services. These included endowment mortgage policies, pensions, share sales and saving plans including personal equity plans and unit trusts.

3.5. Background To The Exploratory Project.

The contract, to which this study was related, involved the modelling of front office behaviour through the identification of routine activities. The bank had recently been modernised and included a brand new layout and therefore changes in front office behaviour such as queuing times and the altered activities of front office staff were expected. This information would be collected by examining banking documentation and through observation and simple counting techniques. Security cameras provided a useful and unobtrusive method for this particularly as they had in-built timing devices.

The front office included a reception area where machines for the withdrawal and depositing of money were located. The aim was to make these machines easily accessible to customers in order to encourage more use of them. This was an attempt to reduce the queues at the counters and improve customer service. Also located in this area was the foreign exchange service and the counselling services where items such as mortgages and insurance were for sale. To the rear of the front office was a counter with four cashier windows. These were difficult to access because this interactive form of business was being discouraged in favour of the use of machines. This was in fact confirmed by senior managers in the bank.

The modelling of the front office behaviour was carried out in order to measure transaction timings and to evaluate the ergonomics of the new layout. This was part of a bigger organisational objective to improve customer service. Increasingly the focus was

on improving front office customer service and sales activities rather than the traditional back office processing activities whilst at the same time continuing to provide the necessary service to its business and other customers. This move was in response to the general increase in competition within the financial sector (Scarborough, 1992).

Changes in the front office operations included the introduction of a computerised customer information system. The introduction of this piece of technology provided the context for examining the value of individual attributes. The system was a way of storing as much information as possible about customers in order to develop profiles on each of them. The purpose of these was to enable tailored services to be provided for individual customers. The overall strategic objective of the bank was to keep hold of existing customers and to encourage new customers. The provision of better customer service would have advantages for both the customer and the bank by improving business through the better targeting of customer needs.

Each of the changes taking place would have implications for the staff. For example, there would be changes in the types of skills that people would need which would have ramifications for training. The bank would need to allocate some time in order to address anticipated training needs.

3.6. Implementation Of The Exploratory Phase.

As the study formed part of a university contract, physical access for the researcher was not negotiated on an individual basis, but formed part of a larger agreement. However, it was the responsibility of the researcher to make sure that she was accepted by the staff, particularly those who were to be interviewed. This was achieved by making sure that people were aware of the project, what its purposes were, who would benefit from it, and that all material was completely confidential. The expression that 'honesty is the best policy' was constantly re-affirmed. By answering employees questions about the project truthfully meant that everyone had the same information and trust was achieved.

Semi-structured interviews were carried out with nineteen employees from a cross-section of the exploratory organisation. Careful piloting of the interview questions was undertaken on two groups of people, members of the exploratory organisation and colleagues within the university department. Each interview lasted about thirty minutes. Semi-structured interviews were chosen as a suitable way of collecting data because they enable the exploration of similar issues with different people resulting in a variety

of responses (Young and Mills, 1980). The questions in the interview schedule were organised into three areas, these were:

1. individuals perception of themselves related to the specific change.
2. individuals related to training.
3. individuals outside activities and interests.

The questions were designed to elicit information about how individuals are different despite the tendency of organisations to absorb these differences through training, etc. (Law, 1994). Responses to the questions were recorded manually using a personalised form of shorthand. The data was analysed for activities and processes that referred to individuals which was regarded as an appropriate technique for examining the events being studied. This method allowed the identification of key themes which reflected the perceptions that individuals had about the change in progress. This then allowed inferences to be made about people, their differences and the value of this to the bank, thus providing the beginnings of a typology of individual attributes.

The rest of this chapter describes the research activity undertaken in the exploratory phase. It provides the context for the interview questions that were asked and the analysis of the responses which led to the development of the research objectives for the main study.

3.7. A Recognition Of Individuality: Towards Research Objective One.

We often talk about 'the organisation' as an entity with decision making and learning capabilities. Law (1994) questions whether structures are active agents in their own rights or whether they are acted upon. It may seem clear that organisations do not learn but that they provide the structure in which learning can take place and that this learning is the responsibility of the individuals that comprise them, who act on the information, etc., that they have. However, there is the tendency to impersonalise individuals in favour of 'the organisation'. One reason for this may be based around the so-called "*historical facts*" (Law, 1994) that circulate within an organisation. These 'facts' comprise the stories that people create in order to make sense of their situation and their worlds, they are a way of ordering the complexity of our surroundings. What seems to transform them into 'facts' is that they appear to be 'shared' (Law, 1994). It is argued that they do not have the same significance for every individual in an organisation, that they are not equally distributed and that they may be challenged (Orr, 1990; Law, 1994).

However, such a common sharing of information gives the appearance of a "*bedrock of 'facts'*" since they are rarely contested even if they are questioned.

This argument and the evidence collected from the exploratory study provides the basis for the first research objective. As mentioned earlier, the managers of the bank had been striving to improve customer service. This included the introduction of a computerised customer information system in an effort to create a more customer focused environment. There had been numerous meetings and memos and a statement of intent with respect to customer service had been announced. In response to this the interviewees were asked to '*characterise what customer service was to them*' (interview question one). All of the interviewees had witnessed the introduction of the customer service drive and so were able to make some comment on this issue. In response to the question many common words and phrases were used by all of the respondents. Their interpretation of customer service included the following responses (where int/ee refers to interviewee),

"*Answering problems and queries from customers..... promptly.*" (int/ee1)
"*Getting to know your customer.*" (int/ee3)
"*Perception of customer accounts and what they need.*" (int/ee4)
"*Being polite and efficient.*" (int/ee7)
"*Provide the service that the customer wants, when they want it, not when we think they want it.*" (int/ee12)
"*Acting promptly in response to customer needs.*" (int/ee14)
"*Quick, efficient and friendly service.*" (int/ee17)

It is clear that there were many shared ideas and perceptions of customer service among the respondents. This is not surprising since a lot of time, money and energy had been spent diffusing 'facts' to employees about what constitutes customer service. As suggested earlier, knowledge and skills will not be distributed uniformly throughout an organisation (Orr, 1990) because people are different. What people know or what they learn is based upon their individual capacity to acquire, for example, the necessary knowledge and skills to deliver customer service (Middleton and Edwards, 1990). It is the differences between individual capacities that are of interest.

In talking about individuals and their differences it is important to begin to understand what is meant by this and what specifically makes them different. Law (1994) suggests that it is possibly a question of personalities, i.e. the character or nature of a person, and provides an example,

"*They say that a good manager is active, resourceful, and creative- a mover and a shaker rather than a passive paper-pusher.*" (Law, 1994).

It seems clear therefore, that people have different attributes based upon their experiences, background and competencies, etc. This makes them different in the way that they perceive phenomenon and their capacity to deal with change (Thompson, 1993; Ferris, 1991). In order to illustrate this, individuals were asked a more personal question '*how could <u>your</u> contribution to customer service be improved*?' (interview question two). Where there had been much common ground in the answers to the first question, here there were signs of divergence in the responses because people had to think about what they as individuals would contribute. Answers included,

"*Keep up-to-date with products and services so that I don't keep the customer waiting.*" (int/ee1)
"*If I can't help them I want to be able to send them to the first person who can.*" (int/ee2)
"*There is good service here anyway.*" (int/ee6)
"*I am always trying to improve service by thinking of other things.*" (int/ee8)
"*(There is) still a lot of work in developing and identifying customer need.*" (int/ee11)

There are two responses that actually directly contradict each other:

"*(I could improve customer service) by concentrating more on 'P'.*" (int/ee13) (where 'P' is the philosophy of customer service at the exploratory study organisation.)
"*It is down to the individual and their standards and attitudes..... rather than the philosophy of 'P'. People are either that way or not.*" (int/ee14)

The different views held here can be related to the respondents role in an organisation, their capabilities and experiences, knowledge and skills, etc. which all form the basis for their individual attributes. Interviewee 13, a data processing clerk, was probably more functionally defined than interviewee 14, a business development and student advisor. The latter would probably have greater flexibility in their role which may provide them with the ability to contribute more easily to their job above and beyond their actual role, intentionally or otherwise.

There was evidence of some constraints on individuals developing themselves with regard to customer service, but for bureaucratic and legal reasons these were beyond the control of individuals (int/ee16, int/ee17). Due to the nature of the business this might not be considered unreasonable. However, individual development was not regarded as

always being subject to such obvious constraints. This is taken up in the second research issue (3.8).

As the data and the literature show, there is evidence for the qualitative difference between individuals, i.e. there is variety (Leavitt, 1968). Individuals act as characters of "agency", i.e. they are the vehicle through which things get done (Law, 1994). The way in which people achieve things, and the success of the achievements is dependent on their individuals capabilities and attributes. Therefore it is not surprising that individuals would perceive and deal with change in different ways despite attempts to fit people into tight organisational structures.

A variety of individual attributes provides more varied and perhaps innovative interpretation of information and has an active role to play in the development of more adaptive organisations. However, it would appear that managers ignore this difference, or do not utilise it, and assimilate individuals into 'the organisation' whose attributes are then 'lost'. There is a tendency to absorb the individual and their personality into the organisational structure. 'Stronger' individuals may have the ability to deny total surrender of their agency to 'the organisation', whilst the more 'passive' seem to relinquish themselves (Law, 1994). Stronger and weaker individuals may refer to or be dependent on the role that they play. People in more strategic roles may have the flexibility to develop themselves in order to maintain their individuality within an organisational structure.

One way in which organisational structures are able to assimilate individuals is through formal training programmes. Individuals are recruited and then 'inducted' so that they might 'fit' into the existing structure (Huda, 1992; Montgomery, 1996). This is not to dispute the quality of these training programmes which is addressed in the next research issue (3.8) but to question whether managers are aware of the value of individual attributes. This leads to the generation of the first research objective for the main case study.

Research Objective One.

1. To elicit and understand better the nature of the attributes that individuals possess within a specific context of change.

3.8. Training And Development: Towards Research Objective Two.

Summarising the argument so far we can see that individuals appear to assimilate facts that are dispersed around organisations, however, these are not uniformly assimilated due to differing individual capabilities and perceptions. Managers do not appear to recognise the potential value of this and therefore do not utilise this difference. Instead individuals are absorbed and lost. In order to understand why this happens and why managers should be valuing this difference we need to start looking at ways of recognising it.

One way in which facts are diffused is through formal training. Training is a method for passing on the tools necessary for carrying out specific activities and each organisation will have particular ways of doing this. The next question refers to the training that the exploratory organisation provides for its employees and whether this training enables them to do their job better. It asks '*does the training that you receive enhance your ability to do your job*?' (interview question three). The respondents answered this question both with reference to the customer service programme and more generally.

"*I have had lots of training on specific things to do with my job such as spotting difficult accounts.*" (int/ee2)
"*The branch assesses your role in the future and sends you on appropriate courses.*" (int/ee4)
"*Yes, the training that I have been on has been of a high quality.*" (int/ee14)

It is recognised that formal training is important in that it provides people with the necessary skills and knowledge to carry out their jobs. Increasing skills levels through formal training is an obvious method for improving production rates. This highlights the importance of developing formal individual attributes. However, there were signs of dissatisfaction with the nature of the formal training that the bank provided, indicating some of its limitations,

"*Maybe the training doesn't go far enough.*" (int/ee2)
"*I believe that on-job shadowing is more important than a formal training course.*" (int/ee3)
"*Experience, shadowing and watching has taught me just as much as formal training.*" (int/ee18)

If organisations are to increase the range of attributes available to them, in order to improve adaptivity, then they must also recognise the value of informal attributes. On-the-job shadowing was regarded as a more informal way of training than for example. a formally structured course. It enabled people to watch the way activities were carried out and then try it for themselves. Consequently, the skills of those that were being shadowed were passed on to those doing the shadowing. There was no way of identifying if the skills that were being passed on were those that had been formally acquired or had been informally adapted to 'fit' the job better. There appeared to be no policy for monitoring this process by the bank. However, if it was the case that people were adapting the formal training they had received then this was one way in which informal attributes could be taken advantage of. It also highlights that formal training is limited in providing the skills necessary for carrying out work activities. In light of this, there is a need to acquire these skills, and other attributes, in other ways. One way is to recognise and value the attributes that people bring from outside of their workplace. Individual attributes may be transferred into organisations as a result of the synthesis between attributes acquired formally at work and those acquired as the result of personal experiences. Evidence that formal training provided by the bank was of value to the individual outside their place of work is also provided,

"*The skills I have learnt have been a good grounding not just for banking but for everyday life.*" (int/ee1)

Interview question three also highlighted some difficulty with getting onto training courses (int/ee7). On the whole those that had got onto training courses perceived them to be of a good quality and that they did enable them to do their job better. However, the question why other people found it difficult getting onto training courses arises. This situation indicates that there was competition for the courses and thus people were being restricted in their attempts to develop themselves. If this was the case, then there will be implications in terms of the constraints that are being placed on developing the range of attributes in organisations.

In looking at this idea further the interviewees were asked '*are you encouraged to take up the various training options that are available to you*?' (interview question four). This question referred to training more generally, rather than that specifically associated with customer service, and aimed to identify whether individuals were encouraged to try and do their job better by their managers.

Half of the respondents felt that they were not being encouraged by their managers to take up training options (int/ee12). The others that felt they were, described their

experiences in different ways. Sometimes their managers assessed their role and then sent them on appropriate courses, often with very little choice (int/ee4, int/ee8 and int/ee9). 'Appropriate' referred to the skills, etc. that 'the bank' perceived were necessary for a persons role rather than the individual concerned. On other occasions managers would both formally and informally suggest that people went on courses. Otherwise you sought out the opportunities yourself and then got agreement from your manager (int/ee14). Annual reviews also provided opportunities for managers to ask what training individuals would like and for them to identify what was available (int/ee18). So, although half of the respondents identified that they were encouraged to take up training options, some of the respondents explained that they were actually sent on them and had little choice in the matter (int/ee8 and int/ee9). This did not indicate real support even for the half that perceived that they were being encouraged to take up training options. The example described here highlights attributes relating to the ability to search for information, the willingness to ask for training and the nature of managerial response.

The reasons for the relatively low levels of encouragement are not explored in this study. Longhurst (1995) suggests that if managers do not understand the day-to-day activities of employees then they cannot understand the training requirements necessary to improve those activities. As a result individuals are often sent on inappropriate training courses. These are generally ineffective since individuals cannot identify their relevance with respect to their role. Even if a number of skills, etc. are picked up, they are often quickly lost if they are not utilised once back in the work environment.

It would seem that there is not a malicious attempt to prevent people from joining training programmes. However, they are not widely advocated unless they relate directly to a specific activity or role. There is no value placed on the skills and knowledge people may acquire as the result of experiencing something indirectly related to their role. Such activities give people the chance of developing attributes which have the potential to contribute to organisations in ways that cannot be anticipated.

From a strategic perspective, it is questionable whether it is worth spending money on further training if an individual is successfully fulfilling the role that they were hired to do. There is only so much latitude that managers can give to allow individuals to develop themselves. This aspect of the study is followed up in the main case study in the Commission for Local Administration (CLA) which argues that individual attributes may not be acquired through identifiable activities. Instead, they may be the result of indistinguishable behaviour that is not even perceived by the owner of the attributes.

The fairly low levels of encouragement identified in the exploratory organisation suggest that managers in this instance are not aware of the value of the individuals attributes which can developed through formal training. Consequently, they are also likely to be unaware of the informal attributes that individuals develop both within and external to the bank. It would appear that people are generally aware of their current and potential capabilities which are, in the main, not exploited by their managers. This is evidenced in the exploratory organisation by the majority of the respondents who responded positively to the question '*do you want to develop yourself through additional training*?' (interview question five). Even though half of the respondents felt that they were encouraged to take up training opportunities, nearly all the interviewees wanted to develop either the job they were in or another job through additional training. The following responses identify the ways in which people wanted to develop.

"*I would like to progress as a counsellor.*" (int/ee4)
"*I would like to develop my knowledge of the new systems as they come in.*" (int/ee7)
"*I want to develop a whole rounded experience of the banking functions.*" (int/ee13)
"*I would like to develop my marketing skills so that I can take that particular aspect of my job further.*" (int/ee14)
"*I would like more product knowledge.*" (int/ee17)
"*I want and am getting training on lending and management.*" (int/ee19)

This indicates that individuals, despite the lack of encouragement, are interested in developing their role. They actively seek to develop themselves, resulting in an expansion of their attributes, which leads to the creation of adaptive capability. Often people look to do this beyond their established job function. However, interviewees listed a number of constraints that prevented them from doing this when they were asked if there were '*other issues that prevent you from doing your job more effectively*?' (interview question six). Only one person felt that they were not constrained. Another person said that they could not identify any barriers but that they felt that this was perhaps due to the nature of their job which was 'general duties' in which they felt they were "*given leeway to do the job as you see fit.*" (int/ee10). The other interviewees identified a number of items which they felt inhibited them from doing their job more effectively. These included technical issues such as not having enough tills during busy times (int/ee15), staff shortages (int/ee1, int/ee6, int/ee9), not being able to find files, etc. (int/ee17), and the lack of space (int/ee12). They also included problems of time and not being able to "*fit in everything that you might want to*" (int/ee2, int/ee17, int/ee19). Finally, "*interference from management*" (int/ee6) was cited as something that prevented people from doing their job more effectively. People felt that they did not have enough decision making responsibility or individual discretion and so had to seek

out management approval and signatures for even the most basic of things. This indicates that perceived flexibility within roles was fairly low.

This issue is pursued in the main case study in the CLA where questions relating to the constraints of job function and the contribution that individuals make to other areas of business are addressed.

It has been shown, both in this and the last section, that individuals acquire personal attributes, both formal and informal, from formal training programmes provided by organisations. Attributes may also be attained through various external activities. However, managers at the bank did not appear to recognise their value as is evidenced by the perceived lack of encouragement of individuals to develop themselves. Consequently, in more general terms we need an improved understanding about why certain types of attributes are undervalued and if they are viewed as constraints by organisations. This leads to the second research objective for the main case study which serves to test the aim of the thesis, i.e. whether expanding and maintaining the range of individual attributes in organisations improves adaptive capability.

Research Objective Two.
2. To assess how individual attributes constrain or contribute to the knowledge accumulation processes within organisations.

3.9. Outside Interests: Towards Research Objective Three

This section develops ideas from the last research issue, specifically the enthusiasm of individuals to develop themselves. It was indicated that individuals were keen to do this despite a lack of encouragement from their managers. To get a sense of this individuals were asked about their activities external to the bank. The main case study will show how valuable attributes that are developed as a result of external activities are to organisations (see chapter nine). The respondents in the exploratory organisation were asked '*have you attended any courses that have not been run by this organisation in the last two years*?' (interview question seven). Half of the sample had attended external courses in order to try and develop themselves. These courses included banking and business to help them with their work. They also included 'semi' work oriented

activities, for example one person was doing an 'A' Level course in mathematics at night school. Other external activities included those items which are usually regarded as 'hobbies'. For example, "*learning to fly*" (int/ee2). This has no direct relevance to a career in banking. However, it is reasonable to suppose that learning to fly could engender increased confidence, better accuracy and improved concentration, etc. which could potentially contribute to the way in which that person carried out her job. It is interesting to note that of those people who had attended external courses, two-thirds of them felt that they were encouraged to take up training opportunities at work.

It would appear that external activities have the potential to develop attributes within people which may be of value to organisations. The main case study will show that these are not just obtained through training and courses but from a whole range of informal activities such as reading and computer game playing. However, the point is that any activity, whether formal or informal, internal or external has the potential to equip people with skills that are transferable in some form to the needs of an organisation. As a brief follow up question, respondents were asked if they '*intended to take up any external courses over the next few years*?' (interview question eight). Three-quarters of the interviewees did intend to take up something or to continue with what they were already doing. Of those interviewees who had not done an external course during the last two years roughly half intended to try something in the future. Highlighting once again that people are keen to develop themselves, either inside or outside of their place of work. The important point is that attributes that are acquired externally have the potential to make a contribution and be of value. The provision of a greater range of attributes furnishes greater choice when dealing with unforeseen situations, thus improving organisational adaptive capability.

Both the literature and the research activity carried out in the exploratory organisation have begun to identify individual attributes. The value of these will be explored in the main case study within a framework for identifying 'types' of attributes that should be present when introducing change, specifically of a technical nature. This leads to the generation of the third research objective. The identification of attributes will enable the development of a typology that can be used as a basis for anticipating specific requirements for dealing with future technical change.

Research Objective Three.

3. To develop a typology of individual attributes as a basis for anticipating requirements for future change (adaptive capacity).

The research objectives identified in this chapter will be explored through further examination of the literature and, as specified earlier, through the undertaking of a case study at the Commission for Local Administration. This provides the means for observing another technological implementation, but in much more detail, which serves as a specific example of organisational change. This will enable further comments to be made about the potential contribution that a variety of individual attributes can make to an organisations adaptive capability.

3.10. Development Of An Analytical Framework And Conclusions.

In order to organise the data collected in this exploratory phase, the interview questions were split into three main areas that were perceived to relate to individual attributes (sections 3.7, 3.8 and 3.9):

- **Recognition of individuality:** provides the basis for recognising individual attributes.

- **Training and development:** the individual and role definition.

- **Outside interests:** the transfer of informal, knowledge and skills into organisations.

Discussion of these three themes resulted in the development of the research objectives for the main case study. They also provided a way of organising the data that led to the development of the provisional typology (see figure 3.1). The first theme sought to assess the view of people as individuals in organisations. It suggested that, despite the tendency to view people and structure as 'the organisation', people view their workplace and operate in it in different ways. This in itself is obvious, and the point has been made in the literature that individual differences are important particularly with regard to managing change (Stacey, 1995). However, the way in which they may be useful has not been identified. 'Recognition of the individual' is not an attribute in itself, but it

does lead us to question what specifically about individual difference is important within the context of organisational change. The second and third themes, 'training and development' and 'outside interests' refer to human activities identified in the exploratory study. In themselves, these themes are not attributes, though they may be described as groups or sets of attributes. That is because from each theme attributes relating specifically to individuals can be identified, for example, the acquisition of improved mathematical skills as the result of an interest pursued outside of the bank. The italicised comments in columns two and three of the table were not explicitly identified in the exploratory study. They were, however, considered worth noting because it is expected that they would have been more clearly expressed if the study had been more in-depth. It is anticipated that they will be identified in the CLA.

Consequently, the beginnings of a classificatory system for individual attributes is presented. This initial typology provides the framework for the organisation and analysis of the data collected in the CLA. As a result of these activities the typology will be built upon and amended in Chapter Eight.

Figure 3.1. Towards A Typology Of Individual Attributes: Based On The Literature And Exploratory Data.

Themes identified in literature/exploratory data (attribute sets)	Represented as	Nature of attributes (examples)	Where in text	Summary of research objective
Recognition of individuality	- individual differences (Leavitt, 1968; Law, 1994) relating to both task (formal) and non-task (informal) activities.	- levels of individual flexibility. - levels of individual abilities.	(3.7) - int/ee14	***1. To elicit and understand better the nature of the attributes that individuals possess within a specific context of change.***
Training and development	- formal attributes of the job description. - formal attributes acquired as the result of training and development. *- informal attributes of the job, e.g. position in the information chain or role as information gatekeeper (Trott, 1993).*	- individual flexibility. - ability to search for information. - willingness to search for information. - ability to acquire role skills and knowledge, etc.	(3.8) - int/ee7/18 - int/ee2 - int/ee6 - int/ee12	***2. To assess how individual attributes constrain or contribute to the knowledge accumulation processes within organisations.***
Outside interests	- personal knowledge/ skills developed as the result of hobbies and experiences. *- the attributes of an individual's personality, i.e. the psychological aspects of the person.*	- improved mathematical skills as result of night class. - learning to fly may result in (non obvious) the development of skills, etc. that are transferable and useful.	(3.9) - int/ee2	***3. To develop a typology of individual attributes as a basis for anticipating requirements for future change (adaptive capacity).***

The main case study will examine whether qualitative difference is valued by managers. In particular, if there is a desire to establish a range of attributes, acquired externally, that were felt to contribute to the individuals work and/or to the functioning of the workplace in a broader sense. It would appear from the literature that managers do not value difference, in fact they tend to 'absorb' it so that it is 'lost' (Law, 1994). However, managers need to recognise, accept, assimilate and utilise individual difference. The degree to which they do this may be an indicator of the ability of 'the organisation' to adapt to unexpected futures.

As a result of the combination of the literature and analysis of the data collected in the exploratory phase it has been possible to begin to recognise the nature of different individual attributes. As a result of the small scale of this initial study, useful but limited insights have been provided into how the technical change was managed and how individual difference contributed to the process. The next chapter introduces the way in which the fieldwork activity in the CLA was designed. It will identify what a more in-depth study needs to take into consideration in order that we may better understand how a variety of individual attributes can contribute to the change process.

Chapter Four: The Research Design.

"*Like life, research is the outcome of interaction.*" (Law, 1994).

4.1. Introduction.

The last chapter began to identify the nature of individual attributes through the recognition of qualitative difference. This variety has the potential to help managers to manage the process of change more adaptively. However, this capability has not been considered in previous research.

This chapter provides the methodological framework for understanding how individual attributes can contribute to managing the process of technical change. The research design is the vehicle by which the aim and the objectives of the research (see 4.2) may be achieved. The aim and objectives provide an indication of the techniques needed to collect and analyse the data so that conclusions may be drawn (Goode and Hatt, 1952; Yin, 1989). Thus, the qualitative approach and the techniques used to investigate variety and its contribution to adaptivity are presented.

4.2. Summary Of The Research Aim And Objectives.

Aim:
To explore the value of maintaining and expanding a variety of individual attributes as the basis for improving organisational adaptive capability. Thus addressing the gap in the literature, i.e. the lack of reference to the individual and their attributes within the change process.

Objectives:

1. To elicit and understand better the nature of the attributes that individuals possess within a specific context of change.

2. To assess how individual attributes constrain or contribute to the knowledge accumulation processes within organisations.

3. To develop a typology of individual attributes as a basis for anticipating requirements for future technical change (adaptive capacity).

4.3. Methodology Adopted.

This study will employ a qualitative set of techniques for data collection and analysis. Such a method is regarded as being appropriate for a piece of work exploring the phenomenon of change. The phenomenological approach to qualitative research is one way of examining social phenomena. It is primarily concerned with the perception of individual actors, which is based upon their individual experiences (Bryman, 1988). Such an approach will enable the research to:

- focus on meanings.
- try to understand what is happening, with regard to the change being observed.
- look at the totality of each situation, to get a broad picture, in order to,
- develop ideas through induction from data. The thesis is, however, directed in its search for data by the analysis of the literature and exploratory field phase. Thus there will be a deductive element to the work in terms of testing the informal propositions that have been set up (Bryman, 1988).

Research of this nature has a number of key characteristics which make it different to doing quantitative research. However, such an approach is not regarded as an appropriate method for researching people and change because of its experimental nature. This is not to suggest that quantitative research is all laboratory-based, but that a qualitative approach is more committed to the collection and analysis of 'naturally-occurring' data (Lee et al, 1992). This is important because such techniques imply that

"*systematic inquiry must occur in a natural setting rather than an artificially constrained one such as an experiment.*" (Silverman, 1993).

Qualitative research is characterised by:

- **description/context-** of what is viewed and the context of the setting in which it is viewed in order to understand events within their environment (Murdoch, 1995). Describing the situation helps the researcher establish what to look for since prior to the fieldwork it is not possible to identify more than what is of interest.

- **process-** such an element is implicit when the research is concerned with 'how' change happens and the implications of the unintended consequences associated with it.

- **flexible structure-** observing social phenomenon "*through the eyes*" of the individuals concerned must involve a loosely structured method for the research in order that inappropriate frameworks may be avoided (Bryman, 1988).

This research design has been developed in order to satisfy this particular theoretical approach and to enable the researcher to gather the information required in order to improve understanding of the issues involved.

Such an approach must also communicate the interactive nature of the process of research as well as showing by what method the substantive nature of the work, i.e. individual attributes, can be recognised. In order to study these issues it is argued that a variety of data collection techniques will provide the most appropriate framework. This will allow different views of the change to be established. The techniques chosen for eliciting such data (see section 4.6) will be operationalised within a single case study organisation in order to see what variety of individual attributes contribute to the implementation of a specific technical change.

4.4. Choice Of Single Case Organisation.

This research will focus on the introduction of a document imaging technology within the Commission for Local Administration in England (CLA). The CLA is a non-governmental organisation financed by the Department for the Environment which investigates complaints of maladministration made against local authorities. The CLA is described in more detail in chapter six in order to contextualise the research. The case study approach was adopted because its purpose is to

"*... reveal the properties of the class to which the instance being studied belongs.*" (Guba and Lincoln, 1981).

Thus, it would appear to be an appropriate method for identifying the properties of the people involved in the change process being studied. The case method employs multiple techniques and it is perceived that the use of a variety of techniques to elicit data allows the development of a more rounded and holistic study (Hakim, 1987). It also enables the researcher to become more closely involved with people which it is perceived assists the

elicitation process (see section 4.6.2). Research of this nature is highly interactive because organisations comprise of people who are 'different' to each other for a number of reasons including,

"*a lot of bits and pieces - spectacles, clothes, motor cars and a history of social relations - which we 'may' have some control over.*" (Law, 1994).

It is these 'bits and pieces' that make us human and which cannot be ignored or eliminated from a study about people. Law (1994) describes these things as 'props' and argues that you have to integrate these 'props', and our interactions with them, with the person. Otherwise you are not researching people as agents or actors but as simply 'bodies'. Therefore a study of organisations must take into consideration individuals as people if we are to understand them a little better. Observation of the process of technological change, therefore provided the opportunity to study individual contributions to the process. From this it is was perceived that it would be possible to make inferences about the value of the variety of individual attributes in the change process and their contribution to organisational adaptivity.

As a single case study it is difficult to infer findings to the greater population and Bryman (1989) suggests that this is not actually the aim of this research tool. Instead it is to

"*... engender patterns and linkages of theoretical importance.*" (Bryman, 1989).

Thus case study material can be evaluated in terms of the adequacy of the theoretical inferences that are generated. The following provides further justification for choosing to carry out the fieldwork in a single organisation and not a larger number.

- A single case organisation provides a convenient way of bounding the research by restricting the population involved. This boundary is not an attempt to present organisations as closed systems but to highlight "*one specific system of interest*" (Lemon, 1991).

- Time and money place restrictions on research and issues of cost must be taken into consideration. Setting up relationships is also a time consuming process. Attempting to do this in multiple organisations would prove difficult and may not be as successful as in one organisation. Good relationships with the people in the case organisation will have implications for data collection .

- The research involves looking at individual attributes which are by their nature hidden. Therefore, an in-depth exploration of the data is needed using multiple techniques. Using many organisations would only allow superficial scanning and would not provide the depth of data required.

It is difficult to summarise the central strengths and weaknesses of single and multiple case studies since much is dependent on the "*degree of fit*" between the objectives to be achieved and the case/s selected for study (Hakim, 1987).

4.5. Access.

Problems of access and the experience of initial meetings with managers and other employees are often left out of the research reporting process, being regarded as simply 'noise' to be negotiated around. However, these encounters provide a rich source of data about the culture and nature of organisations which may prove invaluable when returning there to do the 'real' fieldwork (Schwartzman, 1993). It is clear, however, that accessing an organisation is not a straightforward procedure and involves the consideration of a number of issues (Burgess, 1984).

- **physical access:** refers to the negotiation of entry into an organisation in order to carry out fieldwork activities, often through a 'gatekeeper'. Acceptance may be based on whether you are perceived as likely to help or hinder in any way (Lofland, 1971). It will also be dependent on your ability to develop a contact in the target organisation. This contact will hopefully be sympathetic about the research and is most useful if s/he has the power to grant access to all the necessary forms of data required. They will also have some effect on the social access that must also be negotiated by the researcher (Burgess, 1984; Gilbert, 1993). Describing people as 'gatekeepers' has the effect of making people who are very real to the researcher seem almost unreal. However, as Law (1994) comments with some mockery, it makes us sound more 'scientific'. Gaining physical access takes time and involves the performance of certain activities, such as the writing of proposals. Problems of geographical location and proximity may also be encountered.

- **social access:** physical access cannot be isolated from social access and it is recognised that attention to this may prevent any potential problems. Social access involves communicating to employees that you are trustworthy, sensitive and not part of a covert operation, i.e. you are not a management informer. Social access is dependent on a number of factors including the penetration of close-knit groups.

levels of loyalty, which may either encourage or discourage people from talking to you. It may also be dependent on some knowledge of technical factors, for example if you have some knowledge of the technology that you wish to observe then you may be taken more seriously.

This last point raises another issue that must be of concern to the researcher when negotiating access. This is a knowledge of the environment in which the study is going to be done. Lemon (1994) asserts that there are two forms of knowledge that the researcher needs to acquire.

- **knowledge of the situation:** and the context of the research in order to get a 'feel' for the place (Burgess, 1984; Perkins, 1988). This sense was developed as a result of 'pre-fieldwork' meetings and then strengthened throughout the fieldwork phase. 'Pre-fieldwork' meetings refer to the initial encounters and form an important part of the data collection process (described in Chapter Six). Knowledge of the situation also includes having an understanding of the 'language of the organisation'. Before any attempt to make connection with the individuals at the CLA, it was vital to know something about the job that they did and the language they used. Although this is not a piece of research about linguistics and the data collected would not be analysed in such a way it was necessary to have an understanding of the terminology. This would enable fuller participation in the conversations that took place, for example in the interviews and in the informal 'coffee lounge chats'. Cutting through the jargon enables the researcher to focus on the real issues of concern. It also generates more interest and sensitivity among the respondents if the researcher has made some effort to learn something about them. This has the effect of minimising rejection by the respondents and therefore, making the researcher more at ease with the situation.

- **knowledge of the techniques and skills:** that are necessary to carry out the fieldwork and both their advantages and disadvantages. Exploratory studies and pre-fieldwork visits to the fieldwork site are useful for investigating these issues. For example, the piloting of interview schedules may reduce, to some extent, the chances of 'problems' emerging in the 'real' situation.

The adaptivity required to acquire the knowledge and skills to do the fieldwork is important in itself, however, an ability to adapt to unexpected circumstances is also essential. There may be the need to modify timings if an interview is unavoidably interrupted, or adapt the structure of an interview schedule.

Advice about procedures for getting in and getting on in an organisation provide only limited help for the researcher. The ability to do this is largely dependent on their personal attributes. This involves how you communicate with people and how you promote yourself in order to make a 'good impression'.

4.6. A Multiple Techniques Framework For Data Collection And Analysis.

The fieldwork activity places greatest emphasis on interviewing, along with the examination of documents and observation in the periods in-between the interviews (Bryman, 1989). The use of a multiple techniques, often referred to as 'triangulation, (Denzin, 1978), approach is commonly adopted in single case study research because it provides a descriptive and flexible structure for exploring the process of change. Consequently, it is perceived to be an appropriate tool for finding out more about the impact of individuals on the introduction of a specific change.

An in-depth study which utilises a variety of methods to distinguish individual attributes, which by implication are concealed and therefore difficult to identify, is perceived to best serve the needs of this research since they will lead to the generation of different kinds of data (Silverman, 1993). A variety of data is valuable because it enables a more complete picture of a situation to be developed which allows greater understanding of the research phenomenon as a whole (Patton, 1990).

Such a study needs to consider how questions can be posed appropriately and how the responses may best be recorded and analysed. The techniques of data collection and analysis are listed below and described in the following sections.

- **Interviews.**
- **Observation.**
- **Documentary data.**
- **Recording, transcribing and mapping the interviews.**
- **Analysing observations, interview texts and documents.**

Using complementary multiple techniques to carry out the fieldwork also helps to address some of the problems of validity for the research by overcoming the bias caused by relying on one type of data set (Burgess, 1984).

4.6.1. Interviews.

Semi-structured interviews were chosen as the chief technique for data-collection in this study and were used in order to elicit individual perceptions of change. This technique involves the adoption of a set of 'themes' to be covered in the course of the discussion which may be more aptly described as conversations (see Section 6.3. for the thematic question outline used in the interviews). Such a method enables interviewees to develop their responses in an unstructured format (Burgess, 1984). The interview technique is seen as central to a multi-method approach to the fieldwork and was chosen in order to

"*elicit a picture of the organisation as perceived by the participant and to uncover some of the key factors involved*" (Trott, 1993).

This technique would enable the researcher to get a 'feel' for the organisation and the subject being studied (Young and Mills, 1980). It would also enable the interviewer to find out what each respondent perceived was important with regard to the issues being studied and allows scope for others to be introduced. Semi-structured interviews do, however, yield potential problems in terms of the translation and interpretation of verbal responses. Issues of the validity of using such a method can be dealt with to an extent. The researcher must accept that the interviewee can only reflect upon their experiences and will not be able to describe it in exactly the same way as they experienced it (Young and Mills, 1980). There is also the problem of analysing the non-standardised data that semi-structured interviewing elicits (Stone and Harris, 1984 (2); Lemon, 1991). Patton (1990) suggests that it is possible to attempt to pre-determine some of the analysis which would not be possible if the interviews were completely unstructured. This does not mean that the research must determine specific categories of analysis in advance and so an element of flexibility is retained (Patton, 1990).

Semi-structured interviews allow the exploration of similar issues in different directions with different people which will generate a variety of responses. This is based on the assumption that every individual construes 'reality' in a different way (Young and Mills, 1980). The objective of the interviews was to get the interviewees to describe their understanding of the process of change in order to compare their perceptions of the process. It was expected that this would provide insights into the type of attributes that were utilised in the introduction of the technology, thus allowing the development of a typology.

4.6.2. Interviews as interactions.

The research design in its written form can make the research process appear as a neat linear model when it is actually much more complex (Goode and Hatt, 1952; Burgess, 1984). Interviewing is a social and interactive process where the interview product is

"*something jointly construed by the two co-participants*" (Young and Mills, 1980).

This relationship will have a direct effect on the course of the interview because of the personal attributes and nature of the individuals involved. This means that every interview will be different because the attributes of each individual will have a different effect on the development of the discussion. However, it is not possible to plan ahead for this and so it is important to be flexible in the interview situation as there is no other way to elicit interviewee perceptions (Foddy, 1993).

The relationship between the interviewer and the interviewee means that the data has the stamp of the researcher on it. This cannot be avoided since the researcher is intrinsically involved in the process of collecting the data. Researchers interact with their data and impose their own "*assumptions and theories*" about the world on that data (Law, 1994). As such the research process

"*... must be seen as socially constructing a world or worlds, with the researcher included in, rather than outside, the body of their own research.*" (Steier, 1991).

However, there is a tendency to "*play down the significance of the discontinuities*" and focus on the 'flow-forward' of the project in order to make it appear more manageable (Law, 1994). It is perceived that this "*violates the essential nature of reality*" (Lofland, 1971). However, there has to be some way to manage data in order to make it presentable and so our attempts to analyse are justified (Lofland, 1971; Law, 1994). There is no intention to be prescriptive in the writing of this thesis, but to provide a personal account of a specific process of change and the impact of people on it.

4.6.3. Recording and transcribing the interviews.

The researcher had two methods available for recording the interview. The first was to make notes of the discussion, possibly employing some form of short-hand. The second method was to use a tape recorder. However, before the researcher could decide which to use an evaluation of the advantages and disadvantages of both was required.

It was decided that using a tape recorder would be the most effective way to record the data because:

- there is no loss of information.
- the conversation can take place at its natural speed, with no interruptions or the researcher asking the respondent to repeat something.

Of course, a tape recorder might be regarded as intrusive and therefore inhibit the respondent in their replies for fear of 'giving too much away'. There is also the question of the time it takes to transcribe the tapes since it was expected that each interview would last in excess of one and a half hours (Burgess, 1984). Previous research has estimated the total length of time to transcribe, map and perform initial analysis on the interview transcript at approximately eight hours per one hour of interview time (Lemon, 1991; Trott, 1993). However, in order to preserve the 'raw' data which would allow the researcher to get closer to it, it was decided to tape record the interviews as long as this was agreed to by the interviewees.

Young and Mills (1980) describe the tape as a primary source of data from which a transcript is obtained and on which analysis will be performed. The transcribing of the tapes would be carried out by the researcher for the same reasons as the interviewing, i.e. cost and the need to be 'close' to the data.

4.6.4. Mapping the interviews.

In order to organise the data ready for analysis it is necessary to find a way to represent it. Building on previous research (Lemon, 1991; Trott, 1993), it was felt that a part of the data could be handled and presented through a form of structural mapping (Madu and Jacob, 1991). Mapping is a useful tool to illustrate the content and structure of individuals expressed beliefs and ideas (Trott, 1993; Swan, 1995) and to highlight potential links between the components of the system (Lee et al, 1992). A map, or cognitive map, is described as

"*an individual's internal representation of the concepts and relations among concepts that the individual uses to understand their environment.*" (Swan, 1995).

The mapping technique was based on Kelly's theory of Personal Constructs (1955) which attempts to describe behaviour in order to make predictions about the future.

There are obvious problems associated with this approach which have been enlarged by labelling the maps 'cognitive'. Such a term suggests that 'thinking' is somehow represented in the map and has been used in this way in much management research (Eden, 1992). However, cognitive mapping has gained currency over the last few years among operational researchers and consultants (Madu and Jacob, 1991). Here it has been used as a problem solving and decision support tool to help managers address difficult issues (Ackermann et al, 1990). Used in this way cognitive maps provide a simple device which represent respondents understanding or perception of a specific situation (Eden, 1992).

The maps presented in this study are described as personal process maps. That is because they are drawn to represent each individual's perception of the process of a specific technological implementation at the CLA. This includes their perception of other people involved in the process. This has the effect of preserving a large amount of the richness from the interviews. They involve each person reflecting on what has already happened and how that may affect their perception of the future. However, this will not be a problem if we remember that the maps do not imitate individual cognition or thought but simply represent an individuals understanding of an event or process. This then provides us with a useful tool to elicit process within its problem context, including time, space and organisational elements (Lemon and Park, 1993; Swan, 1995). As a result of this and early indications of differences with regard to 'operational' and 'strategic' perceptions of the process, the maps were built using a technique that split these activities into separate areas[1]. A full description of how the maps were constructed can be found in Section 6.5. For now it is sufficient to note that the maps are composed of individual statements, each describing the activities, both 'operational' and 'strategic', involved in the process, which are joined together to see how things move from one stage to another. The graphical representation simply depicts the linkages and relationships between activities including factors which appear to have some impact on the process or are influenced by it (Lemon and Park, 1993). It is not an attempt to describe the cause or motive behind each action. The linkages depicted on the maps show the specific details of the change, its incremental nature and the people involved in it. Interpretation of the maps will enable the identification of key agents and themes for the analysis. The aim is to show how change is dependent on and supported by process and individuals. Inferences may then be made about individual attributes and how

[1] 'Operational' refers to the day-to-day 'doing' and 'using' activities highlighted during the implementation of the specific technology into the Coventry office of the CLA. 'Strategic' refers to matters that are related to the management of the process, including discussions about the required solution, and approaches to the integration of the technology into the business of the CLA.

attention to these may improve the process of change by creating a more adaptive environment in which change can take place.

4.6.5. Participant observation.

Participant observation is a technique employed in qualitative research which is often used in conjunction with other techniques. It is also referred to as 'ethnography' (Schwartzman, 1993) and 'field research' (Lofland, 1971; Bryman, 1988) and involves the collection of data about social interaction by watching, listening and recording events and processes as they occur (Stone and Harris, 1984(2)). This means that the research does not rely totally on the memory of respondents as they are in the interview situation. The researcher aims to observe without causing too much disruption to people in an organisation or the phenomena being observed. It is argued that this is difficult to achieve since just the presence of the researcher will have some effect on data collection. There are a number of roles that the observer can play and the literature has highlighted these in terms of varying degrees of involvement. Therefore the observer may be implicated to different degrees in the activities of an organisation (Goode and Hatt, 1952; Burgess, 1984; Stone and Harris, 1984(2)).

One of the main purposes of using this technique is to provide a detailed description of the social setting in which the research will take place. Observing and describing organisations is fundamental to understanding their culture and mechanisms, and for generally getting a 'feel' for the place (Silverman, 1993). This includes developing an understanding and empathy of the physical and social structure of an organisation, the context for the research and the subject being studied (Bryman, 1988; Lemon, 1991). Such a description should be consistent with the perspectives of employees in a specific organisation. This can be compared with the results from the other research techniques employed.

However, there are certain limitations to the technique such as the amount of time it takes to 'settle in' and to gather what may be relatively little data. There is also the problem of potential unintended and undetected bias in the study. This may be caused by both the arrival of the researcher onto the situation and the personal interpretation that the researcher will put on the data (Stone and Harris, 1984(2); Van Maanen et al, 1982). Although this might be alleviated if the researcher has developed a sufficient 'feel' for the study subject and context. It has already been asserted that using a multiple techniques methodology will help to address the problems of validity by providing different sets of data to compare with each other. Despite the limitations it is a useful

technique because it can be used to collect information about behaviour that people would be unable to answer questions about. It also has much to offer with regard to the interactive character of the study.

Participation in the CLA involved being present on a regular basis over a six month period. It was expected that this technique would enable additional data related to the specific change to be collected. This was on an informal basis and enabled respondents to add insights to the process as and when they remembered things outside of the interview situation. This involved watching and reading, but particularly talking about the specific change being studied. Observations were recorded in a note book and became subject to the same analysis as the rest of the data collected, but were primarily used as the basis for the description of the CLA which is to be found in chapter six.

It was made clear from the very first visit to the CLA who the researcher was and why they were there. The research interest was, of course, the primary reason. However, as a result of the investigations a report was produced discussing the perceptions of the implementation of the specific technology into the Coventry office of the CLA. Such a deliverable is a common device for getting into organisations. It is interesting to note that even though the researcher was not involved in the introduction of the technology itself she became implicated in it as a result of writing the report. Therefore, in the future it is likely that the researcher will be viewed by the CLA as being a part of the process of implementation.

4.6.6. Documentary data.

Documentary data provided complementary material to that acquired as the result of the interviews and participant observation. It helped to identify the process by which the specific change was introduced. The types of documents examined included memos and reports which provided information about the CLA and the introduction of the technology. Analysis of this kind of data allows, to an extent, the researcher to escape the problem of interaction bias. Therefore, if there is a level of congruence between the data sources there is a good chance that it is relatively bias-free (Young and Mills, 1980).

Documentary sources enable the researcher to gather procedural information about a specific organisation and how individuals perceive their world (Young and Mills, 1980;

Perkins, 1988). Some analysis of documents before entry can help the researcher to develop a good understanding of what an organisation is like. This may reduce the 'settling-in' time necessary and therefore allow the researcher to focus more immediately on the real issues of concern. However, even though this activity may be carried out informally 'before' the fieldwork, it is in fact a part of the fieldwork process.

Documentary evidence includes both primary and secondary sources. Primary sources collected first-hand include notes and diaries. They have a direct relationship with the people and phenomena being studied unlike secondary sources which include published reports, and memos and notes passed onto the researcher. Documents may also be 'private' or 'public', depending on their availability to the public (Burgess, 1984).

The documents collected and used as a basis for analysis include:

- personal field notes/diary- a record of the interviews and observations. They also included personal reflections about the way the research was developing.
- memos/notes, etc.
- published reports.

4.6.7. Content analysis.

Content analysis belongs to an important school of research techniques in the social sciences and is the principal technique used for examining semi-structured data. As such it is the method by which the data for this study will be analysed. The technique has emerged in response to the move towards making phenomena more amenable to measurement and analysis. However, since the rich variety of qualitative data is not responsive to assessment by 'scientific' indicators, content analysis has arisen as a tool to allow 'real' social experience to be identified and represented (Krippendorf, 1980; Mostyn, 1985). It is defined as a

"*research technique for making replicable and valid inferences from the data to their context.*" (Krippendorf, 1980).

Content analysis involves asking probing questions of the data in order to identify key concepts and themes. Often this is done by simply counting the number of times that something is said or referred to. However, it is argued that it is not enough to assume that the frequency of word usage alone will indicate what is important (Swan, 1995). Instead, themes will be identified in order to reflect the 'meaning' that respondents

attach to an event or situation (Mostyn, 1985; Lemon, 1991). For example, themes which reflect the attributes that people perceive are important in managing the process of technical change. Ultimately, the purpose of content analysis is to understand the meaning of the interactions within the context of the respondents own frame of reference.

Once the important concepts have been identified inferences can then be made about the data in relation to their context. This involves making opinions based on our own personal judgements, therefore we need to be objective in our interpretations. From these inferences we can summarise the patterns and relationships found in the data. This allows us to get a better insight into the 'facts' about the phenomena being studied in relation to its context. This enables us to make generalisations about the data to other situations and thus provides a practical guide for other applications. However, this must not be predictive but encompass an element of adaptability.

4.7. Feedback Of Data.

Questions of validity and reliability are raised as a result of the methods of data collection and analysis that has been chosen for this study. In qualitative research there is room for bias to occur as the result of the interactive nature of the work. Personal involvement implies that objectivity may be disregarded and therefore, tests for reliability and validity must be designed into the research (Kirk and Miller, 1988; Krippendorf, 1980; Shipman, 1988).

Reliability refers to the extent to which the same method of measurement will deliver the same results irrespective of the individual researcher and the procedure used. Therefore some duplication of effort is essential. Reliability is a necessary though not sufficient condition for validity (Krippendorf, 1980). Validity refers to the extent to which the research gives a 'true' answer. This problem may be reduced through the use of a variety of techniques to gather the data. Since the validity and meaningfulness generated from the qualitative enquiry have more to do with the richness of the information collected as opposed to factors such as sample size, etc. (Kirk and Miller, 1988). The concept of objectivity is based upon a set of rules which allow rich data sources to be compared against each other so that generalisations can be made.

There are additional questions of validity raised as a result of the use of mapping techniques and the researcher must ensure that the map

"*reveals concepts and relations that are in fact the most important and not just artefacts of the particular approach taken.*" (Swan, 1995).

This kind of distortion is diminished through the feeding back of the maps to the respondents for validity testing. Prior to that the mapping technique was tested among colleagues for uniformity and replication, i.e. another researcher could build a similar map when using the same data.

4.8. Conclusions.

The research design has provided guidance about the types of data that need to be collected in order to deal with the research aim and objectives. It has also given an insight into the approach taken to analyse the data which is developed in Chapter Six.

The research objectives provide the vehicle for understanding the nature of individual difference and how it can help organisational administrators to manage change in a more adaptive way. This will enable us to better understand the value of maintaining and expanding a variety of individual attributes as the basis for improving organisational adaptive capability.

The use of multiple techniques within a case study framework is argued to be an appropriate way of carrying out the fieldwork. It is not proposed that this is the only way that the goals of the research could have been achieved or to say that "*any single approach has a total view of reality.*" (Lee et al, 1992). However, it was regarded as suitable because firstly, it allows the researcher to develop a 'feel' for the CLA and secondly, it provides a richer database necessary to recognise something as difficult to identify as variety.

The next chapter provides a description of the case organisation, the CLA, in order to provide a context for the change being studied. The introduction of document image processing (DIP) is the process that provides the focus for the change. This is discussed within a framework and history of change that the CLA has experienced and sets the scene for the fieldwork activity.

Chapter Five: Background to the Case Organisation and the Nature of the Specific Change.

"***Organisations are many different things at once!***" (Morgan, 1986).

5.1. Introduction.

The last chapter has described how the research was designed in order to meet the aim and objectives of the study. This chapter provides a detailed description of the case study organisation and the particular change being introduced.

