HOME AND AWAY

Learning in and Learning
from Organisational Networks in Europe

An **INNOFLEX** Research Report

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THE INNOFLEX PARTNERSHIP

Project Co-ordinators

- Centre Européen de Ressources sur les Reconversions et les Mutations (CERRM)

- The Work Institute, Nottingham Trent University

Partners
- National Institute for Working Life (NIWL), Sweden
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INTRODUCTION

This report is a comparative analysis of the various learning networks established within the Innoflex Project. The report recaps on the central argument underpinning Innoflex, namely that traditional ways of organising workplaces and traditional styles of management cannot achieve the commitment, agility and adaptability required in the 21st Century. The