It is important to describe the context in which the objectives of the study are carried out. This enables us to make sense of the environment in which the change being studied takes place, providing us with a more accurate account. Law (1994) describes this as a way of ordering the environment so that events make sense not just in the world of the researcher, but also within a wider framework. Describing the CLA provides a more holistic account of the fieldwork activity and helps in developing the framework for interpreting and analysing the issues that are of interest (Perkins, 1988). This is particularly relevant when we are looking at issues of human activity, for example, individual attributes. These things can not be properly understood without first understanding the context in which they occur (Magnusson, 1984).

The case study was carried out in the Coventry office of the Commission for Local Administration (CLA). The introduction of a document image processing system (DIP) at the CLA provided the study with a specific example of a technical change. This allowed the individual attributes that were utilised in the process of change to be identified. This facilitated the development of a typology that would assist with the identification of individual attributes necessary for the future management of change.

5.2. Background To The Commission For Local Administration (CLA).

The Commission for Local Administration (CLA) is a non-governmental organisation sponsored by the Department of the Environment. It was set up under Part III of the Local Government Act of 1974 in order to introduce the principle of the "ombudsman" into local government. The Act set up two Commissions, one in England and one in

Wales. Each has powers similar to those of the Parliamentary Commissioner for Administration who deals with complaints against the central departments of government. The Commission for Local Administration was established to provide

"*independent, impartial and prompt investigation and resolution of complaints of injustice caused through maladministration by the authorities.*" (Local Government Ombudsmen Annual Report (CLA) 1993/1994).

To support this role the CLA is founded upon the following values (Figure 5.1.) which provide a framework for operation.

Figure 5.1. Values Of The CLA.

- We treat people with courtesy, consideration, openness and honesty, respecting their privacy.
- We are independent, fair and consistent, taking full account of what people tell us, explaining fully the reasons for our decisions in plain language.
- We get the truth and report accurately and promptly.
- We provide equal opportunities in employment and in the service we give.
- We train and develop individuals to maximise their personal contribution, encouraging team work, work ownership, innovation and creativity, recognising success.
- We provide good and safe working conditions.
- We improve our work continuously and provide value for money.
- We take account of the effect on the environment in the way we work.
- We have good working relationships with our suppliers to maintain an improve our services and products.
- We support the principle of local government.

(source: Local Government Ombudsmen Annual Report (CLA) 1993/1994.)

If an individual thinks that (s)he have been treated unfairly then (s)he can ask one of the CLA's Local Government Ombudsmen (LGO) to investigate whether injustice was caused through maladministration. The Ombudsmen investigate complaints of maladministration made against district, metropolitan and county councils, and various other boards and authorities but not town or parish councils. Maladministration may be deemed to have occurred when the authority fails to follow proper procedures or does something they should not have done or falls short of the responsibilities that are

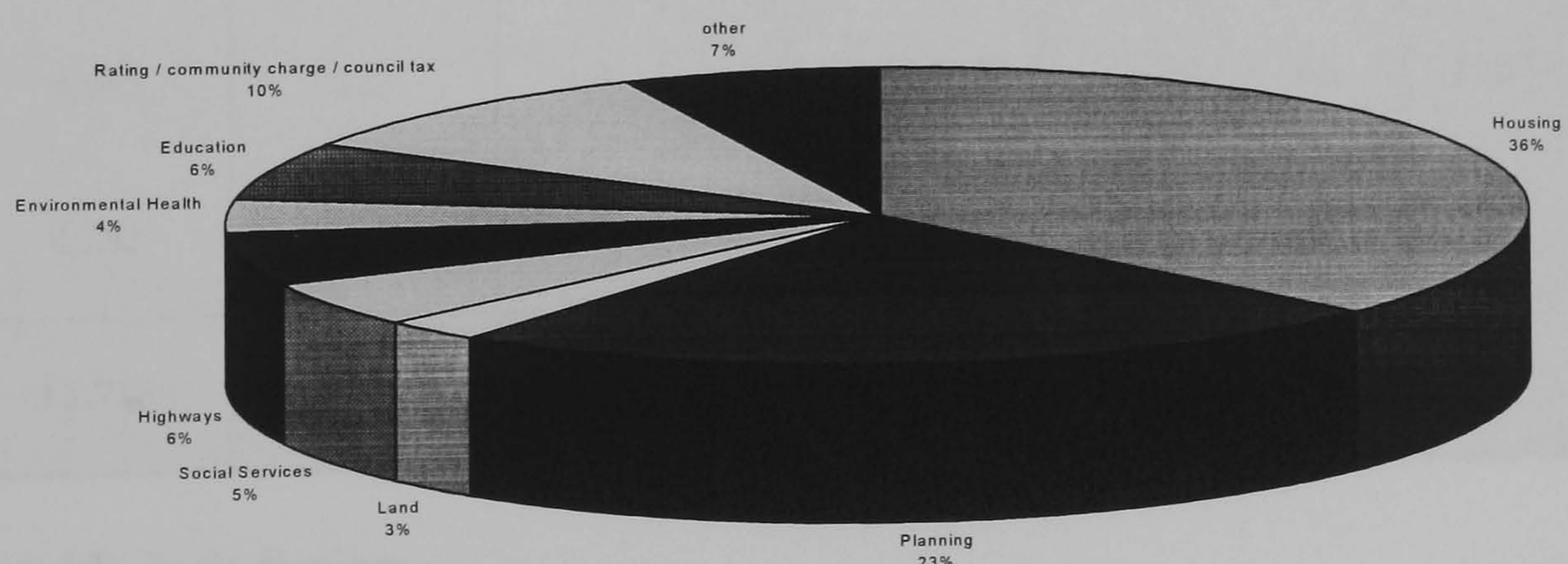
required of them (in the sense of omitting to do something they should have done). The initial duty of the Ombudsmen is to decide whether, *prima facie*, an injustice has resulted from maladministration and, therefore, whether an investigation is warranted. If after investigation the complaint is upheld, the Ombudsmen must then determine what sort of remedy is appropriate and a report is sent to the council. There is no legal obligation on local authorities to provide a remedy for any complainant whose complaint is upheld. However, if a recommendation is ignored and the council refuses to take appropriate action, the Ombudsmen must issue a further report, notice of which must be published in the local press. If the council continues to resist the Ombudsmen's recommendation they are required to publish a statement in the local press explaining their refusal, and they must meet the cost of so doing. This expense must be covered by the council in question. During 1993/1994 nine statements were published by nine authorities, compared with 13 statements published by 10 authorities in 1992/1993.

Since 1993, the CLA has also been committed to promoting 'Good Administrative Practice' which

"*sets out general principles to help councils adopt a systematic approach to all areas of their work.*" (Local Government Ombudsmen Annual Report (CLA) 1993/1994).

The aim is to reduce the number of investigations by helping councils improve their administrative practice through a review of their policies and procedures.

Figure 5.2. Complaints Received By Category For 1993/1994.



(source: Local Government Ombudsmen Annual Report (CLA) 1993/1994.)

On average the CLA receives in excess of 14,000 complaints of maladministration per year. During 1993/1994 there were 14,253 complaints. This number has steadily

increased over the years since the inception of the CLA in 1974, probably because the CLA has become more widely known and the expectations of the public have risen. These complaints are fairly equally spread across the three offices of the CLA where the most common complaints received are about planning and housing. Figure 5.2. provides a breakdown of the complaints received by the CLA into the most common categories.

There appears to have been very little change over the last few years in the proportions of the subjects of the complaints received. Not every complaint received is subject to a full investigation by the Ombudsman. A large proportion are terminated after initial enquiries have been made. This may be because the complaint is outside the jurisdiction of the CLA, or a local settlement is achieved, or there is no evidence of maladministration or there is no, or insufficient injustice. In the case of the other complaints a formal investigation is undertaken and a report produced setting out the Ombudsmen's conclusions. There are three possible decisions. The report may find that no maladministration occurred, or that maladministration occurred causing no injustice, or maladministration occurred causing injustice. A table outlining the treatment of complaints during 1993/1994 is provided in Figure 5.3.

Figure 5.3. Treatment Of Complaints 1993/1994.

CLA Office	Total Complaints Determined	Premature Complaints	Concluded after initial enquiries			Complaints subject to formal investigation				
			OJ	LS	NM*	D-LS	D-NM*	MI	M	NM
London	4,443	708	518	698	2,194	84	57	153	16	15
Coventry	4,992	123	569	693	3,229	160	80	120	10	8
York	4,283	990	537	527	1.854	100	151	103	10	11
Totals	13,718	1,821	1,624	1,918	7,277	344	288	376	36	34

OJ - outside jurisdiction
LS - local settlement
NM* - no evidence of maladministration or no, or insufficient, injustice
D - discontinued

MI - report finding maladministration causing injustice
M - report finding maladministration, no injustice
NM - report finding no maladministration

(source: Local Government Ombudsmen Annual Report (CLA) 1993/1994.)

The average time to deal with complaints was fourteen weeks where there was not a full investigation and seventy four weeks where a full investigation was required.

5.3. The Strategic Context Of The CLA.

5.3.1. Improvement through quality.

Since 1994 the Commission has been involved in a project to make the CLA a Total Quality organisation. The project is called Improvement Through Quality (ITQ) and was introduced at a cost of £200,000 for training requirements. The Commission argue that though time spent on training may have a short term effect on output, the benefits in the long term will outweigh this. Benefits expected include an improved quality of service and better value for money. This research is not about the implementation of the ITQ process. However, staff did perceive that there had been many problems with the introduction of ITQ, which they expected would continue, for example

"*ITQ will fail or succeed depending on how much of a cultural swing the senior managers manage to achieve.*" (int/ee 7:148).

People felt that senior managers at the CLA had not understood or anticipated the fundamental changes to the culture of the organisation that ITQ would involve. It is not the intention of this thesis to discuss the concept of culture or the importance of this in the context of change at the CLA. Culture is so fundamental to an organisation that any potential change in it has to be 'sold' heavily and continually from the 'top' to be given any chance of taking root. This process may takes years to achieve (Gilbert, 1995).

5.3.2. Technology.

It was the intention of the CLA to continue to implement it's IT strategy in line with the requirements of the business. Up until the recruitment of an IT Manager in October 1993 the acquisition of technologies had tended to be rather opportunistic (int/ee 1:80).

It was expected that having the IT Manager working full time on these matters would result in a more organised and professional approach being taken.

5.3.3. Equal opportunities.

The Commission continues to provide awareness training introduced as part of an equal opportunities policy in March 1993. The Commission is also developing a job-share policy.

5.3.4. Connections with other organisations/institutes.

The Commission has made attempts to develop links with local authorities in order to improve administrative practice and reduce the number of complaints. It makes contributions to conferences and seminars in order to develop the role of the CLA. It also continues to develop its links with local government through the provision of training, especially in complaint handling, in order to achieve a high quality of service to the public by local authorities. Access to information for researchers and students is also available.

The goals outlined in Figure 5.4. point to the strategic future of the CLA. The goals are long-term in nature, from 1994-1998, and are the key to the CLA's continuing role.

Figure 5.4. Goals Of The CLA 1994-1998.

- To reduce the average cost per complaint by 10% (in real terms).
- To reduce elapsed times per complaint to achieve the Commission's target times.
- To increase customer satisfaction each year.
- To increase the number of authorities within jurisdiction which have effective complaints procedures.
- To implement fully an Equal Opportunities policy.
- To increase prompt compliance within the Local Government Ombudsman's reports.
- To publish further guidance on good practice notes and occasional bulletins.
- To increase people's awareness of the Local government Ombudsman service and

maintain awareness among relevant advice-giving agencies.

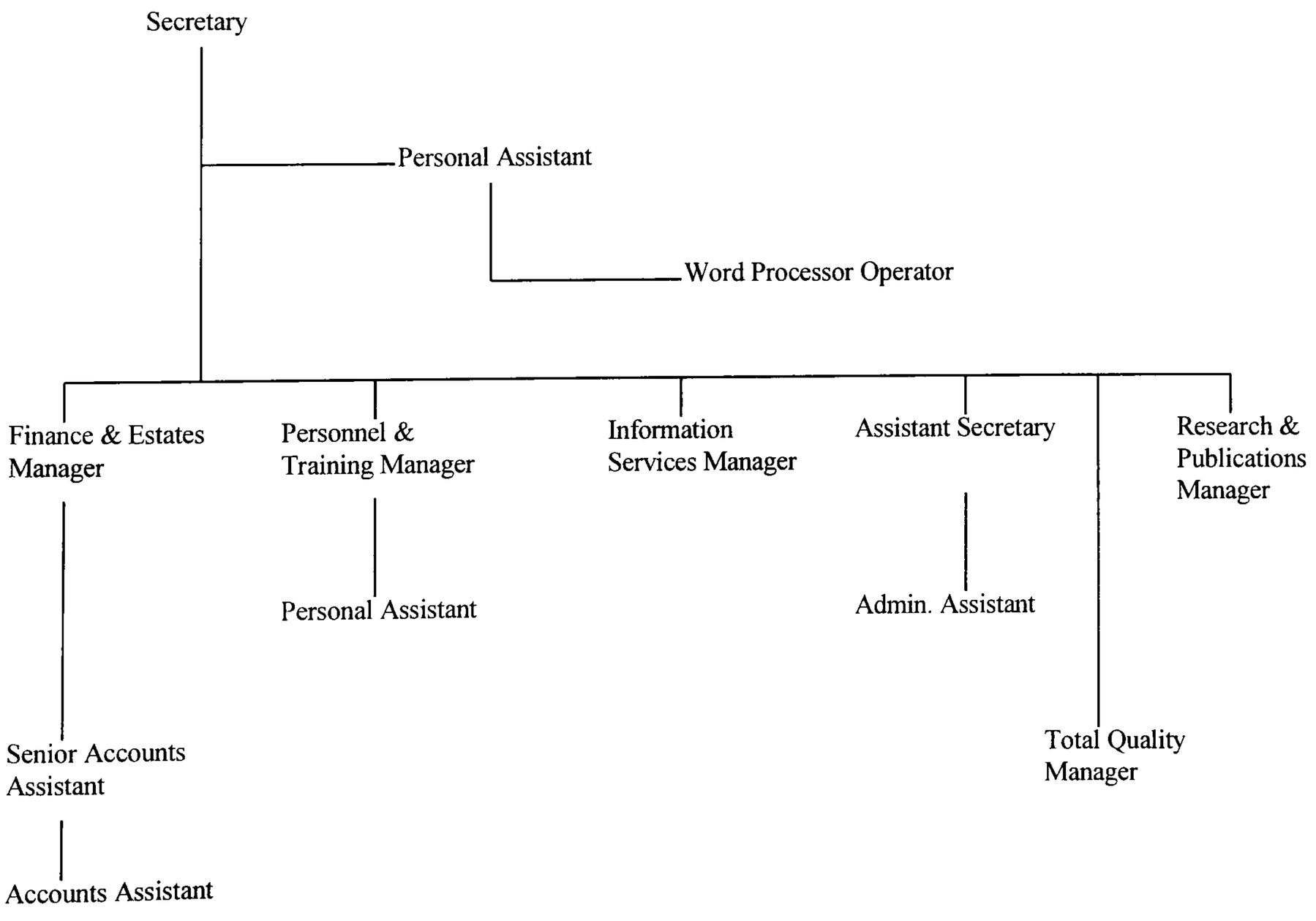
- To secure adequate resources to enable business goals to be achieved.
- To formulate and implement an Information Services strategy.
- To formulate and implement an Environmental policy.
- To complete transition to being a Total Quality Organisation.

(source: Local Government Ombudsmen Annual Report (CLA) 1993/1994.)

5.4. The Structure Of The CLA.

The CLA comprises three regional offices and a central administration agency. The offices are located in Coventry, York and London. Central administration and the Secretary of the Commission are also based in London alongside other members of staff who are not directly involved in the investigative side of the Commission's work but have some overall functional responsibility. These include the Finance and Estates Manager, Personnel and Training Manager, Information Systems Manager, Total Quality Manager, and the Research and Publications Manager. Figure 5.5. provides an overview of the structure of the head office.

Figure 5.5. Structure Of The Head Office Of The CLA.



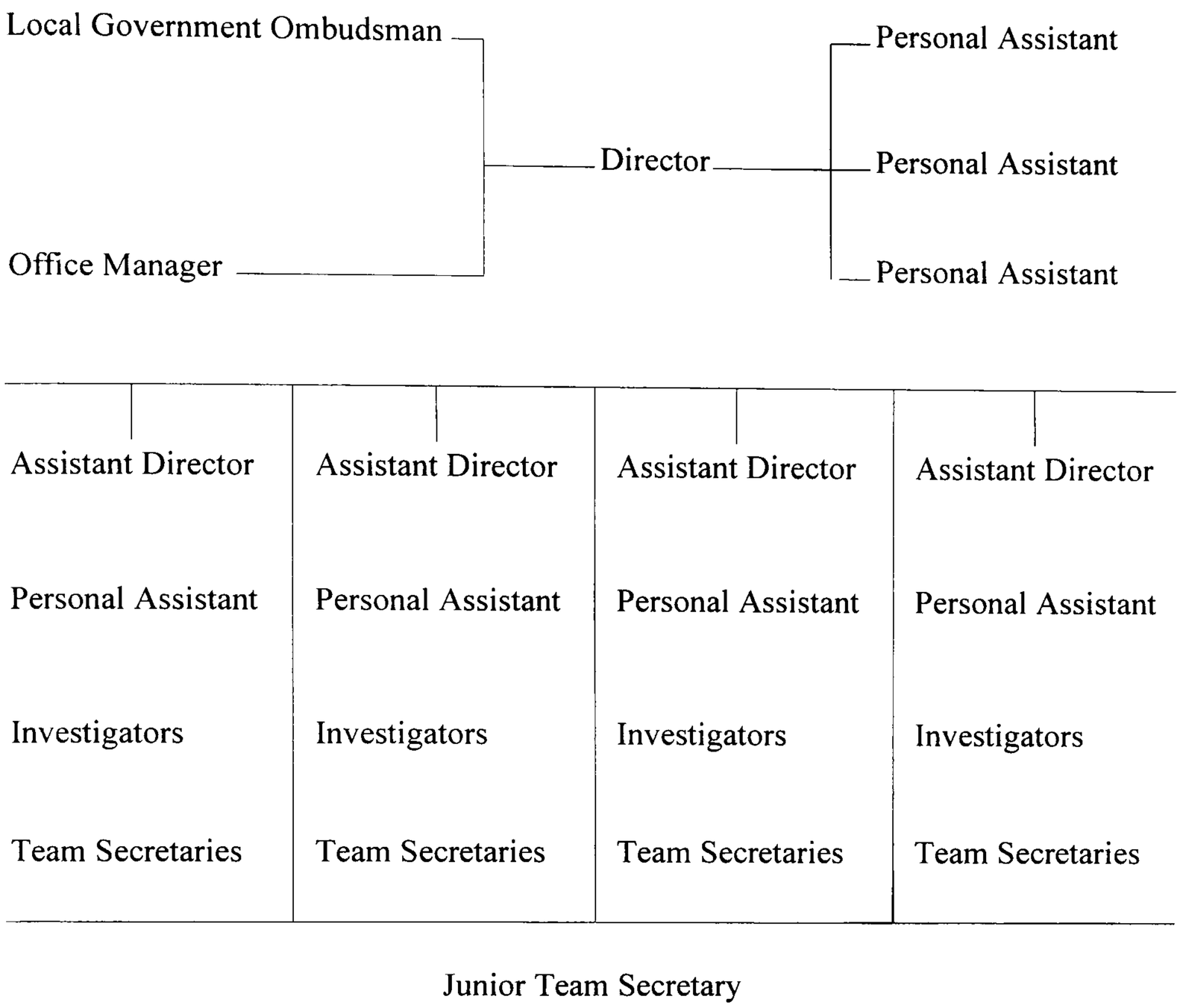
The three regional offices are primarily involved in carrying out the investigative work of the Commission and management of that process. Each office is responsible for dealing with complaints from particular parts of England. Figure 5.6. explains how the country is divided among the three offices.

Figure 5.6. Division Of Complaints.

- **Coventry-** deals with complaints from the South-West, the West, the South, East Anglia and most of central England.
- **London-** deals with complaints from Greater London, Kent, Surrey, East and West Sussex. London also provides the home-base for the administrative function and some members of senior management as well.
- **York-** deals with complaints from the East Midlands and the North of England.

The three offices are almost identical in organisational structure. Each office is headed by an Ombudsman and Director who leads four investigative units. Figure 5.7. is a representation of the office at Coventry but closely represents the York and London offices as well.

Figure 5.7. Departmental Structure Of The Coventry Office Of The CLA.



As we can see from Figure 5.7. each team consists of a Personal Assistant, six or seven investigators and three team secretaries headed by an Assistant Director. The Local Government Ombudsman is responsible for controlling the way in which complaints are investigated. The Director handles his own casework as well as being responsible for the overall management of the office. He is assisted by an Office Manager, a Personal Assistant, a Research Assistant and other support staff.

Each office has its own team management group which is responsible for making local management decisions. These teams are made up of the Director, the four Assistant Directors, the Research Assistant and the Office Manager. The Personal Assistant takes the minutes of these meetings and occasionally other members of staff are invited to attend. Principal policy decisions are made by the Commission's Executive Committee which is made up of the three office Directors and the Secretary who heads the central administration, and the three Ombudsmen (called 'local commissioners' in the 1974 Act) who with the Parliamentary Ombudsmen compose 'The Commission'.

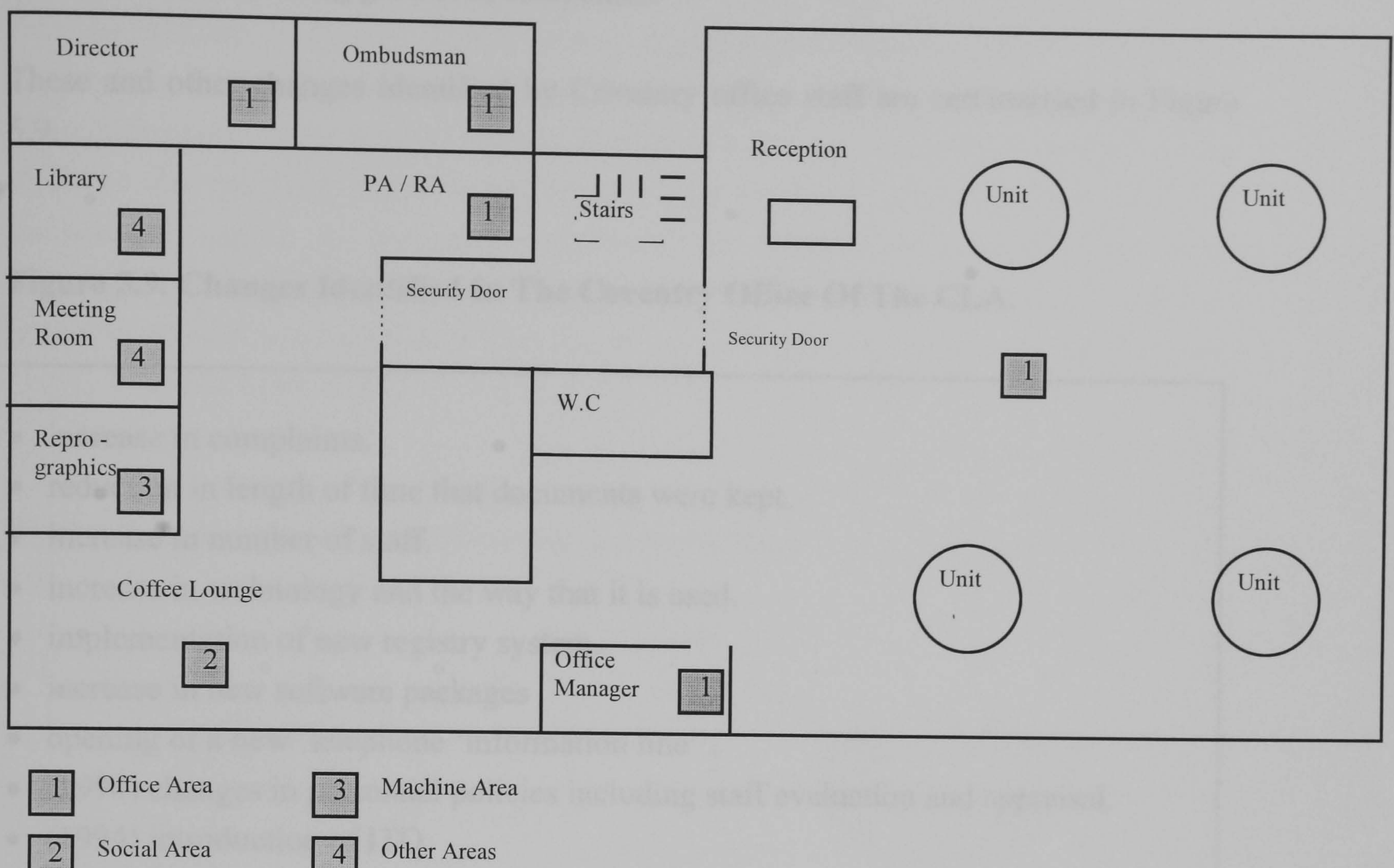
5.5. The Structure Of The Coventry Office: The Fieldwork Site.

The office at Coventry is where the case study was carried out. It is the newest of the three offices and was opened in October 1990. The catalyst for this was a dramatic increase in complaints. The Coventry Director commented that business had increased by about 600% in the fifteen years that he had been with the CLA (int/ee 1:137). A few of the Coventry staff had transferred from the London office but the rest were completely new to the Commission (int/ee 7:95). The new staff came from a wide variety of backgrounds which added a different dimension to the office since previously most people had come from local government backgrounds (int/ee 7:97).

The Coventry office is located on two floors within a relatively new building. The first floor is where the work activity takes place. The investigative units are located in an open plan area alongside the Office Manager. At the opposite end of the building is another open plan area where the PA and the Research Assistant are located in addition to the offices of the Director and the Ombudsman. In between is the kitchen area, the library, and a meeting room and reprographic facilities. As the main working area this floor is reproduced in Figure 5.8. to provide a physical representation of the office. Reference is also made to this diagram in Chapter Seven (Section 7.2). The ground floor is shared between the CLA and another organisation. The area occupied by the CLA is split into two main rooms. The first is a large meeting room and the second is for file storage. This room also became the home for the document image scanner and associated equipment since it was sensible to locate it next to the files that were going to be scanned onto CD format.

The diagram highlights physical areas of the office such as the machine area and the social area, which help people to locate themselves within the office. In contrast, managerial definitions about what 'the organisation' is are not very helpful because they define people as passive tools and not as active characters (Law, 1994). At best devices such as organisation charts describe line management and decision making responsibility. However, they do not represent what the 'structure' of the workplace is to the people who work in it. Figure 5.8. confers a spatial pattern onto the office from which comments about access and communication between people can be made (see Chapter Seven).

Figure 5.8. The Plan Of The First Floor.



5.6. A History Of Transformation At The CLA.

Since the CLA was established by Act of Parliament in 1974 it has undergone many changes common to new and developing organisations. Their business to investigate and resolve complaints of injustice caused through maladministration by local authorities remains the same. However, the quality of that service has changed with the constant effort to improve and develop this service to the public. Change particular to the Coventry office has a shorter history than that of the other offices in the CLA due to its more recent creation. The inception of the Coventry office was a major change for the CLA as a whole. The last section described how the Coventry office was developed in order to deal with the increasing number of complaints being made to the CLA. Once the initial foundations had been laid the Coventry office also found itself dealing with more and more complaints and therefore had to take on extra staff in order to manage the situation. The Office Manager and other staff who had been at the Coventry office since the early days commented on the dramatic way in which the number of personnel had increased (int/ee 2:242; int/ee 3:95). Now the Coventry office is the same size as the

other two offices and there are calls to recruit more investigative and support staff to deal with the continuing growth in complaints.

These and other changes identified by Coventry office staff are summarised in Figure 5.9.

Figure 5.9. Changes Identified In The Coventry Office Of The CLA.

- increase in complaints.
- reduction in length of time that documents were kept.
- increase in number of staff.
- increase in technology and the way that it is used.
- implementation of new registry system.
- increase in new software packages
- opening of a new 'telephone 'information line''.
- (1994) changes in personnel policies including staff evaluation and appraisal.
- (1994) introduction of ITQ.
- (1994) introduction of DIP.
- turnover of Ombudsmen in the Coventry office (3 in 6 years).

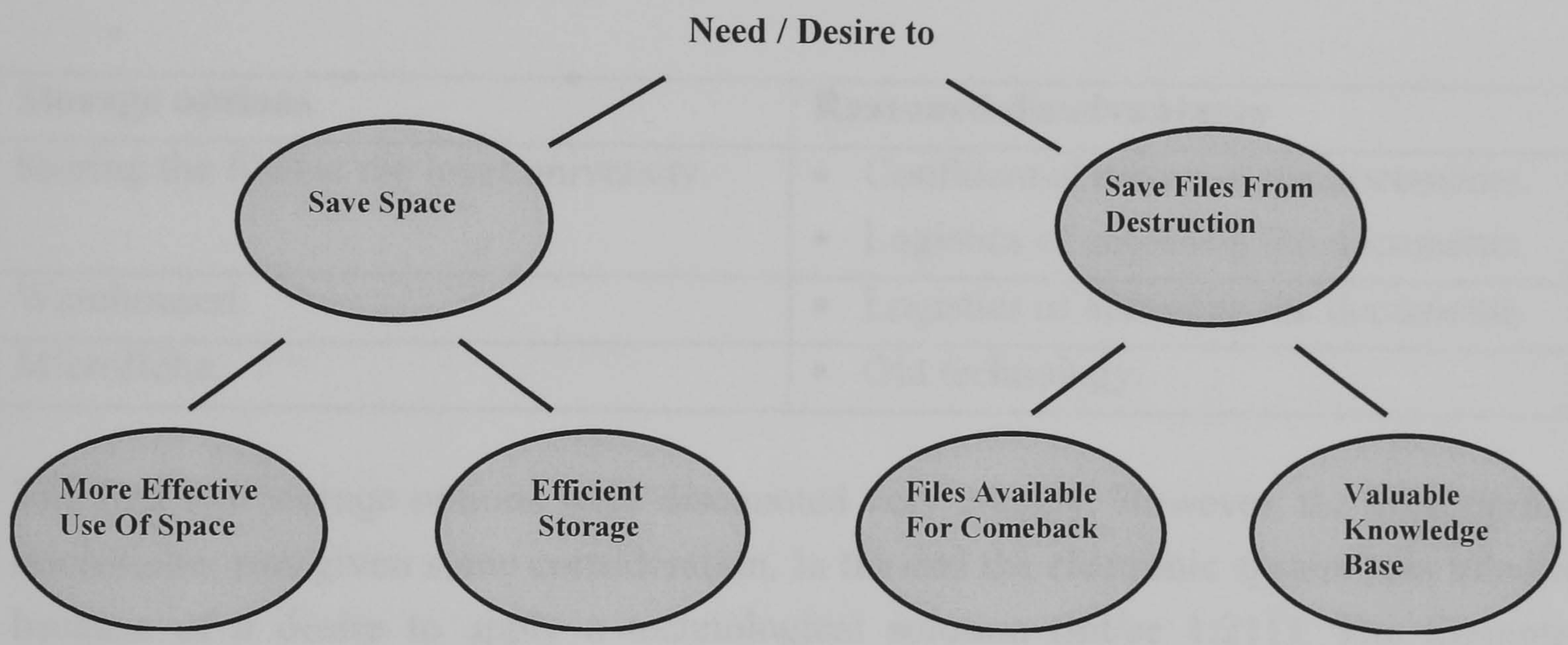
5.7. The Nature Of The Specific Change Being Studied.

The introduction of the Document Image Processing system (DIP) provides a vehicle for examining the variety of individual attributes and their part in this particular transformation. The implementation has a varied effect on work for the whole of the Coventry office and has been managed at the local level since the idea was first originated. It is possible that the rest of the Commission, which did not always appear to entirely support this project, may wish to introduce a similar system.

5.7.1. A description of the Document Image Processing system at Coventry.

Document Image Processing (DIP) enables organisations to capture paper information and replace it with an electronic system. In its simplest form it involves transforming paper documents into digital images. Documents are fed through a scanner which digitises the resulting video image of the scanned pages. This provides a way of maintaining access to necessary documents as information grows. As a result advantages such as saving space and cutting costs as well as creating a more efficient archiving system are achieved. (The 'Report to the CLA' that is based upon this work can be found in Appendix I).

Figure 5.10. Reasons For Considering A DIP System.



The purpose of introducing a DIP system at Coventry was identified as two-fold by the interviewees. Firstly, it is a more efficient way of storing paper documents and therefore would liberate space needed for extra staff (int/ee 12:133). Secondly, it is an effective method for retaining documents that would otherwise be automatically destroyed after a period of two years (int/ee 3:26). Destroying archive documentation was a commission-wide policy necessitated by lack of secure accommodation. It was felt that archive material could not be donated to institutions such as a university because of its confidential nature. The period for retaining files had been reduced gradually due to the lack of storage space. Staff at Coventry were already dissatisfied with the destruction of files at all. They felt that to destroy a valuable data base of information that could potentially provide assistance with future cases and training was a waste of resource (int/ee 30:127). On the practical side there was also the problem of dealing with 'comebacks' when the file had been destroyed. 'Comebacks' are correspondence from complainants who contact the Commission after a case is closed. This comeback could

be in a number of forms. It could simply be a letter of thanks or it might be a repeat complaint asking the investigator to refer to a complaint determined sometime ago. If the file has been destroyed extra work involving reference to the Council and the complainant in trying to recreate this file has to be carried out. Obviously if the original file is available this additional work is saved. For these reasons (summarised in Figure 5.10) the DIP system was considered as a replacement for manual filing.

The DIP system meant that files did not need to be destroyed; instead they could be scanned and stored on compact discs, making them available to investigators in the future. Of course, there are other ways in which the paper archives can be stored. These are outlined in Figure 5.11.

Figure 5.11. Other Storage Options.

Storage options	**Reasoned disadvantages**
Storing the files at the local university.	• Confidential nature of the documents. • Logistics of accessing the documents.
Warehoused.	• Logistics of accessing the documents.
Microfiche.	• Old technology.

The first two storage options were discounted very quickly. However, the third option, microfiche, was given some consideration. In the end the electronic system was selected because of a desire to apply a technological solution (int/ee 1:211). The Coventry Director was well aware that a manual system could work equally well and that a microfiche system would be a relatively cheap option (int/ee 1:203-204). However, others in the office felt that files on microfiche would prove difficult to read and was therefore not a good choice (int/ee 12:138). The Director also felt that it would be a more "*progressive*" move to go for a new technology with the possibility of integration in the future with the office's networked computer system (int/ee 1:211). This idea was further fuelled by an element of opportunism in the form of a budgetary surplus at Coventry which meant that the DIP system was affordable (int/ee 1:210). There was much anecdotal evidence to suggest that the Director's desire to introduce a technological solution was well known throughout both the office and the wider organisation. This had some effect on the way that certain people perceived the DIP system. Some felt it was an expensive and unnecessary solution and that a cheaper solution would have done the job just as well. These people did not agree with the Director's way of thinking, but since they had little or no responsibility for the project

this did not lead to any particular problems in the Coventry office. There was an expectation that any transformation in work habits and attitudes caused by the implementation of this technology would be accepted. Those who did share the Director's views might have done so for differing reasons because it is unlikely that the introduction of the technology would have the same significance for everybody. However, it is conceivable that those people more closely allied, both formally and informally, with the Director would share his view. This is because, firstly, they have probably been exposed to the same information as him, and secondly, because it is perhaps more politically viable to maintain 'good relations' with the Director and other senior staff (21:32). It would appear that this is not something the Director consciously encouraged his staff to consider, and it is not known whether he specifically made attempts to build support for the technical solution or, because of his senior position, felt that it was not necessary. However, the Director did indicate that an important part of his role involved developing a strong commitment among his employees to the purposes of the CLA (1:432). The introduction of the DIP system was not an organisation-wide change, but the Director considered it was important and it is likely that some members of the organisation would 'develop' their view on it as a result of this.

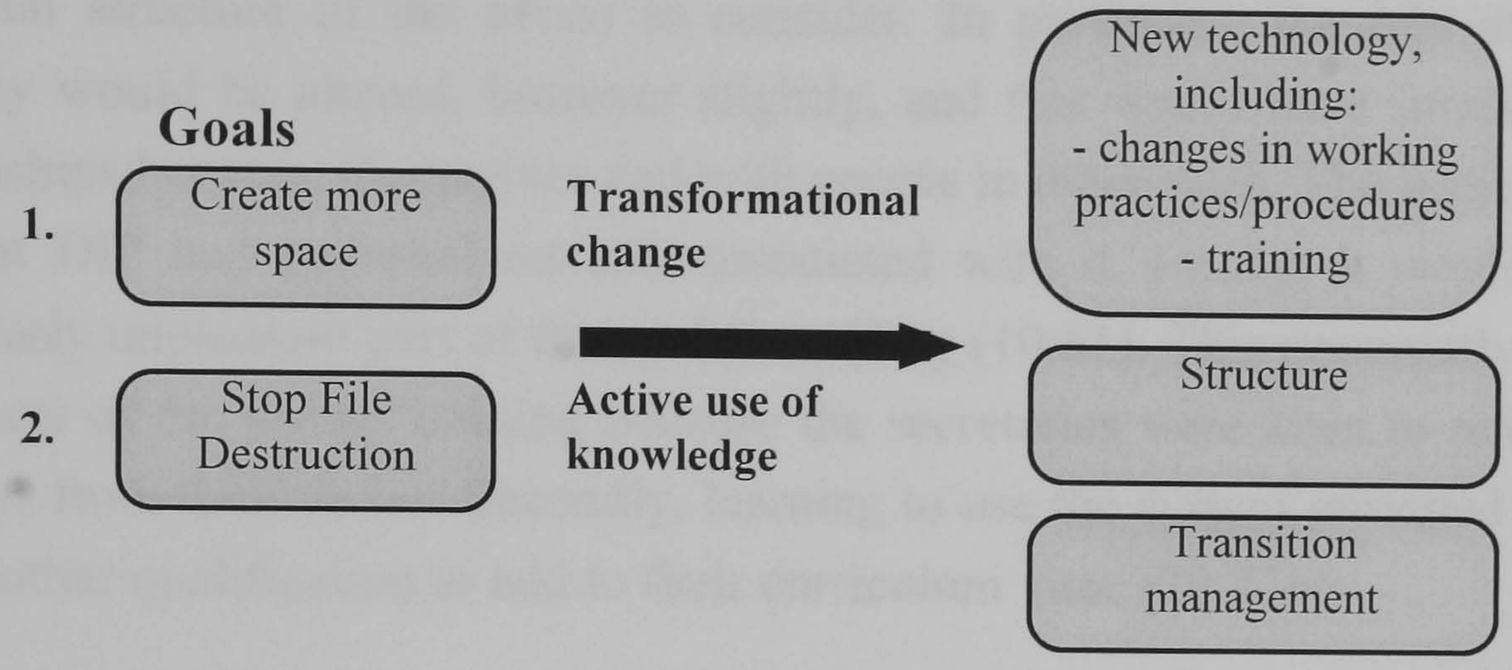
5.8. Implications Of The Change.

There were implications for the CLA as a result of introducing the new piece of technology. The literature covering the uncertain and complex nature of technology implementations is well established (Schwarz and Thompson, 1990; Harding, 1994). The purpose of this study was not to evaluate the actual technology; instead it is concerned with the process by which it was introduced, and the contribution that individual attributes made to that process.

An evaluation of the process for introducing the DIP system can be found in a 'Report to the CLA' which was written as part of the contract giving the researcher access into the organisation. The report provides an account of the technology, a description of the process by which it was implemented, and thoughts on the method for improving the management of future transformations (The 'Report to the CLA' that is based upon this work can be found in Appendix I).

The specific implications of DIP will be addressed in Chapter Seven. However, at this point it is worth noting the effects that the change had on the office and the anticipated implications associated with the process of introducing something new into an organisation. See Figure 5.12. for a summary of this.

Figure 5.12. The Reasoning Behind And The Implications For This Technological Change.



Two specific goals were identified as being the catalysts for the introduction of the DIP system. The first was the need to create more working space and the second was the desire to stop the regular destruction of files. There were implications for the employees of the Coventry office of the CLA, both directly and indirectly, relating to the specific technology and to the process by which it was introduced. These are discussed below:

- **New technology.** The decision to go for a technological solution is described above in Section 5.7. The knowledge of one particular individual was drawn upon to help the Director introduce the specific system. It was then necessary to consider two other important implications of the introduction of the DIP system: **(i) Changes in working practices and procedures.** The introduction of DIP would have implications for those who would be using it. This would affect the way in which filing and retrieval activities would be carried out, which might affect the other roles and responsibilities of team secretaries. There were also concerns about the back scanning of the files sitting in the archive. At one point it was thought by the management team at Coventry that the team secretaries would also be responsible for this. This caused some consternation among the investigators in terms of the impact that this would have on the secretaries' other duties. Part time staff were eventually employed to deal with this problem. **(ii) Training.** An operating procedure was drawn up by an Assistant Director at the Coventry office which provided details on the use of the DIP system. The main concern was the time that would be needed to carry out the training. As a result of the training, new skills would be developed.

- **Implications for structure.** The physical structure of the office would be changed as a result of the DIP system. It was hoped that after a period of time the paper archives would disappear and that would provide much needed extra working space. This could be utilised by present staff as quiet space which was much craved (7:353) or for a completely new team of investigators which it was felt was necessary to cope with the increasing numbers of complaints (2:294). There were also implications for the social structure of the office to consider. In particular, the role of the team secretary would be altered, however slightly, and this would have implications for relationships between themselves and with people in other roles. The team secretaries saw that DIP had potential rewards associated with it. Firstly, it would relieve a particularly unpleasant part of their job, i.e. filing (10:61). This potentially reinforces the effects of the formal training because the secretaries were keen to remove filing activities from their duties. Secondly, learning to use the system provided secretaries with another qualification to add to their curriculum vitae (20:236).

- **Transition management.** Those managing the process of introduction were influenced in terms of how they would do it in the future. The Director felt that he had learnt a lot from the experience (1:338). However, it was felt that the office was still weak in terms of project management capabilities. This resulted in the development of 'rules for project management' and included issues relating to the acquisition and sharing of knowledge. It was hoped that this would improve the way in which change was managed in the future (int/ee 1:347). However, there were people not involved in the introduction of the DIP system that felt that they could have been. There were those who felt that since they would be using the machine, they ought to have been at least consulted about it (9:188). In addition there were others that had prior experience of DIP and its implementation which they felt could have been drawn upon and used, and which could have potentially improved the process by which it was introduced.

5.9. Summary.

This chapter has described the context for the research. This includes a description of the organisation in which the fieldwork activity took place and the specific technical change which provided the study with an example for exploring individual attributes. Describing the context is important because it is central to an understanding of how people interpret change.

Having provided the context for the fieldwork it is necessary to describe what activities were undertaken and how they were carried out (based on the research design in Chapter Four). The next chapter also outlines the reasons for undertaking the fieldwork.

Chapter Six: Implementation of the Fieldwork Activity and some Initial Interpretation.

"So here I am. I am standing at the gatehouse, looking at Daresbury Laboratory. And I can't keep the grin off my face..... I'm here!". (Law, 1994).

6.1. Introduction.

The last chapter described the context in which the objectives of the thesis would be met. This provided an understanding of the environment in which the work was undertaken and the nature of the change through which individual attributes would be explored. This chapter describes the activities that were undertaken and how they were carried out in order to elicit the types of data required. It also describes how some of the data was represented on personal process maps, and how these were constructed and analysed. Figure 6.1. provides a summary of the fieldwork activities that took place.

Figure 6.1. A Summary Of The Fieldwork Activities.

Access was negotiated into the CLA in return for the writing of an evaluation of the implementation of DIP

↓

Multiple-techniques approach developed for the fieldwork- including interviews, observation and analysis of documentary data

↓

Interviews carried out

↓

Interviews transcribed

↓

Maps drawn (from the transcriptions) of each individual's perceptions of the implementation process (of DIP)

↓

Maps sent back to individuals for validation

↓

Visit to CLA to collect maps and see all individuals regarding any changes to them

Figure 6.1. appears to represent a linear sequence of separate activities, however, they were in fact very closely connected and iterative in nature. These stages are discussed in the rest of this chapter.

6.2. A Story Of Access.

Chapter Four described the need to be aware of the issues involved in arranging access into an organisation. Access into the CLA was negotiated both physically and socially. This involved gathering information about the organisation and developing an understanding of the type of work they did.

Physical access into the CLA came in the form of an opportunity presented by a senior university colleague. This person was aware of the nature and requirements of the research project. He was also aware that the Director of the CLA's Coventry office was looking to hire an external researcher to assess the recent implementation of a DIP system. This was viewed as an appropriate framework in which to carry out the case study and so discussions about access were initiated. In return for allowing access an appraisal of the implementation of the DIP system was to be produced.

It is clear that 'choosing' to carry out the fieldwork in the CLA was not based on random selection. It was chosen because it is a knowledge intensive organisation, which provided an appropriate setting in which to explore individual attributes.

A summary of the process the researcher went through to gain both physical and social access, having met the Director is outlined below:

- (15.3.94) The Coventry Director asked the researcher to send him a proposal explaining the research interest and how the fieldwork activities and assessment of the DIP system could be carried out. The Director needed to receive this proposal almost immediately since it was to be presented to his management team within a matter of days.

- (16.3.94) The proposal was sent to the Director outlining the Ph.D. interests and what the fieldwork activities would involve, including observation, interviewing and access to documentary data. The proposal was written in the context of the technological introduction since that is what the CLA was interested in. It seemed feasible that the evaluation of the DIP system could be carried out as part of the research fieldwork by including questions about it in the interview schedule. At that

stage it was a little unclear as to how many interviews were necessary but since they were to be in-depth, about thirty was thought to be appropriate. The proposal was then presented to the management team at the Coventry office.

- (18.3.94) The Director responded, stating that the proposal was acceptable and a meeting was set up to discuss a number of issues. The meeting was to be casual so that the researcher could to get acquainted with the Director on an informal basis.

- (24.3.94) Met the Director for an informal meeting with the university colleague in a local pub. The Director described the Coventry office and its activities and suggested a number of the people that he perceived were key to the DIP implementation process. There was a brief discussion about what he wanted from the evaluation report which we would return to later. He also remarked that he would need to read anything that was written about the CLA in the thesis for security purposes, although no problems were envisaged. This was not regarded as a constraint on the research. Complete access was granted and therefore it was necessary to fulfil any requirements of that access. At the end of this meeting, a date was arranged for the researcher's first visit to the Coventry office to meet some of the people the Director had talked about.

- (29.3.94) This was to be the first visit to the CLA office at Coventry although the Director who had become a familiar face was not going to be there. On arrival at the Coventry office, it was necessary to identify oneself and one's business to the receptionist through an intercom system outside of the building. Once this was confirmed, the receptionist opened the security door electronically from her desk. Following the instructions that the receptionist had given, the researcher made her way up to the first floor where she was met by the Director's Research Assistant. The main purpose of the visit today was to talk to the Research Assistant (RA), the Office Manager (OM) and one of the Assistant Directors (AD), all people who had been involved in the introduction of DIP. The RA was waiting at the top of the stairs outside of the reception area which we passed into through another security door.

It was not clear what this shield of security was there to protect. The CLA was an organisation that was set up to provide a service to the public, however the high levels of security did not provide an immediately inviting welcome. On meeting the RA, she explained that there were a lot of personal files in the building that the CLA had a duty to keep private and confidential. She also explained that most of their contact with the public was over the telephone and via the mail. People with

complaints did not come to the office, instead if there was a need to speak to them face-to-face, the Investigative staff would go out and visit them.

The RA was a very warm and amiable person who was to become a friend. This resulted in a high level of trust being developed. As a sign of this trust, on only the second visit to the Coventry office the access code for the internal security door was given to me. This might have been regarded as a little unwise, in the sense that it circumvented the very thing that the CLA was trying to achieve by having so much security. However, it did appear that there were advantages to be had from being introduced into the office by the Director. There are, however, implications associated with this which are discussed later in this section.

To begin with we sat in the kitchen area. This is a very pleasant and relaxing corner of the building which has many facilities for preparing food and drink. After initial introductions the Research Assistant began to explain what the CLA did, how big it was and its formal structure. She also provided a file containing a number of documents including an organisation chart. We then discussed the research needs including numbers for interviewing and the timing of them so that she could begin to organise it. The RA then introduced the Office Manager (OM) and one of the Assistant Directors (AD), they joined in the informal meeting to talk about the introduction of the DIP system, in which they had both been involved. Although these meetings were informal, an element of formality was perceived due to the fact that everyone wore business style suits. It was also because this was the first time we had met and it happened to be in the work environment. On subsequent meetings, this formality was hardly perceptible.

Both the AD and the OM had already agreed to be interviewed on the next visit and were interested to find out what sort of questions they were going to be asked. The Office Manager explained that she thought that it was good idea to bring 'outsiders' into the organisation so that they could compare how they think they are doing with how others think they are doing. We then visited the archives where files were stacked from the floor to the ceiling. She explained that there was no more room in the building left for storing the files and suggested that this was why the DIP system was being introduced. This issue was brought up many times during the interviews.

After the meetings with the Research assistant, Assistant Director and the Office manager, the researcher was allowed to wander around the office alone. This provided the researcher with the opportunity to introduce herself to the other staff and to explain what she was there to do. These 'chats' served to create a level of

sociability and enabled the researcher to explain that though she had been introduced into the office by the Director, access had been granted on the strength of her proposal. Consequently, there was no reason for people to be concerned that she was there to act as a 'stool pigeon' for the Director. As well as looking to extract information for the DIP evaluation report, she had her own research agenda in which people were very interested in on the whole.

Before leaving, arrangements were made for the first set of interviews to be carried out on 19.4.94. These would be with the Director, the Office Manager and the Assistant Director. Another day of interviewing was also scheduled for 4 5.94 when the Research Assistant and two or three others yet to be confirmed at that stage would be interviewed. These and all the subsequent interview dates would also provide the opportunity to observe the office and collect documentary data.

Reflecting on this first visit to Coventry, it appeared that the CLA would provide a most appropriate location for carrying out a case study which aimed to explore people and their effect on the change process. All the staff at the CLA had appeared to be very interested in the study and it seemed as if everybody was happy to help. This was reassuring since prior to the first visit it was not clear how the researcher might have been regarded. Researchers are often viewed as experts who are going to solve all the organisations problems. Otherwise they are seen as inexperienced academics who just get in the way. These fears proved to be totally unjustified. There were a large number of people in the office who had experienced academic life and had some appreciation of the study. Others were simply happy to assist in whatever way they could.

Negotiating access and initial field visits are specific tasks and they form an important part of the fieldwork activity. They provide the study with information and help to generate a feel for an organisation. Physical access had been practically granted once the proposal had been accepted. These meetings led to the researcher being granted social access as well.

The Director fed back to the researcher that the people at the Coventry office were happy with both her and the proposed study. Such approval does not necessarily secure a successful study, indeed it could mean that a less incisive and critical approach is adopted. However, the researcher was aware of this and made efforts to ensure that this did not happen. This was addressed through the adoption of a multiple techniques approach to the work. It was intended that this would provide a more complete picture and a better understanding of the individuals involved and their personal contribution to change could be developed.

Collecting data using different techniques also allows, to some extent, for the difficulty in acquiring information about individual attributes. The rest of this chapter explains how each method of data collection was used in order to find out a little more about them within the specific context of change.

6.3. The Interviews.

The interviews were conducted in a non-directed manner using a semi-structured interview guide. This guide consisted of a number of open questions that were grouped into particular themes. The questions were flexible enough to be reorganised as the interview developed so that it could follow the 'natural' progression of the discussion (Stone and Harris, 1984 (2)). This natural flow was enabled further by the researcher who made sure that there was a shared understanding of the topic under investigation at the outset of the interview (Foddy, 1993).

All of the interviews were carried out by the researcher, this was for three particular reasons. The first is the lack of financial resource available to postgraduate research. The second is that having one interviewer reduces the chances of variability in the interview style and approach, thus ensuring a greater degree of consistency in the answers. The third reason is based on a perceived need for the researcher to be involved in the interviewing exercise in order to help develop a 'feeling' for the organisation and its people. This also has benefits in terms of better understanding when analysing the data (Mostyn, 1987).

Prior to beginning the interviews at the CLA a few pilots were carried out among friends and colleagues. It is accepted that piloting outside of the context in which the 'real' interviews will take place has limited value in terms of analysis. The pilot interviewees will not have experienced the specific change that provides the focus for the 'real' interviews. However, they did provide useful insights into the interviewing process and helped with regard to the clear expression and understanding of the questions. Since piloting the interviews was not possible in the CLA, the first interviews carried out there provided the opportunity for making minor changes to the way the questions were posed.

The purpose of the interviews was to encourage individuals to talk about how they perceived change, both generally and with specific reference to DIP, in the CLA. This involved them trailing the process of how ideas are transformed into decisions and what

the value of people, including their knowledge and skills, is in that process, i.e. what contribution they make. Information about each individual's knowledge and skills was then sought. The introduction of the DIP system provided a focal point for this. It also provided a good example for the research since it would be an event that most people would have some knowledge of. The questions were designed "*as triggers to encourage the respondents to talk, rather than each fulfilling a specific role in the research design*" (Hadfield, 1997), and were organised into the following themes:

- Demographic information (name, role, etc.).
- Individuals perception of the routes by which change is introduced into the CLA.
- Individual's role in that process (identifiable practices for enabling individuals to contribute to the CLA).
- Individual's perception of introduction of the DIP system (role/perception of self and others in process).

Individual' s perception of own skills/knowledge (to fulfil role and beyond/formal and informal).

Individuals were asked to describe their experience of change in the CLA. Once the concept of change had been introduced into the conversation, it made it easier to ask about the introduction of DIP into the Coventry office. The focus on the DIP implementation was based on the need to elicit information about how people describe and deal with a specific change in different ways. The aim was to examine the data in terms of the variety of individual attributes (based on their description in Chapter Three). However, before this could be done it was necessary to classify the data, i.e. make sense of the data set as a whole. This was done by organising the interview transcripts into themes. Then it was possible to look at each of the themes in order to establish what individual attributes were evident. By looking for specific phenomena relating to individuals it was possible to identify attributes, some examples are provided in Figure 6.2. below.

Figure 6.2. Examples Of Individual Attributes.

Theme	Interview-ee	Response	Associated Attributes
outside interests	(4:56)	*I do not think that we are very good at using people's personal experience and knowledge acquired outside of work*	- recognition of other people's knowledge, skills, etc. - recognition of limitations of organisation's managers
scanning and networking	(3:30-33)	*We were both aware that DIP was coming along. He through personal contacts and friends. Me through my own general reading. I read about 5 computer journals each month.*	- personal knowledge - willingness to acquire information. - recognition of other peoples' knowledge.

From Figure 6.2. we can see that a number of attributes are related to each theme. After full analysis of the data set many more themes and, consequently, attributes were identified and these are presented in the next two chapters. In order to provide a manageable framework that represents individual attributes, they are grouped together in attribute sets. This aggregation is the basis for the typology.

6.3.1. The interview sample.

Choosing how many people to interview involves making a number of decisions about representation and project manageability. However, it is often more about what you are able to negotiate. Deciding what is an appropriate sample size may be dependent on some official guidelines to a certain degree. However, it is claimed that the meaningfulness generated from a qualitative enquiry such as this has more to do with the richness of the information collected than factors such as sample size (Kirk and Miller, 1988; Gilbert, 1995).

Thirty interviews were carried out with individuals from a cross-section of the Coventry office over a period of about six months. One other interview was carried out with a senior manager at head office. During this period of time observations were also made and documentary data was collected. Transcribing the interviews and drawing maps as well as some initial analysis was also begun during this time. The people who were interviewed are described only in terms of their organisational role in order to maintain confidentiality. The sample represented 50% of the office and represented all levels of the hierarchy.

6.4. Recording And Transcribing The Interviews.

Each interview lasted between one and a half and two hours and was taped onto an audio cassette. The issue of taping the interviews was raised with the Director at the first meeting. Although he had no problems with the idea we decided that each interviewee should be free to decide how they felt about it. As it turned out everyone was quite happy to be recorded.

Transcribing the tapes was done almost verbatim and was carried out by the researcher for the same reasons as the interviews (see Section 6.3.). The researcher benefits from carrying out these tasks because it allows greater familiarity with the data. The disadvantage is the time that it takes to do all of this. It took approximately six hours to transcribe and analyse one hour of interview, a figure that has been established in earlier research (Lemon, 1991; Trott, 1993). Transcribing the interviews began during the fieldwork period and was completed shortly afterwards. Once the interview transcripts were complete it was possible to do some initial sorting of the data and to begin to construct maps.

6.5. Mapping The Interviews: Understanding Their Construction.

Mapping the interviews was regarded as an important exercise because it is thought that they "*represent subjective data more meaningfully than other models*" (Eden, 1992). This is because they can be seen as a picture that encapsulates a person's understanding of a particular situation. No claim is made that they in any way represent models of thinking. Instead, the 'map-like' diagrams are simply a device for displaying perceptions of process, including identification of the 'key agents' involved. The part of the interview describing interviewees' understanding of the introduction of the DIP system into the Coventry office was pencil drawn onto sheets of A3 paper. The fully constructed maps remained in this format and were returned to the respondents with a letter asking them if they would spend a little time checking them. They needed to confirm that it was a 'true' and fair representation of how they had perceived the process of change. If it was not, then they were asked to make any changes that were necessary. On a subsequent visit to the Coventry office all the maps were collected with very few alterations. This provided some support for their use (Trott, 1993). The visit also provided the opportunity for individuals to ask questions and for the researcher to ascertain the level of interest in the mapping technique. Respondents found the way in which their views had been expressed very appealing. As a result they were regarded as

a "*politically acceptable*" method of representing process (Brown, 1992). Only when the maps had been through this validation process were they entered onto the computer using the Microsoft Word drawing facility.

The maps began from one particular starting point identified by the darkest shaded box. This box in all cases refers to the events that each respondent perceived initiated the process of introduction. In most cases this is a recognition of the problems of space and file destruction which were described as the catalysts for the decision to introduce DIP. In only one map (see Map 10) does the respondent not mention the problems as being the starting point, instead they refer to the technological knowledge of one of the Assistant Directors (AD). For this Team Secretary (TS), the AD's knowledge was the beginning of the process of introduction of DIP. This Team Secretary was not a member of the AD's team and so it is thought that her view was based on the powerful nature of the AD's knowledge which was known about throughout the office. Map 22 is also a little different to the others in terms of the start box. This Investigator (I) perceived, like most other respondents, two main catalysts for the change, i.e. problems of space and problems of file destruction. However, Respondent 22 was very clear to note that the route each of these issues took was slightly different. The problem of space was identified and then taken up by the Coventry management team (TMM), whereas the problem of file destruction only reached the TMM after discussions between Investigators, both formally and informally. This Investigator perceived that people in her role were the most affected by file destruction, since they have to deal with the consequences of it, and so they were most concerned about it. She had been involved in a number of informal meetings with her colleagues and formal meetings with her team to discuss the dilemma. In her view these issues were noted and then passed onto the TMM who then dealt with the two problems simultaneously.

Each statement on the maps is drawn from the interview transcripts and is therefore representative of 'actual' activities. People were asked to describe their personal perception of the process by which DIP was introduced into the Coventry office, from the very first time they heard about it, up to the time of the interview. This included explaining their own involvement as well as their perception of other peoples'. The statements are joined together simply to represent the linkages and relationships between activities including factors which appear to have some impact on the process or are influenced by it.

Initially the boxes and the arrows linking the statements together were drawn without the two-circle skeleton. However, after the first four or five interviews, a couple of things became increasingly evident. The first was that there seemed clear differences

between what are described as 'operational' and 'strategic' activities. Chapter Four described 'operational' actions as the day-to-day 'doing' and 'using' activities, whereas 'strategic' refers to matters related to the management of the process and the wider implications for the CLA as a whole. The second important 'duality' to emerge was the allusion to the 'internal world of the organisation' (which included its customers, etc.) and to the 'external world', i.e. the environment. Operational-strategic and internal-external are described as dualities only in terms of the two-fold reference that is made. They were asserted to be important with regard to individual attributes for the following reasons:

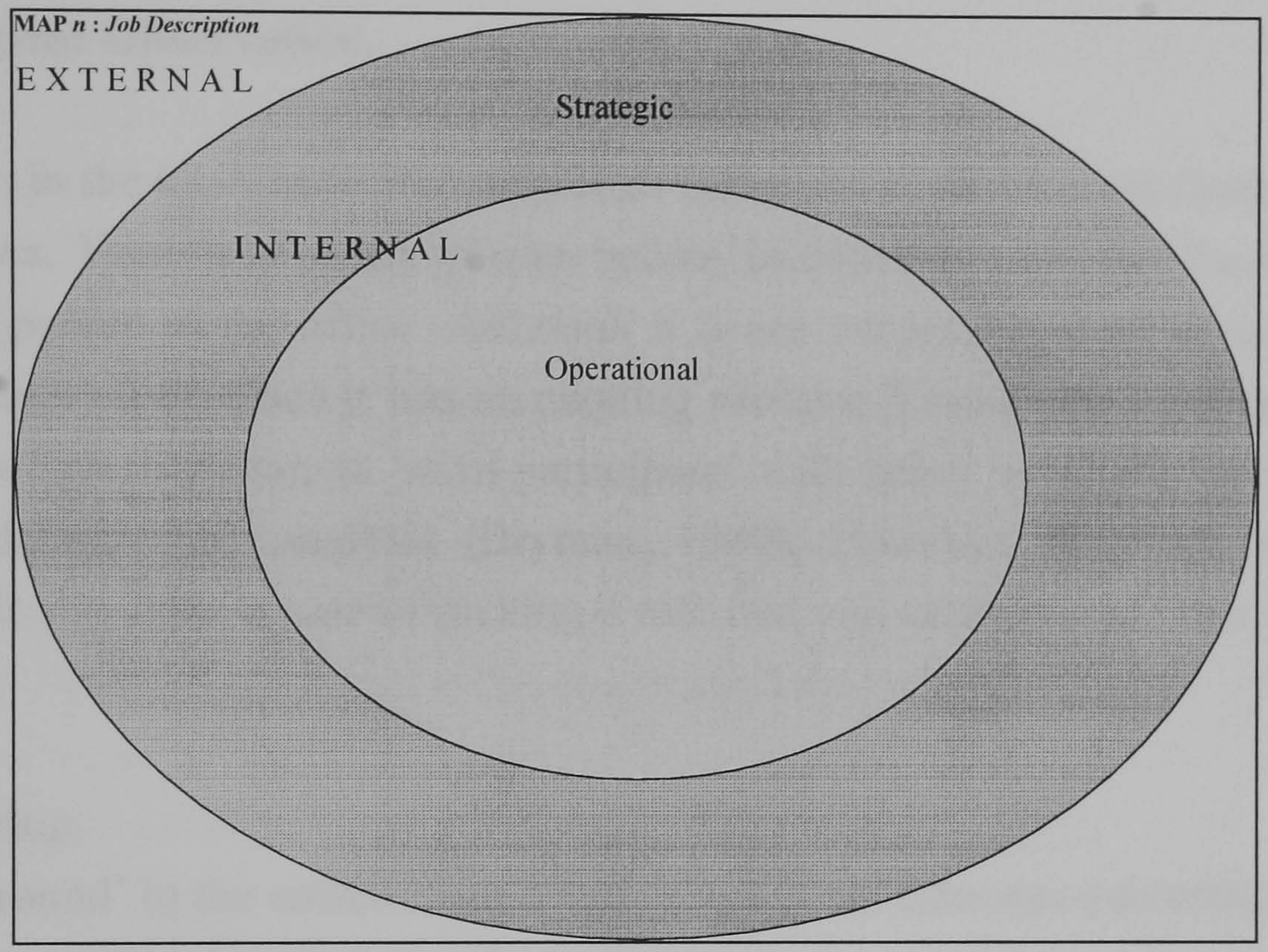
- **Operational-strategic:** Depending on their role, it is argued that individuals are likely to have or develop either an operational or strategic perspective of an organisation., i.e., people at the operational level are expected to have an operational perspective and to describe change in such a way as reflects that. This idea (discussed in Chapter Seven) is based in organisation theory which contends that an individual "*will perceive those aspects of the situation that relate specifically to the activities and goals of his department*" (Dearborn and Simon, 1958; Simon, 1947). However, it became evident after the first few interviews that some individuals had a view of change more normally reflected in a different role. The same argument is made for those at the strategic level. An example of this is described in Section 7.3.2. where an individual at the strategic level, who had some responsibility for managing the DIP project, had great empathy for the operational activities related to that. This does not mean that he did not have a strategic view more obviously related to his role, but that he had an understanding for the operational aspects of the project in addition. It was agreed among most of the staff that this contributed to the good management of the project at the local level.

- **Internal-external:** This duality was developed as a result of the data collected in the exploratory phase. It refers to the identification of attributes acquired by respondents as the result of formal training inside the CLA and those gained externally on a more informal basis. It was felt that, on the whole, the latter were not valued by the CLA but had the potential to provide the organisation with "*extra skills and knowledge*" (15:212). In one instance, the Director did both recognise and utilise one of his Assistant Director's externally (and informally) acquired attributes. However, it was felt that this was not common, despite the contribution that these individual attributes could make.

As a result of the emergence of the operational-strategic and internal-external dualities and their importance with regard to both individual attributes and the introduction of the

DIP system, it was found necessary to devise a way to represent them on the maps. See Figure 6.3.

Figure 6.3. Representation Of Operational-Strategic And Internal-External Activities Related To The Introduction Of DIP At The CLA.



The aim was to divide the statements, but also to keep them on the same page so that it was still possible to observe the whole process. The development of the two circles was simply a matter of trial-and-error. Figure 6.3. represents the way in which the two dualities are portrayed on the maps. The inner circle contains statements referring to operational activities and the outer band to strategic activities. Anything within the two circles refers specifically to actions carried out within the CLA, and anything outside of the circles refers to the world 'external' to the CLA. Each respondents perception of the process of change was then drawn over that outline.

The time spent constructing the maps varied, depending on how 'big' they were, i.e. how many statements about the process were made. On average it took between half an hour to build the smaller maps and one a half hours to build the bigger maps. This included transferring statements from the interview transcripts to create the initial pencil-drawn maps, making any changes suggested by respondents and then transferring them onto the computer. No maps were invalidated because of spoilage or incompleteness. Even those maps which might be described as 'small' in terms of the number of statements are representative of something and therefore potentially

important. Drawing the maps meant that it was possible to compare viewpoints as well as to identify difference. Content analysis was carried out on the individual statements to identify individuals and attributes (identified by the light shading) utilised in the introduction of DIP. The analysis of the maps, as well as the other data, is described in the next two chapters.

6.6. Participant Observation.

Participation in the CLA came about through being physically present there to carry out the interviews. There was plenty of time before, in-between, and after the interviews to observe the people in the office. Although it is not necessarily easy to define explicit periods of observation since it was an ongoing process. It would be possible to describe this degree of participation as 'semi-participant' with heavy emphasis on interviewing and some documentary analysis (Bryman, 1989). However, this role was not pre-conceived. It was more a case of picking a role that was comfortable. This included the following:

- interviewing.
- 'sitting around' in the coffee room chatting to anyone who was interested.
- 'sitting around' in the administration area.
- 'hanging around' in corridors.
- sitting in the library reading documents or interview transcripts.
- walking around the main office area where the Investigative teams were located.
- developing personal friendships.

These simply involved the observer being sociable and proactive about asking people questions. Observers generally miss more than they see either by accident or by simply not recognising the importance of something. Sadly, an invitation to an informal lunch with a group of Investigators had to be turned down due to pre-arranged interviews. However, most other invitations to chat etc. were gladly taken up. Once you are in a situation it is difficult to be detached from what you are studying especially when there is no reason to be detached. The nature of this study involved being interactive with the setting in which the change was being examined and choosing to collect data through observation was a technique which reflected that need. We all interact with what we are studying whether we want to or not (Law, 1994). The researcher welcomed this interaction as it mirrored the nature of the study as a whole, i.e. it was considering the role that informal attributes played in the process of change.

6.7. Documentary Data.

A number of materials about the DIP implementation were given to the researcher at the first meeting with the Director. They included memos that had been circulated about the introduction of the system and the minutes of management meetings that referred to or discussed the change. This permitted some analysis of the process before entering the CLA. It also enabled some feeling for both the organisation and the process of change to be developed and explained. During the second visit documents were given to the researcher that helped her develop some sense of how the CLA was structured, who made the decisions, who and how many people worked there and the functional composition of the teams.

During subsequent visits to carry out further observations and interviews more documentary data was collected. This included general papers and reports about the CLA as a whole. These allowed the researcher to gain a better understanding of what the organisation did and how it did it. It also included documents that were directly related to DIP, for example, the Office Manager was keeping a diary of the implementation process. This was a daily log and included all the visits to suppliers and demonstrations that had been carried out, it also noted when the system arrived, when it was set up, any problems and when and who was being trained on the system. A copy of the operating procedure was also acquired.

6.8. Conclusions.

This chapter has described and reflected on the steps that were undertaken in order to gain access into the case study organisation and the subsequent data collection activities. It has also described how some of the data referring to the introduction of the DIP system was represented on personal process maps and discussed how these were constructed and analysed. These activities were part of a search aimed at exploring the contribution that individual attributes made to the introduction of a specific change.

Being in the Coventry office of the CLA carrying out the data collection activities allowed the researcher to gain a 'feel' for the place. This has been described as important because it enables change to be more fully understood within its context, thus helping us to improve our interpretations of the process. The next chapter describes what is meant by gaining a 'sense of place' and how both physical and social elements

of an organisation are relevant for the people who work in them. This provides a setting for describing and interpreting the introduction of DIP into the CLA's Coventry office.

Chapter Seven: A Backdrop To Change.

"*All descriptions...are a creation. We do not live in a universe but in a multiuniverse with as many descriptions as there are describers. Beauty is agreed upon consensually through social interactions, conversations. Things are what we agree to call them.*" (Paul Watzlawick, 1994).

7.1. Introduction.

The last chapter described how access into the CLA was achieved, the data collection activities that were undertaken and how part of the data was represented in the form of maps.

This chapter provides further explanation of the context in which the specific change took place. This is important because the physical environment is not simply a static setting in which change occurs but is an integral part of the social process. The reasoning behind this is based on the argument that different changes have unique spatial and temporal boundaries which are linked to the system surrounding them. They are also unique because of the differing social relations that organise themselves within the system. This refers to the relationships people have with each other but also to those that people have with their physical environment (Urry, 1987; Law, 1994). These agencies and relationships are what embody and characterise 'the organisation' (Law, 1994).

7.2. A Description Of Place.

The physical character of the Coventry office of the CLA has been described in Chapter Five. This aspect of the organisation is relevant because it provides a spatial picture of the location in which the introduction of the DIP system was examined. The physical structure is also relevant because it helps people to define themselves with regard to the tangible aspects of being in an organisation. Consequently, all of the respondents referred to physical place or space in some form or other. For example most people identified that physical space was one of the main reasons for introducing DIP into the office

"*... downstairs was put aside for the archives but has filled up very quickly, so there is a problem with space.*" (4:108).

The archives were located on the ground floor and the staff were situated on the first floor which provided the focal point for both work and social activity. It quickly became apparent that the ground floor was referred to by most people as 'downstairs' as if it was not part of their office. In fact, not only the archives were located 'downstairs', there were also conference and meeting facilities as well as a medical room. However, when people referred to 'downstairs' they meant the file room.

One member of staff explained that in her previous job she had had to retrieve files from a basement archive which she had not enjoyed doing. Consequently, she felt privileged that in her job at Coventry as an Investigator she did not need to go 'downstairs', instead she had a Team Secretary that would do this for her (7:288).

As well as the archives, people had thoughts about other parts of the office. For example, the first floor, where all activities, except archiving, took place was organised into specific areas (see Figure 5.8). The fact that these areas exist is not in itself as important as the use to which they are put and the way they are perceived.

- **Office areas:** strictly for the purposes of investigative work. The researcher was told that drinks and food, etc. were not allowed at desks. This meant that if someone wanted a coffee, then they would have to drink it in the coffee lounge. Some people found that this interfered with their performance because they could not continue working whilst having a drink (7:159; 15:15). However, most people perceived that making the effort to leave their desk to take refreshments had a positive two-fold effect. First it meant that people could avoid the isolation associated with the work and secondly, it provided a forum for informal interaction (16:16).

- **Social area:** where people met to have lunch and various breaks during the day. This area provided a place to discuss issues related to casework on an informal basis and was highly valued by all the staff. For example,

"*We acquire knowledge by each other ... or we swap information on cases. We do this informally at coffee breaks or just walking around the office.*" (7:57-59).

The informal acquisition of information and knowledge was commonly referred to by the respondents. In fact all the interviewees at all levels identified its value. The social area when empty also provided a 'quiet' working space which was something

a number of people perceived was lacking in the office. It was hoped that the introduction of DIP would create space for this purpose (7:253).

- **Machine area:** simply used for purposes of photocopying and other reprographic activities. Perceived by the researcher as a noisy room.

- **Other areas:** for example the library and the meeting/interview rooms. People used the facilities of the library to acquire information relating to the law and other things associated with casework. The meeting rooms were small offices that were used for work related purposes. However, both the library and the meeting rooms were used as quiet working areas whenever possible.

People also locate themselves physically in terms of where they sit and their position in the office. The perceived seniority of your role may be defined by where you sit, for example, a colleague of the researcher commented that there were positions in his office that gave the 'best' view of what was going on and these tended to be occupied by fairly senior staff. It also helps people to be aware of where other people are positioned. For example, one Investigator commented on how changing the seating arrangements in his area of the office had made improvements in terms of communication within the team. The change involved ensuring that everybody was in sight of each other which meant that it was possible to

"*... quickly have everybody in the unit chatting about something without this feeling of isolation which did happen before. It is only a minor thing but it has had quite an impact. People have commented on it quite regularly.*" (8:195-197).

Previously, isolation had inhibited interaction between the team members, thus communications had suffered. It was also commented that new Investigators had been able to learn the job more quickly because they were able to ask questions more easily as a result of the new seating arrangements (8:198). This example leads us to consider what types of individual attributes were utilised to make this change. Skills were applied in the first instance by the team member who recognised that there was a problem with regard to communications in the team and that one reason for this may be a consequence of the seating arrangements. This person then shared that knowledge with their manager, who responded by applying that knowledge and agreeing to make changes in the seating plan. It was commented that the change had involved very little disturbance for the members of the team and that the impact had been positive (8:196).

Open plan offices are often perceived as being of benefit to the development of internal office communications. For example, a senior manager at central administration in London perceived that the CLA was a fairly "*heads-down*" organisation which could have an isolating effect (13:57/58). However, because of the open plan seating arrangements at the Coventry office, he felt that this was more conducive to the sharing of knowledge and information because people got together more spontaneously (13:56/59). The previous example showed that being an open plan office did not necessarily ensure good communication, thus when organising open plan offices, some ways are better than others. There is also the need to think about the fact that at times people do need quiet working areas in order to be able to concentrate without being disturbed (see above). This would appear to be counter to the requirements for good communication and so needs to be considered by managers.

Another issue related to where people sat in the office was the distance between the investigative units and the location of the Director's and Ombudsman's offices. Both of these were located at the opposite end of the floor to the four investigative units (see Figure 5.8). This had an effect on the way that both they and the CLA were perceived, which was as rather old-fashioned and paternalistic (int/ee 22:22). People were not concerned that the Director and the Ombudsman had big offices but they did consider that their location was detrimental to the sharing of knowledge and information through the organisation. One person commented that this was made worse by the fact that her unit was the farthest away (19:2/3). Another member of her unit supported this statement and commented,

"*... physically our unit is at the end of the office and we get forgotten sometimes.*" (25:11).

This had resulted in both her and the unit often being overlooked simply because things did not reach them. This supports the idea that physical places and our interactions with them can have social implications.

The social aspects often mean much more for the individual than its physical layout and geographical spaces. The 'social structure' also helps people to locate themselves. However, Law (1994) suggests that we need to think of the social as a reflexive process rather than a "*thing*". Thinking in terms of structures often evokes images of inert objects which is not appropriate for describing the social elements of an organisation. Instead, viewing the social organisation as a group of processes appears more relevant when we understand that what we are talking about is based on individual perceptions of their social 'life' (Ley, 1981). Within organisations, this existence is constructed by and

represents each individual's experience including their interactions and relationships with other people.

Interpretations of place will be varied because every individual will describe their involvement in an organisation in numerous different ways (Lemon, 1991). Such differences in interpretation will have implications for the variety of ways in which meanings are attributed to the process of change (Eyles, 1985). This is explored further in the next section.

7.3. Perception And Interpretation Of Change: Their Relationship To Individual Attributes.

The introduction of the DIP system will have made a change to each person's physical and social surroundings, no matter how small. People deal with change in different ways, and one element of a person's response to change is based on how they feel and are located, physically, professionally and socially in an organisation.

Maps were drawn to illustrate each individual's personal perception of the change, including the identification of the key people involved in the process. Clearly, it is not possible to empathise with the research participants completely, or they with the researcher. Therefore, the researcher needed to be aware that she would locate her understanding of the introduction of DIP within a framework that was different to that of the interviewees. The researcher was able to get an understanding of the process of change from the periods of observation and carrying out the interviews. However, it was possible to gain further insights into the process after finishing the fieldwork. This was because the researcher now had an understanding of the collective view of the process which allowed further questions to be asked of the data that was not possible before.

The concept of perception has been referred to on numerous occasions during this thesis. This is primarily because part of the fieldwork was concerned with gathering individual perceptions of the introduction of DIP into the Coventry office of the CLA, represented in the personal process maps. Therefore, it is necessary to spend a little time describing what perception means within this context. It is important to note that the researcher is not attempting to be a psychologist, the field from which perception is most commonly explored. Consequently she is not an expert, but some understanding of the concept was deemed important in order to understand its relationship with individual attributes.

The study of perception is about why things appear or seem as they do to people. It refers to our "*awareness of objects or conditions about us*" (Allport, 1955). In his description, Allport (1955) alludes to an "*understanding awareness*", i.e. there is some "*meaning*" or "*recognition*" of the objects of which we are aware. Perceptions emerge as we develop a coherent system of personal constructs which we then impose upon the events that we encounter (Kelly, 1969). Events are open to a variety of interpretations because there are as many ways of understanding a situation "*as we ourselves can invent*" (Adams-Webber, 1979). Dearborn and Simon (1958) describe how perception is determined to a large extent by what is already "*in the subject*". However, in many cases individuals are not aware of or do not articulate the basis for their own actions or characteristics (Baron, 1983). This is often because aspects of being human (i.e. pertaining to personality) may be formed early in life or may be acquired without obvious recognition. It is this aspect of perception that is related to individual attributes. If perception is based on what is "*in the subject*", and attributes form some part of this, e.g. knowledge, skills, experiences, etc., then it can be said that attributes inform perception. They play a role in determining the particular view an individual takes of an event or situation which they are confronted with. This particularly relates to informal attributes, i.e. those pertaining to personality, etc. because people found it very difficult to identify where these types of attributes had been acquired, but formal attributes also contribute to the creation of our perception and understanding of circumstances. Consequently, it is argued that variety in individual attributes will lead to variations in the perceptions that people have.

These perceptions are important with regard to managing change, since they may either help or hinder the process. Chapter Six described how individuals perceive situations that specifically relate to their role and work activities. However, in this study, it was found that certain people also perceive events that relate to other peoples's roles as well as their own. Section 7.3.2. describes the part that one Assistant Director played during the implementation of the DIP system, whose view of the change did not entirely reflect his position and role. This was described as being of value because it resulted in the project being well managed at the local level, in fact better than might otherwise have been expected. Sections 7.3.1. to 7.3.4. describe examples of four individual's perceptions of the change at the CLA which are analysed with regard to their official functional role.

In the first instance, the exploratory study at the bank led to the identification of certain individual attributes which helped to gain a better understanding of their nature. Getting people to describe their perception of specific change at the CLA led to the classification of further attributes which are highlighted on the personal process maps

(light shading). These boxes either directly state an attribute, e.g. 'knowledge'; or where they were acquired, e.g. 'journals'; or refer to situations that are based on the use of attributes used, e.g. 'collected information'. See Figure 7.1. below which is an excerpt from interviewee 19's personal process map.

Figure 7.1. Representation Of Individual Attributes On The Personal Process Maps: An Example.

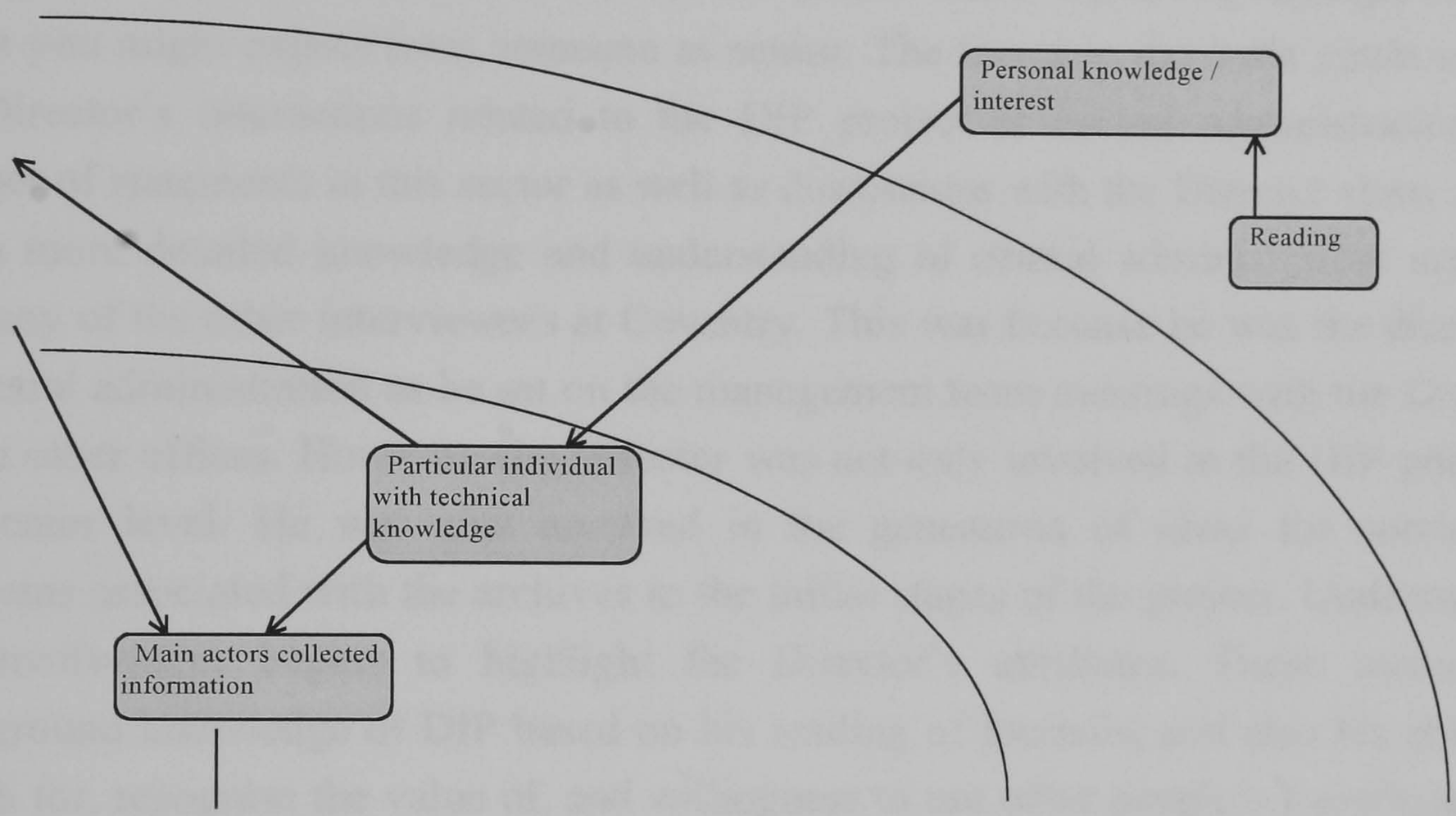


Figure 7.1. shows that interviewee 19 perceived that a specific individual had technical knowledge, acquired outside of the CLA, that was used to aid the introduction of DIP into the Coventry office. His knowledge was acquired as a result of a personal interest in technology which involved him reading a great deal about the subject. Consequently, the related attributes identified (in *italics*) are "technical *knowledge*" acquired as a result of "*personal interest*" and "*reading*" which led to the "particular individual" being involved in the *acquisition of information* about DIP, this relates to both *formal and informal scanning* activities.

The following section describes four accounts of the introduction of DIP into the Coventry office. They have been selected because they represent the main hierarchical levels. They also portray views of both change and the CLA which are relevant to the analysis of people and their individual attributes.

7.3.1. The Director's story.

The Director was the most senior member of the office and was the first to be interviewed. He was heavily involved in the initiation of the project and had some prior knowledge of DIP technology. Figure 7.2 represents the Director's perception of the implementation process.

We can see from the Director's map that he had a very comprehensive understanding of the way in which DIP was introduced into the office. There is a strong strategic feel to it which you might expect from someone as senior. The boxes in the outer circle identify the Director's interactions related to the DIP project at central administration. The number of statements in this sector as well as discussions with the Director show that he had a more detailed knowledge and understanding of central administration activities than any of the other interviewees at Coventry. This was because he was the direct link to central administration as he sat on the management team meetings with the Directors of the other offices. However, the Director was not only involved in the DIP project at the senior level. He was also involved in the generation of ideas for solving the problems associated with the archives in the initial stages of the project. Understanding his involvement begins to highlight the Director's attributes. These include his background knowledge of DIP based on his reading of journals; and also his ability to search for, recognise the value of, and willingness to use other people's knowledge. For example, the Director was able to draw upon the 'specific' individual's personal knowledge, which he recognised was acquired as a result of this person's external, informal activities.

The Director used his own personal skills and knowledge by responding to the need for change. On the whole, he involved people in the change based on their role and position, specifically the Research Assistant and the Office Manager. However, the did not become involved until the Director had discussed the issue with the 'specific' individual who was one of his AD's. This was despite this person having no formal technical role in the CLA. However, as a result of his personal knowledge, the AD he became centrally involved and was perceived by most people in the office as being

"*... the computer whizz-kid, what he can not do on a computer is nobody's business.*" (8:237).

The Director perceived that it was "*pure chance*" that he had a person in his office that could contribute in this way (1:382). If these abilities had not been available, then the

Director felt that the project possibly would not have gone ahead, based on the potentially prohibitive cost of employing a consultant (1:383-384).

It became clear in the interviews that there was a lack of clearly defined roles for the staff involved in the project. This was evidenced by the Director who felt that despite the AD's critical contribution to the local management of the project, the overall project could have been better handled. He was particularly referring to delays in the project caused by actions at central administration. He commented that in any new project he

"*... would certainly make sure that somebody was appointed to head the project and that no one interfered with their authority.*" (1:343).

From this description it appears that the Director's view of both change and the CLA is at the strategic level. He was very aware of activities at the operational level but did not see them in the same detail as someone at the operational level. As a fairly formal manager the Director passed on the responsibilities of the project to his staff once the initial ideas had been generated and decisions had been made (1:212).

7.3.2. The Assistant Director's story.

The Assistant Director, referred to above as "*the computer whizz-kid*", was one of four AD's in the Coventry office. The AD's were, in effect, senior investigators who carried out their own casework, as well as managing a unit of investigative staff. This particular AD perceived the introduction of DIP as something that was needed in order to prevent the paper archives from being destroyed (3:21-22). He recognised that he possessed a great deal of knowledge about technology, both specifically and in general. This was an attribute that he did not need to have in order to carry out his prescribed job function. It was acquired as a result of his own personal hobbies and the fact that he read in excess of five computer journals and magazines each month (3:33-35). On this basis he described himself as "*a dabbling amateur*" (3:301). Other studies have indicated the importance of different forms of scanning for increasing the knowledge base and thereby adaptability of organisations, however, these have concentrated on formal rather than informal activities (Trott, 1993).

Technical expertise could have potentially been bought in on a consultancy basis at considerable cost. However, the Director was aware of both the interest and extensive knowledge that the AD had in information technology even though this was not seen as part of his job description. Similarly, other employees at investigator and clerical level

used the AD as a resource for technical support. The contribution that the AD made to the introduction of the DIP system involved writing the specification in support of the tender document and solving the technical problems during the implementation and early use of the system. What was interesting, considering the AD's formal role, was why he became so involved in the project in the first place. In pursuing this question in the interview he responded

"*Really you are asking me why I do the sorts of things that I do I guess which are over and above what in a sense I am paid to do. And I suppose it is because I want to make the organisation work better.*" (3:72-73).

We have seen that the Director identified and was willing to draw upon the AD's informal knowledge. The value that the Director placed on this was linked to his need to deal with the specific problems of space and file destruction. In addition the AD was prepared to make his attributes available to the Director, in itself an attribute. Whilst the AD was prepared to offer his expertise to help "*the organisation work better*", he was also quite clear that he did not want to become involved in the day to day management of the system once it was fully installed. This he felt was the responsibility of the Office Manager.

The AD had a strategic view of both change and the CLA. This was evidenced in the interview as well as on his personal process map (Figure 7.3.). Both show that the AD had a good understanding of events at senior management level including how DIP fitted into the wider organisation. He was involved in some of the negotiations that went on at central administration, but he refers less to the strategic activities of the process, identified in the outer circle than the Director does. It is not surprising for the AD to have a strategic view, since he is at middle management level, however, he also had an understanding of the introduction of DIP that might be more associated with a person at the operational level. For example, because of his interest in technology the AD was very aware of the specific operational/procedural details of DIP (3:101). As a result, he was able to write the specification for the tender document, deal with any technical problems that arose during the implementation and early use of the system, as well as draw up the operating procedure for using the system (3:193). He would not have been able to do any of this without an understanding of how the system worked and the way in which the operators carried out their tasks. We can see on the AD's map (Figure 7.3.) that the central circle is very dense and contains specific details about DIP and the process of its introduction.

The fact that the AD had both a strategic and operational understanding of the change had value for the CLA. It is possible to identify the importance of this because at the local level the process of introducing DIP was described as being well managed (23:232). The AD had empathy for his managerial role, but was also happy to 'get his hands dirty' in order to improve the operations of the wider organisation. The example of DIP and the role played by the AD highlights a number of individual attributes. The AD's attributes include, technical expertise, willingness to scan, sympathetic disposition to requests for support, etc.; the Director and other staff recognised these attributes, and were capable of harnessing them for their own benefit and for that of the wider organisation.

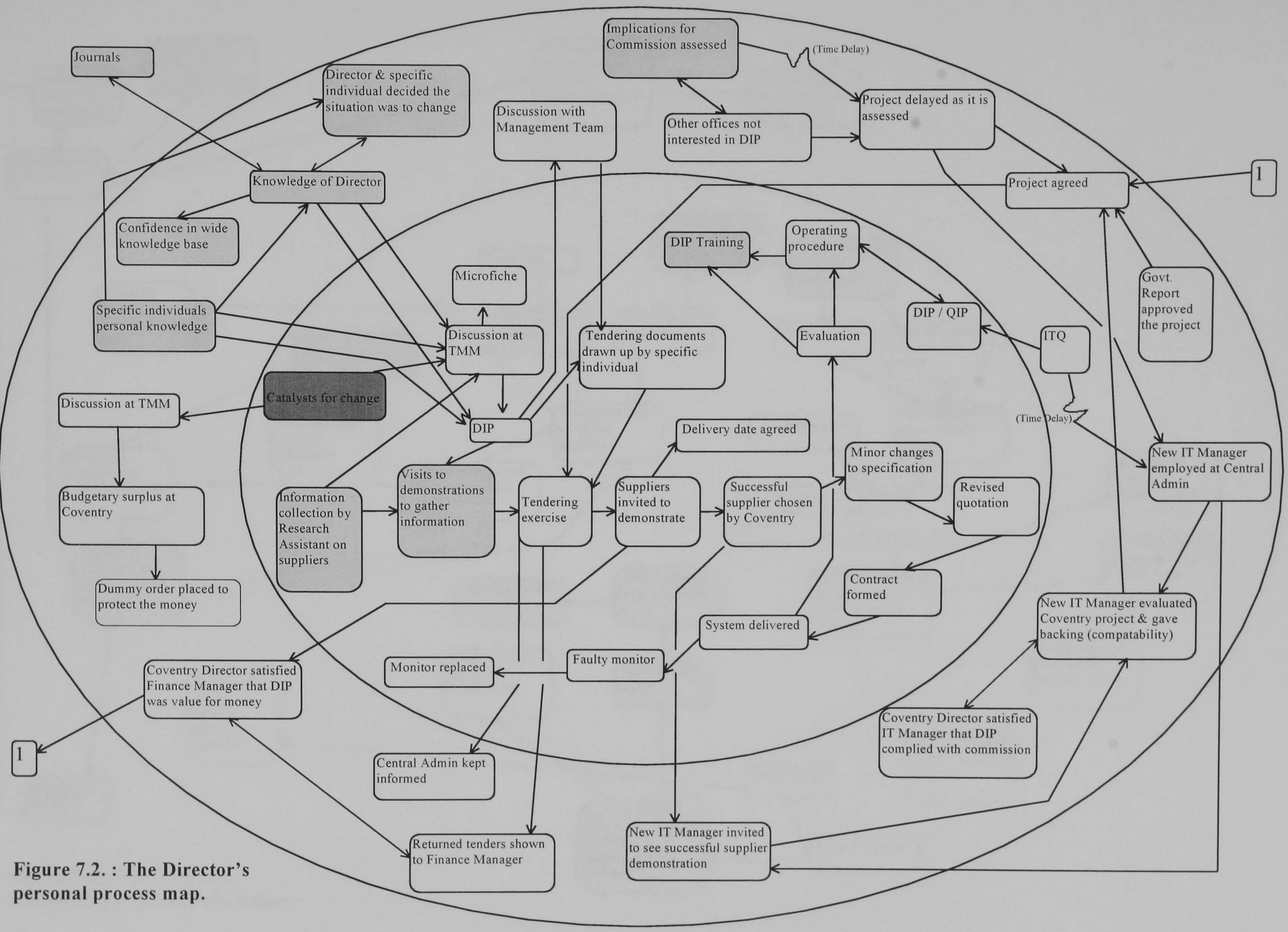


Figure 7.2. : The Director's personal process map.

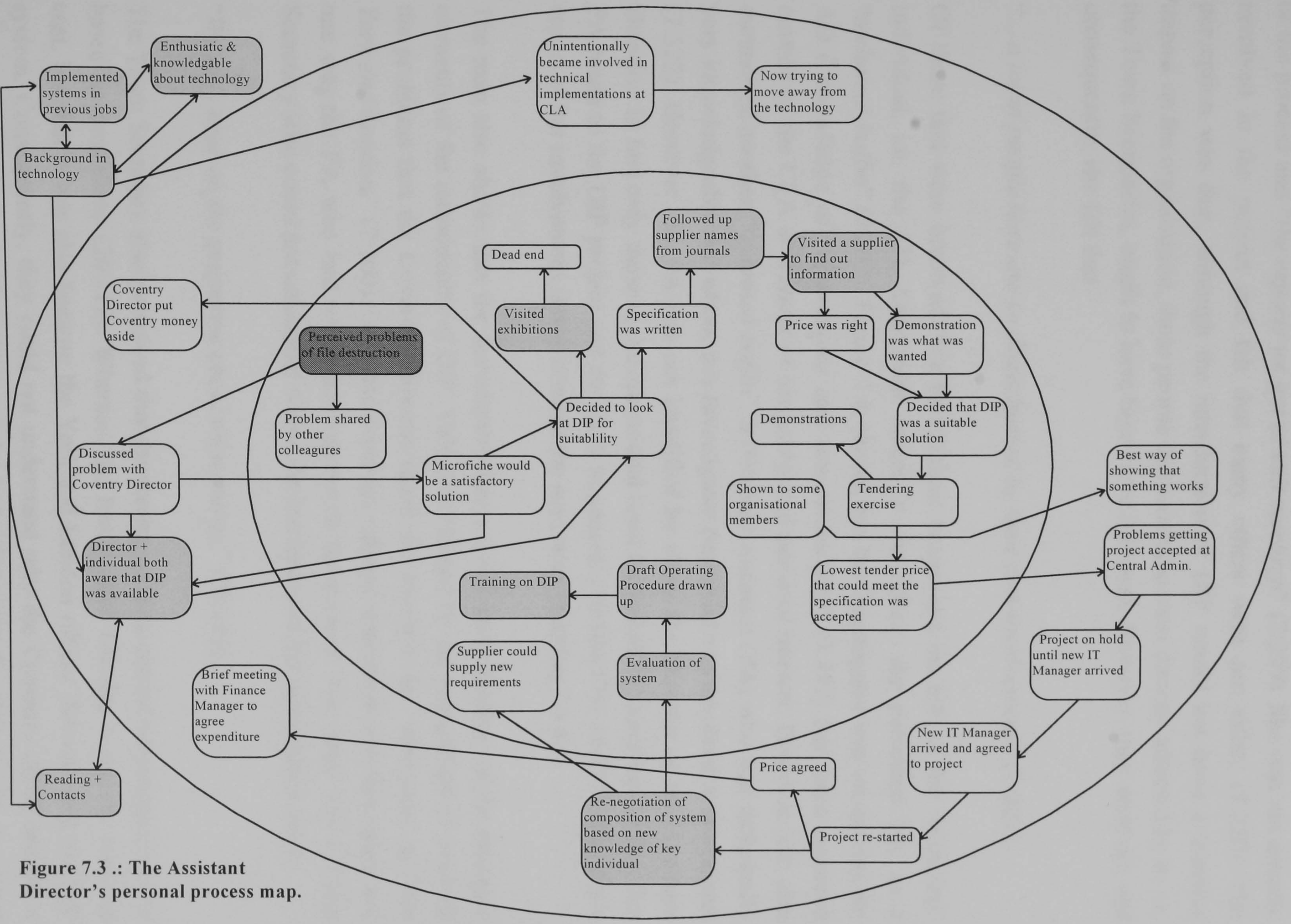


Figure 7.3 .: The Assistant Director's personal process map.

7.3.3. The Investigator's story.

This person's perception of the implementation of DIP was based on her observations of the process and "*the reports we got at unit meetings*" (7:209). She was not directly involved in the project and felt that many others were not either (7:220). Her perception was that, although the introduction of DIP would not have a massive impact on the organisation, those people that would be most directly affected by it, i.e. the Team Secretaries, ought to have been more involved. However, they were not and consequently, she felt that

"*... a lot of people here are so disenchanted by their non-involvement.*" (7:223).

Of those that were involved, this Investigator recognised the role of the 'technical' individual, i.e. the AD. Like most others in the office, she perceived him as a "*technical boffin*" (7:297). Figure 7.4. shows that the Investigator was aware that the AD's knowledge of "*innovations and new technology*" (7:297) had been acquired outside of the CLA as a result of his hobby and personal interest. However, she also mentioned another "*technical boffin*", a Personal Assistant (PA) who was technically very knowledgeable and whom this Investigator perceived was involved in the project (7:322). However, the PA was not identified by either the Director or the Assistant Director. In fact only those at the operational level identified the contribution that this PA made to the DIP project and the CLA in general (10:104/179; 14:124). The PA's report of her involvement is described in the next story (Section 7.3.4.).

The map also shows that the Investigator had a good understanding of the strategic elements of the introduction of DIP. This is evidenced by the recognition of some of the problems that the Coventry Director faced, for example the "*resistance at both York and London.*" (7:300). Only two other operational staff referred to this issue, and one was the PA who had some involvement in the project. The other was a Team Secretary who could not remember where she had acquired the information since

"*We only hear on the grapevine about these things.*" (20:119).

The Team Secretary also perceived that the resistance from central administration was based on cost alone (20:112). Whereas, the Investigator felt that it was an issue of cost, but that it was also because the York and London offices did not want the DIP system. Consequently, they could not understand why the Coventry office needed it either (7:301). She was also aware of the lack of support for the project at central administration (7:303). The Director reported a combination of all these factors (1:231-245). This infers that the Investigator had a wider understanding of the change

and how it fitted into the CLA as a whole, than is normally associated with a person at her level. This does not mean that the Investigator was in the wrong role or that her view of the CLA was the same as the Directors, but it could mean that she had attributes that were potentially valuable if they were exploited. A person at the operational level with a strategic perspective on the organisation could enable the links between the operational and strategic levels to be developed and perhaps strengthened. However, the Investigator perceived people at the operational levels were not valued and that the knowledge that they possessed was not taken on board partially because there were no "*facilities for ideas to be communicated upwards.*" (7:28/47). This could potentially be relieved if there were better links between the managerial and operational levels, but there was no one with responsibility for "*keeping staff informed*" (7:496). The Investigator perceived that she had the necessary abilities to contribute to the improvement of office communications through the development of a "*liaison*" role (7:496-498). However, she felt that the CLA was not set up to enable those sorts of skills to become manifest and utilised. The Investigator felt a skills audit might improve the situation which she hoped might happen as the result of the quality programme being introduced into the CLA (7:109). It is recognised that an audit of this nature only refers to attempts to quantify skills in an organisation. It is unlikely that it would highlight 'all' skills, particularly those acquired outside of the CLA, or those without immediate relevance to the work organisation. Consequently, other attributes, particularly those that relate to personality, would not be highlighted. Indeed it has been suggested that many attributes will not emerge until situations arise that lead to their manifestation, reinforcing the need for variety and flexibility. The Investigator felt that an audit might go some way towards preventing skills, at the very least, from being wasted. At the present time she perceived that there were individuals in the company who had skills with immediate and obvious utility, but that they were "*dying because they are not being utilised.*" (7:110). It was thought that this was due to the fact that the CLA had very static and inflexible views about people's roles. Consequently, they were not encouraged to use or enhance attributes which might have been acquired as a result of informal activities or in previous jobs(7:13/111-13).

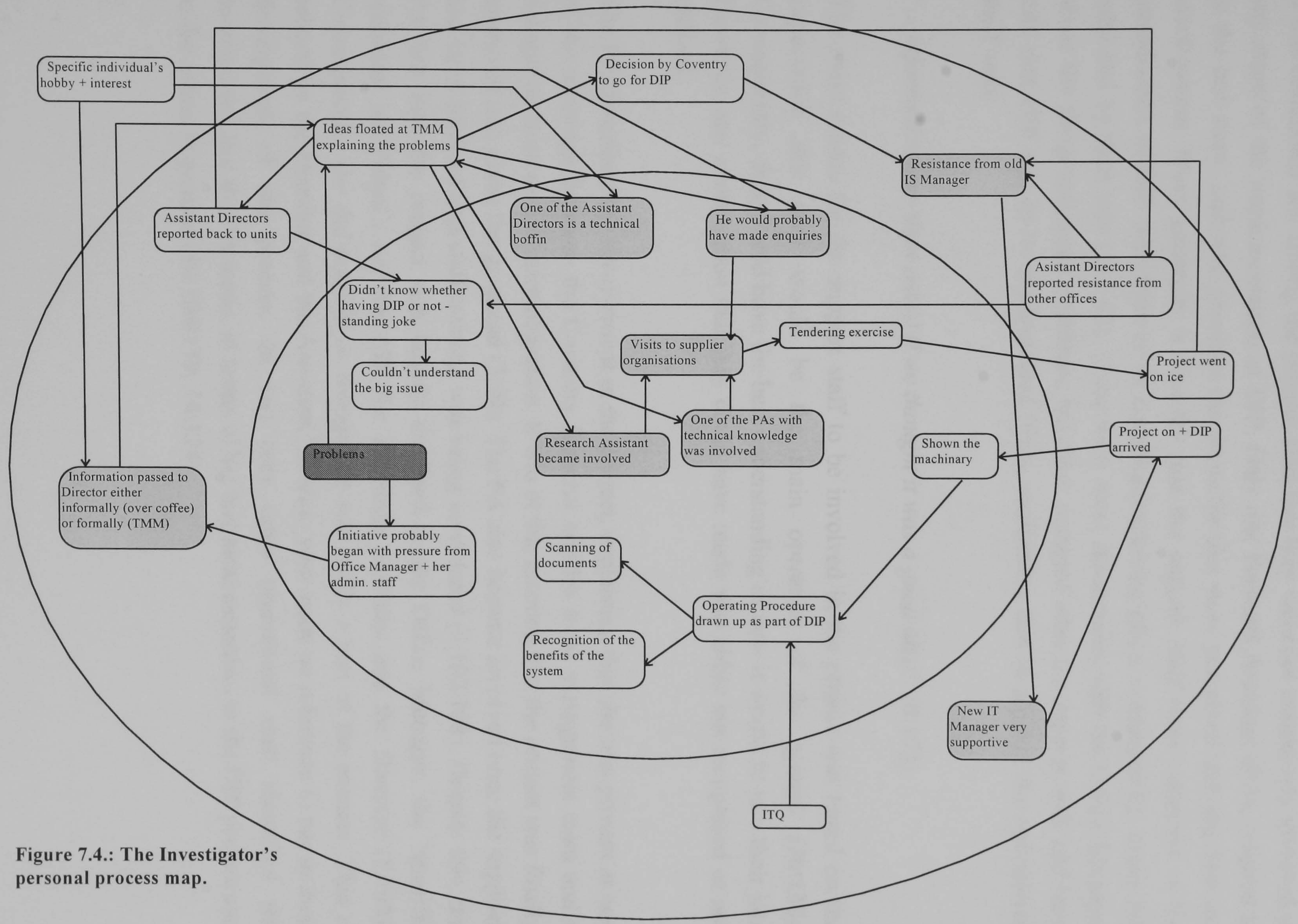


Figure 7.4.: The Investigator's personal process map.

7.3.4. The support staff's story.

It was commonly felt among the support staff that they were not extensively involved in any stage of the implementation of DIP. Only one Personal Assistant (PA), referred to in the last story, and who provides the focus for this story perceived that she had any involvement. More generally it was felt that the support staff were informed of the introduction of DIP with little or no consultation taking place, consequently, many felt inhibited by their role (10:143). There were some discussions with the Office Manager about the filing and space problems, but these occurred after the support staff had been told that DIP was to be implemented (9:9), confirming that in general the operational staff were

"*... informed rather than asked if we thought it was a good idea.*" (9:172).

The main reason for the support staff to be involved in the project was based on the expectation that they would be the main operators of the system (20:136). Consequently, they would have the best understanding of how it would fit into their job. However, any contribution that they could have made was either not recognised or not utilised.

The PA described her involvement in the project, explaining that she was present at one of the meetings between the Coventry Director and his local management team and a delegation from central administration. It was at this meeting that the project was finally approved and given the go ahead (5:94). The PA also became involved once the supplier had been selected and staff training was being considered (5:102/108). Despite this, the PA felt that the project was largely confined to the Office Manager, the 'specific technical individual', i.e. the AD, the Research Assistant and the Director (5:103). Consequently, she did not feel as though she was really a part of the process. This is echoed by the Director and the Assistant Director, who made no reference to her in their descriptions of the process. In fact only other operational staff identified the contribution that the PA made, in terms of her technical expertise, to the DIP project and to the office in general (10:104/179; 14:124).

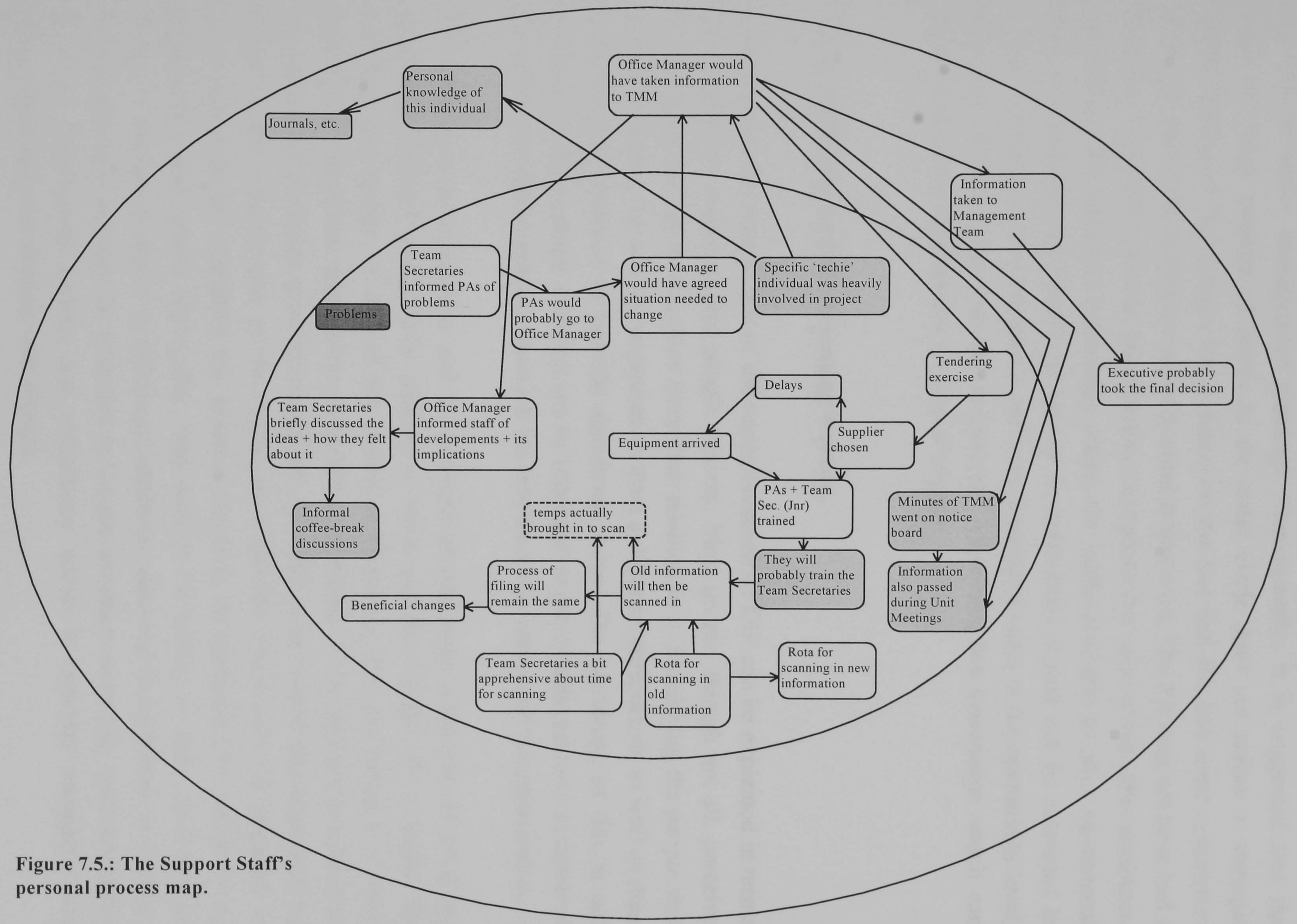


Figure 7.5.: The Support Staff's personal process map.

We can see from Figure 7.5. that the PA was quite knowledgeable about the activities that took place at the operational level. which reflects her position in the CLA. Her knowledge of the activities at the strategic level was based on the limited involvement she had in senior management meetings. Consequently. it is suggested that the relatively large number of boxes in the outer circle does not reflect a strategic understanding of the change, but is based on the fact that she had some connection with and. therefore, awareness of the process at that level. The PA may not have had a strategic view of the process, but this does not reduce the value of her other attributes, particularly the technical knowledge which she made available to other operational staff. Recognising the benefit of variety in individuals should not be restricted to people in strategic roles because it can have significant value at the operational level, not only through skills that can re-interpret operations, but knowledge which can direct operators to appropriate sources of support.

7.4. Conclusions and Representing Variety.

Variations in the perceptions of the implementation of DIP can be explained in terms of the different attributes that people possess. Most people. though not all, perceive the organisation and its activities from their position in it. Identifying the people that understand their role and the organisation from a different perspective. as well as their own. has the potential to provide significant value. The advantage of this is not restricted to the strategic roles but can be important at the operational level in terms of the ability to understand how ones job fits into the wider context of the organisation.

Drawing upon the interviews and the personal process maps a number of attributes have been defined, particularly relating to skills and knowledge. for example the technical knowledge of one of the Assistant Directors. The exploitation of such attributes is dependent upon three essential factors which are in themselves attributes: the sources of attributes must be recognised; the value of individual attributes must be linked to the requirements of the organisation and the owner must be prepared to make that potential available; this potential needs to be recognised by others in the organisation and. where appropriate, they need to be willing to draw upon it. The ability to recognise utility in individual attributes need not be restricted to internal. formal activities but may be extended to include attributes externally and informally acquired. Developing variety. and redundancy within it, provides managers with greater flexibility for dealing with change.

Individual attributes have been identified within a specific context of change, some of which may only be relevant to that particular case. However. it is more likely that

attributes identified within the context of one change will also be relevant to other change. For example, the ability to scan for information or the willingness to share it, will be relevant whatever the nature of the change. This chapter has been concerned with the attributes that were identified as each person described their perception of the introduction of DIP (represented on the maps). However, the thesis as a whole is interested in the development of a more general framework. Consequently, attributes over and above those discussed in the DIP change, i.e. from the the exploratory study and the CLA interviews in general, are described in the next chapter. This will enable us to see if there was a rich pool of untapped attributes that might have been useful for the DIP project. The whole of the data set is classified into themes based on specific phenomena relating to individuals which allowed attributes to be identified. These are then grouped together in attribute sets which provides the basis for the typology.

Chapter Eight: An Amended Typology Of Individual Attributes.

"*It is about seeing, hearing, noticing, sensing, smelling, and then raking over what has been noticed, and trying to make sense out of it.*" (Law, 1994).

8.1. Introduction.

At the end of Chapter Three a provisional typology of individual attributes was presented based on the data collected in the exploratory study and examination of the literature. This then guided the way in which the fieldwork and data analysis was carried out in the CLA.

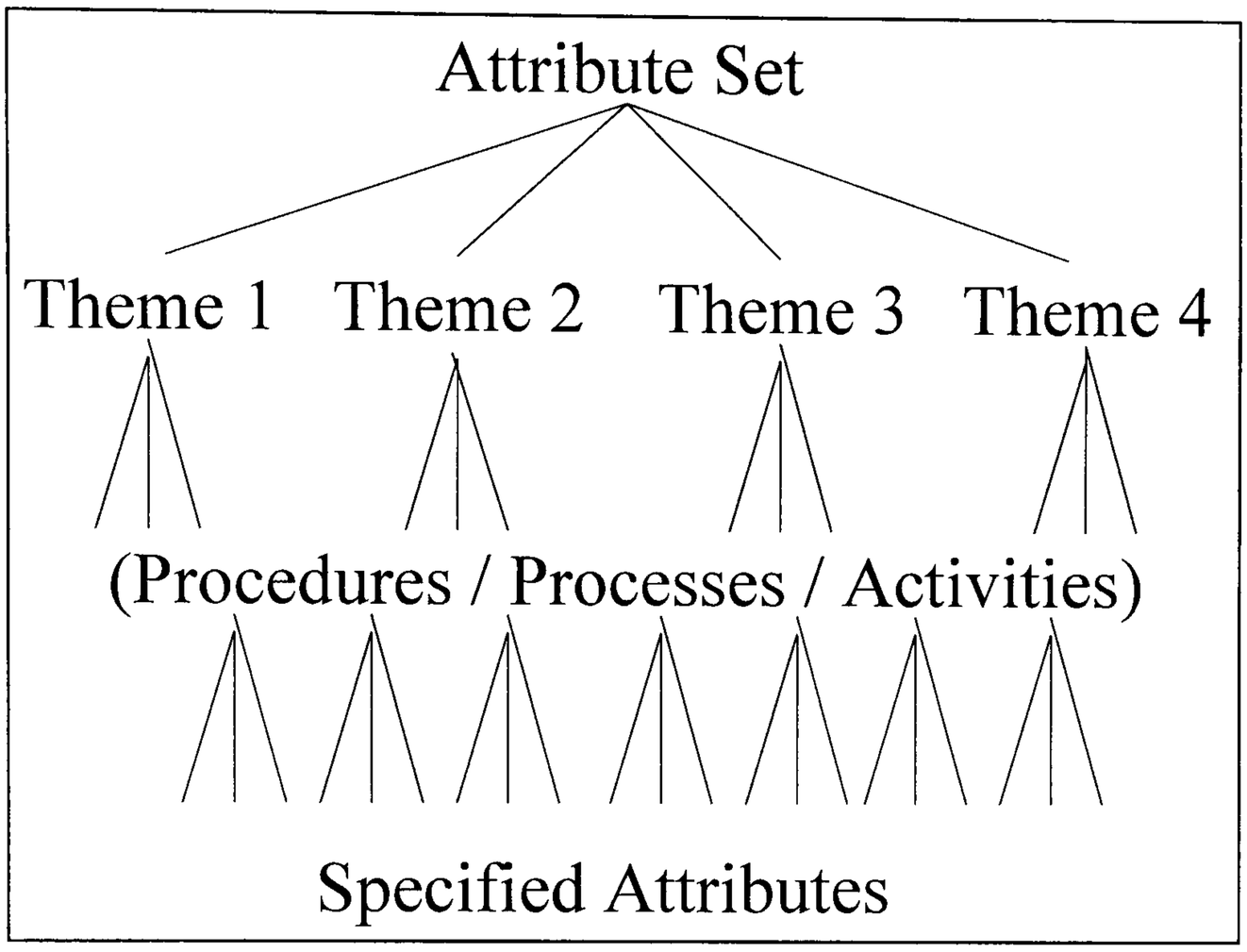
The last chapter identified a number of individual attributes utilised during the introduction of the DIP system. These and other attributes, identified in the workforce as a result of the interviews, are described in this chapter. The interview transcripts were organised into themes for purposes of manageability. The themes were based on specific events and processes relating to individuals which were then analysed for evidence of attributes. In order to provide a systematic framework for representing individual attributes, they are aggregated into sets which provides the basis for the expanded typology. As the discussion of the provisional typology was undertaken in Chapter Three, this chapter will not return to it.

The sets of attributes are presented in the form of a nested hierarchy as represented in Figure 8.1. Within the attribute sets there are themes relating to individuals; within these are processes and activities undertaken by and through individuals; and within these are the specified attributes that influence the capability of individuals to carry out these processes and activities. Attributes are dimensions or properties of individuals, such as knowledge or willingness to use that knowledge in either a positive or a negative way. Attributes that were utilised during the introduction of DIP as well as others identified in the wider workforce are represented in the typology at the end of this chapter.

Individual attributes are not mutually exclusive and it is possible that they will appear in more than one set. That is because each set is a configuration of commonly held attributes; i.e. they combine or aggregate in different ways. Some will be more important in the context of the DIP change than in other kinds. However, the aim is to build a generic framework that can be usefully utilised to manage change more

generally. The data from the CLA has provided us with some configurations of individual attributes that will be applicable to other change.

Figure 8.1. Structure of Attribute Sets.



It is likely that there are certain types of attributes that were not evidenced as a result of the DIP process or in the CLA generally but would come under an already established attribute set such as 'Social Interaction' for example. Consequently, it is not claimed that the typology represents all the possible attributes to be found and it will be necessary, as we encounter situations, to modify and update it. This is more appropriate than trying to force observed situations into the typology so that attributes are created that may neither exist or have utility for managing change.

8.2. Attribute Set One: Acquisition Of Knowledge And Skills.

This set of attributes refers to the knowledge, skills, experiences, abilities, etc. that are acquired by organisations via the workforce. Examination of the CLA data revealed attributes relating to the acquisition of knowledge and skills. These were identified as being attained in three specific ways: through people having outside interests; scanning and networking activities; and training.

8.2.1. Outside interests.

Outside interests refers to the attributes that are developed as a result of the external activities that individuals engage in. These may be formal, i.e. specifically work related, or informal. Most of the respondents identified that they had outside interests (20:186). These included reading journals (3:52; 30:194), taking non-work related courses (24:3), using and playing on computers (12:19). Some individuals identified their families as having given them skills such as how to handle people (20:192) which were transferable in the organisation. In addition people possessed attributes which they had acquired outside of the CLA in previous jobs. For example one Investigator had been a manager of a voluntary advice organisation which she felt had given her an ability to deal with the public and manage large amounts of information (21:374).

It is argued that attributes acquired in this manner have potential value for the organisation. Most of the respondents supported this idea, but considered that outside interests and previous personal experience were undervalued by the organisation. They made comments such as,

"*I do not think that we are very good at using peoples personal experience and knowledge acquired outside of work.*" (4:56).

"*People do have skills from other jobs that they could usefully use to contribute to the processes*" of this job. (7:13).

"*I have life experience but these are the kind of skills that are overlooked.*" (19:242/243).

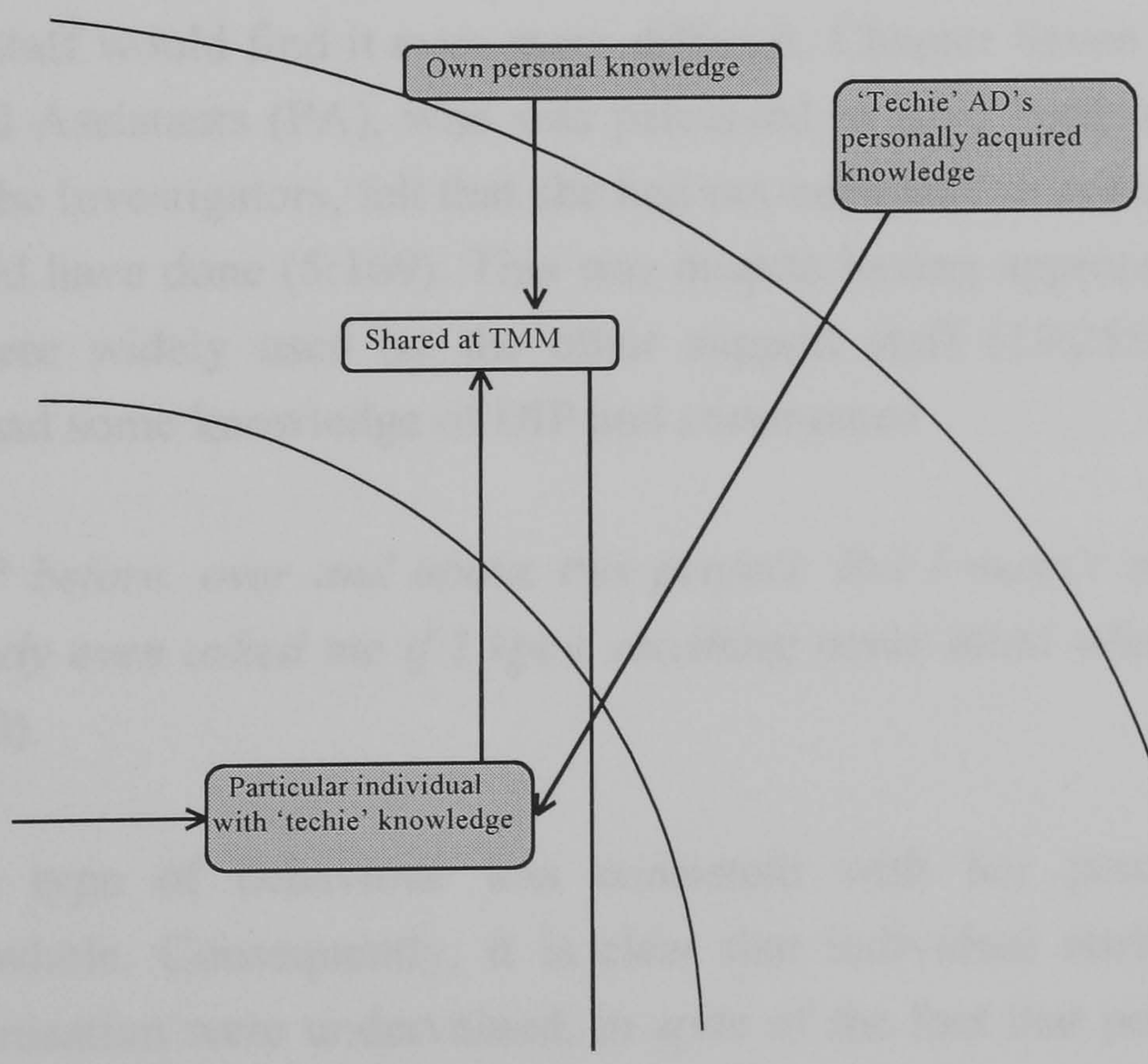
Managers at different levels agreed that attributes acquired outside the organisation were undervalued and recognised that they were not very good at utilising them (30:260). It was suggested that this was because they were often not directly related to the mainline activities of the CLA and so it was difficult to recognise their utility (1:103/104). However, it is argued that they have an indirect role to play, providing organisations with a reserve of attributes which could potentially be utilised during periods of uncertainty and change.

A variety of attributes clearly existed in the CLA but it was felt that they were "...*dying because they are not being utilised.*" (7:110; 17:55). Consequently, they were 'lost' to the organisation (Law, 1994).

We have seen in Chapter Seven that that the informal skills and knowledge of one of the Assistant Directors, acquired as the result of personal interest, made a significant and valuable contribution to the implementation of the DIP system. This was despite the fact that his job function contained no technical element. However, in this case, but not in all, his talents including where they were acquired were acknowledged by most people in the organisation. (8:237; 12:29).

It is important to note that this AD was part of the middle management hierarchy which was described by two other middle-managers as a sort of 'inner sanctum', which gave favourable opportunity to its members, i.e. because of their membership they had a better chance of having their ideas considered (29:87; 30:9). So, this individual was in a good position to have his skills recognised and utilised. However, it was discovered in the interviews that there were others in the organisation, at all levels, who also had knowledge about DIP and the implementation of technologies. These sources may also have been useful to the DIP project but were not recognised or not called upon. For example, another AD described having personally acquired technical knowledge which she felt would have been of value to the project. She presented this knowledge to the local management team (see Figure 8.2. for excerpt) but it was not taken on board.

Figure 8.2. Excerpt from Interviewee 30's Personal Process Map.



Despite her personal knowledge not being utilised, this AD wanted to the fact that she had it and was willing to make it available represented on her map because this was a part of the process as she perceived it. Another AD also commented

"*I am interested in DIP because in my last job I tried to introduce it into the organisation... So I thought that I could contribute to this.*" (29:84/86).

This person said that he was not consulted and felt constrained from being involved in the project. His personal knowledge is not represented on his map (Map 29 in Appendix II) because he perceived that it played no part in the process despite his willingness to make it available. From this we can see that even though these two ADs were members of the management team their attributes were either not recognised or not utilised. Both were of the opinion presented above, i.e. that there was a sub-group within the management team that was closed to others and that it was this group that had the 'real' power with regard to change in the organisation (29:87). This feeling was supported by a senior manager at central administration,

"*Culturally, things in the organisation had been driven along by particular perceived individuals.*" (13:126).

It is considered that if it was difficult for members of the management team to contribute to the DIP process, as well as change more generally, then it was likely that other members of staff would find it even more difficult. Chapter Seven explained that one of the Personal Assistants (PA), who was perceived to have been involved in the process by one of the Investigators, felt that she had not been able to contribute as much as she felt she could have done (5:169). This was despite having appropriate skills and knowledge that were widely used by the other support staff (19:255). One of the Investigators also had some knowledge of DIP and commented

"*I knew about DIP before, over and above this project. But I wasn't involved in any consultation. Nobody even asked me if I knew anything never mind what it was that I knew.*" (17:188-190).

She felt that this type of behaviour was consistent with her perception of the organisation as a whole. Consequently, it is clear that individual attributes acquired outside of the organisation were undervalued, in spite of the fact that people perceived that that they had an important role to play. It has been argued that they provide organisations with a reserve of attributes which could be useful for dealing with change,

but it seems that managers often do not recognise their value and utility and therefore do not take advantage of them.

8.2.2. Scanning and networking.

References to scanning and networking were made by individuals who perceived that they themselves carried out these activities, for example, "*I am a networker by definition. It is part of the interactive process.*" (17:222/223). It also refers to individuals who perceived other peoples scanning and networking activities (4:92).

Scanning and networking have been closely linked with each other and it has been suggested that networking can be described as an aspect of scanning (Trott, 1993). Trott (1993) defines scanning as "*...unstructured, formal and informal methods of information search*", and, networking as the "*interaction of people resulting in the informal trading of know-how*". These definitions provide the basis for the understanding of these terms within this thesis. The willingness to search for information, the ability to gauge the relative importance of that which they search for, and the subsequent use of the knowledge, etc. acquired as a result of it are described as individual attributes. Such activities are regarded as important since if the organisation is aware of what is 'out there' and if this knowledge is assimilated (Gilbert, 1995) then the adaptive capability of the organisation is enhanced.

Individuals scan and network in order to satisfy requirements for information and knowledge, etc. (Trott, 1993). The CLA needs operational information about the specific cases with which it is deals and strategic information about specific change in order to make long term decisions with regard to the future. The actions taken to acquire information involve both formal, informal, internal and external scanning and networking activities and are represented in Figure 8.3.

Figure 8.3. Types of Scanning and Networking Activities.

Types.	Examples of Activities.
Internal formal scanning or networking	e.g. unit meetings (int/ee 31) e.g. library (int/ee 17)
Internal informal scanning or networking	e.g. using colleagues knowledge, etc. (int/ee 30) e.g. coffee lounge (int/ee 8) e.g. library (int/ee 22)
External formal scanning or networking	e.g. contacting external bodies (int/ee 21) e.g. journals (int/ee 4)
External informal scanning or networking	e.g. external/informal contacts (int/ee 1) e.g. computing hobbies and other outside interests (int/ee 3) e.g. journals (int/ee 3)

1. Internal/Formal.

The library was used for the formal collection of information and knowledge for specific case work

"*I look things up if I need them. I flick through the information journals. And if I've got a current case that is similar to something in the journal I might look it up.*" (27:48-50).

People had differing views on the value of the library, for example, one person felt that the library material helped her to test her understanding of issues and perceived that this was quite as good as asking her colleagues (30:278). A more common response was that the library was a poor substitute for asking colleagues about things on an informal basis. The ability to scan and the willingness to ask in order to acquire knowledge represent important individual attributes.

"*We do have a library and I know how to use that. But my first port of call for reference would be people.*" (17:219/220).

However, people were aware that there was a limit to the number of times that you could interrupt someone to ask them questions because of the pressure of work

(27:288/289). In which case the library proved to be a useful place for gathering professional knowledge (17:217; 27:285).

With regard to networking activities, unit meetings provided a forum for people to meet and share information on a formal basis. There were four investigative units at the Coventry office each of which met on a regular basis. At these meetings the minutes of management meetings would be circulated as well as discussions about specific cases. The management meeting minutes included a record of the discussions about the implementation of DIP. However, as each unit was headed by four different Assistant Directors, the structure and content of the meetings varied considerably.

With regard to the introduction of DIP and change in general, internal and formal scanning and networking took place at the senior level; lower levels were generally not invited to participate. A team of people was put together to carry out scanning activities externally, but internally they would get together to discuss their findings and to make decisions.

2. Internal/Informal.

Within the CLA, both scanning and networking activities related to the investigative role were predominantly perceived as informal. This relates particularly to internal activities and is evidenced by responses like the following

"*...the interchange of information and ideas comes from all over the place... but the coffee lounge is one of the best places for ideas.*" (8:155/156).

Sitting together in the coffee lounge was commonly regarded as the best place to chat about work situations on an informal level. It provided an opportunity to test ideas and to swap information on case work (6:92; 7:58/59). All of the interviewees except one recognised that they used the knowledge of their colleagues which they acquired from them informally in the coffee lounge and in the working area and was described as "*...an informal network.*" (11:262). The library also provided a place for individuals to informally acquire information and knowledge. However, it was regarded as a formal method of obtaining information as well. If the scanning of material in the library was directly relevant and necessary for the investigation process then it was regarded as a formal activity. If the scanning activity was in addition to that which was necessary to make a decision about a case or was not directly related to the investigative process it was regarded as informal (17:69).

Chapter Seven showed that, with regard to the DIP process, internal and informal scanning and networking took place at the senior level, primarily by the Director and one of the Assistant Directors, thus utilising their attributes and possibly ignoring those that other staff possessed. The Director commented that the process for doing this was rather ad hoc because there was no prescribed route for gathering information in the CLA (1:80).

3. External/Formal.

With regard to the investigative process there was evidence of external scanning and networking activities. If it proved necessary Investigators contacted outside bodies such as planners or architects or other specialist areas that pertained to the realm of complaints that the CLA receives. Individuals felt that this kind of information and knowledge could be more efficiently used if they were provided with more regular updates within the office. Specialist seminars that dealt with the areas of interest such as environment, planning and social services had been common when the office first opened and were regarded as very important. However, it was felt that the managers no longer perceived them to be necessary (17:34). In spite of the high levels of work, it was felt that updates would be useful and might result in a reduction in the amount of time spent ploughing through legislative material (17:36/38). Outside sources were regarded as being helpful to the investigative process because they often provided a different view or perspective about a particular case in question (17:39).

It was recognised that it was difficult to feed information and knowledge, etc. acquired by non-senior staff up the organisation's hierarchy. Theoretically information and knowledge externally acquired could be passed onto senior staff via the unit meetings, however, it was felt that these ideas got

"*...watered down in the process of going up and... disappear into a vacuum.*" (11:14/15).

The lack of encouragement to acquire information and knowledge on a formal basis led people to feel confused and undervalued in the organisation. With regard to the DIP project, the search for information changed from an informal to a formal and external activity. This involved an extended search for information about suppliers and then visits to suppliers and technology exhibitions (see Figure 8.4.). Knowing where to acquire information is perceived as an attribute.

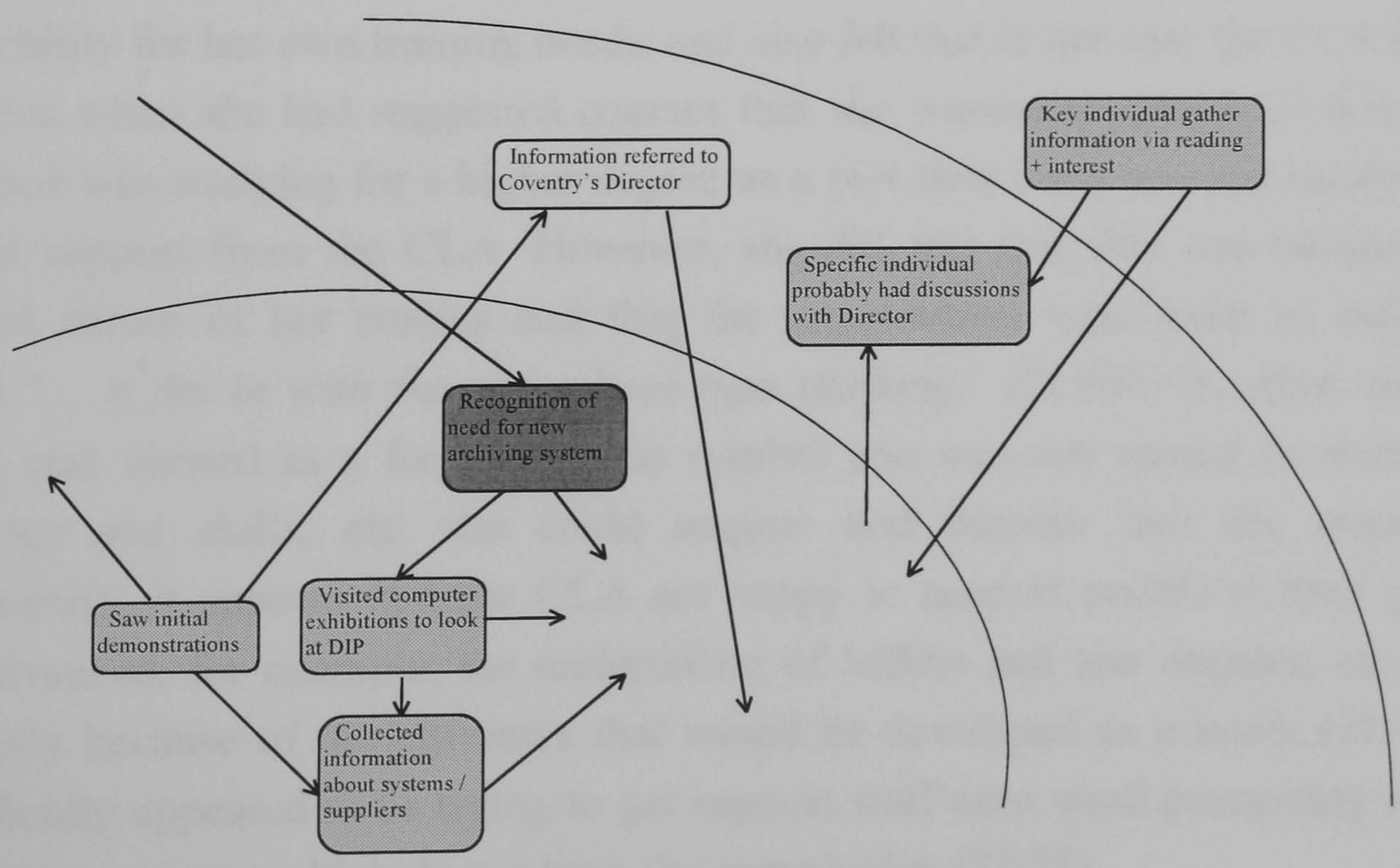
4. External/Informal.

Investigators commented on the lack of communication between the three offices of the CLA (17:20). This was also noted by a senior manager at central administration. He commented that there was "... *little inter-office communication.*" (13:40). Therefore, he perceived that there was a need to open up the informal channels of communication between them (13:38/48). This was not an attempt to undermine the individuality of the three offices but to try and develop best practice across the CLA as a whole (13:63/64).

Many of the Investigators in the Coventry office met on a monthly basis outside of work to informally discuss their case work and other more general things regarding the CLA's work. The group met to swap information because it was perceived to be an important learning opportunity (27:109).

The gathering of information about the DIP project was initially carried out on an informal basis by the Director and in particular one of the ADs. As the project developed it became more of a formal process with certain people being assigned to carry out specific activities (Chapter Seven). Figure 8.4. shows an excerpt from interviewee four's personal process map which demonstrates the 'techie' AD's ("*key individual*") personal knowledge as being externally and informally acquired. Once it became part of the organisational domain, it became formalised. At this stage interviewee four became involved in the process of external scanning for information about DIP and suppliers.

Figure 8.4. Excerpt from Interviewee Four's Personal Process Map.



8.2.3. Training.

All the respondents at the operational level commented about the difficulty facing either themselves or others when trying to get onto training courses in the CLA. One person said

"*We are not really encouraged to go on them.*" (28:41).

"*We*" referred to herself and other members of the support staff. This person had asked to go on a particular training course but her manager at that point had not responded to her request, despite having waited quite some time (28:45). She felt that this was partly because of the backlog of work (28:44). This view was shared by others, however, she also felt that it would help her improve the skills that would be of direct value to her work, though she was not sure if the CLA actually valued such efforts (28:48/49). If the organisation was going to get any value from the training it was felt that allowances would have to be made so that people could go on training courses (24:55). At the same time, it was felt that though people were being asked to do their job better and faster, because of the amount of casework, they were not being provided with the tools to do this. It was commented that

"*There is no formalised discussion outside of the appraisal meeting about how you can go about acquiring more knowledge*. (21:59).

Staff stated that they were not properly supplied with information about what training opportunities were available and that each person was considered solely responsible for organising their training needs (21:61-63). This respondent was happy to accept some responsibility for her own training needs, and also felt that in her case the CLA had been supportive when she had suggested courses that she wanted to attend (21:65). In fact, this person was studying for a higher degree on a part time basis and had received some financial support from the CLA. However, she did feel that this was because of the advanced nature of her studies and that the organisation were keen to support her because "*... it fits in with the old school type thinking.*" (21:69). In other words, the training was viewed as a form of status symbol and was not valued in terms of the knowledge and skills, etc. she could acquire and transfer into the organisation. Consequently, it appears that the CLA are happy to support people if their goals are fairly advanced, for example, the undertaking of MBAs and law degrees, etc. but not necessarily because of the attributes that would be developed as a result (21:70). The real difficulty appeared to be trying to get support staff onto word processing and other such training courses which do not have the same kudos (21:71).

From a different angle, one respondent described how she had specific skills as a trainer that she was not able to use. She felt misled by the CLA because when she joined the office much had been made of her training background and had therefore felt that there was going to be an opportunity to carry out training as part of her job. The CLA must therefore have been aware of these skills, acquired before joining the CLA, but they were not utilised and were therefore a wasted resource. Many employees felt that there was a need to invest in much more training in order to improve the way the organisation operated. However, others felt that a lot of attributes were already available, but that they were not always recognised and therefore not utilised. Consequently, the CLA needed to focus its efforts on this (11:266/267, 269-271).

With regard to the training of operators on the DIP system, it was perceived by most to be inadequate. Initially there had been some confusion as to the role that the Team Secretaries would have (see Figure 8.5.). Finally it was decided that temporary staff would be employed to carry out the back scanning of the archives.

Figure 8.5. Excerpt from Interviewee 20's Personal Process Map.

Team Secretaries would however, be expected to input any new files, in the same way that they would have done before, except it would now be electronically and not manually filed. They also needed to learn how to retrieve documents from the system in response to requests for files from the Investigators. This was not felt to be a difficult task to learn, however, there was a need for some basic training on the system that many Team Secretaries perceived they did not get (20:125).

8.3. Attribute Set Two: Application of Knowledge and Skills.

This attribute set refers to the use of knowledge and skills, etc. by the CLA, both formally and informally. It describes the ways in which knowledge and skills in particular are diffused or not as the case may be, around the Coventry office; how such attributes are often used opportunistically; and suggests that managers need to recognise that certain attributes are not immediately obvious. Developing the ability to recognise and utilise attributes that emerge in response to organisational requirements is key to creating organisational adaptive capability.

8.3.1. Sharing and using knowledge and skills.

This theme refers to the perceived formal and informal sharing of information and knowledge that occurs in the CLA. Section 8.2.2. showed that most people used their colleagues attributes to help them carry out their job. This was done on an informal basis both in the coffee lounge and in the work area where information relating to casework and other matters such as technical problems was shared (7:58/59; 10:201). While this informal network (11:262) was regarded as extremely valuable, it was also recognised that people were under so much pressure to get their work done that it made it difficult to use the knowledge of others as much as one would like to. Therefore, people were careful not to abuse that network and accompanying goodwill (7:458).

Among peers it was perceived that the movement of information and knowledge around the organisation was encouraged (24:12) and was regarded as an important activity, though due to its informal nature it was rather ad hoc (24:30). Informal sharing of information and knowledge was perceived to happen among the operational levels, i.e. those involved in the investigative process. However, it was perceived that knowledge gained at the senior level was not readily shared at the operational level. People felt confused and angry about this saying

"*Some of the managers... are either loathed to take the time out to talk to you about what is happening in the office or are very secretive.*" (7:424).

The control of information in this way was perceived to be a management characteristic (29:25/26). The concept of 'gatekeeping' was introduced by one middle-manager who used the term in a negative way to highlight that certain senior managers were filtering information and knowledge not for the benefit of the organisation but for their own self advancement (29:27/28/35/36). As a result he felt that communications were inhibited at the formal level and that people who succeeded in the organisation were those whose face fitted (21:103). It was believed that this would not happen if there were properly structured routes for communicating information and knowledge (21:110).

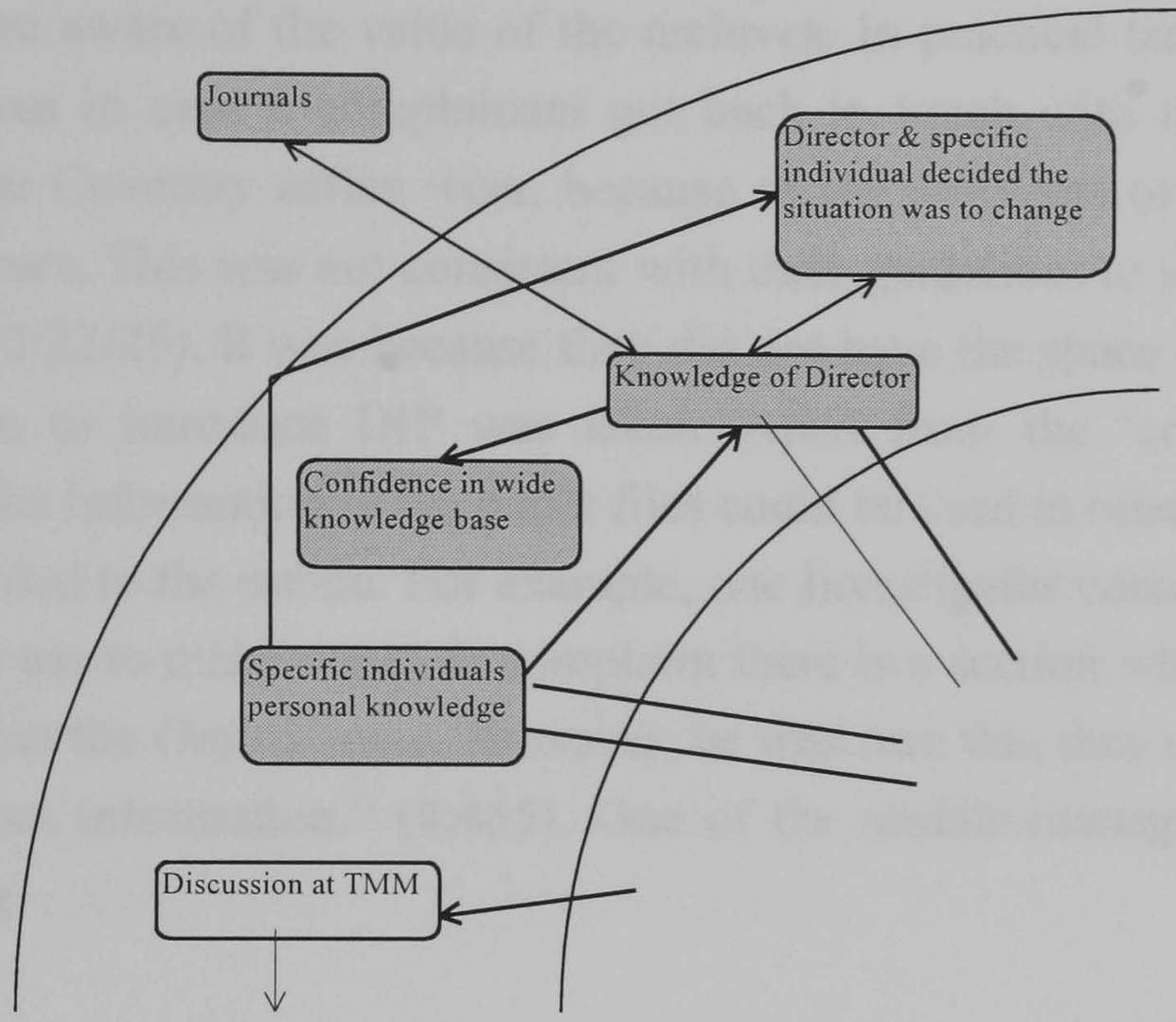
Formal information was circulated around the office via unit meetings, the noticeboard and notices called 'instructions'. 'Instructions' were circulated throughout the offices in order to inform staff of changes to working procedures, etc. Operational staff felt that since these instructions were probably going to affect how they worked then they should be involved in their creation to some degree (17:23). It was not as if all of the instructions were disagreeable but it was felt that as operational staff they were in a position to contribute positively to the process (77:46). Of course it was understood that it was not possible to have meetings about everything but that it would be appropriate to be involved in those things that affected them directly (17:23). People felt that the CLA perceived it did consult staff on these matters (17:26) whereas overwhelmingly they thought that they were not and described the situation as a "*fait accompli*" (7:44) where people felt like things were already "... *signed, sealed and delivered.*" (7:47).

Unit meetings were regarded as inadequate for the dissemination of information because the four units operated very differently, largely as a result of the very different characters of the Assistant Directors, which led to inconsistencies (7:39; 9:66; 29:41). Respondents also felt that little was actually shared in these meetings. They were really a forum for being briefed that something had already been decided at senior level (9:90). Minutes of senior management meetings were also circulated at unit meetings but it was often only possible to skim-read these due to the time-pressure of work; and since they were only informing people about decisions that had already been made, it was difficult to gather any enthusiasm for them (7:48; 18:104).

With regard to the sharing of information about the DIP project there were differing perceptions. The Director and the 'techie' Assistant Director were able to share their

individually acquired knowledge about DIP and pool it as a joint resource (3:30-31). Figure 8.6. shows an excerpt from the Director's map that demonstrates this.

Figure 8.6. Excerpt from Interviewee One's Personal Process Map.



Initially the Director and the AD shared their knowledge on an informal basis. Later they introduced the idea to the local management team (TMM), where most people felt that they were generally kept up-to-date, though not necessarily involved. On the whole, those directly involved in collecting and collating information and making decisions about DIP perceived that they kept others at all levels informed of the project's progress (2:143/147/148). However, many people that felt that information about the project was not shared throughout the office. Some were concerned about this and others were not (10:118; 18:98). Those who were not too concerned were those who were going to be only indirectly affected by the introduction of the new technology. However, they were generally sympathetic towards those who would be affected and who did want to be kept up-to-date (7:245). A lack of sharing reduces the amount of information and knowledge circulating in an organisation, a condition which inhibits its adaptivity. Consequently, being able to recognise and draw upon other people attributes, related to their willingness to share them, are attributes that managers need to utilise themselves and encourage in others.

8.3.2. Wastage of attributes

In identifying wastage, people referred to two particular kinds, the waste of human knowledge and skills, etc. (i.e. individual attributes) and the waste of paper information such as the archives.

Respondents were aware of the value of the archives. In practical terms it was wise to retain the archives in case a complainant got back in touch with the CLA (called a 'comeback'). The Coventry office were, because of the problems of space, destroying files after two years. This was not consistent with their guidelines to local authorities on file destruction (3:22/25). It was because they did not have the space to store more files that the decision to introduce DIP was taken. Apart from the 'comebacks', it was recognised that the information in the paper files could be used in other ways to improve the service provided to the public. For example, one Investigator commented that on the form that people use to make out their complaint there is a section which asks how they came to hear about the Ombudsman. However, he was sure that they did not actually do anything with that information." (8:455). One of the middle-managers supported this comment, saying

"*We have a huge information resource. As a database it has considerable value and it is grossly under used.*" (30:212/213).

The Director agreed that there was a lot of information that came into the office which was "... *filed away against a rainy day.*" (1:78). By this he was referring to the information contained in the files as well as to other potentially useful items that came into the office such as such as mail shots on office equipment and technologies that could help improve work processes, etc. However, this information was not explored or investigated in an especially systematic way and so it was often wasted (1:81). Usually things were addressed in rather an ad hoc way, whereby whatever attracted most notice received the most attention (1:79). It was both hoped and expected that the introduction of the 'Quality' programme would improve these processes through its more methodical approach (1:86).

As well as the information held in paper files, people were very aware of the knowledge they possessed and how this was being wasted despite the potential value. As a result of the organisations attitude, people felt de-skilled (17:213). There appeared to be no formal mechanisms for enabling people to keep up with and/or to develop their knowledge and skills (11:46). This was considered an enormous waste of resources and abilities (21:12). For example, middle-managers were perceived to have limited

authority within the organisation which was regarded as "... *a waste of talent.*" (17:83). Another example of perceived waste was among the support staff who were not encouraged to move 'up' into investigative roles. Senior management explained that this was because they did not have the skills to do the job or the required degree. However, there was one PA who did have a degree and two other support staff who were studying for degrees part time. It was also felt that they already had a lot of knowledge about the investigative process since they worked alongside Investigators to a lesser or greater degree. Other elements could be picked up through training and if given the opportunity, through experience. All Investigators were given training when they were recruited, so this would fit in with organisation policy, however, this was not encouraged, which was perceived as waste of knowledge and skills by both Team Secretaries and Investigators alike (19:63).

Section 8.2.1. referred to one of the PAs, who was felt to have been constrained in contributing her knowledge to the DIP project (5:169). A number of people felt that a great deal of available knowledge and expertise was not used during the introduction process, and consequently, it was wasted. It was perceived that this would most likely result in the eventual loss of these attributes altogether (19:255).

8.3.3. Opportunistic nature of knowledge and skills.

This topic identifies where respondents have referred to the opportunistic nature of knowledge and skills in particular (1:80). That is, the ad hoc way in which these types of attributes, either within or coming into the organisation, are used or not used. They may have been formally or informally, and internally or externally acquired.

It was perceived that there were constraints on people using knowledge described as being outside of the main function of the CLA because it did not have obvious utility. However, such knowledge was often used opportunistically. For example, the introduction of the DIP technology was based on available knowledge (of the 'techie' AD in particular) coinciding with the need to solve a particular issue. Before space became a problem, that knowledge did not have immediate utility, but as the problem developed it became increasingly important. Another example is the use of information sent speculatively by businesses through the post (10:21). On the whole that information was not regarded as useful unless it coincided with a requirement of the CLA or occasionally it initiated an interest. The ability to recognise what may be of use is a valuable attribute, however, it was perceived that only senior members of the office

were allowed to make suggestions and that recommendations from lower down in the hierarchy were not valued (9:39).

8.3.4. Manifest and latent individual attributes.

About half of the interviewees made reference to latent attributes. It has already been suggested in Section 8.2.1 that the CLA was not very good at using attributes such as the knowledge and experiences that people had acquired externally (4:56; 7:130). Most employees recognised that there was plenty of potential that was not utilised (1:130). For example

"*There are a lot of people in the office with training skills. But very few of us do any training at all. So those skills have not been exploited (and) other bits of knowledge are not tapped into.*" (8:398-400/405).

There was also an understanding that by not using the range of attributes available, managers were potentially not managing change as well as they could. One interviewee identified specific training skills that he and other people in the organisation possessed but as yet had not been utilised and so remained latent. Although these specific skills were unused at the present time, as long as they are apparent to managers who are willing to make use of them, they are of potential value to the organisation. Being aware of these types of attributes enables planning for the future to be more focused because it provides managers with prior knowledge of the resources they have available to help them to achieve their objectives, just so long as they are prepared to draw upon them. However,

"*The problem is that there are a lot of skills that people do not recognise.*" (8:432).

Attributes are often not recognised or taken on board because of the need to focus on the primary task of production, whatever that may be. Formal training by the organisation will, largely, provide the necessary attributes that individuals need to fulfil their role. However, people will also have brought with them skills and knowledge acquired elsewhere, both formally and informally that may or may not be apparent. It is argued that not only is it necessary to be aware of the specific attributes available in the organisation, but also that there are attributes which are not yet apparent. These are potentially valuable for dealing with unexpected situations which the organisation cannot plan for. These attributes remain latent until situations emerge that lead to their manifestation. The hope is that attributes are available or will emerge that coincide with

the organisation's requirements. For example, although the 'techie' AD's knowledge of IT was known about before it was utilised in the DIP project, his specific knowledge of DIP and his willingness to make it available were not. As the problems of space and file destruction emerged, so did his attributes which were then utilised by the Director. Consequently, developing variety in individual attributes can help managers deal with the unexpected. In this instance, largely because of the relationship between the Director and the AD, emerging attributes were utilised, but generally the CLA and other organisations do not have the type of environment that allows this kind of behaviour (12:245). Developing conditions that enable managers to utilise attributes that emerge in response to organisational requirements is critical to the growth of adaptive 'learning' organisations. However, it was perceived that, on the whole, the CLA only utilised peoples' attributes that were based solely on their job function, irrespective of the contribution that their other attributes could make (7:111-113). Middle-managers felt that most people had skills that were not utilised in the office. The degree to which they could be usefully used in the office was something that would need investigation (12:242/243). Nevertheless it was clear that improvements in this area needed to be made, because at present it was felt that there was

"*no forum really to sit down and discuss the skills that you have or the kind of experiences that you have*." (7:119).

As a result there was a widely held perception at all the hierarchical levels of a need to create an environment that encouraged this type of discussion (11:49).

8.4. Attribute Set Three: Levels of Involvement and Flexibility.

This attribute set refers to the extent to which people felt involved in the processes and activities of the CLA. This was related to the specific roles that people played; the levels of flexibility associated with them; and how this affected the development and use of attributes, which directs us to make inferences about the value that managers place on individuality.

8.4.1. Levels of encouragement to contribute and develop.

Many respondents felt that they were not encouraged to contribute or develop themselves within the CLA (refer to Section 8.2.3 on Training). People were also aware that their colleagues were not encouraged either (see Figure 8.7).

Figure 8.7. Levels of Perceived Encouragement.

Managerial/non or semi investigative staff.	Non-managerial/investigative staff.
All 8 of the senior staff interviewed felt encouraged to develop in order to contribute to the organisation	6 of the operational staff felt that they were encouraged to develop in order to contribute to the organisation
Of these 2 perceived that others in the organisation might not feel encouraged	3 of these perceived that their colleagues were also encouraged. 1 perceived that colleagues at lower levels were not encouraged. 2 did not comment on their colleagues
	17 operational staff felt that on the whole they and their colleagues were not encouraged

All of the senior staff felt that they were encouraged to develop in order to contribute to the organisation, based largely on the control they had over such matters. However, two of these were aware that some people perhaps did not feel so encouraged or able to develop. One member of the senior staff who did feel encouraged commented

"*I am very lucky with my manager. We meet on a regular basis to talk about where I think that my job is going to and to find out what I want to do to either develop it or get involved in some more training.*" (4:61).

On the other hand, only six out of a possible 23, operational staff felt that they were encouraged towards self-development. This has disadvantages for the organisation in terms of reducing the chances of developing individual attributes. However, related to this is the question why certain people felt encouraged and others did not. Most individuals felt it was related to the role that they held, and not to their willingness and ability to seek out training opportunities. A number of people commented that even though they received no encouragement from the CLA, they did try to encourage each other on an informal basis to seek and follow up potential opportunities (24:28; 26:30).

8.4.2. Levels of consultation.

A large number of people identified that there was a lack of consultation in the organisation. One of the middle-managers felt that there was not a standard approach to the process of consultation (29:12) and that it

"*sometimes almost happens by accident. It might happen because generally there is a feeling that there might be some resistance. (and that) Consultation might be seen as a way of diffusing that.*" (29:9-11).

His perception was that there was a "... *closed group of people who are involved in these things.*" (29:87). Certain members of the management team who were perhaps part of this "*closed group*" were aware and even sympathetic to this view (30:9). However, one manager did comment that people could not be consulted on everything and said

"*If we are talking about consultation then there would be discrimination insofar as who would be consulted on certain things. For example if you wanted to amend standard letters you would not consult the odd-job man. You would go to someone who would have use of and knowledge of whatever it was.*" (12:61-63).

The support staff who considered there was a lack of consultation suggested that the introduction of DIP echoed this. They felt that since it was going to affect their day-to-day job then they should have been consulted and perhaps been allowed to contribute. One person commented that

"*it would have been nice to have asked the Team Secretaries what we thought about it. Because we are the ones that are going to be using it. But they (the organisation) always make decisions like that. There is no consultation. I think sometimes that the Commission does not think that we have a brain in our heads.*" (20:135-139).

The Investigators supported the Team Secretaries on this issue, adding that consultation on a general level needed to be improved. At present it was a case of being informed rather than asked about or consulted on matters of change and that this got worse the further down the hierarchy you were (9:172; 11:194/195; 19:10/11, 13/14). Employees did not expect to be consulted on every matter, their concern was that they were involved when decisions were made that would affect working practices, rather than simply getting instructions that "*pretend to be consultative which is very annoying*" (17:23-26). There was also a feeling that the CLA tried to "*protect*" staff from change which was felt to be a patronising and unnecessary strategy (19:15). Involving only

senior staff in the consultation process will result in individual attributes at the operational level not being considered which will affect the amount of variety and consequently, the organisations capacity to adapt.

8.4.3. Role flexibility.

Job functions were perceived to be very inflexible (25:31). This caused some frustration as many people felt that they were capable of contributing much more than they were allowed, as a result of their specified job role, that could benefit the organisation (20:57/58). For example, in practice the support staff felt that there was some cross-over between their role and the Investigators, however, they were told that they should focus on their own job specification (5:29; 20:56). This was despite the fact that many of the Investigators worked more effectively with Team Secretaries who had a better understanding of the investigative process (20:59). This kind of inflexibility could prevent the development and utilisation of individual attributes which could handicap the organisation's ability to adapt. This inflexibility was also related to people's ambitions to move into other functions. There was no perceived opportunity to change positions or even to contribute to the CLA beyond the role that they were in, despite the potential benefits of doing this (27:116/117). For example, one Investigator had applied to become an Assistant Director, having all the necessary qualifications and managerial experience, however, her application was dismissed and an external person was employed. The Investigator felt that her managers totally misunderstood her qualifications and experience and perceived that there were many other people who felt that there were strictly defined levels in the CLA that you just could not cross (21:100-103). Another example is provided by one of the PAs, who was acknowledged as a technology expert by her colleagues, though only played a small part in the DIP implementation process. She applied for a post in the Coventry office as a technical assistant but was turned down because she did not formally have the technical skills (5:162). This person was known to have these skills but her managers were not prepared to draw on them and utilise them in the same way as they had been willing to draw upon the 'techie' AD's. This gives the impression that informal and externally acquired knowledge, etc. is only valued if it is the property of senior people.

It was acknowledged widely among the operational staff that they could not move into more senior roles than the ones they occupied, despite being perfectly capable of doing the jobs that they aspired to (21:96-98). However, this was denied by the managers. People also performed informal activities, for example scanning, as an integral part of their job. They did not actually have to do this but said that they got involved in other

areas of work in order to perform their role more effectively and for the greater good of the organisation (8:152/154; 11:203). Individuals felt that they had more to contribute, both formally, in terms of their role and, informally, extra to their role. However, at the present time, it was felt that peoples attributes were undervalued by managers and often not recognised or utilised which has implications for developing organisational adaptivity.

8.5. Attribute Set Four: Physical Interaction.

Physical things provide a context within which people work. This attribute set refers to the awareness of the impact of the physical environment on the knowledge accumulation process.

8.5.1. Dress.

One specific example of this theme occurred during the fieldwork and is based on the image that a person conveys as the result of their physical dress. It was perceived that the dress of the Director enhanced an image of the whole organisation. The Director wore very formal pinstripe suits and, consequently, those who had little interaction with him regarded him as formal and even unapproachable (23:159). Despite this image the Director was very well liked in the office and it seemed that to an extent his physical image betrayed his personality and the way that he operated (22:333). One of his managers did describe him as historically an autocratic manager (30:35) but she saw that as the organisation had changed

"*... his intent, which I find entirely honourable, has been to shift away from that. He has made enormous strides in changing the style of operation to a more participative form of management. But it does not come instinctively.*" (30:38-40).

People are more or less sensitive to the image that others portray. In this example, the Director's dress represented him as a formal unreceptive character which has the ability to constrain knowledge transfer activities. Consequently, people who know how to deal with situations like this and are able and willing to make improvements to address them facilitate the knowledge accumulation process.

8.5.2. Physical location.

Chapter Seven has already described how the physical location in which people work is important because it enables people to define themselves in terms of the tangible aspects of being in the organisation. It also has some bearing on what they do and how they operate. Individuals are more or less sensitive to layout and this can both facilitate or constrain the knowledge accumulation process. As with 'physical dress', an awareness of the impact of physical location is an important attribute. Linked to that recognition is the ability and willingness to deal with and improve processes that restrict interaction, which is related to the next attribute set.

8.6. Attribute Set Five: Social Interaction.

This attribute set considers how individuals interact with colleagues on both formal and informal levels. The way in which individuals socially interact is related to how they manage the physical environment. It also affects the way in which they understand and deal with situations.

8.6.1. Formal interactions.

The formal interactions that people engage in have been referred to throughout this chapter. All the interviewees referred to this theme, which is not surprising since they all sit on meetings at some level. The operational staff were involved in unit meetings which were led by middle-managers and provided an opportunity to share knowledge and swap information on cases on a formal basis (7:57/58). Unit meetings were also where staff were informed about decisions made at the higher management levels (9:6). Middle managers attended management meetings at the Coventry office with the Director. As the senior manager in the office, he was also involved in the senior management meetings at central administration. The context for all of these meetings was formal since they were organised in advance and on a regular basis. In addition to these internal interactions, the CLA, inevitably, also interacted with the external world. Again these interactions were generally of a formal nature since their primary function, context and content was specifically work related. For example the interactions with external suppliers about DIP were formal as were the discussions about its actual introduction, both of which only took place at the senior level (4:113). Formal

interactions about casework also took place with external organisations such as local authorities (7:52).

8.6.2. Informal interactions.

Like the formal interactions, informal interactions were also been referred to throughout the chapter and were identified by all the interviewees. Informal interactions took place at all levels and both within the CLA and external to it. One example of internal informal interactions were the discussions between Investigators about their casework in the coffee lounge These were valued very highly by the operational staff. Informal interactions relevant to the organisation also took place externally. For example, a group of Investigators that met on an informal basis at each others homes to discuss issues related to their work (27:159). It was perceived that some of the conversations among the managers at the Coventry office about DIP were informal in the early stages. For example the Director commented that the sharing of information that took place between him and the 'techie' AD in the coffee lounge on an informal basis (1:367-370). They only became formal once the ideas were introduced to the Coventry management team (TMM).

Both formal and informal interactions can constrain or facilitate the process of change. Being aware of this, and being able and willing to carry out activities that improve these processes, as well as manage and manipulate the information that is acquired as a result are described as individual attributes.

8.7. Attribute Set Six: Perception.

This attribute set relates to the perception that individuals had of themselves and others, and also of the organisation as a whole and what this means in terms of individual attributes.

8.7.1. Perception of self.

All the members of staff interviewed had a perception of themselves as individuals within the organisation. For example, one person said "*I am a networker by definition.*" (17:223). Another perceived herself as being able to contribute something to the organisation that was at that point not exploited (2:527). There were also people who

perceived that they had knowledge of the DIP technology but felt that they were not utilised (17:188-190). These people recognise themselves as individual entities within the organisation and placed considerable value on that.

8.7.2. Perception of others.

All the interviewees also had some perception of other people and their activities in the CLA. For example on a formal level the Director was perceived as the key decision maker in the office (11:87). On an informal level all of the Investigators recognised the value to their casework of talking to other Investigators and using their knowledge (18:133-135).

With regard to the introduction of DIP there were people who were more and less involved in the process. However, most people perceived the involvement of the 'techie' Assistant Director as central to the implementation process (as seen in Chapter Seven). Despite the fact that his role did not involve any technological element, people were very aware of his attributes in that area, which he had acquired as the result of a background in IT as well as personal interest (11:151/154; 21:191/199).

People also had a perception about how they were perceived by others. For example, the introduction of DIP into the office involved an amount of 'politicking' at head office. This was felt partly to be because none of the other offices were interested at that time in acquiring this technology for themselves (2:338). The Coventry office did not need finance from central administration as it came from its own budget. However, they did need to persuade head office that the expenditure was appropriate and that the technology did fit in with the role of the CLA (1:241). The Coventry office did not even need the expertise of the then IS Manager because they had their own knowledge base in the form of the 'techie' Assistant Director.

Coventry's "*technological wizard*" was aware of his skills and confident that he could implement DIP into the office (21:191). However, he felt that he was perceived by the IS Manager as a threat and that this person opposed any decisions made about DIP at Coventry as a result of this (3:162/167).

Another example of this phenomena was provided by the Research Assistant who described herself as being "... *very short on statistical skills and things like that.*" (4:251). However, she was aware that other people perceived her as something of an expert on the subject and felt that this was because she was happy to tackle statistics and

was not frightened of them (3:252-254). One of the Investigators confirmed that this particular individual was regarded as an expert by commenting on her statistics training which she tapped into when necessary (7:491). However, she had not actually undertaken any such training.

8.7.3. Perception of organisation.

Individuals perceived the CLA in a number of ways:

1. Latitude for development.

Despite wanting to develop themselves and be more involved in the organisation it was felt that people were aware that the organisations primary motive and reason for existing was to provide a service for their customers. Seven of the interviewees identified this, one middle-manager and six operational staff. However, people still wanted to develop within this context. This generally involved attending training courses, but there was an awareness that the organisation was tied to some degree because of the pressures of work and so it did not have time to spend on sending staff on courses, etc. (28:32).

One of the middle-managers who had identified this issue felt that people were not positively encouraged or inhibited to develop themselves but asserted that not everyone can be involved in all matters of the organisation. In terms of consulting people there had to be some discrimination, i.e. those who would have use of and knowledge of the issue in question (12:58-63). However, the point that was repeatedly made was that those people who would be using or affected by the change should be consulted or at least kept informed of its progress. One of the Investigators felt decisions were usually made without any consultation or input from those who would be affected (8:360). However, he noted in defence of this that it

"*... is the business of management. I mean managers are there to manage and they cannot share everything with you all the time.*" (8:361/362).

Despite this, people felt frustrated when their views were obviously not considered on certain issues (8:363). Another Investigator supported this view and said that rather than get instructions (17:25) on every decision that has been made by the managers

"*It would be nice to know when decisions are going to be made that will affect working practices. And if there were staff meetings for the important things, though not everything of course.*" (17:23/24).

Another Investigator commented that the organisation should

"... *learn that if they expect people to embrace change and for people to change their working habits which is a great element to consider when you are doing something new, then you have to sell it and they have to give people some ownership of the decision.*" (21:272/273).

This individual continued, that nobody expects decisions to be made at the more operational levels of the organisation, but to consider that at that level people have a greater insight into the problems of operation than the managers do. The introduction of DIP provides an example of this. The Team Secretaries were going to be affected in some way by its implementation, however, they were not involved or kept up-to-date on its progress and it was felt by all levels of the operational staff that they should have been (21:275/276).

2. Power and control.

This topic refers to issues of power and control that individuals observed in the organisation. It was felt that the managers generally had a lot of power in the organisation in terms of the work that was carried out. Among those were particular personalities who were regarded as having the power in the office and that people can either be in or out of favour with them. It was perceived that it was the concerns of those that were in favour that tended to drive the office (21:125-127). Even among the managers it was perceived that knowledge about things going on in the organisation was kept among themselves making it difficult for others to get to know about it and use it (29:25-28). This has consequences for the organisation. Those with power are in a position to constrain the use of individual attributes, either because they are not prepared to share their own or to utilise other peoples. This affects the level of useful attributes available to managers for dealing with situations of change that emerge.

The introduction of the quality programme in the CLA was based on the perceived interests of senior managers, no consultation took place at the lower levels. However, it was felt to be under threat because as far as one particular Investigator saw it the quality programme was about empowering people which she felt that the senior managers would not actually be able to take on board in the end because "... *they would see it as a relinquishment of power.*" (7:155). The quality programme would mean senior management handing over some responsibility to the staff which it was perceived they would not be happy to do (7:160).

3. Paternalistic/Mechanistic structure of the organisation.

Related to the last topic, eleven interviewees, all at the operational level except one perceived that the organisation was either mechanistic in structure or paternalistic in nature. It was felt that such an approach was part of the reason why people felt that they were not encouraged to develop themselves (8:142). Only one of the managers identified this topic. They suggested that roles in the organisation were too inflexible as a result of the rigid structure of the organisation and that this was reflected in its thinking (30:13-15).

This rigid structure was associated with the "... *patriarchal nature of the people in charge*." (18:4) and was reflected in the way that change was introduced, i.e. in the form of an instruction (24:35). It was perceived that some of the people in senior management had been there for over twenty years with very little change at the top (21:20/21). In that time the organisation has grown and developed but the managers had not grown with it (21:26/27).

4. Expectations of the ITQ quality initiative.

A larger and probably more important change was also taking place during the DIP study that would affect the whole of the CLA This was the 'Improvement Through Quality' (ITQ) initiative. This programme had involved many hours training and had involved the setting up of quality improvement groups (QIPs) which would address perceived problems in the organisation. It was through these groups that almost two-thirds of the respondents perceived that positive changes would be made in the CLA.

Respondents identified where they expected improvements to be made in the organisation. The Director felt that instead of the opportunistic use of knowledge for improving processes in the organisation it would provide a more systematic approach (1:80-86). One of his managers felt that because of the working groups internal communication would improve (2:97). Another felt that these groups would also enable a climate to be developed where contribution was encouraged more (3:84). This opinion was supported by operational staff who perceived that the process of ITQ was about encouraging communication and teamwork so that people could contribute more to the initiation of ideas at all levels (5:26/28; 7:20; 11:69/70). These improvements were naturally welcomed by the respondents as was the idea of a skills audit as a way towards generating the empowerment of staff (7:117/156).

It was perceived by one of the managers at head office who was quite new to the CLA that there was a need to change the culture of the organisation. He felt that decision making was the responsibility of too few people and that

"*Culturally things in the organisation have been driven along by particular perceived individuals.*" (13:126).

His aim as a new manager was not to squash the energies and intuitive abilities of those in power but to unlock other peoples stifled creativity and empower them. This he saw could then be harnessed for the benefit of the organisation (13:127-133). The application of ITQ principles would be an inherent part of this.

Despite all the good things associated with ITQ and the expectations that staff had from it there were people who felt that it had not been introduced to the organisation in the best way. For example one middle-manager in the Coventry office recognised that ITQ would make many improvements but

"*It has been for some people quite a divisive process which has been very sad for me because inherently it has the potential to achieve such a lot.* (30:88).

She felt that the organisation had not taken measures to ensure that ITQ was embraced and that a

"*... hearts and mind exercise needed to be done for people to own the impact of what was inevitably a very unsettling process. Some people were able to make that emotional leap as well as the intellectual leap. Others were very threatened by it and so resisted it.*" (30:91-93).

Another manager said that his feelings towards it had swayed between positive and negative because of the haphazard way it had been introduced and the fact that it had meant all the employees taking many hours away from the office on training courses. This person was not complaining about the fact that people were receiving training because he felt that any quality programme must be inherently good but was aware of the very heavy work loads that continued to pile up in peoples absence (12:92/97-99). This feeling were shared by people at the operational level who also had reservations of it in terms of actually delivering any of the things that it promised. For example

"*Theoretically the idea of ITQ is that ideas generate from anywhere in the organisation through the work group process. I have not seen any results of this myself.*" (18:8-10).

Perhaps more time was needed to allow ITQ to be taken on board at all levels of the organisation. There was a fear that even if it were accepted at the office level there was a

chance that the managers at head office would not be totally committed to it because they could see it as a threat to their power base (7:155). The benefits of ITQ to the organisation are clear, especially in terms of allowing latent attribute to become apparent and utilised as unintended consequences arose.

Many people had expectations that the organisations quality programme currently underway at the CLA would help to improve many 'problems'. It was anticipated that the programme would enable the organisation to make better use of people's attributes that had been acquired informally and externally (4:56). In order to do this it was recognised that managers needed to be aware of peoples interests and to recognise the attributes that were developed as a result were a potentially valuable resource (1:108; 4:185; 11:80).

8. 8. Discussion and Conclusions.

This chapter has discussed the themes, organised into attribute sets, that emerged from the CLA data relating to individuals and their attributes. Within the themes there are processes and activities undertaken by and through individuals which represent specific attributes. Each person's attributes are dimensions of their personality that influence the way in which they undertake and deal with events. Those that were utilised during the introduction of the DIP system are marked with an asterisk*, but other attributes that were recognised in the wider organisation are also displayed. The typology of individual attributes presented in Figure 8.8. below has been developed in order to help managers consider the variety of human resources they have available for managing future change.

Figure 8.8. Typology Relating to Individual Attributes.

Attribute Set 1: Acquisition of Knowledge.

Themes	Represented as	Attributes	Where in text
Outside interests	- external (informal) activities and hobbies such as reading/ computer game playing, etc. - (formal) career background/experience - personal 'life' experience	- personally acquired knowledge, eg. technical knowledge* - ability to organise - ability to liase - ability to make people feel comfortable, either face-to-face or on the telephone - ability to manage large amounts of diffuse information	- int/ee's: 3:52; 12:19; 24:3; 20:192; 7:13; 29:84; 4:56; 19:242
Scanning and networking	- information search (in/ formal, internal/external), e.g. journals - interactions with people (in/formal, internal/external), e.g. chats in coffee lounge/ discussions with authorities	- ability to search for information* - willingness to search for information* - ability to recognise other people's knowledge* - ability to recognise utility of information with respect to organisational requirements*	- int/ee's; 3:30; 27:48; 8:155; 17:222
Training	- acquisition of role skills and knowledge (formal) - acquisition of non-role skills and knowledge (external/informal)	- acquisition of knowledge/skills* - ability to search for training opportunities - willingness to search for training opportunities - ability to possess knowledge/ skill, etc.	- int/ee's: 9:28; 25:98; 10:177; 21:70; 21:71, 28:41

Attribute Set 2: Application of Knowledge and Skills.

Themes	Represented as	Attributes	Where in text
Sharing and using knowledge	- formal and informal exchanges of work-related information/ knowledge, eg. meetings, chats, etc.	- ability/willingness to communicate information about work-related/wider organisational activities* - gatekeeping* - ability to recognise/use other peoples attributes* - willingness to make own attributes available* - ability to recognise utility of information with respect to organisational requirements*	- int/ee's: 7:59; 10:201; 24:191
Waste of knowledge and skills	- formal paper information - people's informal knowledge/skills, etc.	In response to this perceived problem: - need for more systematic approach to utilisation of information - ability to recognise attributes* - ability to utilise attributes* - ability to enable others to use attributes	- int/ee's: 8:455; 30:212; 7:110; 17:213; 19:63
Opportunistic nature of knowledge	- ad hoc use of knowledge (acquired internally/ externally and formally/ informally)	- ability to recognise/use information, etc. in response to organisational requirements*	- int/ee's: 1:80; 3:30
Manifest and latent knowledge and skills	- knowledge/skills, etc. known about and not known about (acquired internally/ externally and formally/ informally)	- recognition that known/ unknown attributes may not have immediate utility - recognition that certain attributes will only become manifest in response to emerging situations - willingness/ability to develop an environment in which these types of attributes are valued	- int/ee's: 8:45; 11:269; 7:130; 8:398

Attribute Set 3: Levels of Involvement and Flexibility.

Themes	Represented as	Attributes	Where in text
Levels of encouragement to develop/contribute	- formal and informal encouragement - operational and strategic differences	- ability/willingness to encourage colleagues - ability/willingness to seek out (training) opportunities - willingness to utilise skills, etc.* - willingness to make own skills, etc. available*	- int/ee's: 4:61; 24:28; 7:85; 29:186
Levels of consultation	- lack of formal consultation - informal consultation - operational and strategic differences	- ability/willingness to communicate appropriate information*	- int/ee's: 9:172; 20:135; 367; 11:194; 19:10
Flexibility of role	- operational and strategic differences - informal 'extra' activities (work beyond role)	- willingness to make information /attributes available across the roles - willingness to draw upon other people's attributes (from other roles and positions in the organisation)*	- int/ee's: 27:116; 30:15; 8:154; 10:34; 21:100

Attribute Set 4: Physical Interaction.

Themes	Represented as	Attributes	Where in text
Physical location	- physical places and spaces and effect on people's actions - sensitivity to the physical environment	- recognition that physical location can affect social interaction - awareness of impact of physical environment and the ability to deal with it	- int/ee's: 4:108; 19:153; 25:11
Physical dress	- relationship between image and operations - sensitivity to the environment	- awareness that dress can make people feel un/comfortable-ability to improve situations that make people feel uncomfortable	- int/ee's: 21:22

Attribute Set 5: Social Interaction.

Themes	Represented as	Attributes	Where in text
Formal interactions	- internal and external communications, e.g. meetings - sensitivity to the l environment - sensitivity to the social environment	- ability/willingness to share information/ listen* - ability to socialise/talk, either face-to-face or on the telephone - ability/willingness to make people feel comfortable	- int/ee's: 4:113; 7:60
Informal interactions	- internal and external communications, e.g. chats in coffee lounge - sensitivity to the social environment	ability/willingness to share information/ listen* - ability to socialise/talk, either face-to-face or on the telephone - empathy - ability/willingness to make people feel comfortable	- int/ee's: 8:158; 27:159

Attribute Set 6: Perception.

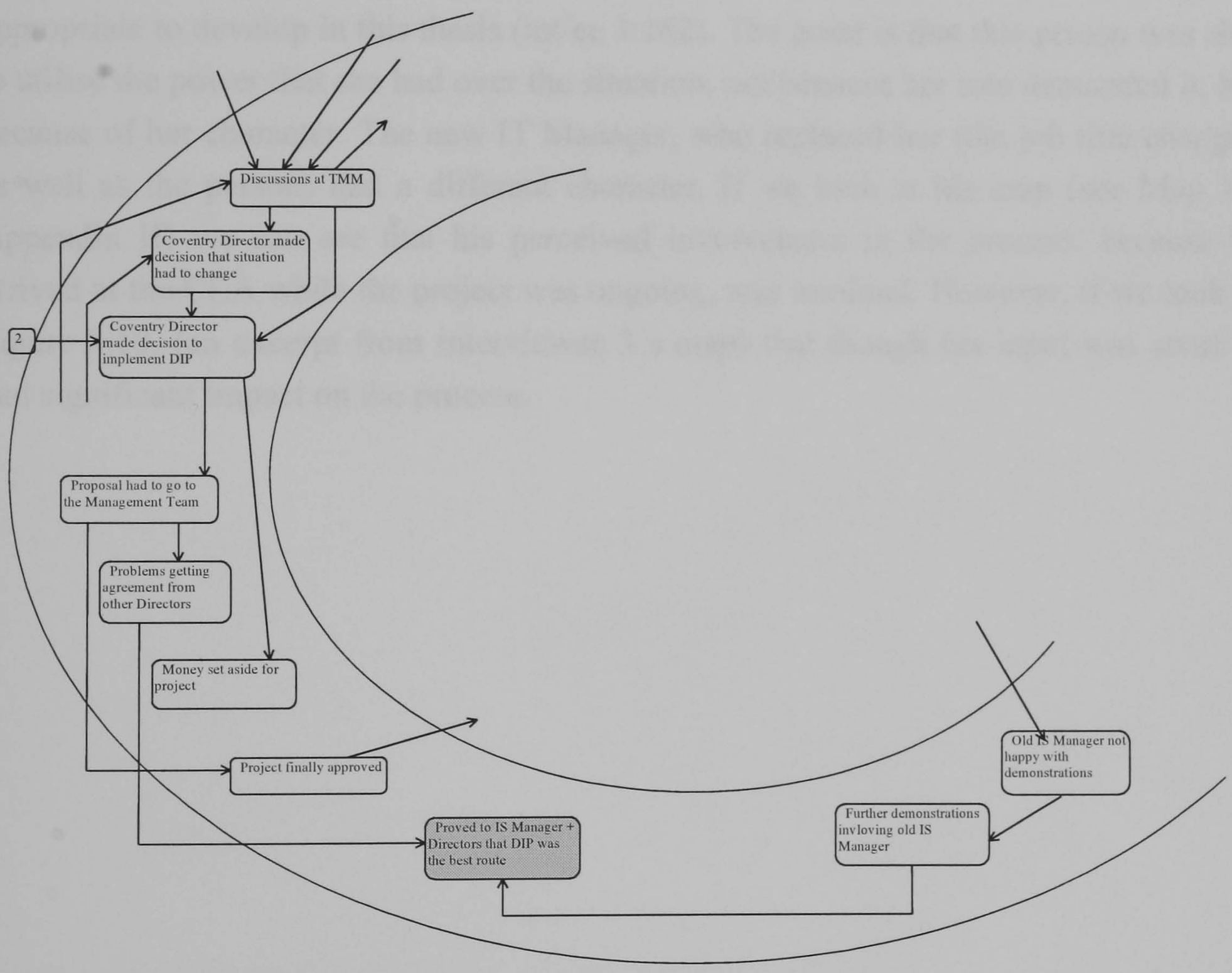
Themes	Represented as	Attributes	Where in text
Perception of self	- recognition or view of self in the organisation (in terms of role, character or value)	- aware of own knowledge and skills, etc. *	- int/ee's: 2:527; 17:223
Perception of others	- recognition or view of others in the organisation (in terms of role, character or value)	- awareness of other people's knowledge and skill, etc. *	- int/ee's: 11:87; 18:133
Perception of organisation (environment)	- latitude for allowing people to develop - issues of power/control in the - paternalistic/mechanistic structure - ITQ quality programme	- ability to understand how own role fits into the wider organisation	- int/ee's: 8:361, 28:32; 7:155; 21:125; 29:29; 30:13; 1:80

The typology was developed from the observations of the introduction of DIP and the roles played by individuals in that process. However, the organisation as a whole was also being observed and so other attributes emerged that were not part of the DIP process. All of these were identified in the typology in order to develop a framework for

managing change at a broader level. A generic framework is useful because although there may be attributes that are particular to one specific change, there are many others that are common across most change, for example, scanning and networking.

There are some general points with regard to individual attributes that are considered in the rest of this chapter They relate to issues of time and organisational structure and are relevant because they influence or are influenced by the way that individuals manage change. Figure 8.9. (an excerpt from Map 4) provides an example.

Figure 8.9. Individual Attributes related to Time.

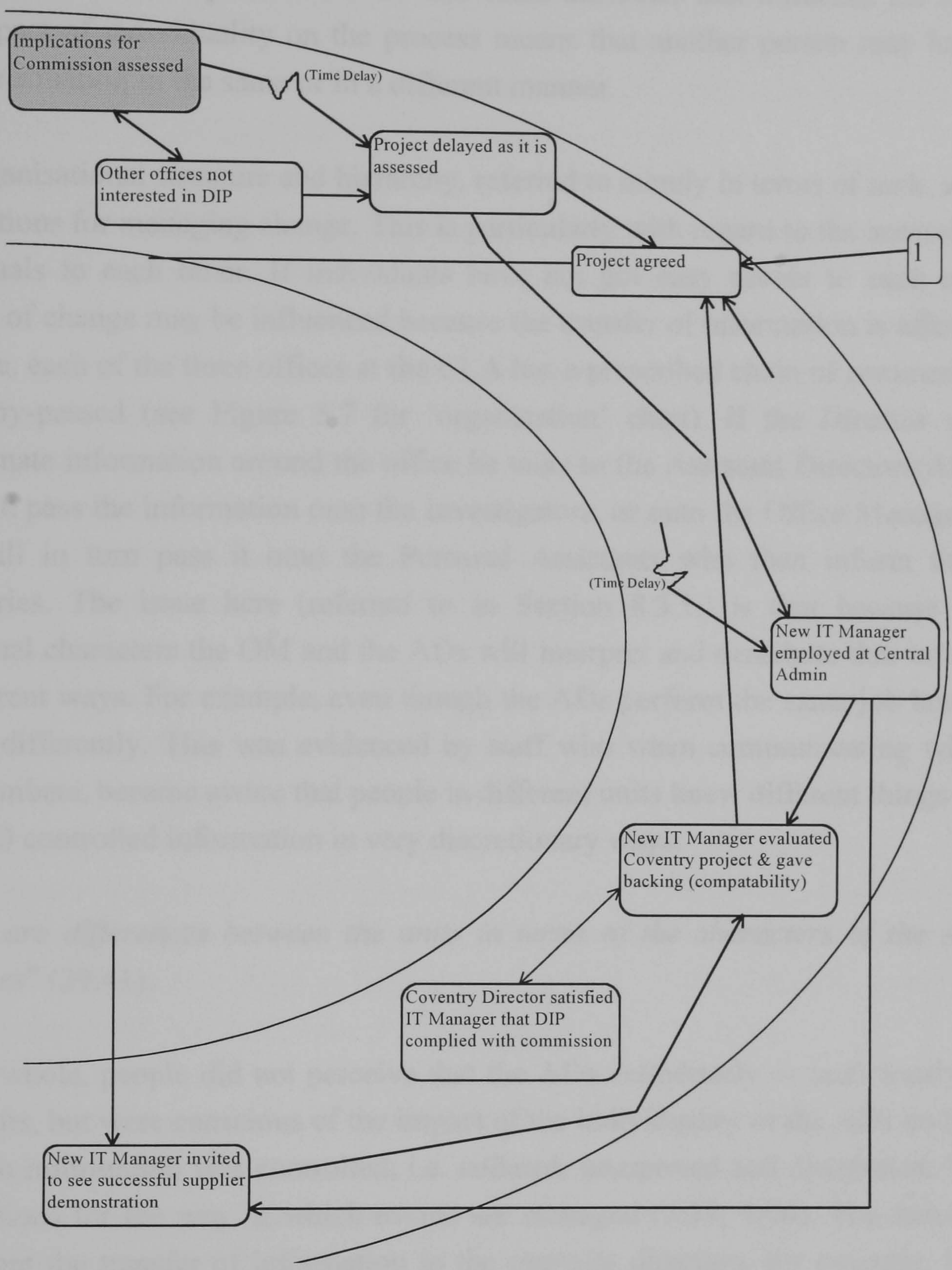


This map shows that there were delays during the process of introducing DIP into the Coventry office, this caused much frustration among the senior staff there. This was confirmed by most members of staff during the interviews, though the senior staff, as a consequence of their position, were more privy to sensitive information about the reasons behind the delays, of which there were two in particular. The first involved the Coventry Director trying to persuade the Directors of the other two offices why his office needed a DIP system even though theirs did not. The position that the two Directors took on this issue meant that what could have been a reasonably short process

turned into a relatively long one. That is not to say that their concerns were not justified. One has to consider that the approach they employed was a totally professional one and that the time that they took was wholly necessary and appropriate. The issue here is not whether the process undertaken was either good or bad, but that it is dependent on the individual attributes that contribute to the character of the individuals involved. This is because individual attributes are neither good or bad, we just need to be able to recognise them.

The same can be said about second perceived cause for the delay in introducing the DIP system into the Coventry office, namely the previous IS Manager. This person was perceived to have caused delays for "*personal and political*" reasons that are not appropriate to develop in this thesis (int/ee 3:162). The point is that this person was able to utilise the power that she had over the situation, not because her role demanded it, but because of her character. The new IT Manager, who replaced her (the job title changed as well as the person) had a different character. If we look at his map (see Map 13, Appendix II) we can see that his perceived involvement in the process, because he arrived at the CLA while the project was ongoing, was minimal. However, if we look at Figure 8.10. (an excerpt from interviewee 3's map) that though his input was small it had significant impact on the process.

Figure 8.10. Individual Attributes related to Organisational structure.



The new IT Manager inherited what he perceived was a fairly "*problematic project*" and his general attitude towards it was not to get too heavily involved (13:109). However, because of his knowledge of DIP he was able to recognise its value, as well as other possible solutions, at the Coventry office which contributed to the management teams (comprising the office Directors) revised receptivity to the project. In essence, the IT Manager's input into the project resulted in two distinct 'problems' being dealt with. The situations with the Directors and the old IS Manager were understood to be different because of the dissimilar reasons behind their objections to DIP, even though they resulted in the same thing, i.e. perceived delays in the project. The IT Manager's

role did not demand that he act in any particular way towards this project, his approach to the situation was dependent on the individual attributes that influence his character. The impact of individuality on the process means that another person may have dealt with the situation in the same or in a different manner.

The organisational structure and hierarchy, referred to merely in terms of rank, also have implications for managing change. This is particularly with regard to the accessibility of individuals to each other. If individuals have not got easy access to each other the process of change may be influenced because the transfer of information is affected. For example, each of the three offices at the CLA has a prescribed chain of command that is rarely by-passed (see Figure 5.7 for 'organisation' chart). If the Director wants to disseminate information around the office he talks to the Assistant Directors(ADs) who will then pass the information onto the Investigators; or onto the Office Manager (OM), who will in turn pass it onto the Personal Assistants who then inform the Team Secretaries. The issue here (referred to in Section 8.3.1.) is that because of their individual characters the OM and the ADs will interpret and distribute that information in different ways. For example, even though the ADs perform the same job but they do it very differently. This was evidenced by staff who when communicating with other unit members, became aware that people in different units knew different things because each AD controlled information in very discretionary ways.

"*There are differences between the units in terms of the characters of the Assistant Directors*" (29:41).

On the whole, people did not perceive that the ADs deliberately or maliciously misled their units, but were conscious of the impact of the individuality of the ADs on the ways in which information was controlled, i.e. collated, interpreted and distributed. This has implications for the way in which events are managed (7:39; 9:66). The same can be said about the transfer of information in the opposite direction, for example, from the Team Secretaries to the Personal Assistants to the Office Manager to the Director and then onto the Coventry management team meetings (TMMs) and beyond. The operational staff, in particular, felt that any information that they understood to be pertinent to their job or to the wider context of the CLA, was either

"*watered down or ignored completely so that anything vaguely relevant often does not get communicated upwards*" (22:46).

At each stage of the process, the character of the individual responsible for transferring information influences the way in which it will be dealt with. The approach that people

take to any situation, be it formal or informal, is dependent on the attributes that contribute to their character, which will affect the way in which they manage situations.

The following is a summary of the conclusions and the insights that have been made about attributes and the characters' of individuals in the CLA:

- Individual attributes were recognised as contributing to qualitative difference, but they would appear to be largely undervalued at the present time. This is particularly the case as we move further down the hierarchical structure of the organisation. Those in more senior positions are in a better position to make their attributes known about and available. However, individual attributes were recognised to contribute to the accumulation of 'organisational' knowledge. The Coventry Director claimed to know where alot of the expertise, at the senior levels, was located in the office. However, he also understood the need to establish a range of attributes, that made use of sources at all levels, that could be drawn upon to deal with change in the future.

- The informal flow of information requires that its sources are at first recognised. Secondly, the value attached to that must be linked to the requirements of the organisation and the individual concerned must be willing to make it available. Finally, this potential needs to be recognised by others in the organisation and, where appropriate, they need to be prepared to utilise it. Consequently, there are attributes related to the collection, selection, interpretation and communication of material. All of these factors are needed to facilitate the flow of information, the absence of any single one could hinder the way in which the process is managed.

- An individual's character can influence both their formal and informal attributes. For example, the way in which information is controlled, i.e. collated, interpreted and distributed. At any stage an individual can slow up or speed up or even halt in a very arbitrary way the way that they deal with information which affects the management of change.

Chapter Nine discusses the implications of the typology for managing change and will relate it to some contemporary examples. It will also discuss the implications of the methodological approach taken.

Chapter Nine: Conclusions And Implications.

" ***It is the learners who will affect the future. The learned find themselves equipped to live in a world that no longer exists.***" (Eric Hoffer).

9.1. Introduction.

Organisational change is inherently unpredictable because of the uncertain environments in which organisations operate. This has implications for approaches to managing change. Consequently, it has been argued that a more adaptive approach to managing change is needed and that this may be developed if managers were more aware of the value of variety in the attributes of the workforce. This thesis has identified individual attributes and explored the importance of maintaining variety in them as a contribution to the development of adaptive learning organisations.

Of particular significance in this context is the latent potential of individual attributes which may not have any formal outlet or role specification. Because organisations operate in, and are themselves, complex environments it is not possible to specify the range of skills required for managing change and consequently strategies which reduce individual attributes should be viewed with this in mind. A number of prescriptive and contemporary management trends have reduced the variety of intellectual capital and skills in a search for more 'efficient' or leaner organisations, i.e. downsizing and de-layering. However, it is far from clear how practices which retain this variety can be established.

This final chapter describes the contribution of the thesis and addresses a series of questions that were raised in Chapter One in order to understand the relevance of this type of study for managers. The implications of the methodology undertaken for this study and its suitability for researching people and change are considered. Practical implications for the organisation are highlighted and suggestions about future research, based on the findings, are presented.

9.2. Overview of Thesis and its Contribution.

Historically organisational complexity has been seen as a threat to be controlled. In doing this, it was believed that the uncertainty that is associated with change could be removed. Change has, thereby, been dealt with in a mechanistic and prescriptive manner which treats organisations as closed systems where there is no interaction between individuals and their environment. Consequently, no allowance is made for the unpredictable nature of change. Examples of this type of approach can be found in the intellectual frameworks of Taylorism and Fordism. From around the 1920's, a human relations approach gradually developed which understood better the relationship between people and the technologies they were using. However, it focused on a narrow understanding of the individual and simply replaced technical controls with social ones, whilst continuing to focus on separating individuals and their knowledge.

Despite the limitations of the human relations movement as a management tool, it did recognise that complexity could not be removed from organisations. This meant that managers had to find alternate ways of dealing with change, one that took into consideration the emergence of unintended outcomes. Consequently, a more adaptive approach was developed. A number of disciplines, particularly in the biological sciences, have recognised the value of variety as a basis for creating adaptive capability. This idea is now being recognised in the organisation and management literatures. However, though studies carried out in this field have advocated the importance of variety, it has been approached from a top-down perspective where there has been no articulation of the individual. Consequently, there is little evidence as to what the dimensions of difference related to individuals are. This thesis has concentrated on identifying those dimensions and has called them attributes. However, these attributes appear to be largely neglected in organisations and so the potential they have to provide managers with additional resources has not been exploited. As a result their value in terms of adaptive capability has not been utilised.

The contribution that this thesis makes is in recognising the need to harness the variety in individual attributes. This provides managers with the basis for a more adaptive approach to managing the uncertainty associated with change. The benefit of variety in individual attributes should not be restricted to strategic roles but can have significant value at an operational level, not only through skills that can re-interpret operations, but knowledge which can direct operators to appropriate sources of support. Consequently, we need to develop our understanding of the value of accumulating and drawing upon individual attributes as a way of developing more adaptive organisations.

A typology of individual attributes has been developed within the context of specific change (DIP). This relates to people and the formal and informal attributes they have which characterises the way in which they manage change, i.e. attributes influence individual's understanding of change and consequently, how they will deal with it. The typology provides a generic framework for identifying the types of knowledge and skills, etc. that would be valuable for managing future change. It is only by establishing an organisational culture which nurtures an increased variety in individual attributes without demanding immediate or obvious return from them that sufficient flexibility can be created to deal with uncertain futures. Of equal importance is the ability to assimilate these attributes, and the knowledge arising from their potential contribution, into the organisational learning process. It is therefore, central to this argument that some strategy is developed to support this assimilation process whereby informal attributes are made available and where appropriate, incorporated into the formal attribute set of the organisation.

Increased variety in individual attributes can only be achieved if there is an organisational culture which enables two things. The first, referred to above, is that attributes need to be developed without immediate or obvious utility in order that redundancy (excess capacity) can be developed. The second is that error-making is accepted as a way to learn. Organisations need to be designed to legitimise some trial-and-error activities, because this allows us to design for uncertainty and to obtain benefits from the unexpected (Holling, 1978; Stacey, 1995). This means that the organisational culture must be based on trust and openness, so that people feel that they can share their attributes and that they will be valued. This may also have the effect of reducing the fear that is induced in organsiations as a result of change (Turner, 1996).

9.3. Why is Variety Important?

Chapter Two explained that variety as defined in this thesis referred very simply to "*distinguishable differences in an ensemble*" (Buckley, 1989). It was speculated that if a broader range of variety was made available then redundancy (excess capacity) would be developed. This is advantageous because it provides flexibility which in turn provides the capacity for organisations to readjust or adapt to new situations. In pursuing a discussion concerning the role of variety relating to individuals, a number of issues have been raised, for example:

1. The observation that individuals are different is self evident and the researcher is aware that continuing to repeat this statement makes no further contribution to the

field. Much of the management literature in particular may be accused of overly emphasising this message without investigating its meaning for organisations.

2. That individual differences are important in relation to managing change is a point that has already been made in the literature (Herriot and Pemberton, 1995). Writers have looked at individual difference, with regard to different backgrounds and culture, etc., as a source of strength (Turner, 1996). However, this has not been seen in terms of identifying what aspects of individuals are valuable, but through the development of models for teamworking and learning at the collective level.

3. That variety for variety's sake is a good thing. In fact, it has been shown in the literature that it could actually be bad to adopt such a course (Stacey, 1995; Jeffrey, 1996). If managers developed policies which stated simply that variety must be maximised, by implication this would mean investing in all an organisation's resources. So, although increasing variety in individual attributes creates redundancy, there are implications for managers that need to be considered (refer to McKergow's question one).

This thesis has tried to take this debate beyond a simple restatement of these points. It has done this by focusing specifically on the variety in human capital, as opposed to other types of resources within the organisation. The argument has been made that individual attributes may not always involve any cost for the organisation. For example, attributes that are acquired as a result of activities undertaken outside of the organisation, and are subsequently assimilated do not have significant costs, i.e. there is not training involved and so time and financial costs are avoided. The main issue is in addressing how managers are made aware of these attributes in order that they can be of value in organisations. The aim of this thesis has been to identify individual attributes. In order for this to be useful McKergow (1996) has raised a series of questions of which four are particularly relevant to this study. These questions were initially raised in Chapter One and will now be dealt with in light of the need for developing and maintaining variety in individual attributes. The pupose of this is to comment on how studies like this can contribute to the development of strategies for utilisation by managers.

McKergow's questions emerge from a discussion on the use of 'complexity theory' to managers. In terms of its value for studies in organisations, complexity theory is beneficial because of its focus on system behaviour (Jeffrey, 1996). This has led to an increased awareness of the complex nature of organisations and the inability of managers to predict future outcomes. Consequently, it has been identified that strategies

for managing change need to be more adaptive. Using a biological analogy, variety provides one way of increasing adaptivity and this thesis has focused upon the value of one aspect of human variety, i.e. individual attributes, as a way to develop this capability. This then enables us 'manage' complexity a little better, by being able to respond in an adaptive manner to changes that arise as a result of our inability to predict the future. By responding to McKergow's questions it might be possible to shed some light on how individual attributes and adaptive capacity could be useful for managers dealing with change in organisations.

1. *What does it mean to lead an organisation? If high adaptability comes as a package with 'out of control', are investors, leaders and workers ready for it?*

2. *What are the implications for 'change management'? Does it become stability prevention?*

3. *What structures and organisational forms might be able to 'use' the complex world rather than attempt to go against it?*

4. *What forms and degrees of connectedness and communication facilitate adaptation in organisations? Where is the point at which communication becomes a hindrance?*

The following discussion begins to address these questions and consequently progresses the research field.

9.4. Complexity and an Agenda for Management Research.

It should be noted that the text presented in this section refers and contributes to just one dimension of complexity, i.e. that of individual attributes. Organisations must also manage the balance between other dimensions such as technical attributes, structural attributes and those relating to business type, etc. Jeffrey (1996) provides a broader intellectual framework for looking at these issues.

1. What does it mean to lead an organisation? If high adaptability comes as a package with 'out of control', are investors, leaders and workers ready for it?

If adaptive capability is to be developed, based on the argument that has been made, organisational leaders have to learn to take into account the variety of individual attributes available in the organisation.

To achieve this the channels of communication must be improved in order to allow attributes to reach the people who are in a position to align them with the requirements of the organisation. Linked to this is the need for managers to be aware of their value and to be willing to draw upon them. These have been described as attributes in themselves. In order for employees, at all levels, to be able to make their attribute available there is the need to develop a culture in which people feel comfortable about doing this. This challenges existing views of strategy which are based on concepts such as "*vision, mission, leadership and core businesses*" (Turner, 1996), because they focus on the achievement of predetermined long term strategies. This is no longer regarded as suitable strategy for managing futures that are unknown (Clayton and Radcliffe, 1996). Instead the emphasis needs to be on process and organisational dynamics and the "*necessity for experimentation*" which involves a shift in our views towards competitive behaviour.

The suggestion that adaptability will lead to stakeholders having no control is related to 'point 3' made in Section 9.3., i.e. that too much variety can 'overload the system' so that managers are not able to effect adaptivity. However, at some interim level variety facilitates adaptive behaviour in response to changing circumstances. Consequently, it is argued that adaptivity enables managers to be 'in control', i.e. it enables them to respond to changes by drawing upon variety in individual attributes instead of passively suffering from "*mysterious changes*" (Open University, 1981). Therefore, the overriding argument is for increasing variety and it is suggetsed that handling complexity in the organisational context is largely a matter of achieving and managing the balance between variety and diversity (see Section 9.6). This will be influenced by the context and type of business, and the management structures in place within the organisation. Consequently, the idea of maximising the variety that mangers can draw upon when it is not possible to specify in advance what attributes are required needs consideration. When we are talking about specific planned change, managers can identify (to an extent) the types of attributes necessary to enable its implementation. They can even make judgements about attributes that may be required to deal with possible situations. However, this does not take account of the unintended and unexpected circumstances that arise as the result of change. Until situations emerge it cannot be known what action is required but by increasing the options available to the organisation, through increased variety, there is a greater chance of adapting to unforeseen futures. The idea behind this is that through having variety in individual attributes there is a greater chance of them coinciding with the requirements of the organisation. Therefore, we need to consider how variety can be incorporated into management practice.

2. What are the implications for 'change management'? Does it become stability prevention?

Exploring variety in the Commission for Local Administration (CLA) has enabled individual attributes to be recognised. These were identified as a result of the observation of a specific change. However, it was suggested in Chapter Eight that attributes used in one change are likely to be applicable to other change. As a result the typology provides a generic framework that could help managers deal with change more generally. However, this is only possible if managers are able to recognise what attributes facilitate change and which constrain it. Consequently, they need to able harness the former and avoid the latter.

In the CLA, this ability was dependent on the Director and other senior managers possessing certain attributes. These included: being able to recognise sources of capability; being able to link available attributes to the requirements of the organisation; and being willing to draw upon them. In particular, informal attributes were shown to be of value to the introduction of the DIP system which was described as a fairly 'successful' project. In making this comment, the Director was talking about the fact that he was able to acquire the DIP system for the office. He was not referring to the process by which it was introduced, but he did recognise that there was a need to improve project management techniques. (Refer to Appendix I for an evaluation of the implementation process, some of the ideas presented have subsequently been accepted and taken on board). There had been 'problems' getting satisfactory approval for the project from central administration (see Chapters Seven and Eight), but the Director of the Coventry office felt that he had achieved largely what he had set out to. However, it was clear that there were many attributes that were available to him that were not used. In this case, the Director was aware of these attributes and did make the link between them and the needs of the organisation. However, he was not willing at the time to draw upon them. The Director chose the person who he felt had the capability to contribute to the project, but he also chose the most senior of those with the necessary 'qualifications'. This allows us to make suggestions about why he did not use all the options available to him. We know from Chapters Seven and Eight that the Director was a formal manager who perhaps would only consider referring to his direct line subordinates. This approach has implications for the way in which future projects are managed. Particularly with regard to the contribution that people with skills, etc. at the operational level can make to change in terms of the re-interpretation of operations. In a subsequent personal communication with the Director he commented that he was aware there were other people in the office with knowledge and skills that could well have

contributed to the project specification. Based on this, it is conceivable that the DIP project could have been better managed at the local level if greater consideration had been paid to the range of attributes available.

The need to expand variety has implications for management, which may even cause difficulties in terms of increased communication. However, in order to develop a more adaptive and flexible approach to managing change the balance between stability and instability needs to be managed.

3. What structures and organisational forms might be able to use the complex world rather than attempt to go against it?

Organisations with formal hierarchies do not lend themselves to the kind of management that would allow uncertainty to exist and be used as the basis for adaptivity. Chakravarthy (1982) supports this argument by saying that organic structures are more appropriate than mechanistic ones for organisations that need to be adaptive because such a structure can deal with a greater variety of environmental turbulence.

Organic organisations which are flatter in structure and more flexible in nature with looser job definitions could lead to greater flexibility within the organisational form. Such a structure would give people the opportunity to develop themselves beyond their tightly fixed role, creating the right conditions for increasing variety. Flatter structures could also mean that there is a less complicated hierarchy through which information and its sources are identified and communicated. This means that the variety in individual attributes can be more fully utilised. However, it is also argued that this flexibility need not necessarily be created through the removal of whole layers of people from the organisational structure. In fact it is further argued that the general trend towards down-sizing which ran right through the 1980's and into this decade has implications for the irreversible loss of an established knowledge base, that was subsequently understood as being of value.

Down-sizing programmes have meant that organisations are potentially leaner in terms of knowledge and skills as well as in terms of size and complexity. Consequently, certain organisations have made moves towards specifically employing the tacit knowledge and skills of people from certain age groups, in fact those that were particularly affected by rationalisation. For example, the B&Q DIY chain-store has recognised and made positive moves to employ people over the age of fifty. In a press release made in October 1994 B&Q stated that choosing to employ more mature people

would address a number of issues. This included the fact that previously the organisation had employed predominantly young people. Analysis of its labour force showed that one of its major business problems, staff turnover, was highest among the younger staff members. It also recognised and valued the life experience and informal knowledge relating to DIY and DIY products that older people are understood to possess. B&Q also found that because of the lower labour turnover better training for its employees was provided and consequently customer service was improved. The company does not consider that stores should be entirely staffed by people over the age of fifty. In fact they have found that achieving a balance of ages and experience and backgrounds has created a positive benefit for B&Q in terms of the quality of service they can now provide. This type of action has obvious implications for regional planning within businesses which may enable the development of improved and more flexible management and personnel structures without jeopardising its day-to-day activities and profitability.

In light of the argument made in the thesis, organisations need to question the wisdom of downsizing and de-layering as a way to develop more 'efficient' rationalised organisations. It is not posited that these paths are necessarily detrimental for an organisation but it is pertinent to recognise that as organisations do this, a series of issues are raised about:

- the loss of the variety (and diversity (refer to Section 9.6.)).
- the loss of potential knowledge and skills.

These points have implications for how managers develop and use people's knowledge and skills. At present managers utilise people in terms of their role and function. Consequently, they do not consider the other types of knowledge and skills that individuals possess. However, managers are in a position to both recognise attributes and to take advantage of them. If this is done successfully then the concern with downsizing and other trends of this nature may be counterbalanced to an extent. It was suggested in Chapter Seven that people in operational positions who also had a strategic understanding of the organisation, and conversely, those at a strategic level with operational knowledge added value to the organisation. This was because of the potential these people offered in terms of developing and strengthening the relationship between the two levels. Firstly improving the communication between the two is important for knowledge transfer, and secondly, people with 'other' perspectives are able to (re)interpret activities within the organisation more clearly. Perhaps greater recognition of this alliance has the potential to compensate for the loss which

organisations may have suffered as the middle management layers of people were stripped away during the 1980's.

4. What forms and degrees of connectedness and communication facilitate adaptation in organisations? Where is the point at which communication becomes a hindrance?

It is argued that communication, i.e the transfer of information and meanings that are created as a people interact; and high levels of connectedness, i.e. the effects that are transmitted as a result of communication, are important in terms of increasing variety. High levels of connectedness can provide greater choice for managers to draw attributes and other resources from. This provides the basis for developing an adaptive capability thus the flexibility for dealing with change is increased. However, there is once again the need to achieve a balance between having 'too much' and 'too little' interconnectedness. If there is too much variety or too much opportunity for communicating this, it has been argued that there is the chance that the system will overload and become self-defeating. This may lead to the emergence of unintended consequences in other parts of the organisation which then need managing.

9.5. Implications for Methodology.

An ethnographic approach to researching organisational change has enabled a 'rich picture' of the activities within the organisation to be developed. This is important when the research is concerned with trying to understand phenomena such as variety. It is also important because description at the local level can be developed in order to provide a framework for exploring similar types of change in other organisations. Consequently, the methodology adopted for this study involved a multiple-techniques approach with the use of semi-structured interviews, observation and the examination of documents relating to the introduction of a new technology. This type of approach is commonly adopted in single case study research because it provides a descriptive and flexible structure for exploring the process of change.

The adopted methodology was found to be an appropriate vehicle for researching the role played by individual attributes in the change process. It was also demonstrated as being a useful way to understand the organisation and to identify the interactions between those individuals being studied. This could be a useful approach for managers to take on board in order to monitor variety in the workforce. Once it was possible to actually identify variety, a more structured approach, one that is more common in

human resource/change research, was undertaken as part of the multiple-techniques approach. Specific questions were asked of individuals and consequently. specific issues were explored. For example, the comparison of different backgrounds and different outside interests that people had, and which have been identified in the typology in Chapter Eight.

9.6. Implications for Future Research.

This thesis has defended the position that there is a need to adopt a more human-centred approach to managing change which takes account of individual attributes. This requires the future researcher to determine the validity of current approaches in order to improve the transition of the framework into management practice. There is also the need understand how we can incorporate the knowledge arising from the potential contribution of individual attributes into the organisational learning process It is therefore critical that some strategy is developed to support this process whereby informal attributes are made available and, where appropriate assimilated into the formal attributes set of the organsiation.

Another issue raised that needs addressing is the distinction between variety and diversity. The term variety has been used throughout this thesis to refer to micro-difference. In the wider management literature the two terms have been used interchangeably, because it only now being recognised that there are important diffecrences between the two.

Variety is described as variance within an attribute set and diversity as variance between attribute sets. Variety is more easily understood because it is identifiable, i.e. attributes can actually be identified and measured as demonstrated in the typology presented in Chapter Eight. Diversity, on the other hand, is not always identifiable. This is because the variation of, and the interaction between, attributes leads to the creation of new attributes that are emergent in nature (refer to Chapter Three). The suggestion is that diversity is in fact an emergent process, the value of which is not apparent in response to any specific change. However, when we look back at the process of change we can see that it manifested in the form of different combinations of attribute sets. This is a dynamic process, which appropriately describes the intricate character of complexity. From a methodological point of view this thesis has used variety to determine the attributes in the typology as a vehicle to get an insight into diversity refer to the different attribute sets.

Also identified in the thesis is the idea of latent and manifest attributes, i.e. attributes that may and may not be identified respectively. This provides us with something to think about with regard to the difference between variety which is identifiable and diversity which is not. However, the notion of emergence which has been shown to be very closely related to diversity does not mean latent. They are different because emergent attributes are created as knowledge, etc. is accumulated, whereas latent attributes may already be developed but are just not apparent. Latency refers to that which is unknown and emergence refers to that which is unknowable.

It is clear, therefore, that further research is needed to develop a management-relevant and useful distinction between the terms variety and diversity. As a result of the work reported here, we can introduce more clarity into the discussion of the two terms, but it is recognised that we need to develop a research agenda that focuses on further clarification. Such an agenda will help organisations to strike the right balance between the two and consequently manage change a little better.

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APPENDIX I

An Evaluation of the Implementation Process of Document Image Processing (DIP) at Coventry.

Report to the Coventry Director of the Commission for Local Administration in England.

Prepared by Jane Scamans.
INTA/Cranfield University.
February 1995.

APPENDIX I

Contents of the Report.

Executive Summary for the Commission for Local Administration in England.

(1). Introduction.

There is at present a trend towards imaging and document management generally and from recent surveys there is evidence of uptake across most industry sectors. Although overall uptake by government departments, and public authorities generally, has been relatively slow, it is likely to expand further as organisations come to terms with the world of computerised information processing.

(2). Background to the Report.

The Commission has recently been reviewing its current Information Technology structure. The Rice Report suggests that because of the Commission's level of technological immaturity at present only a small-scale imaging system is to be introduced. The review does not indicate possible reasons for this technological immaturity which it identifies. The report recommended that Coventry pilot a system so that it could be monitored before any possible wider application to the rest of the Commission. The Document Image Processing (DIP) system introduced at Coventry conforms to the recommendations made in the report.

This report is the result of an investigation into the introduction of the DIP system at the Coventry office of the CLA. Its purpose is to evaluate the process of implementation and to make suggestions about the way in which such innovations are introduced into the organisation in the future. This report is not intended as an appraisal of the state of the technology. The information on which this report is based includes a series of thirty interviews carried out at Coventry. Staff were asked about their perception of the DIP implementation process.

The following table summarises the main objectives that led the Coventry office to introduce DIP. The report also evaluates other subsidiary objectives that were relevant in the genesis of the project.

Coventry's Main Objectives	
Keeping hold of information →	3.1. Holding onto data
Creation of space →	3.2. Space
Subsidiary Objectives	
	3.3. Cost
	3.4. Labour
	3.5. Security
	3.6. Quality

(3). Findings.

This report will show that in terms of the actual DIP implementation the overall project was managed quite well and was acceptable to staff members. However, a number of suggestions are made as to how the Coventry office might manage it's projects in the future. They make reference to the DIP project and are also of a more general nature:

(3.1). Organisational and Technical Issues.

- The lessons to be learnt from the introduction of the DIP technology may encourage the CLA to address the evolving relationship between the technology and the organisation and between the technology and the individual. This may have implications for the way in which the organisation views the IT function, i.e. more as an integrated part of the organisation rather than as a functional item, since technology appears to be becoming more central to the activities of the CLA.

- It would seem that a new and better relationship needs to be developed between the IT function and the user communities within the three offices. This particular issue is being addressed at present as the result of the recruitment of a full-time IS Manager in October 1993 and the recruitment of Assistants to the IS Manager in December 1994.

- Once the decision to go for any new technological system has been taken a detailed assessment of the situation needs to be made along with careful consideration of the step by step development of the project. There are special considerations in the case of the DIP systems since common standards are not yet in place. A DIP system must integrate with the work processes of the organisation, which presented no problems in this case. In addition, it must interface with the systems already in

place. This can be established with the minimum difficulty and is especially relevant in the case of the Registry system at Coventry.

- It is vital to have an understanding of the relative strengths and weaknesses of vendors before and during the tendering process. In such a rapidly changing marketplace this can be the key to the successful choice of any application.

- Suitable consultants and vendors will try to explain how they understand the particular issues facing an organisation; it is essential that they be encouraged to do this. They will then try to develop appropriate solutions and assist their clients through system and solution implementation.

- Judging the correct pace of implementation will lessen the trauma for staff associated with organisational change.

- There needs to be a greater understanding of what a project is to achieve before and during the implementation of a technology. This point is highlighted by the different perceptions that staff had of the implementation process. It was highlighted again when there were delays in the implementation and staff did not know what was happening and at what stage the implementation process was at. It is suggested that this issue be addressed in the future. Where any project affects staff they should be kept informed of the situation clearly and regularly.

- There were different perceptions of the project at the Coventry office and at central administration and this gap led to delays in the implementation of the project. It would seem that the relationship between Coventry and central administration at London in the context of project management needs to be examined and developed. This may involve further devolution of 'powers' to the individual offices if proper responsibility is to be assumed.

(3.2). Training Issues.

- There was a genuine concern among the staff as to their position and role in terms of the DIP machine. Training issues need to be thought out as clearly as possible prior to implementation and adhered to as closely as possible. In the case of the DIP implementation this would have reduced the fear of the unknown for the staff and would have presented to the organisation a project that looked proficient

- Users must be prepared to invest time and effort in the analysis of their needs and requirements in order to realise full benefits to their working methods.

(3.3). Consultation and Communication Issues.

- Time spent consulting and communicating before launching a project is always time well spent. This is especially so where the project is going to have a direct effect on particular staff and their working practices. The level of consultation was a major issue for the staff at Coventry.

- There is a need to involve users much earlier and allow them, if they wish, to follow the process through. This has obvious advantages, particularly in providing a system which they can use, i.e., the user specification will be more efficient if it fits in with how users work and is therefore likely to be more acceptable.

- The introduction of an electronic mail system as a way to improve communication at the CLA was suggested numerous times during the interviews at Coventry. Electronic mail (e.mail) would improve communication within the offices and also between the three offices.

Main Report for the Commission for Local Administration in England.

(1). Introduction.

There is at present a trend towards imaging and document management generally and from recent surveys there is evidence of uptake across most industry sectors. Although overall uptake by government departments, and public authorities generally, has been relatively slow, it is likely to expand further as organisations come to terms with the world of computerised information processing (1). (Appendix II).

The Commission has recently been reviewing it's current Information Technology structure. The Rice Report suggests that because of the Commission's present level of technological immaturity it is considered not ready to take on board the full-scale imaging systems that are available (2). The report does not discuss whether this relative immaturity is the result of the technology that the Commission has or whether it is because of the scale of the organisation or, indeed if it is for any other reason. However, it was recommended that a small-scale Document Image Processing (DIP) system would be appropriate and the Rice Report endorsed the suggestion that Coventry pilot the system so that it could be monitored before considering application to the rest of the Commission.

In the light of the Rice Report it would have been unwise to go ahead, at present, with a large-scale system and this should only be attempted in the future if it is part of a Commission-wide project with the full support of the IS department. However, the DIP system introduced at Coventry is a small-scale project and is in accordance with the recommendation in the report.

This report is the result of an investigation into the introduction of the DIP system at the Coventry office of the CLA. It's purpose is to evaluate the process of implementation and to make suggestions about the way in which innovations are introduced into the organisation in the future. This report is not intended as an appraisal of the state of the technology at the Coventry office or the CLA as a whole.

This report will investigate:

(1.1). DIP- what is it?

DIP enables organisations to capture paper information at source and replace it with an electronic system. There are many potential advantages to such a system such as

saving space and cutting down on costs as well as creating a more efficient archiving system. However, the question arises: if DIP is going to revolutionise and reorganise office systems then why are not all organisations buying them? A review of the history of technology uptake by organisations in the UK indicates that there is an inherent conservatism about new technologies. Smaller organisations, traditionally, seem less inhibited about 'trying-out' innovations but often do not have the resources to do so (1).

Before an organisation begins to appraise the potential of a DIP system it must go through a full process of assessing the 'problem' and evaluating the options that are available; some of these will be procedural and some will be technological. A technological solution should only be a response to an organisational need. However, if it is necessary, in terms of organisational need, to go for an IT application then it is worth noting that it should be integrated into the working of the office and that the business should drive the implementation of such systems and not the other way round. Like any investment there will be risks, and business decisions will have to take into account the nature of these risks.

(1.2). Main Objectives of DIP for Coventry.

The following table summarises the main objectives that led the Coventry office down the path of DIP. This section also evaluates other subsidiary objectives.

Coventry's Main Objectives	
Keeping hold of information →	3.1. Holding onto data
Creation of space →	3.2. Space
Subsidiary Objectives	
	3.3. Cost
	3.4. Labour
	3.5. Security
	3.6. Quality

The report will then go on to examine:

(1.3). Implementation Process and Evaluation of DIP.

This section discusses the thirty interviews that were done at Coventry in order to assess the staff's perception of the introduction of the DIP system. Responses to the

questions about the process are categorised in terms of a person's interest and whether or not DIP will form a direct part of their job.

(1.4). Conclusions and General Recommendations.

The report will show that in terms of the actual DIP implementation the overall project was managed quite well and was acceptable to staff members. However, a number of suggestions are offered about how the CLA might manage its IT projects in the future. These insights outline involve organisational and technical issues; training issues; and consultation and communication issues.

(2). Research Context of the Report.

My particular interest in the DIP implementation project at Coventry stems from the research that I am doing for a Ph.D. at Cranfield University. This report has been written as the result of the access given to carry out data collection activities during the summer and winter periods of 1994.

The data for this report and the Ph.D. was collected by an examination of Commission documents and through a series of interviews at the Coventry office of the CLA. The interviews covered all the hierarchical layers and provided, approximately, a fifty percent sample of the office.

The research is looking at organisational learning and change as dynamic processes. The introduction of the DIP system provides a good example of organisational change. The focus is on how individuals contribute to this process. In the past, researchers have examined the role of the individual in change but have not examined the nature of the characteristics of those individuals. This research is aiming to do that.

The analysis of the data for the purposes of the Ph.D. is underway and a series of maps have been drawn to represent a part of the data collected. These maps provide clear pictures of how individuals perceived the implementation process of DIP. Through further analysis of the interviews I was able to determine the feelings of the individuals towards the change and the way in which it was managed. In addition, I was able to highlight the skills that they possess and which enable them to take part in the change process. A model which highlights these individual characteristics is being developed.

(3). DIP- What is it?

- Document Image Processing (DIP) is a form of digital information storage which harnesses the latest computer technologies for scanning, indexing, retrieving and storing all types of documentation. Touche Ross Management Consultants describe how the use of computers and laser technology turns images from paper into coded images that can be stored on computers, displayed on screens and reproduced on laser printers. DIP works instantly, reliably and efficiently (3).

- It organises, through electronic digitisation, incoming unstructured paper information. This is an area of information management that has been neglected in the past. Advances in DIP technology means that the opportunity now exists to integrate image processing with the office automation tools that are already being used in the office (4).

- Organisations which have reported success stories in terms of DIP implementation are those where the users have recognised the opportunities and, where necessary, have adjusted their working routines to reap full benefit from the technology.

- It is worth noting that it is recognised that DIP differs from other forms of IT in the sense that it has more to do with the way in which organisations manage their information base than with the actual technology. DIP is viewed as a solution to the problem of the 'paper-dam'; it just happens to be a technological solution.

(4). Main Objectives of DIP for Coventry.

The following table summarises Coventry's main objectives for introducing the DIP system. It also lists their subsidiary objectives.

Coventry's Main Objectives	
Keeping hold of information →	3.1. Holding onto data
Creation of space →	3.2. Space
Subsidiary Objectives	
	3.3. Cost
	3.4. Labour
	3.5. Security
	3.6. Quality

Coventry had two main objectives for introducing DIP to the organisation:

- **Retaining information that would otherwise be lost through the file destruction policy or misfiling.**
- **Saving and creating much needed space.**

These primary objectives are evaluated below:

(4.1). Holding on to data.

- All archived files at the CLA have a value even though they spend most of their time sitting in filing cabinets. There are constantly changing data requirements in the CLA and so it is never certain what information will be needed in the future. It would therefore seem prudent to keep all of it. The DIP system, as applied at Coventry, is a way of storing efficiently and permanently, but not on paper. information that is not used very often. It is an archiving tool and it has a relatively passive role in that it is a standalone machine that is, at present, not directly linked up to the other systems at Coventry.

- As the number of complaints increase and the amount of information grows it is vital that investigators have all the access they need to the documentation in order to ensure that they are able to make judgements about cases that are based on complete information.

- There is the potential embarrassment for the Commission when documents are lost or destroyed as it may be necessary to telephone the council that it is dealing with to request the information from them. Some councils have been criticised by the Ombudsman for the premature destruction of documents.

- There is also the cumulative effect of such inefficiencies. It is not only the fact that documents are lost but also that the CLA has to make good the deficiency and this is a wasteful use of time.

It was felt that the situation at Coventry would be improved and the objectives satisfied once the DIP system was fully operational. DIP means the elimination of lost files. It also means that data is not lost **permanently** owing to the destruction policy or **administratively** through errors such as misfiling, as long as the documentation is scanned in and indexed correctly.

DIP also means the that specific documents can be found quickly and it is expected that the response time to file requests will be drastically reduced, thereby improving customer service to both complainants and council departments.

(4.2). Space.

The Coventry office of the CLA is a new building approximately six years old. It does not have basements to store files which the offices in London and York have and space for the storage of documents had been exhausted by the end of 1993.

- The space can be better utilised for quiet space for investigators to work in or, as the number of complaints being received by the CLA is growing it may be necessary to utilise the space to accommodate more staff.

- Cost of floor space per square foot. Generally speaking, 95% of all documents reside in filing cabinets. At Coventry, the area devoted to the archive was 575 square feet with a cost of £14.75 per square foot. This figure is per annum and does not include rates.

The other recognised benefits that may be realised from the introduction of a DIP system are:

(4.3). Cost.

Reducing costs is often an objective of investing in a DIP system:

- The costs of owning and maintaining a filing cabinet as opposed to the potential reduced cost of one DIP machine and storage on compact discs.

- The costs of misfiling in terms of replacing a document.

- The cost of hours per year looking for information that has been misplaced, misfiled or mislabelled. There are potential indirect labour savings to be made.

- There are, of course, the costs of the technology to consider and the transition costs of moving from paper to an electronic means of storing documentation, for example the cost of temporary staff to do the back-scanning. .

(4.4). Labour.

There are labour related improvements to be achieved from the DIP system:

- Increased labour efficiency due to the time saved filing.

- Potential retention of staff because DIP is recognised as a user friendly piece of technology that is not difficult to operate.

- Relieving Team Secretaries of the duties of archiving paper files and document destruction.

There are also labour costs to be considered:

- Training includes both the physical cost of the training of the Team Secretaries and the P.A.'s and the time lost from their normal working day while they are being trained. However, if the costs of training are adequately covered in the overall costs of the project then there will at least be no surprises.

- The cost of change in terms of the possible restructuring of the workforce as a result of DIP. This includes changes to employees normal working practices such as training. A feeling of contentment is vital.

(4.5). Security.

For some organisations, including the CLA, the security of their data is very important.

- Physical Security- the possible advantages of electronic copies over paper copies due to the high level of security for document images.

- There are, however, possible disadvantages of DIP in terms of confidentiality and data protection. This is only because there are as yet no standards for this type of information storage system. However, there has been guidance from the Data Protection Registrar about data protection issues raised by the development of DIP systems. This has been slow in coming but the approach being taken by the Registrar is that organisations using DIP should develop their information systems to ensure that they are able to meet the requirements of the Data Protection Principles (5).

(4.6). Quality.

- The achievement of 'Quality' is a high profile objective of many organisations now. The CLA is involved in a quality programme called 'Improvement Through Quality' (ITQ). (The BS5750 Quality Management Standard specifically mentions documentation). It is expected that DIP will improve the flow of information around the office since it will be easily retrievable and there will be more control of the documentation, thus assisting the ITQ implementation. The most effective use of DIP is when it is viewed as a means of improving business processes rather than simply as a device to save space, paper or time.

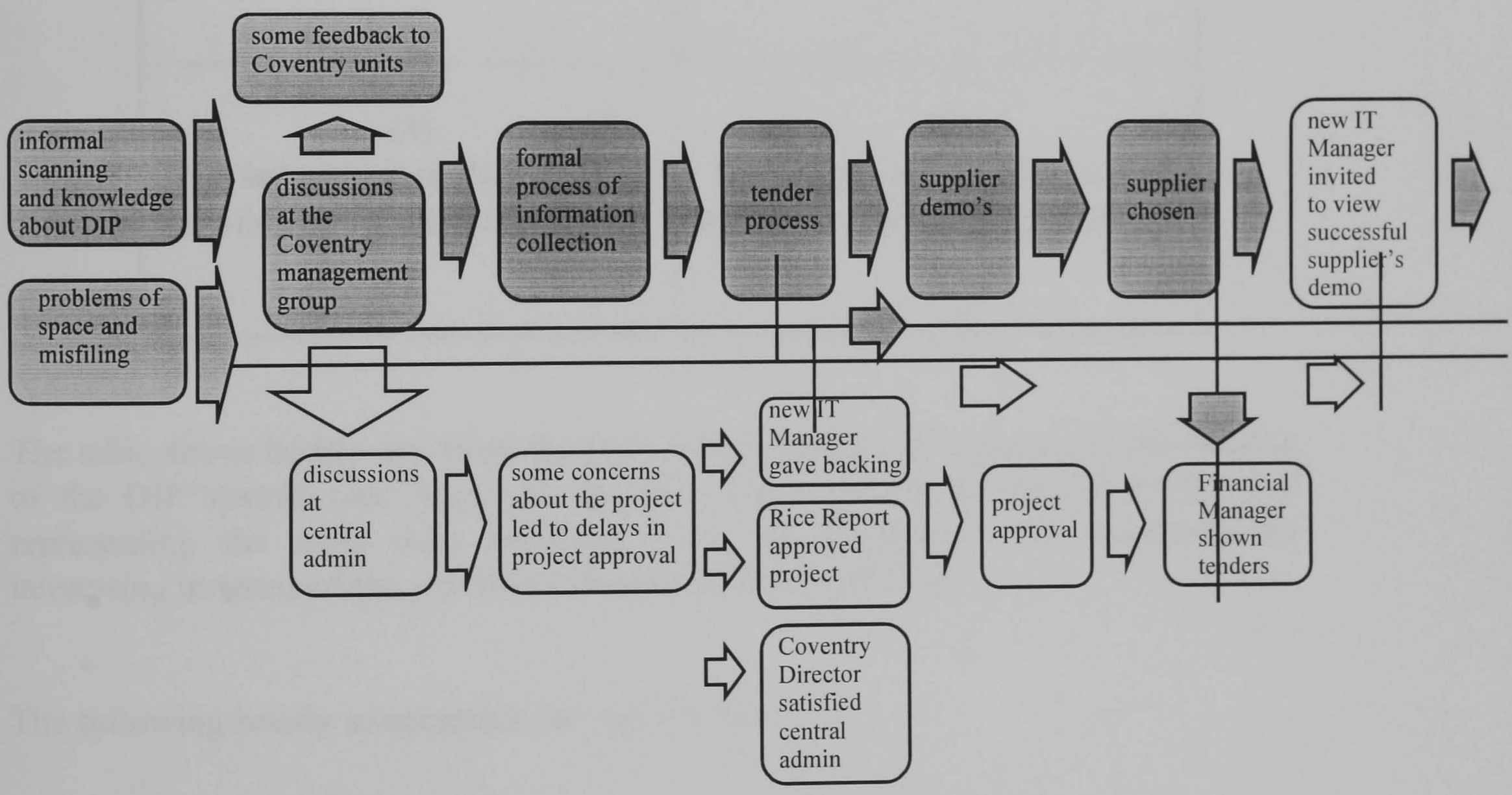
(5).Implementation Process and Evaluation of DIP.

This section evaluates the introduction of the DIP system at Coventry. The data for this part of the report was collected by carrying out thirty interviews at the Coventry office of the CLA. The interviews covered all the hierarchical layers of the organisation and provided, approximately, a fifty percent sample of that office.

(5.1). Process of the Implementation.

The process of the introduction of the DIP system, once the decision to go ahead was taken, was a fairly straightforward and speedy operation. The following diagram gives an idea of the implementation as viewed from the people most involved in the process.

Implementation Diagram.



(5.2). Internal Evaluation of the DIP system at Coventry.

From analysis of the interviews it was clear that attitudes did vary but there was general consensus that the DIP machine was simply a tool that would hopefully enable them to do their job more efficiently.

There were four main types of response to the introduction of this new system. These appeared to depend on whether the individual was interested in the project at all and whether it had any direct bearing on their job or not.

Categories of Response.

(1) **Interested** in DIP and **will** form a direct part of their job	**(2)** **Interested** in DIP and **will not** form a direct part of their job
(3) **Not interested** in DIP and **will** form a direct part of their job	**(4)** **Not interested** in DIP and **will not** form a direct part of their job

The table above briefly describes the four main categories of response to introduction of the DIP system (see Appendix I). This table is a simple way of sorting and representing the main data responses from the interviews. The responses are interesting in terms of the possible dichotomies that could arise.

The following briefly summarises the above table:

(1). There were staff whose attitude to the new system was very positive and who were very interested in it's introduction. They were also expecting to use the system as a normal part of their working day for the retrieval of documents. This category contained approximately 30% of the interviewees. The level of involvement in the introduction process was varied.

(2). Staff in this category were interested in DIP though they were not expecting the system to become a direct part of their working day. These tended to be fairly interested in many of the projects that were going on in the organisation and seemed to have a curiosity in terms of the wider applicability of the system and the broader

context of the organisation. This was the largest category with 44% of respondents falling into this group. As with the previous category, the level of involvement in the introduction process was varied.

(3). Staff in this category were not interested in the DIP system though it would probably form a direct part of their job in terms of retrieving documents. There is a possible problem here in that the user's lack of interest in the machine may mean that mistakes may occur. The lack of interest and the lack of involvement in the introduction process may of course be linked. There were, however, very few staff members that fell into this category, in fact just 6%.

(4). There were staff members who took no interest in the system at all, including what the equipment does and how the system works. This may have been because it would have no direct bearing on their working day although this is not clear. This was a conscious choice on their part. It is likely that this kind of person was not involved in the introduction process and had no desire to be involved. 20% of staff members fell into this category.

In addition to these findings from the interviews it was found that there were some gaps in the implementation process. These concerns are highlighted below:

- There was concern about the time it would take out of the Team Secretaries' working day in order to back-scan all the files that are held at Coventry. However, this problem was overcome when temporary staff were brought in to carry out this task.

- This issue had also caused some worry for the investigative staff who were concerned about how much time their secretaries would be away from their regular duties.

- Very few people, even those directly involved in the implementation of the DIP, shared the same view of the process.

- A major issue of concern was the level of consultation throughout the DIP project with the people most directly affected by it's introduction.

- There was one problem that had a significant effect on the introduction process and this was the delay to the project. It also had some effect on the staff at Coventry in the sense that they never knew what the state of play was. The delays could have stemmed from the Coventry office not adequately explaining their case and perceived need for a new archiving system or from the fact that the Systems Manager was part-time and over-committed. Whatever the problem in communication may have been, the result was a lengthy delay in implementing the project. This caused some staff members to ask what was going on because they felt they never really knew what was happening. There were, however, regular

reports by the Director to the Coventry Management Group. The message appears not to have reached all levels of the hierarchy. Electronic Mail may be a way to solve this problem. There was a distinct feeling that nothing could be done about the situation because there are perhaps far too many constraints placed on the Director's freedom to act.

The main concern now is about training and not knowing when the cascaded training from those who were trained by the suppliers of the system will happen. Operating the DIP machine is a fairly simple procedure and extending the training should present few problems.

(6). Conclusions and General Recommendations.

In terms of the actual DIP implementation it appears that overall the project was managed fairly well and was acceptable to all staff members. However, this section outlines a number of ways in which the Coventry office or the CLA as a whole may attempt to improve the way in which it handles projects in the future. These recommendations are a result of the concerns that have been raised. They make reference to the DIP project and are also of a more general nature:

(6.1). Organisational and Technical Issues.

- DIP technology may be a catalyst to encourage the CLA to address the evolving relationship between the technology and the organisation and between the technology and the individual. This may have implications for the way in which the organisation views the IT function; it should be viewed more as an integrated part of the organisation, rather than as a functional item especially as technology is becoming more central to the activities of the CLA.

- It would seem that a new and better relationship needs to be developed between the IT function and the user communities within the three offices. This particular issue is being addressed at present as the result of the recruitment of a full-time IS Manager in October 1993 and the recruitment of Assistants to the IS Manager at the end of 1994.

- Once the decision to go for a new technological system has been taken a detailed assessment of the situation needs to be made along with careful consideration of the step by step development of the project. There are special considerations in the case of the DIP systems since common standards are not yet in place. A DIP system must interface with the systems already in place and integrate with the work processes of the organisation. Integration presented no problem in this case and the interface could be established with the minimum difficulty especially in the case of the Registry system at Coventry.

- It is vital to have a clear understanding of the relative strengths and weaknesses of vendors before and during the tendering process. In such a rapidly changing marketplace this can be the key to the successful choice of any application.

- Suitable consultants and vendors will explain how they understand the particular issues facing your organisation; it is essential that they be encouraged to do this. They will then try to develop appropriate solutions and assist their clients through system and solution implementation.

- Judging the correct pace of the implementation will lessen the trauma for staff associated with organisational change.

- There needs to be a greater understanding of what a project is to achieve before and during the implementation of a technology. This point is highlighted by the perceptions that staff had of the implementation process. It was highlighted again when there were delays in the implementation and staff did not know what was happening and at what stage the implementation process was at. It is suggested that this issue be addressed. If situations arise in the future where delay is out of the control of the Coventry office the suggestion is that staff should be kept informed of the situation clearly and regularly.

- There were different perceptions of the project at the Coventry office and at central administration and this gap led to delays in the implementation of the project. It would seem that the relationship between the Coventry office and central administration at London in relation to project management needs to be examined and developed. This may involve further devolution of 'powers' to the individual offices if proper responsibility is to be assumed.

(6.2). Training Issues.

- There was a genuine concern among the staff as to their position and role in terms of the DIP machine. Training issues need to be thought out as clearly as possible prior to implementation and adhered to as closely as possible. In the case of the DIP implementation this would have reduced the fear of the unknown for the staff and would have presented to the organisation a project that looked proficient.

- Users must be prepared to invest time and effort in the analysis of their needs and requirements in order to realise full benefits to their working methods.

(6.3). Consultation and Communication Issues.

- It is always worth taking the time to consider carefully the options available to solve a problem and consult and communicate. This is especially relevant where the project is going to have a direct effect on particular staff and their working practices. The issue of consultation was the major issue for the staff at Coventry.

- There is a need to involve users much earlier and allow them, if they wish, to follow the process through. This has obvious advantages, particularly in providing

a system which they can use, i.e., the user specification will be more efficient if it fits in with how users work and is therefore likely to be more acceptable.

- The introduction of an electronic mail system as a way to improve communication at the CLA was suggested numerous times during the interviews at Coventry. Electronic mail (e.mail) would improve communication within the offices and also between the three offices.

References.

(1). Mayon-White, W.M. (1994), Paperless QA: The Challenge and the Opportunity for Electronic Document Management. Notes for a meeting of the Nottingham and Derby branch of the Institute of Quality Assurance, 19th October 1994.

(2). Rice, M.A. (1993), Review of Information Systems Strategy. A Report for the CLA in England.

(3).Touche Ross Management Consultants and DRT International (1993), Document Management Briefing. Notes circulated at DIP Roadshows around Britain.

(4). Morgan, R. of Butler, Cox and Partners Ltd. (1989), The Growing Requirement for Electronic Document Management Systems in the Office. 6th. Annual Conference on Optical Information Systems: the Requirements for EDM systems, London, pp 202-206.

(5). Data Protection Registrar, (1994), Document Image Processing- Draft Data Protection Guidance Note in a letter sent to the CLA's Coventry Director.

Appendix I.

This table shows the **Categories of Response** that were highlighted in the main report with quotes from the interviews.

(1) **Interested** in DIP and **will** form a direct part of their job	(2) **Interested** in DIP and **will not** form a direct part of their job
"It will make people's jobs a lot quicker and easier and a lot less stressful." "I think it will be really good." ".....keen to get on and do it."	"I won't really be using it.....but I'd want to know how to use it." ".....the investigators will soon benefit." ".....it's impressive."
(3) **Not interested** in DIP and **will** form a direct part of their job	**(4)** **Not interested** in DIP and **will not** form a direct part of their job
"I think that I've not been terribly interested in it ....." "When it came it just seemed to be so much hassle."	"I've been as involved as I've wanted to be." "It is of minor significance in their day-to-day activities." "It doesn't mean a lot to me."

Appendix II.

The Future Expansion of DIP.

- There has been, for some time, discussion about the idea of the paperless office. This ideal is still far away in the future, if at all attainable or even required. Therefore, it is perhaps more pertinent to think about the extent to which we can reach this aim as opposed to actually attempting to achieve it.

- Work at Cranfield has suggested that DIP coupled with 'Workflow' is an inevitable development for most paper-intensive processes in the 1990's and will be a common feature of the networked office environment (1). Workflow gives imaging a more active role in the organisation than a simple archiving system does as it redesigns the flow of paper throughout the office. However, at present the integration of Workflow onto a DIP system requires complex linking tools in order to create a queuing system for a database. It is expected that this gap will soon be bridged.

- There is a need within the Commission to develop a migration policy for the DIP system in order to guarantee that it will remain viable as the technology develops. There will, therefore be costs in the future for maintaining the electronic records. In addition new systems will need to be flexible and adaptable into the future with the ability to expand. There are skills within the Commission to deal with this.

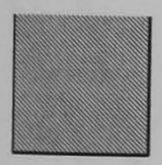
- There would, in the future, be the potential for the sharing of documentation across the three offices of the Commission if a full-scale networked imaging system was implemented. This could also enable simultaneous access to documentation if this was thought to be a requirement. Integrating image across organisations would be a much more challenging issue than was the adoption of the present system at Coventry.

- It is still important to consider the Rice Report and the recommendations that it made about the future IS strategy of the Commission. The technology should be developed only if it a requirement of the business.

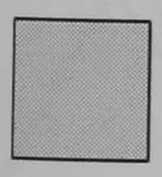
APPENDIX II

Key To Maps :

TMM – Team Management Meeting (local management meeting)
DIP – Document Image Processing
ITQ – Improvement Through Quality (CLA's quality initiative)
QIP – Quality Improvement Process

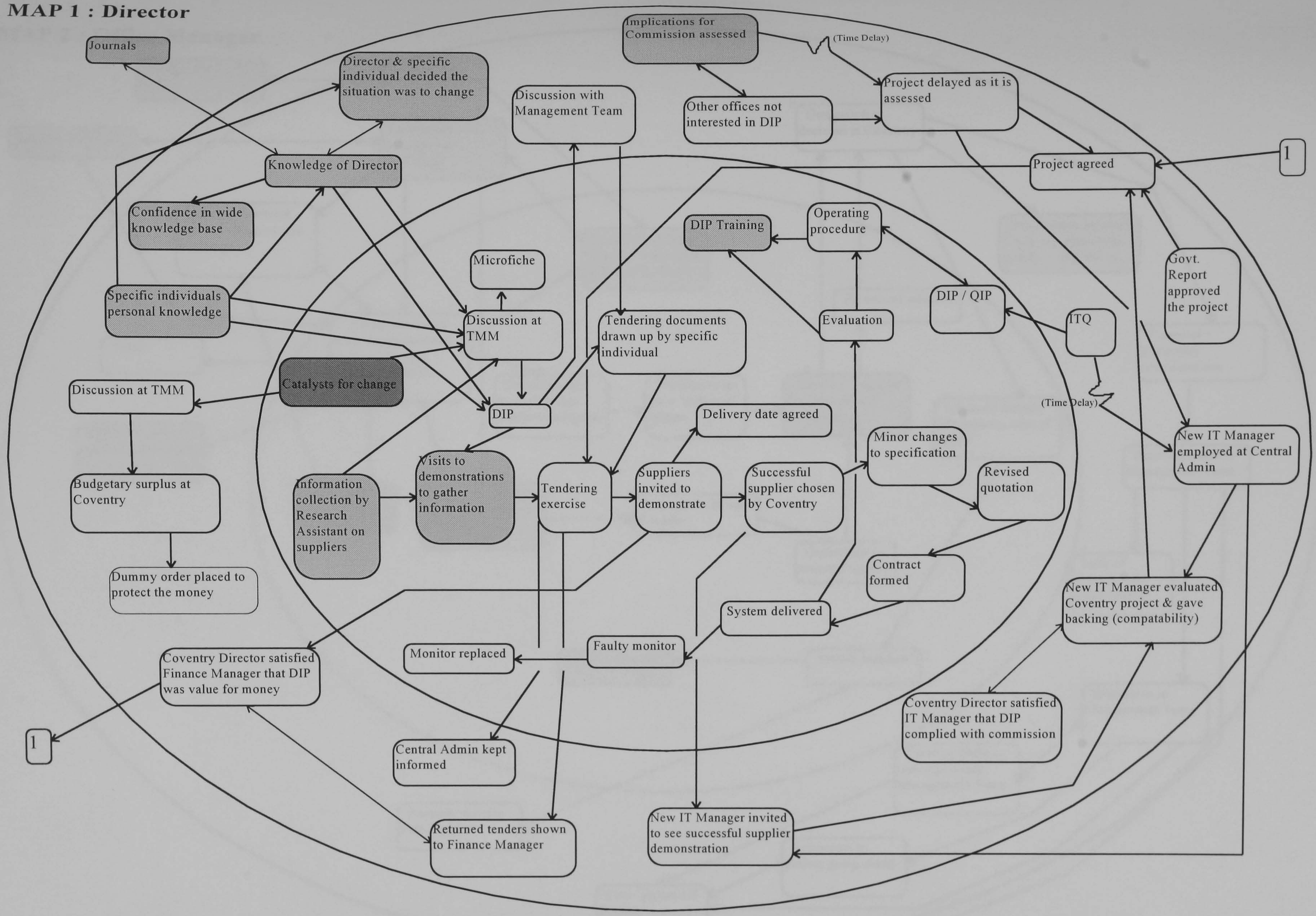


Start Of Process

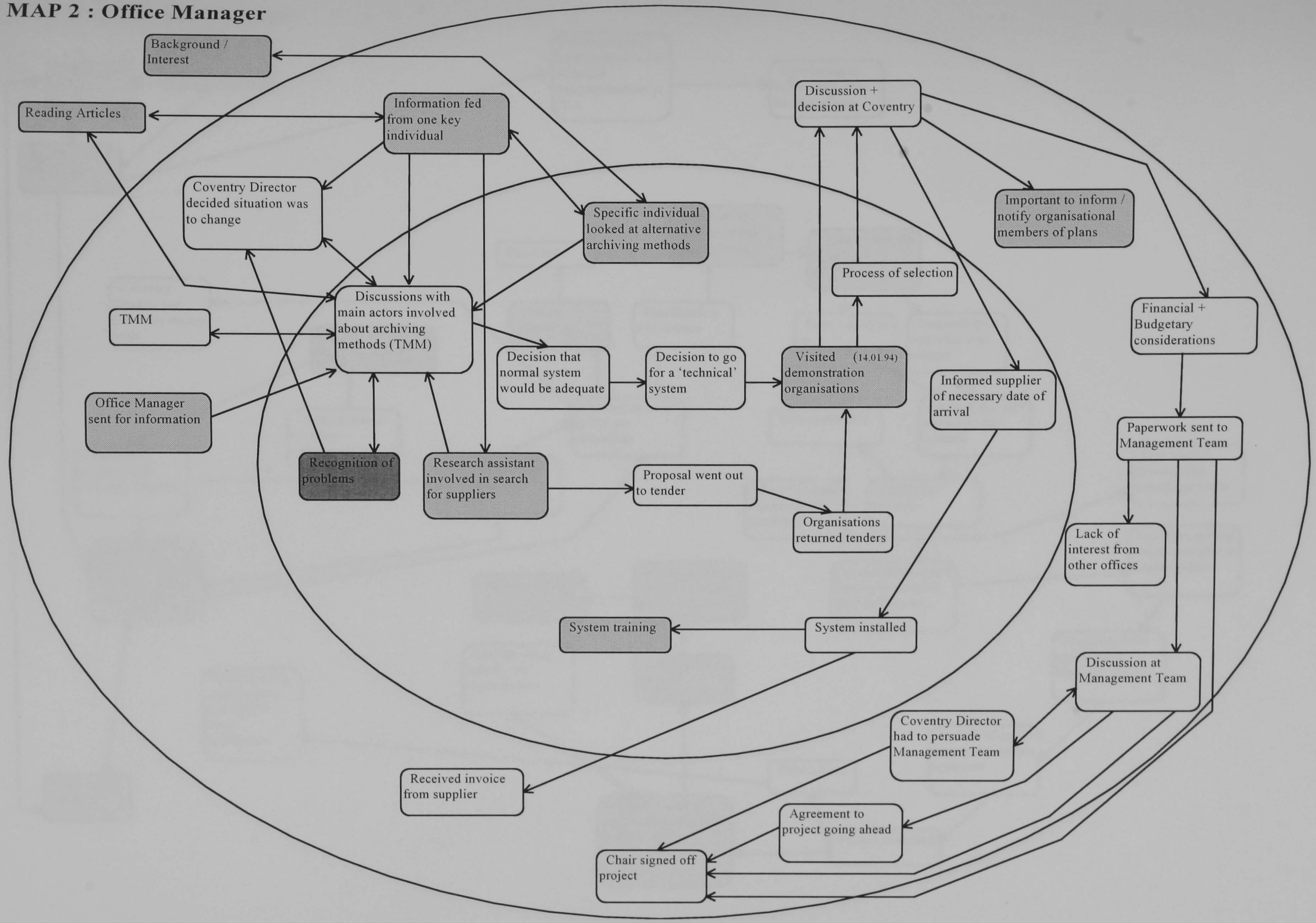


Activities and process related to individual attributes

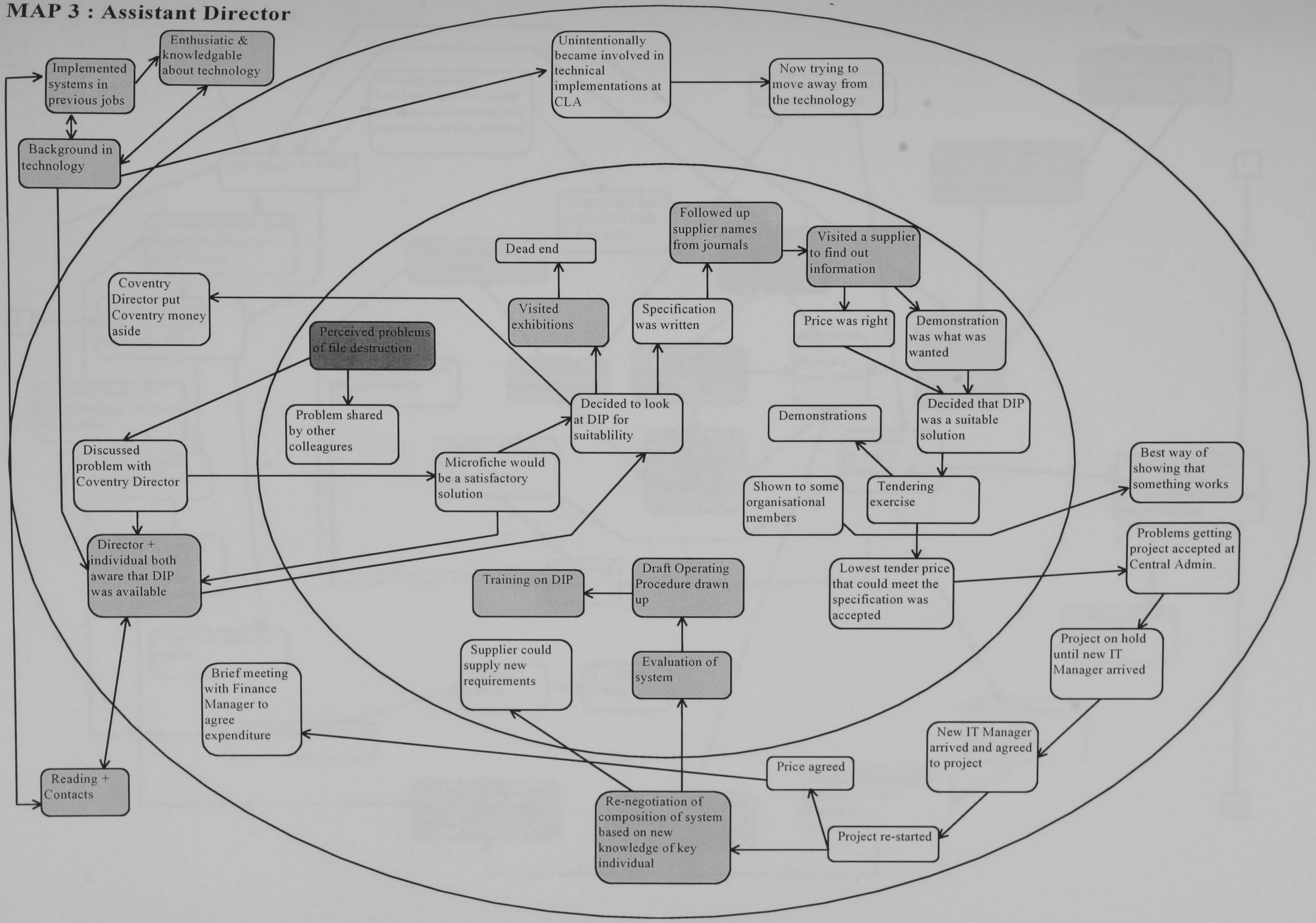
MAP 1 : Director



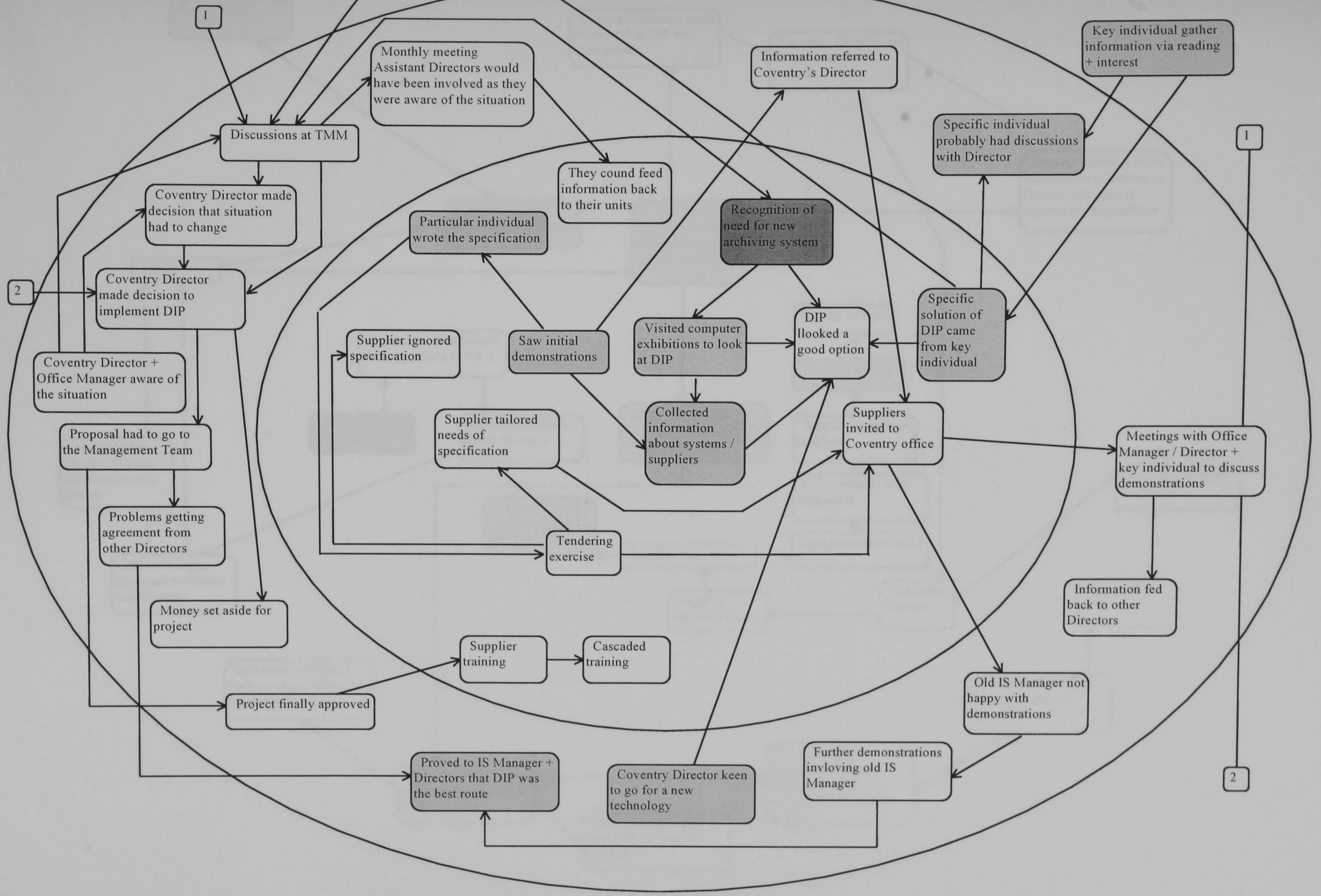
MAP 2 : Office Manager



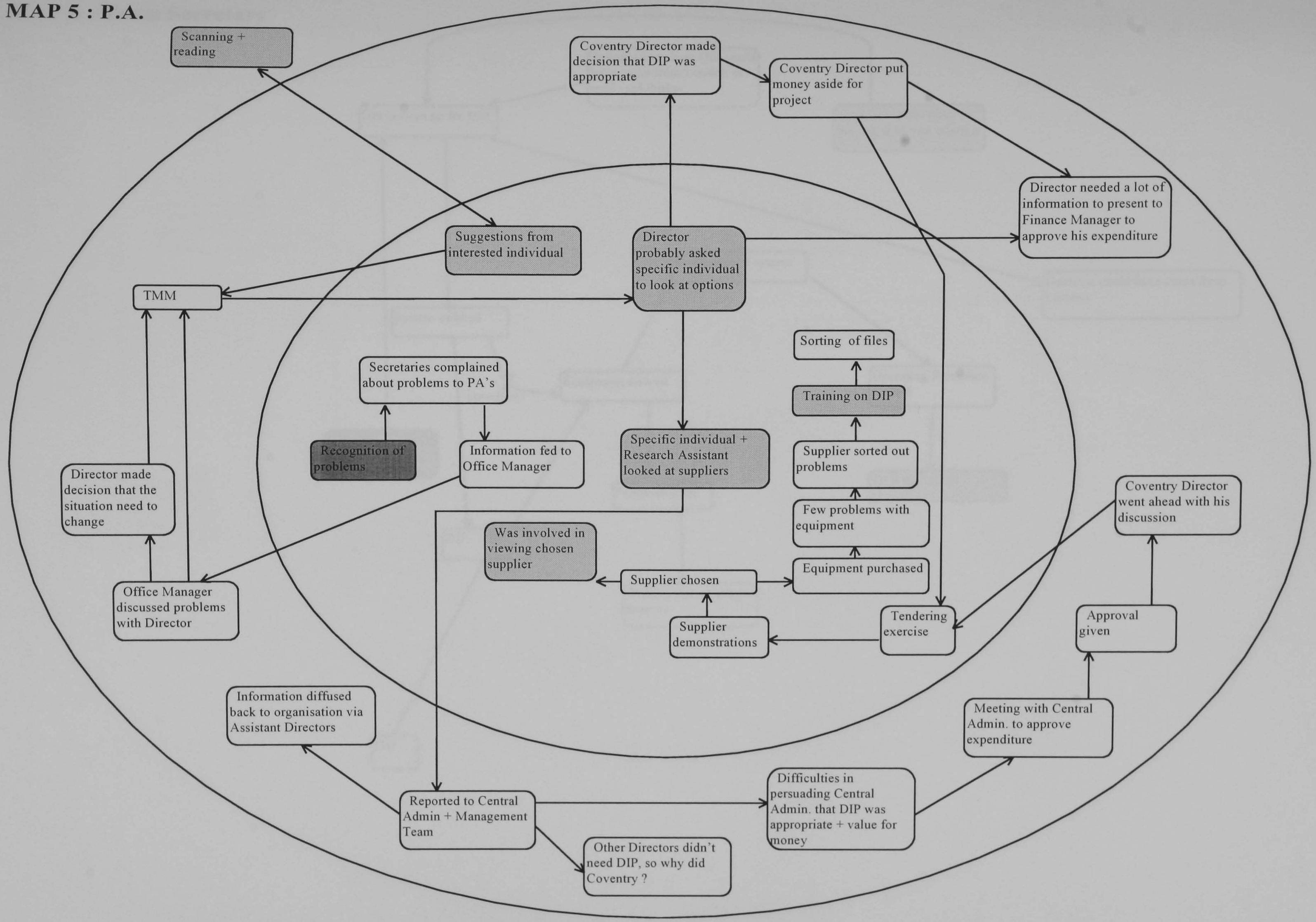
MAP 3 : Assistant Director



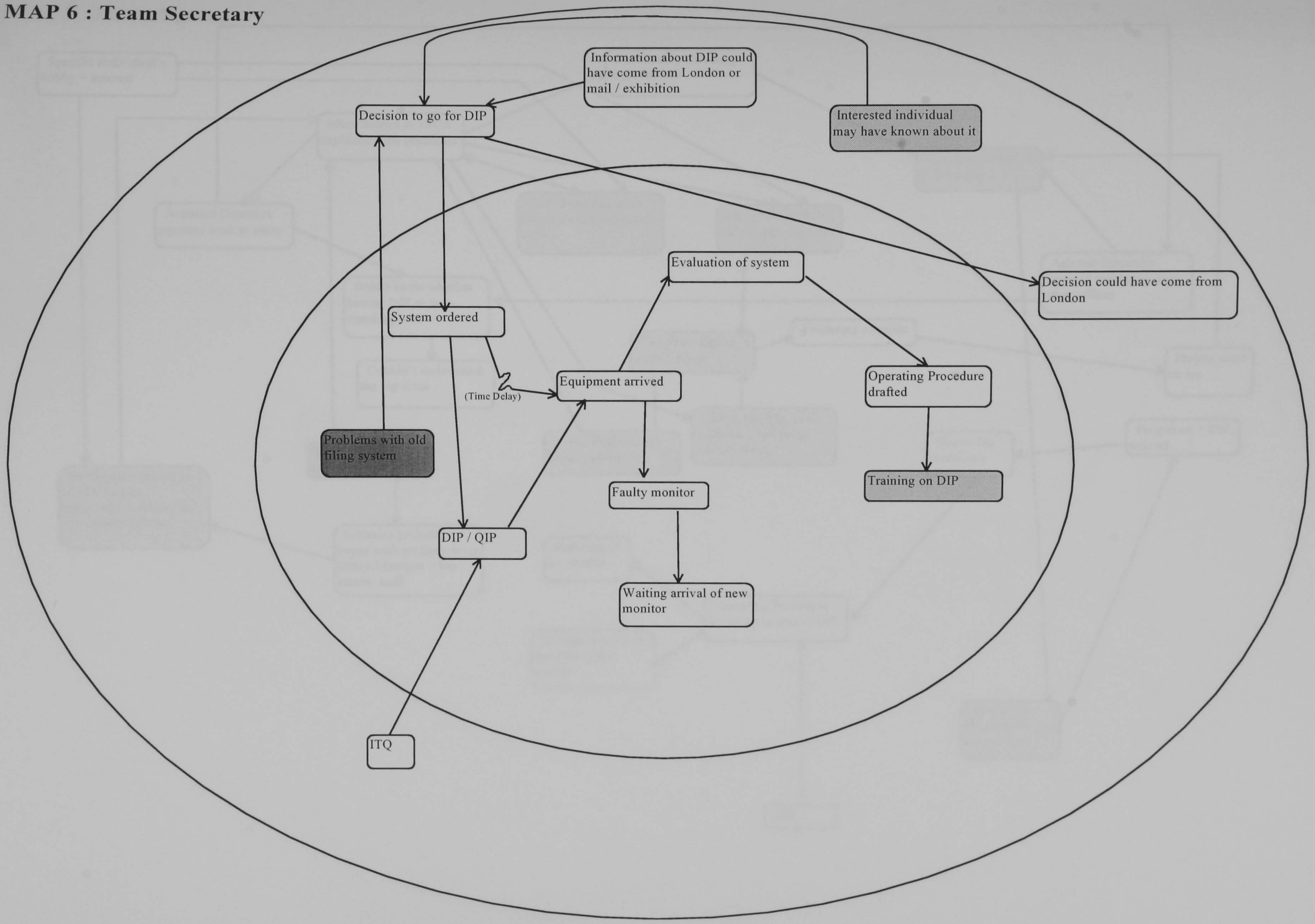
MAP 4 : Research Assistant



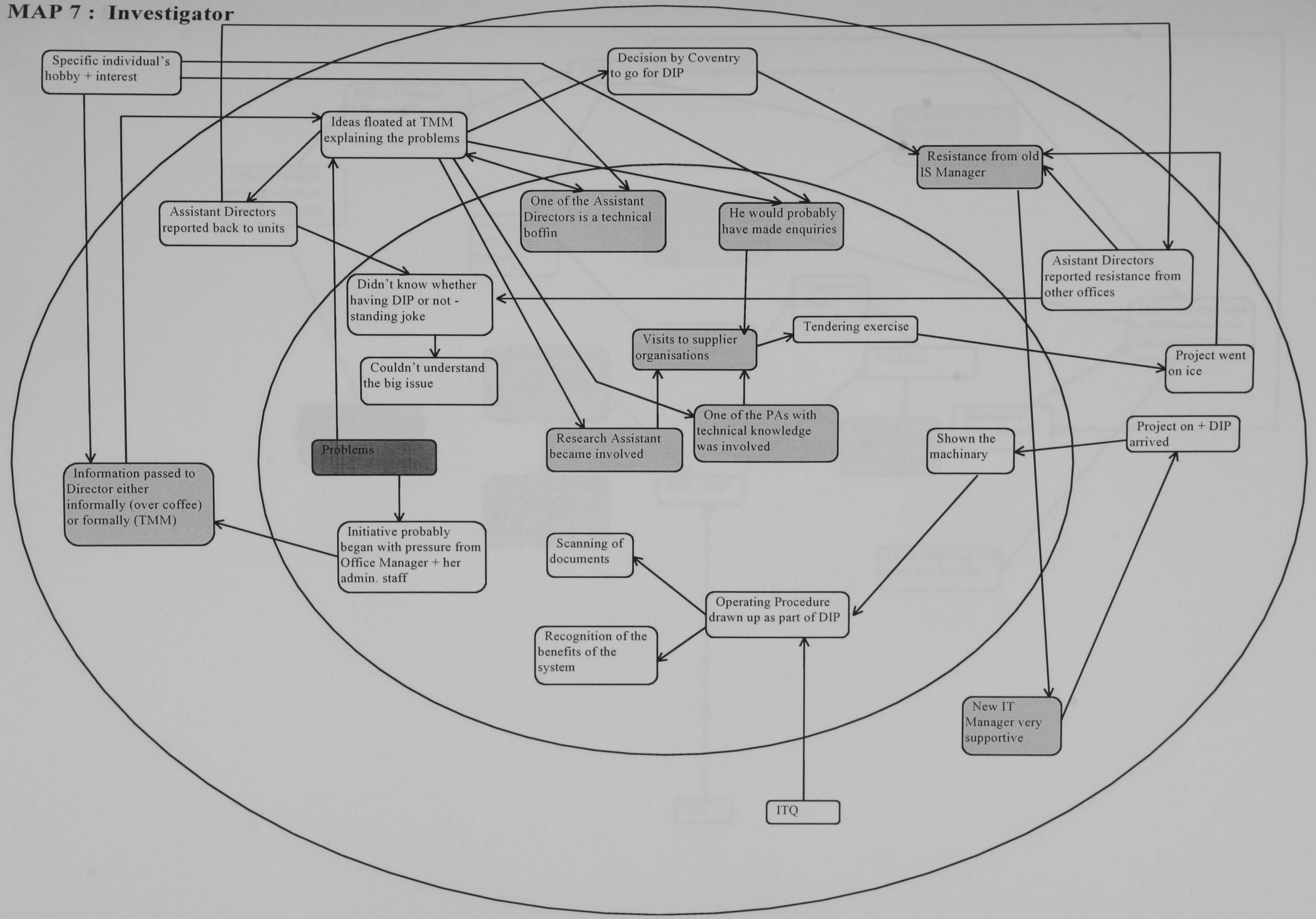
MAP 5 : P.A.


Scanning + reading
Coventry Director made decision that DIP was appropriate
Coventry Director put money aside for project
Director needed a lot of information to present to Finance Manager to approve his expenditure
Suggestions from interested individual
Director probably asked specific individual to look at options
TMM
Sorting of files
Secretaries complained about problems to PA's
Training on DIP
Recognition of problems
Information fed to Office Manager
Specific individual + Research Assistant looked at suppliers
Supplier sorted out problems
Director made decision that the situation need to change
Coventry Director went ahead with his discussion
Few problems with equipment
Was involved in viewing chosen supplier
Supplier chosen
Equipment purchased
Office Manager discussed problems with Director
Supplier demonstrations
Tendering exercise
Approval given
Information diffused back to organisation via Assistant Directors
Meeting with Central Admin. to approve expenditure
Reported to Central Admin + Management Team
Difficulties in persuading Central Admin. that DIP was appropriate + value for money
Other Directors didn't need DIP, so why did Coventry ?

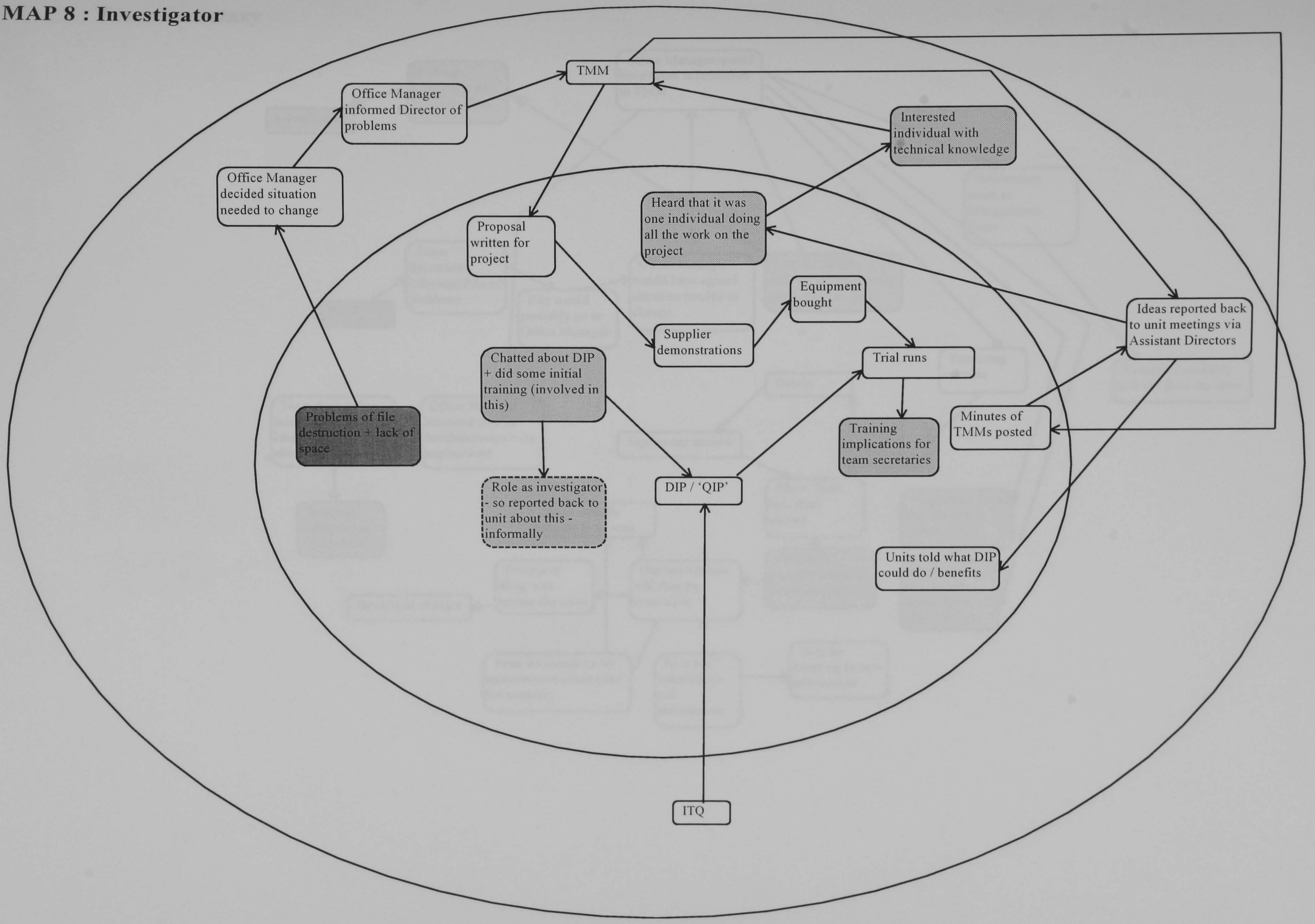
MAP 6 : Team Secretary



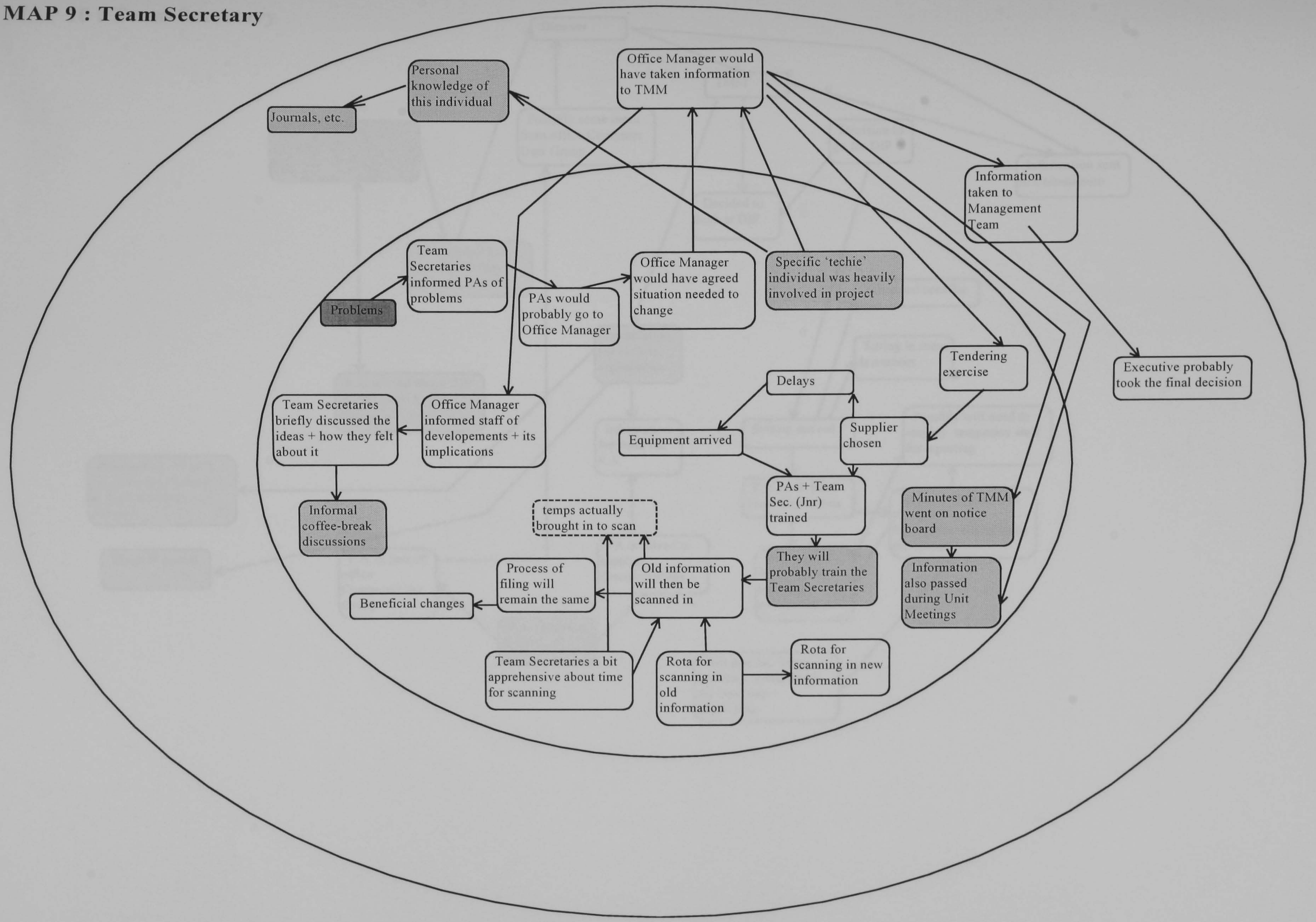
MAP 7 : Investigator



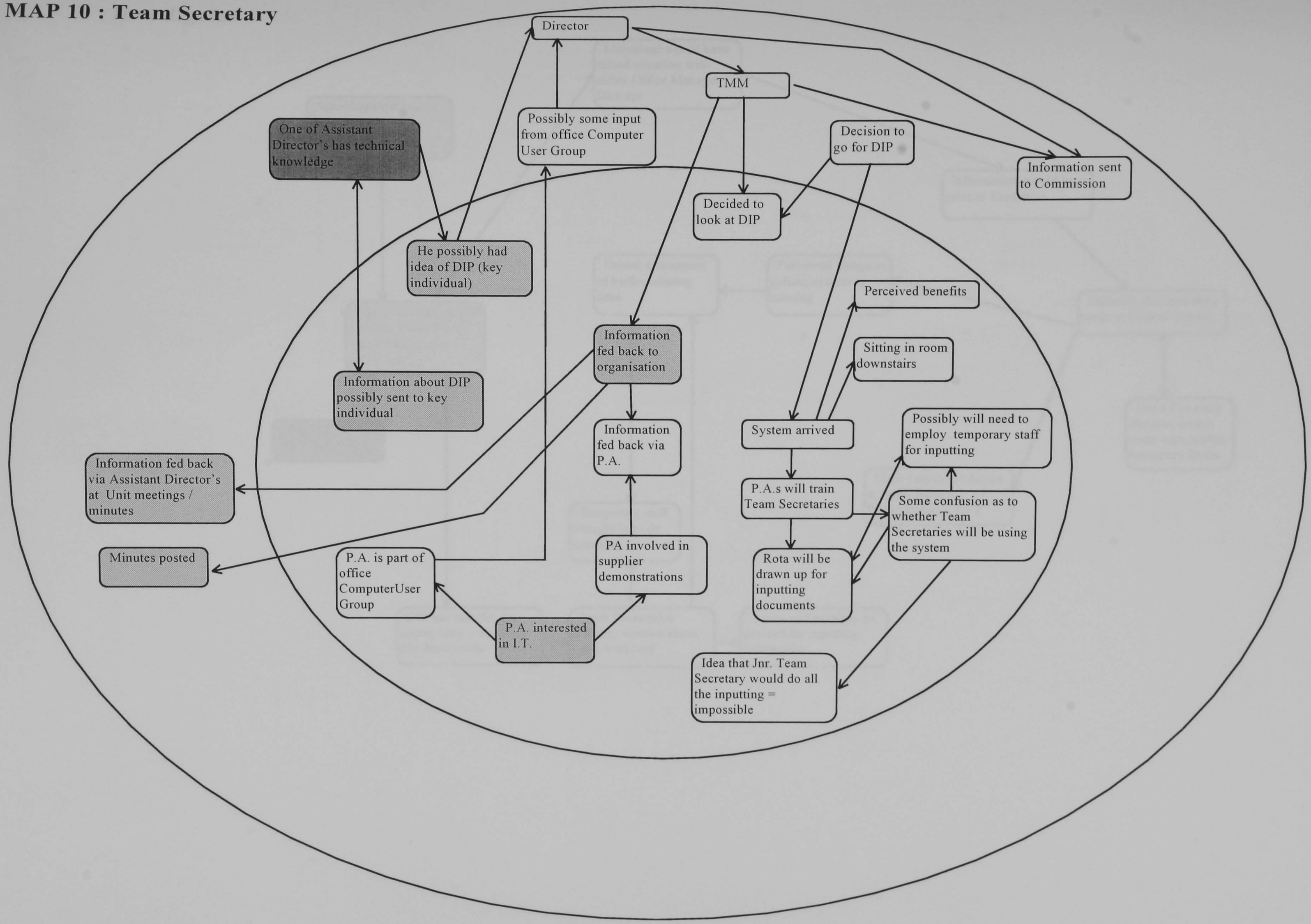
MAP 8 : Investigator



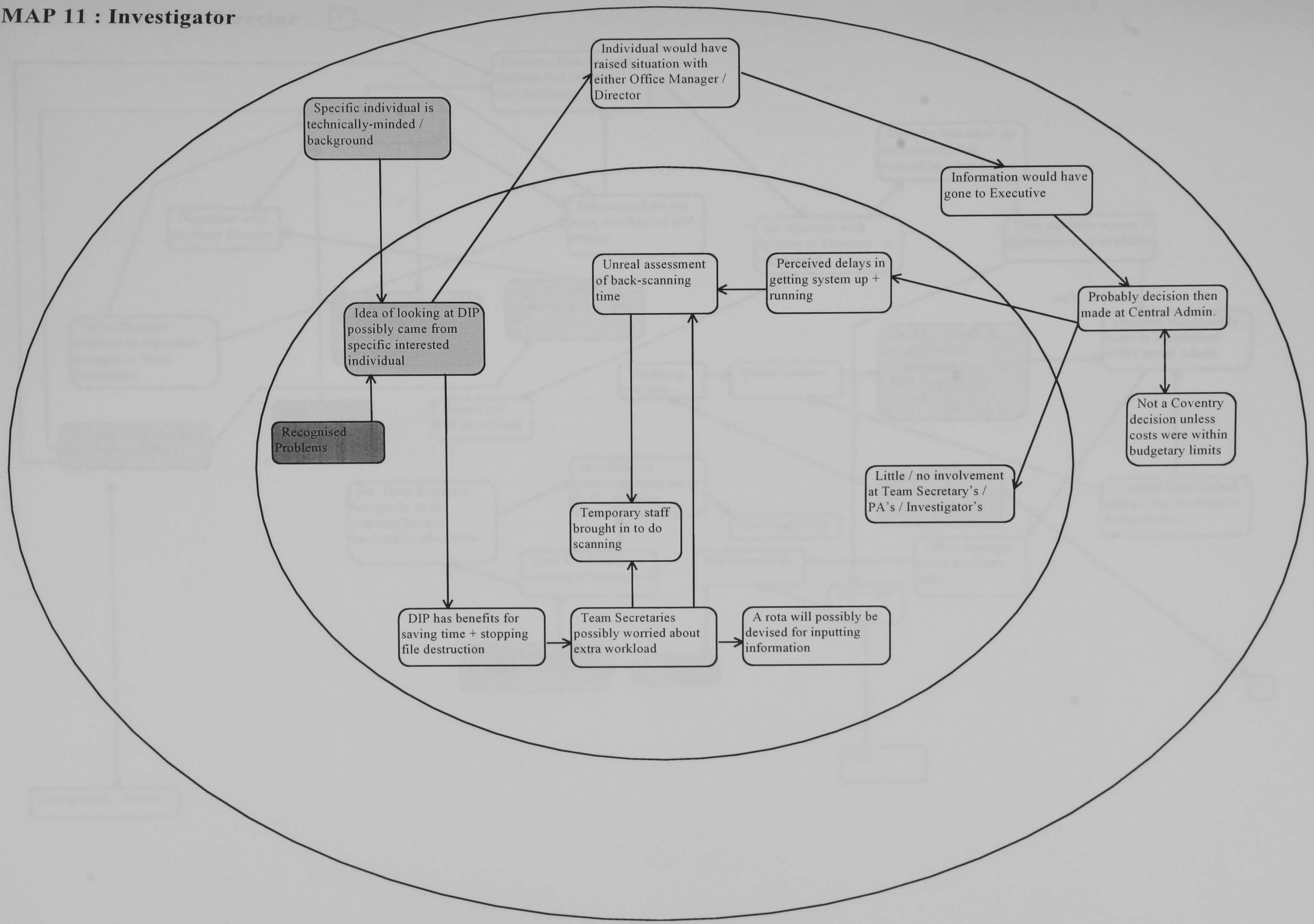
MAP 9 : Team Secretary



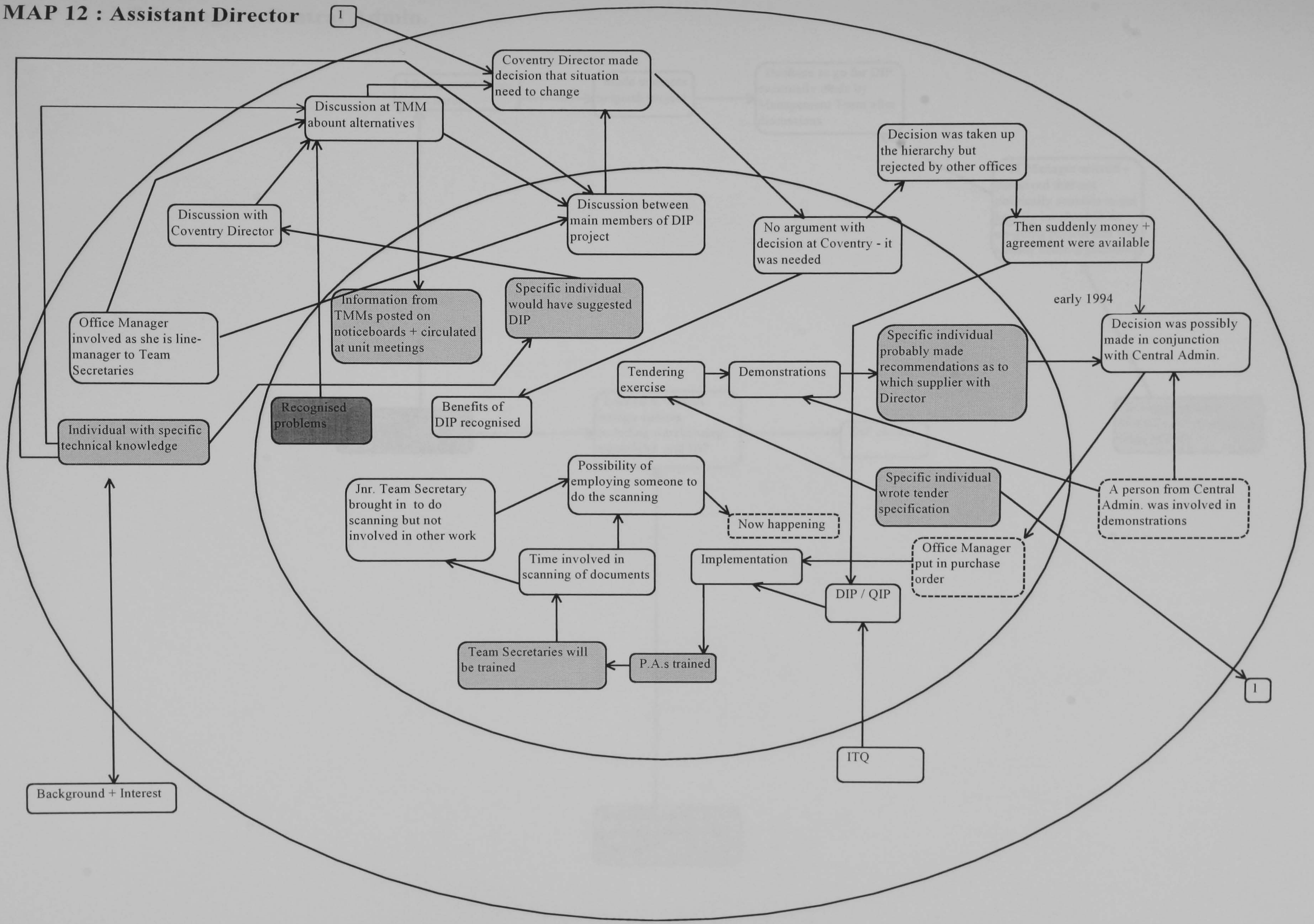
MAP 10 : Team Secretary



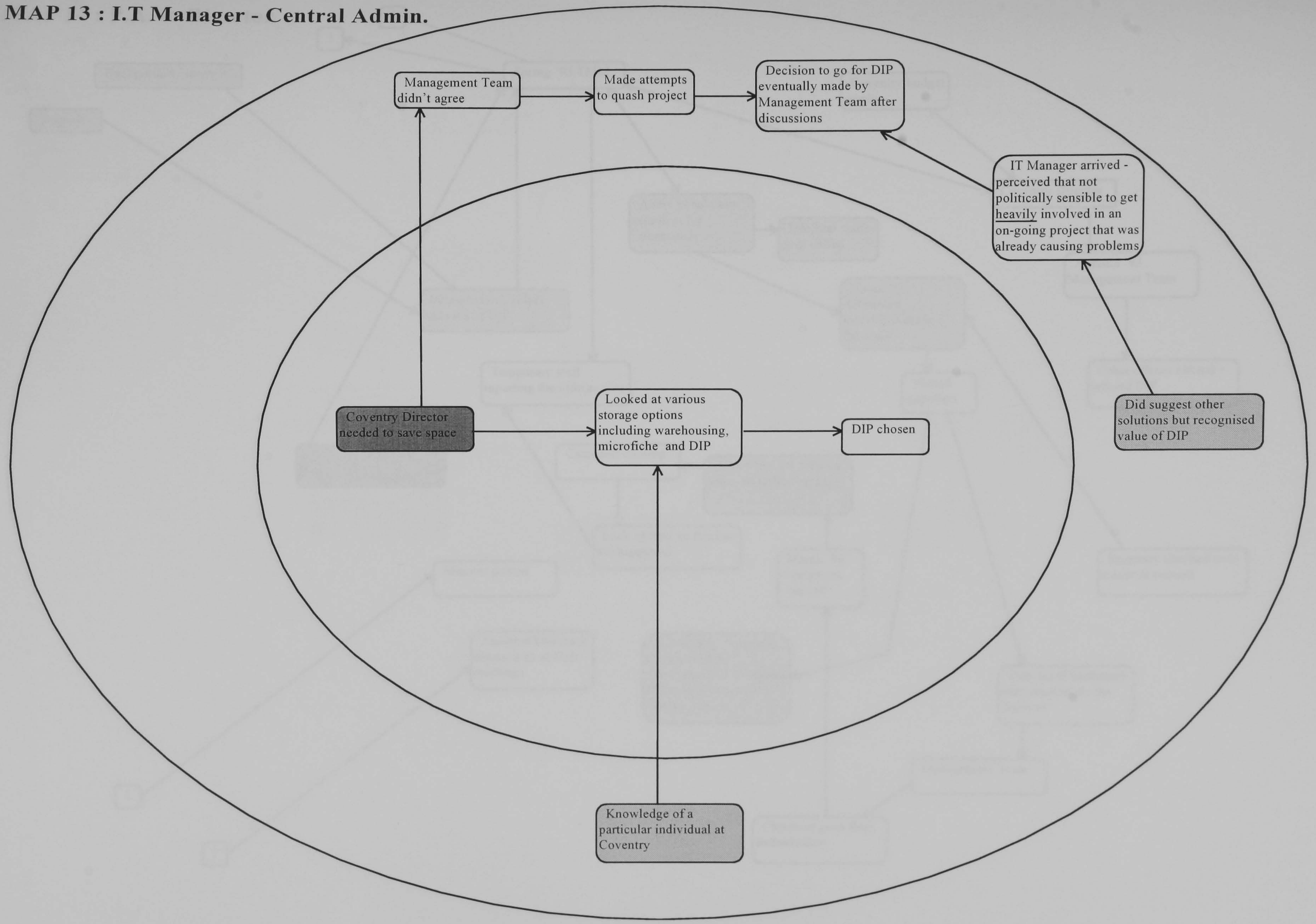
MAP 11 : Investigator



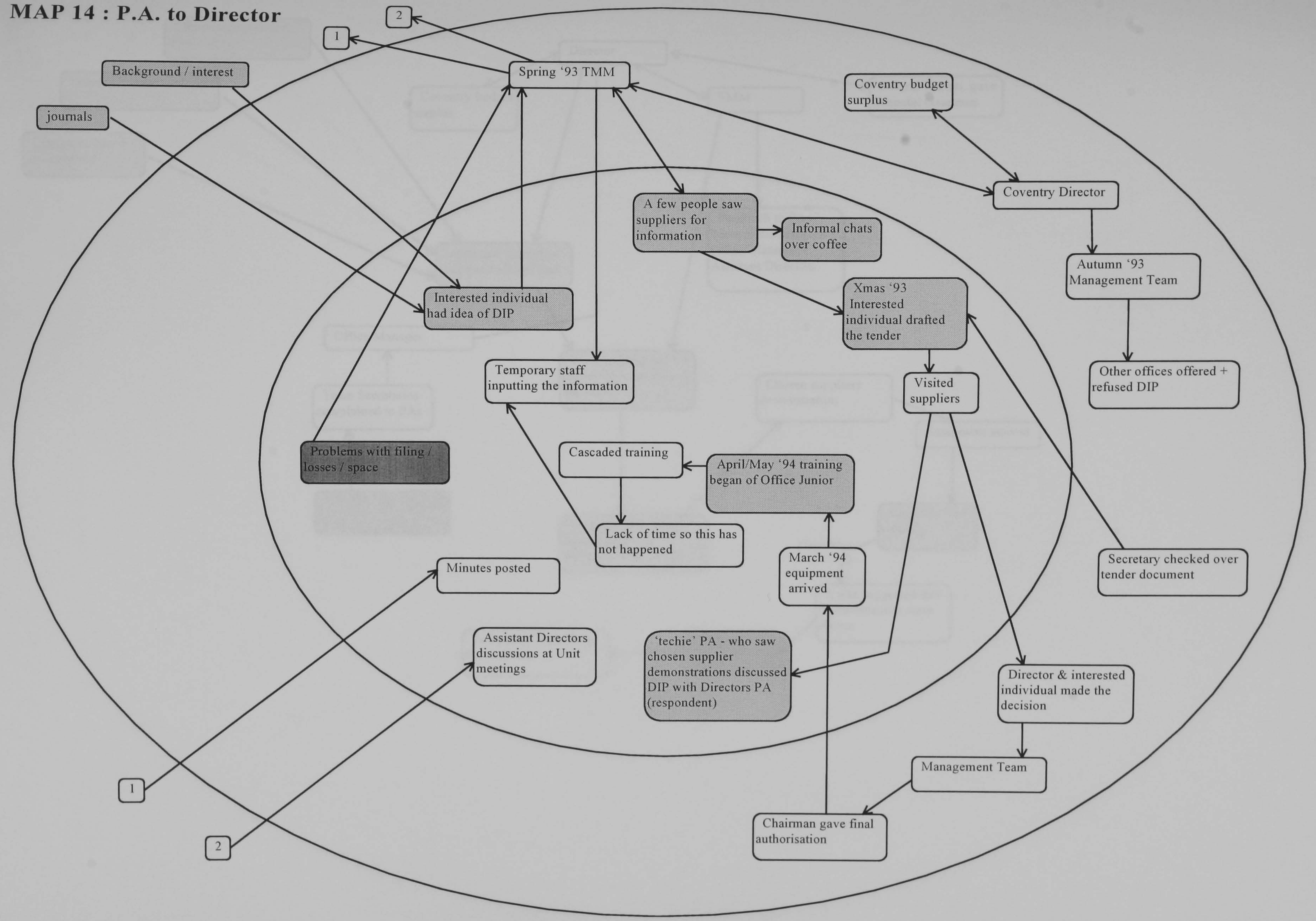
MAP 12 : Assistant Director



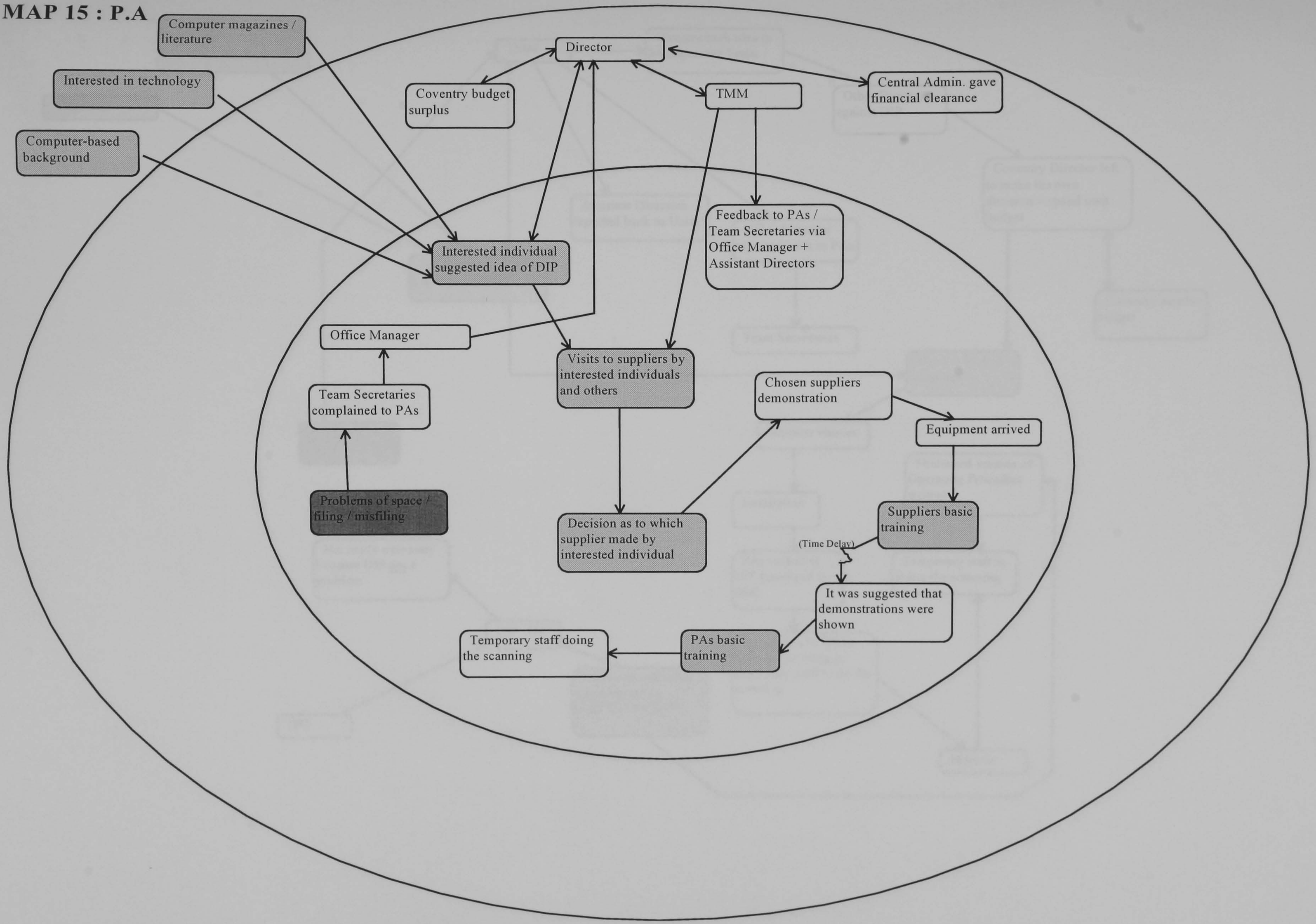
MAP 13 : I.T Manager - Central Admin.



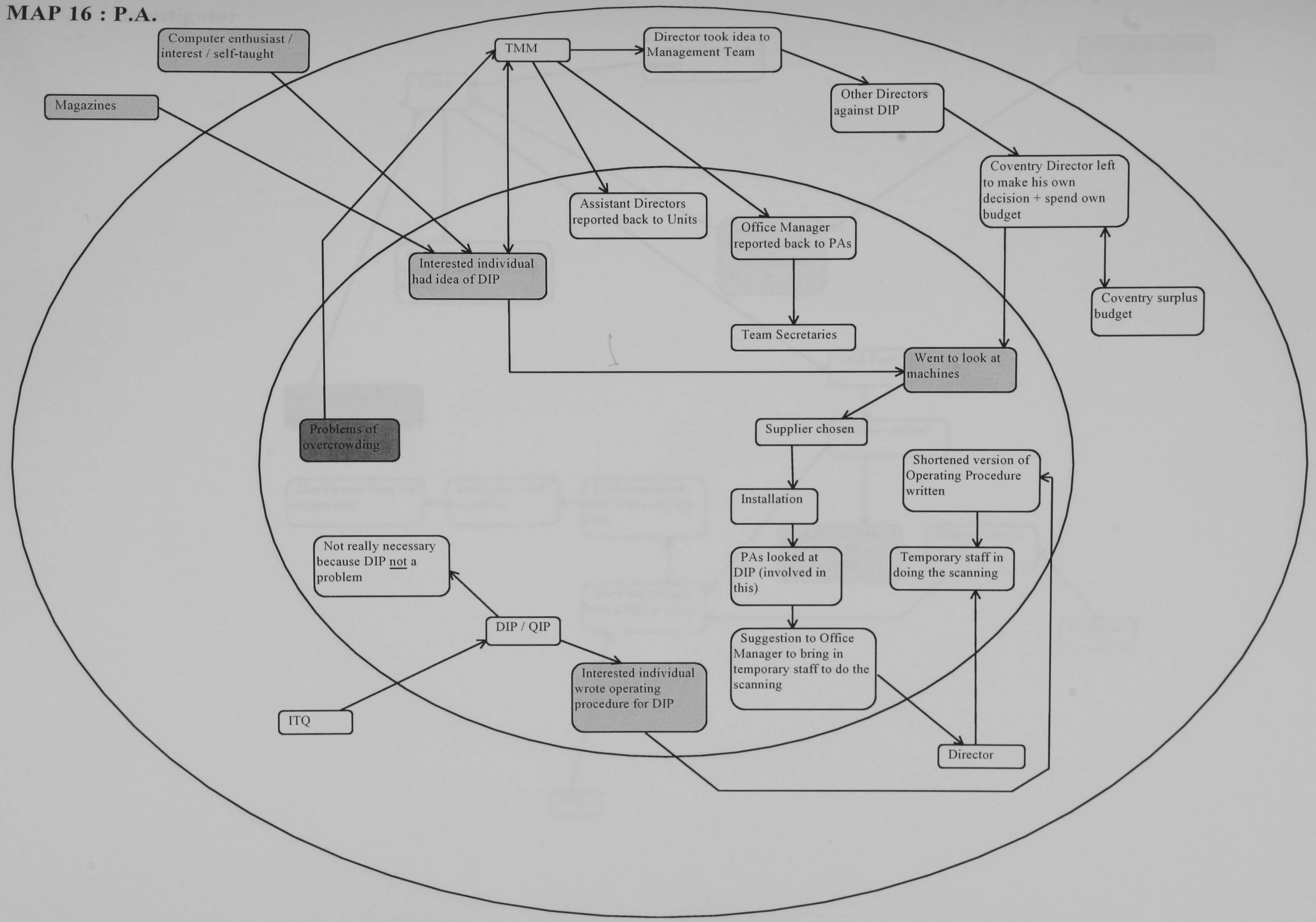
MAP 14 : P.A. to Director



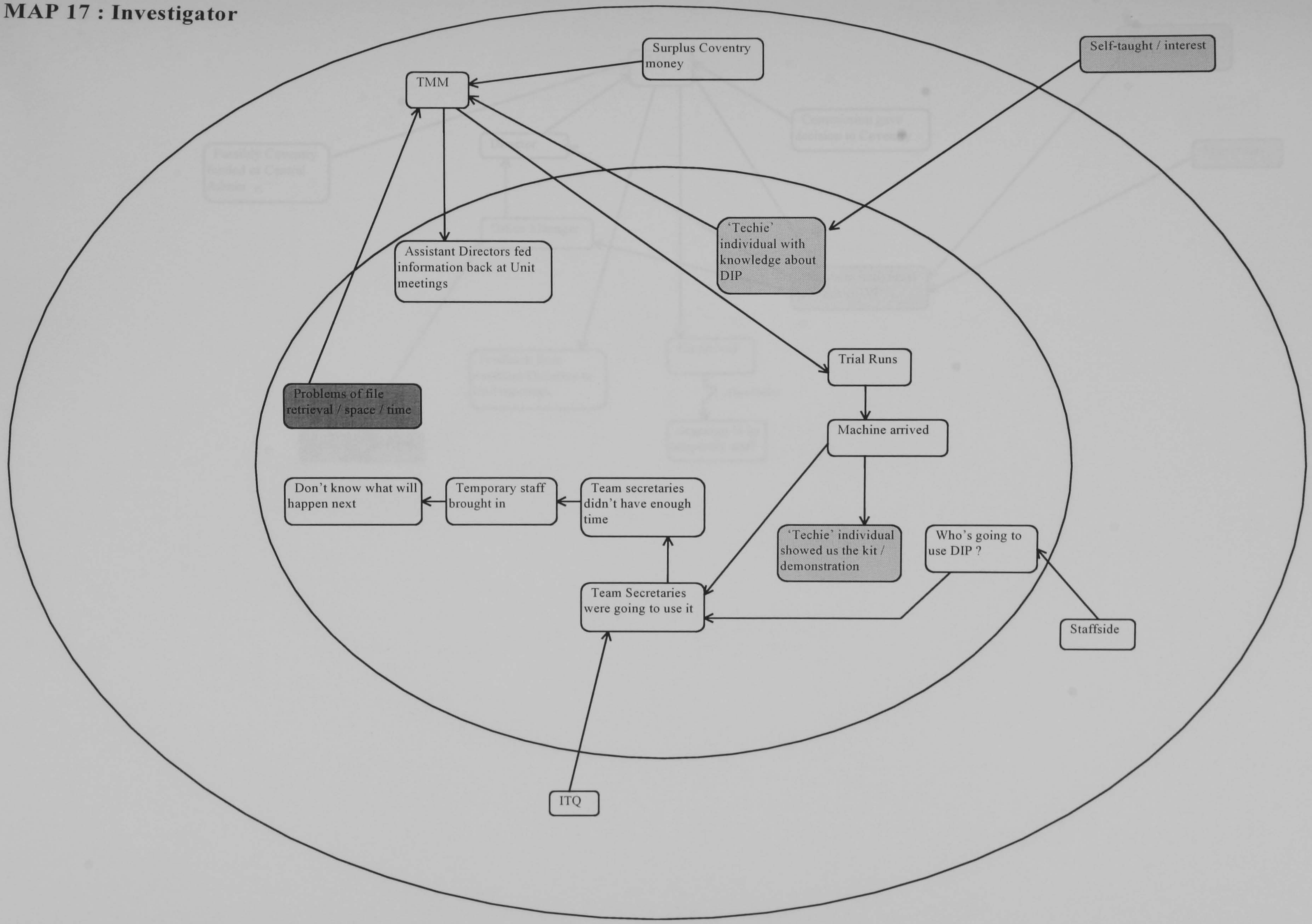
MAP 15 : P.A


Computer magazines / literature
Interested in technology
Computer-based background
Director
Coventry budget surplus
TMM
Central Admin. gave financial clearance
Feedback to PAs / Team Secretaries via Office Manager + Assistant Directors
Interested individual suggested idea of DIP
Office Manager
Visits to suppliers by interested individuals and others
Team Secretaries complained to PAs
Chosen suppliers demonstration
Equipment arrived
Problems of space / filing / misfiling
Decision as to which supplier made by interested individual
Suppliers basic training
(Time Delay)
It was suggested that demonstrations were shown
Temporary staff doing the scanning
PAs basic training

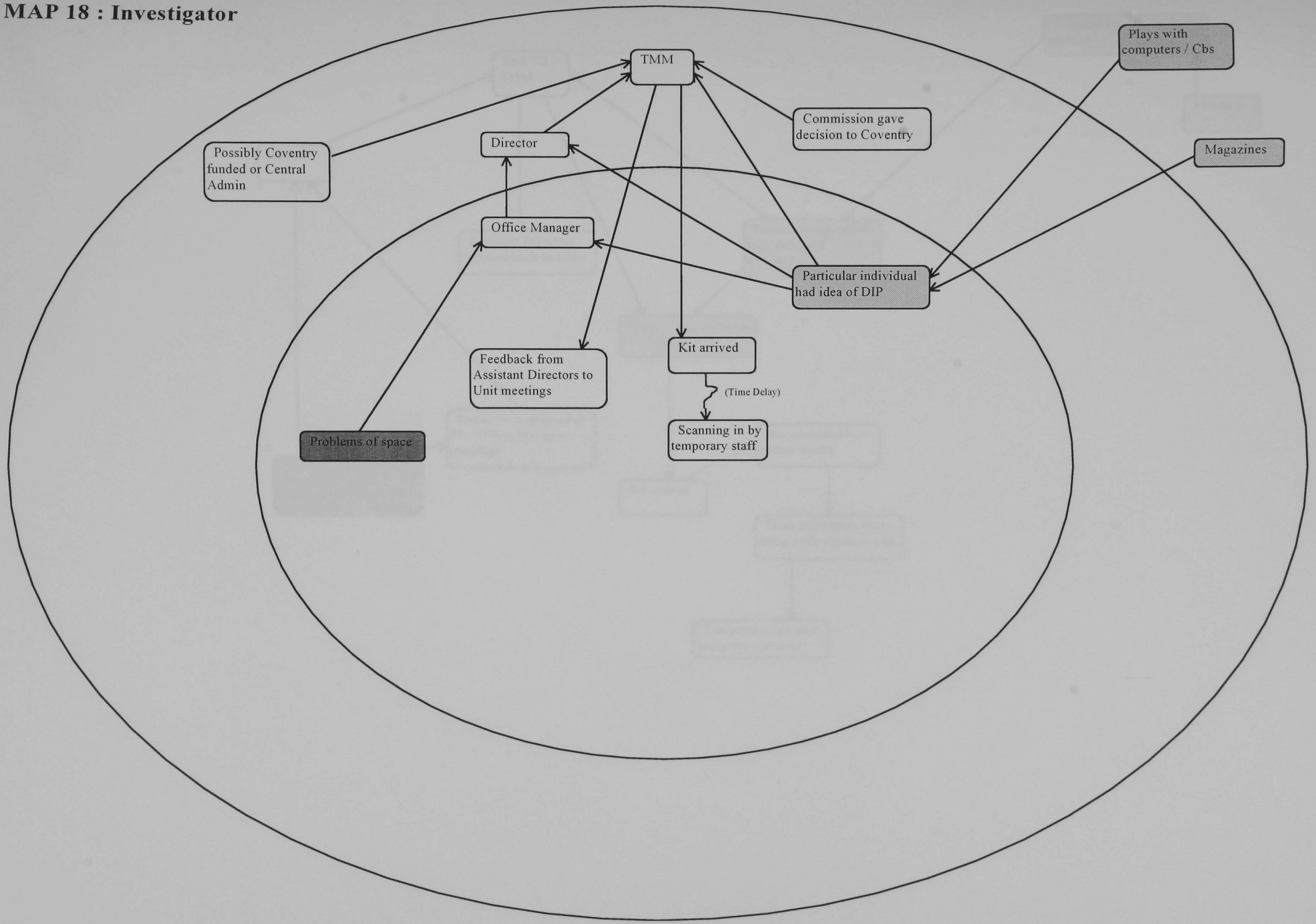
MAP 16 : P.A.


Computer enthusiast / interest / self-taught
Magazines
TMM
Director took idea to Management Team
Other Directors against DIP
Coventry Director left to make his own decision + spend own budget
Coventry surplus budget
Assistant Directors reported back to Units
Office Manager reported back to PAs
Interested individual had idea of DIP
Team Secretaries
Went to look at machines
Problems of overcrowding
Supplier chosen
Shortened version of Operating Procedure written
Installation
PAs looked at DIP (involved in this)
Temporary staff in doing the scanning
Not really necessary because DIP not a problem
DIP / QIP
Suggestion to Office Manager to bring in temporary staff to do the scanning
Interested individual wrote operating procedure for DIP
ITQ
Director

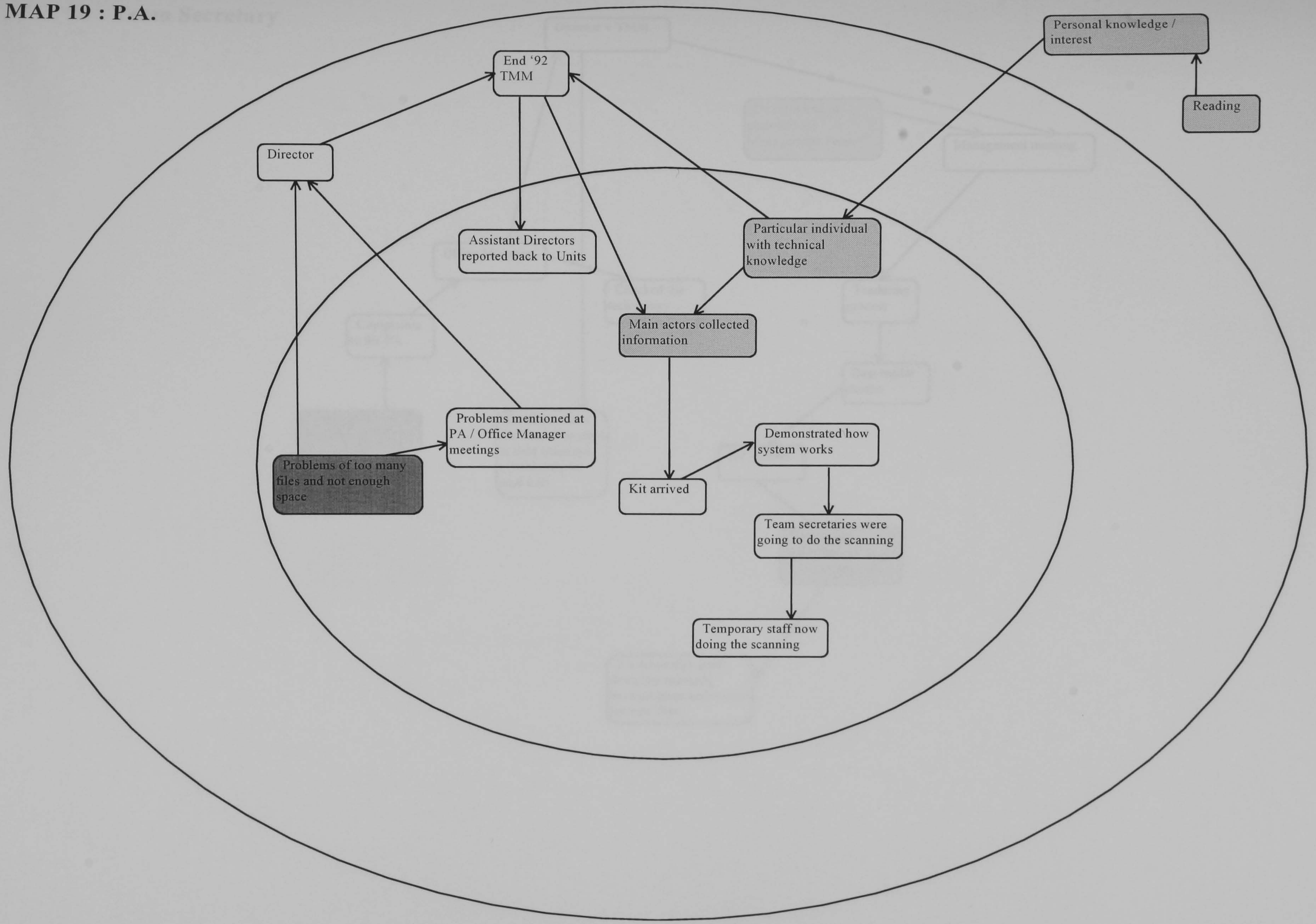
MAP 17 : Investigator



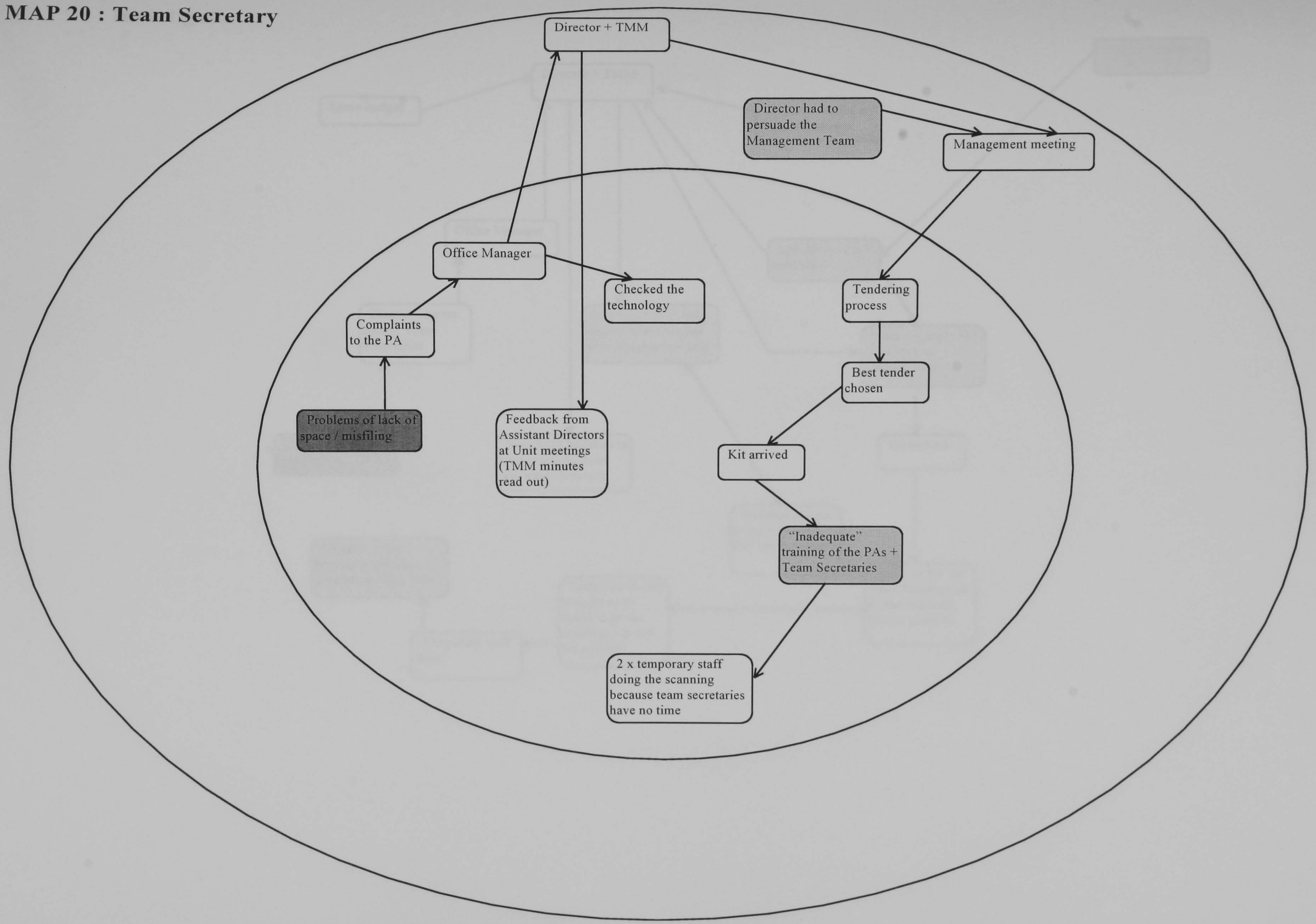
MAP 18 : Investigator



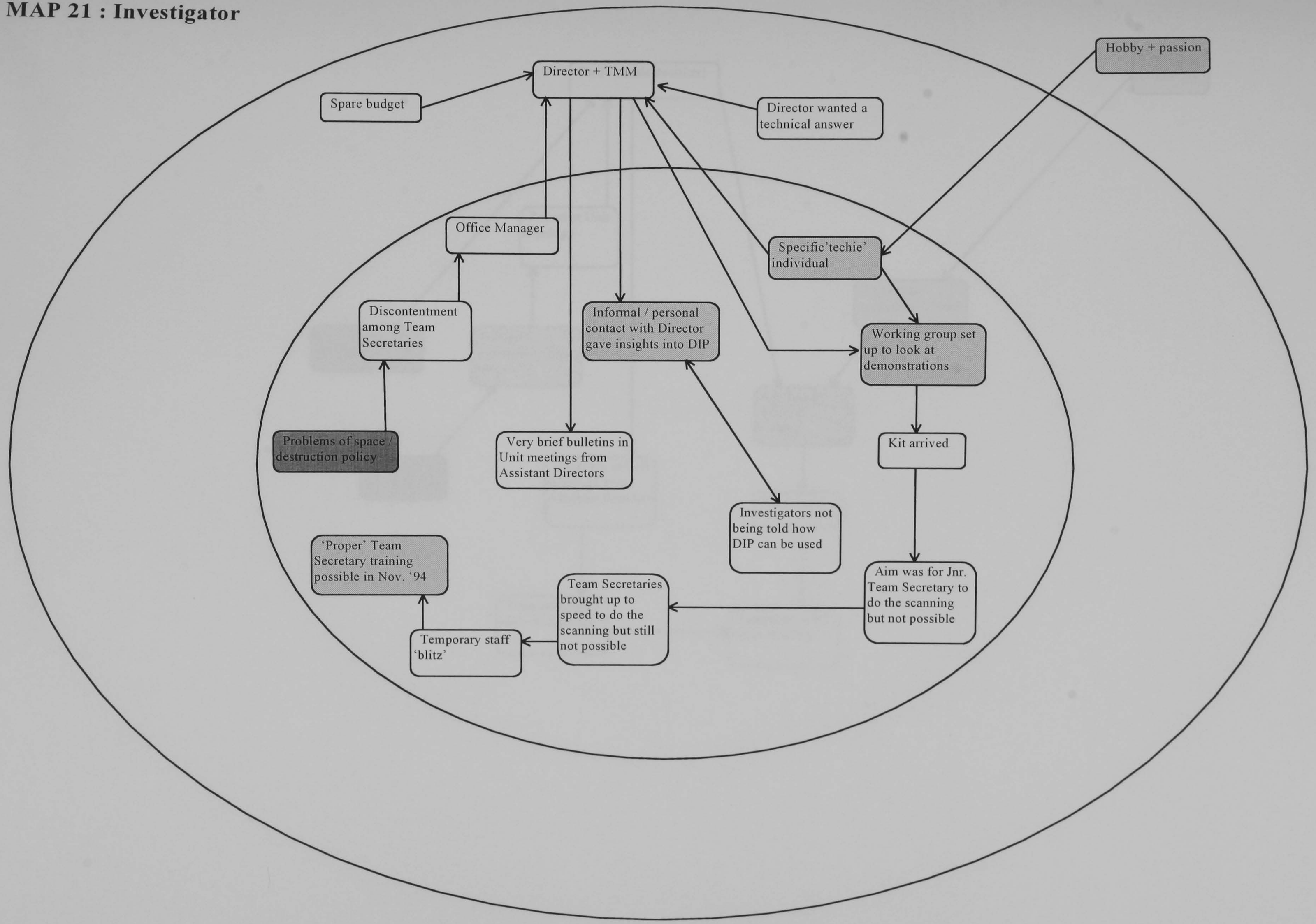
MAP 19 : P.A.


Personal knowledge / interest
Reading
End '92 TMM
Director
Assistant Directors reported back to Units
Particular individual with technical knowledge
Main actors collected information
Problems mentioned at PA / Office Manager meetings
Problems of too many files and not enough space
Demonstrated how system works
Kit arrived
Team secretaries were going to do the scanning
Temporary staff now doing the scanning

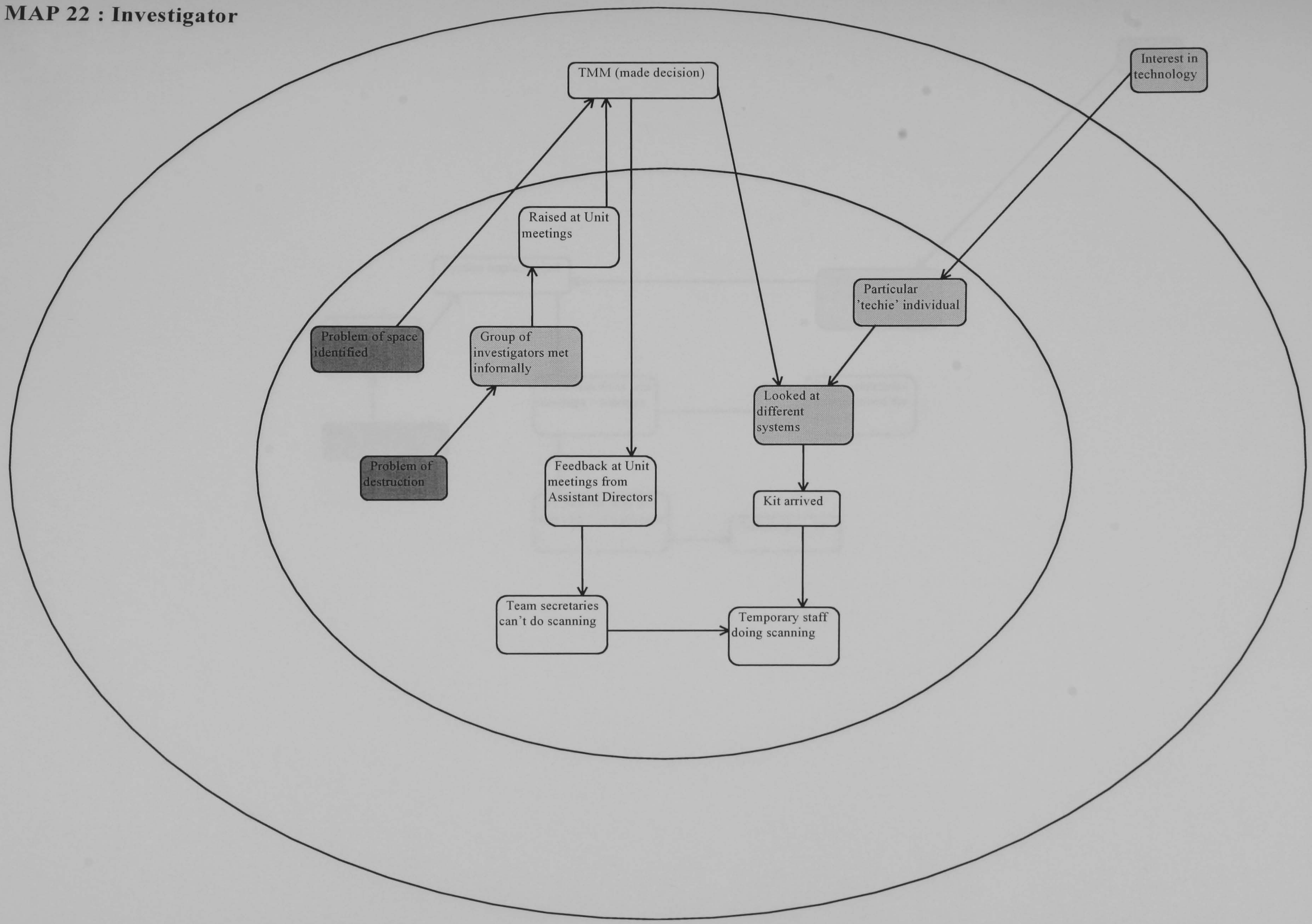
MAP 20 : Team Secretary



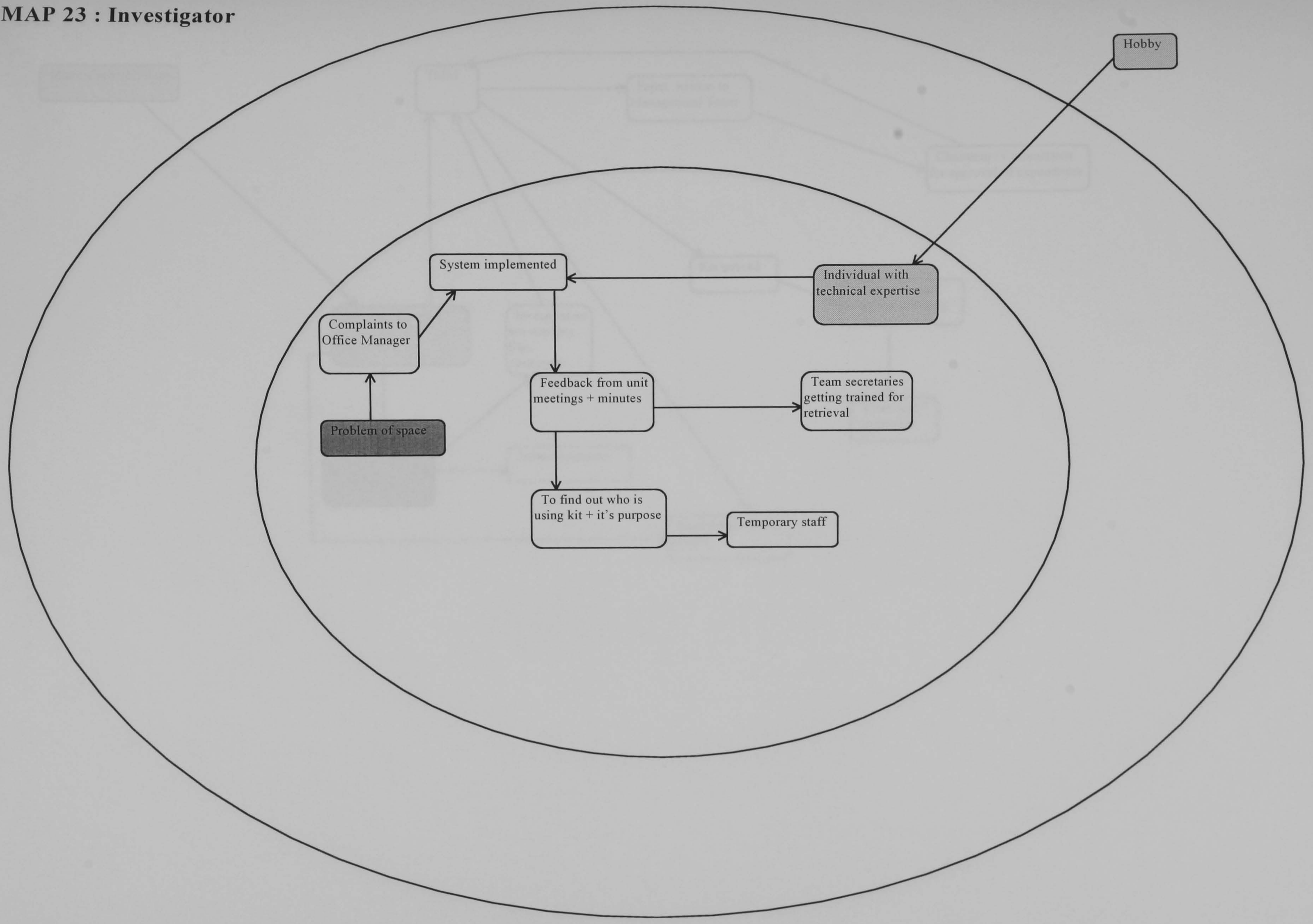
MAP 21 : Investigator



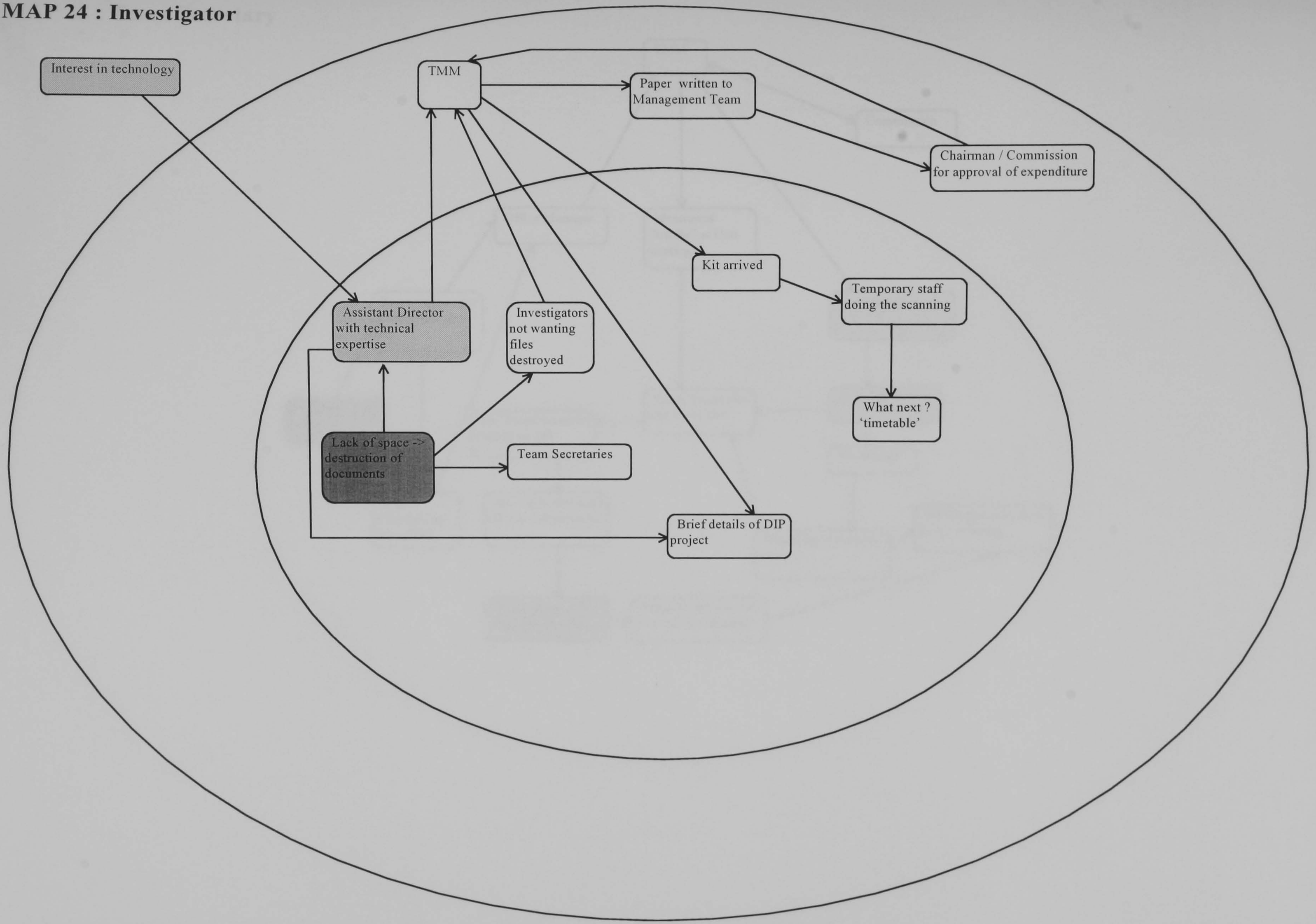
MAP 22 : Investigator



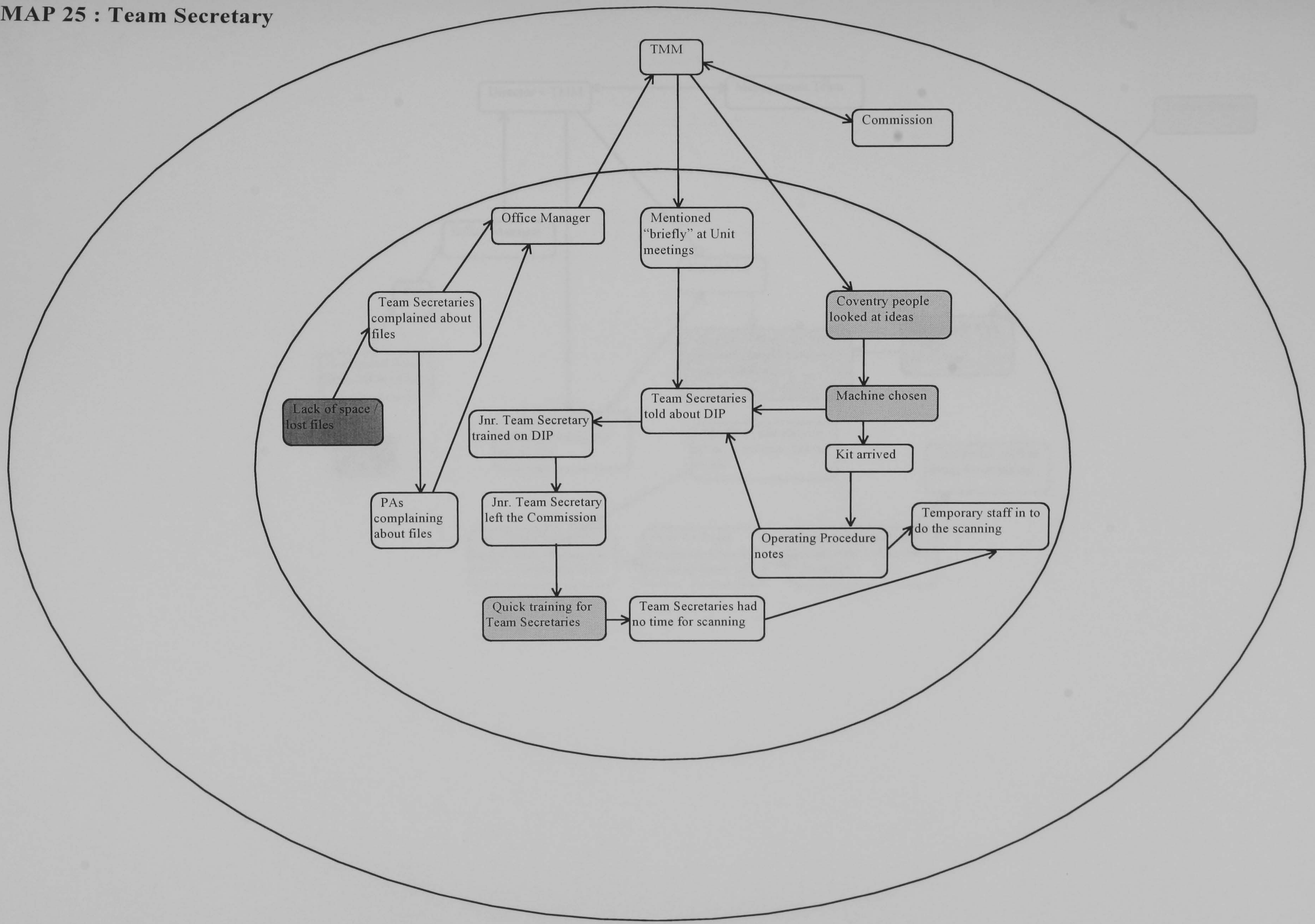
MAP 23 : Investigator



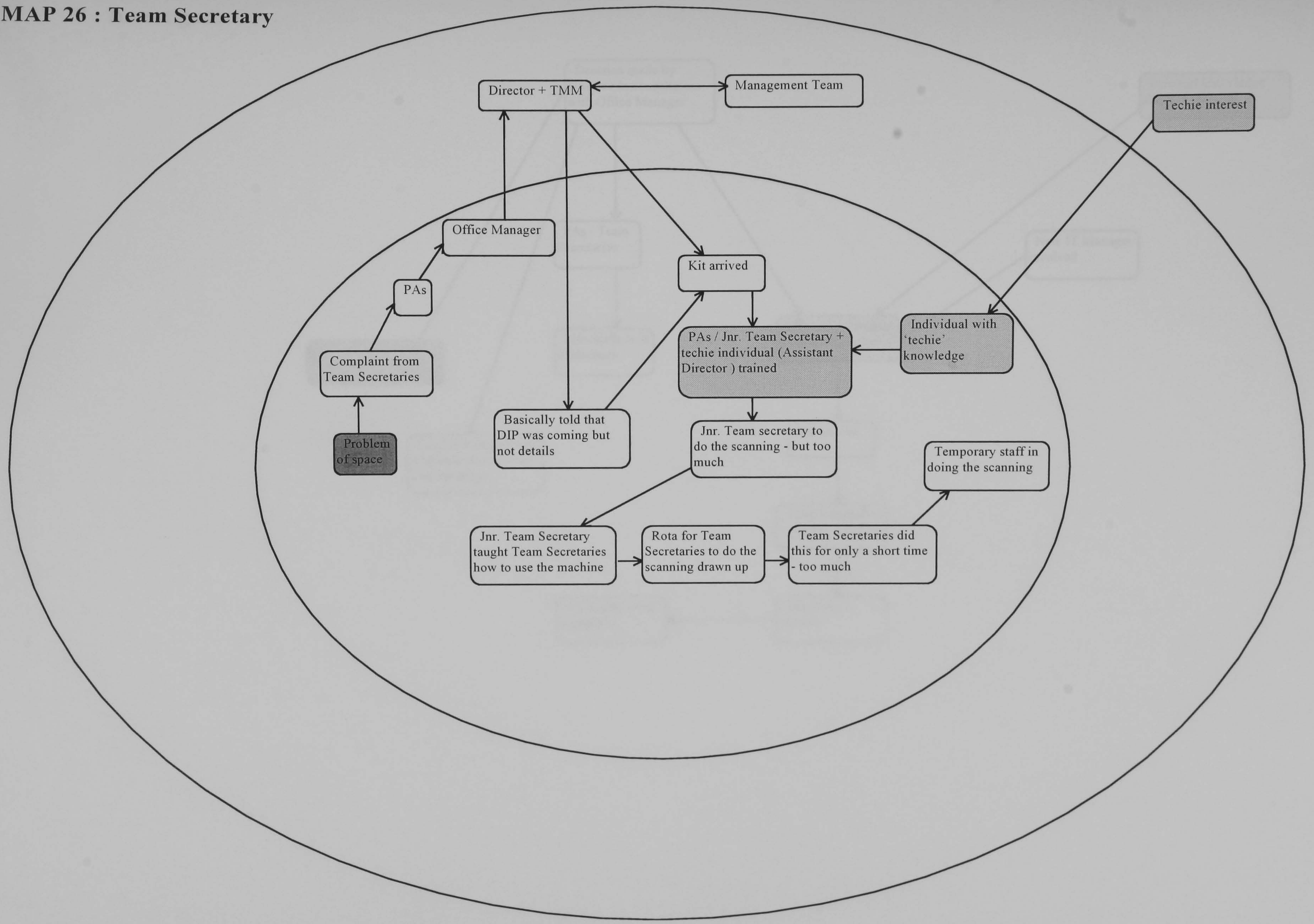
MAP 24 : Investigator



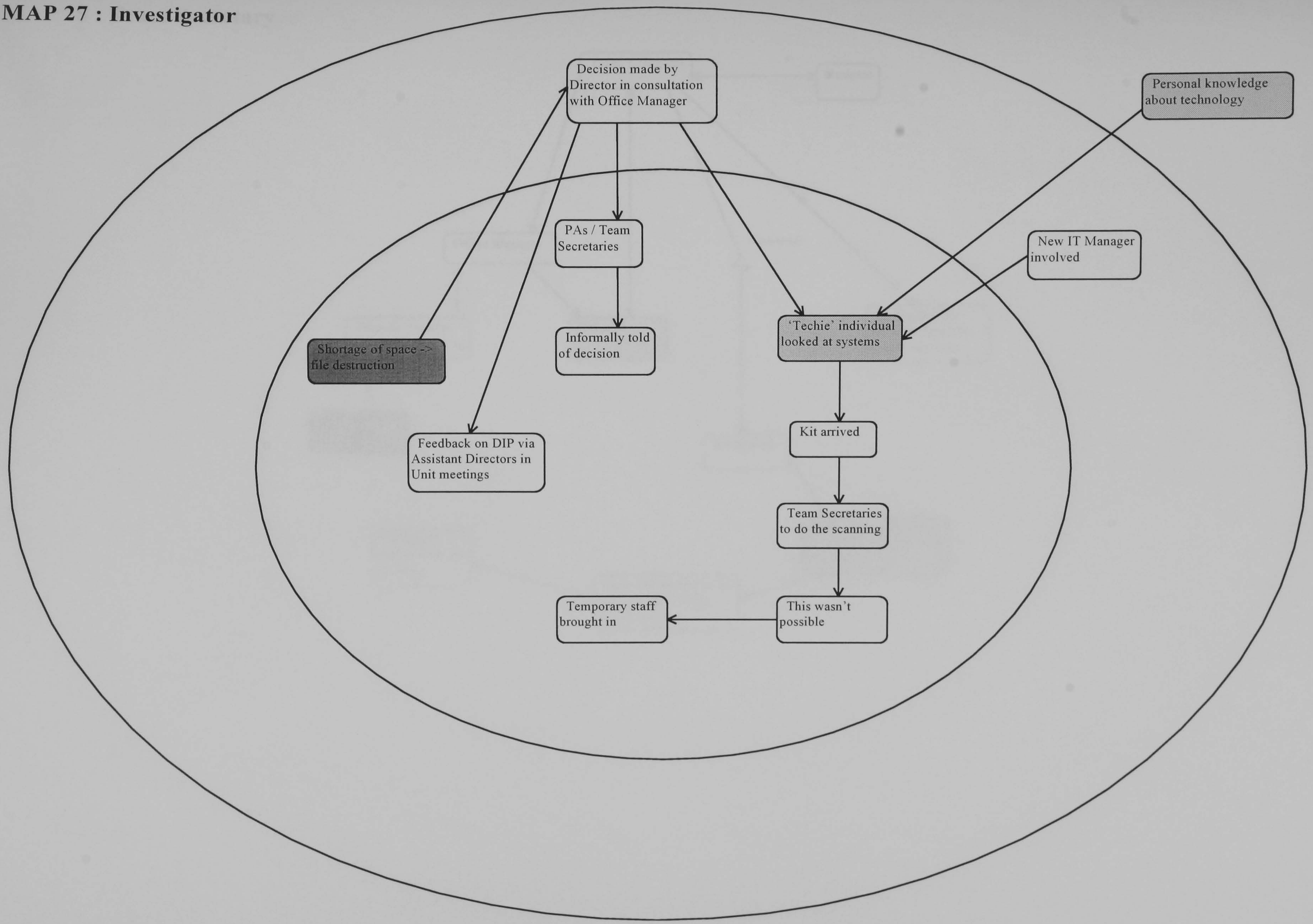
MAP 25 : Team Secretary



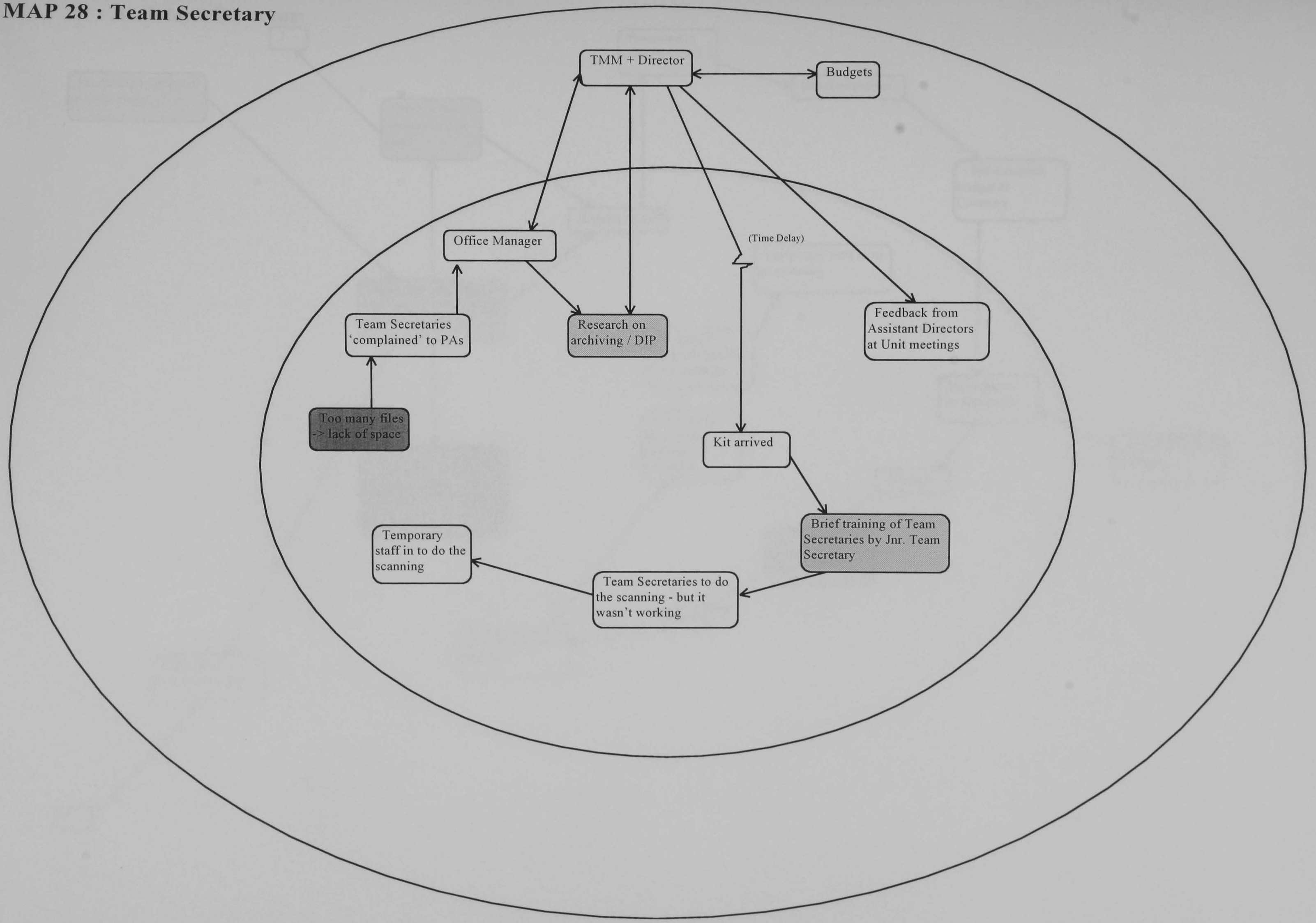
MAP 26 : Team Secretary



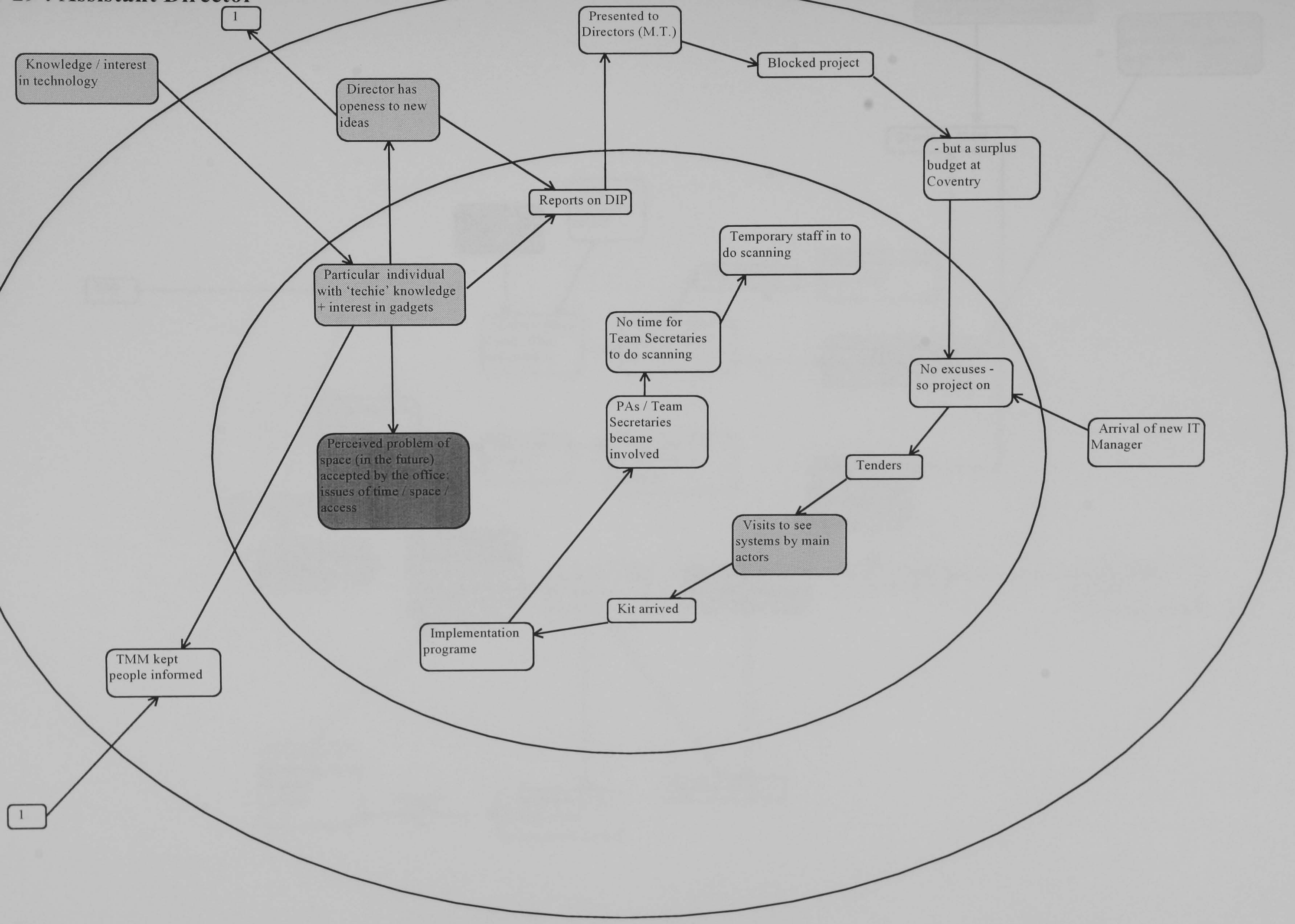
MAP 27 : Investigator



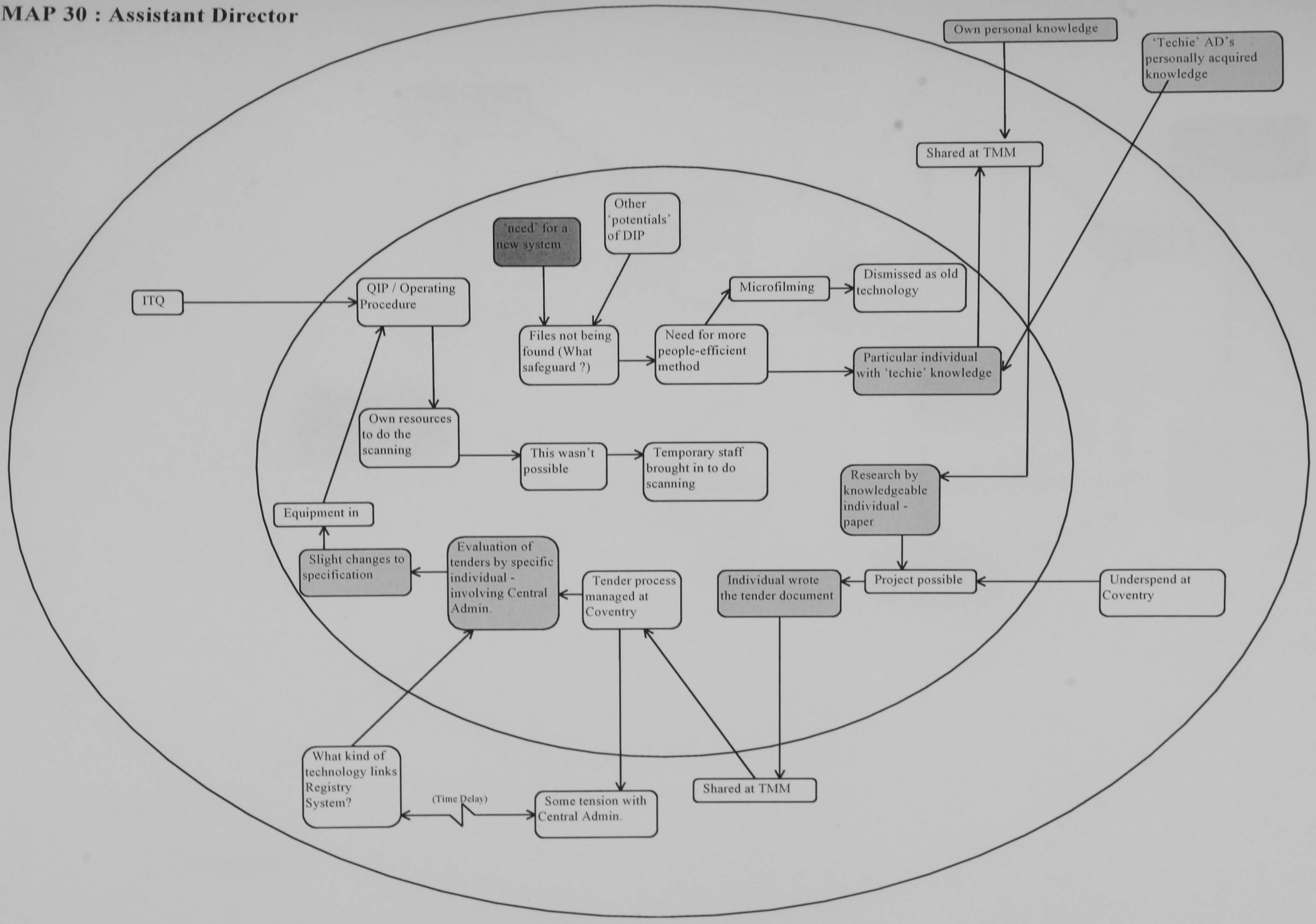
MAP 28 : Team Secretary



MAP 29 : Assistant Director



MAP 30 : Assistant Director



MAP 31 : Investigator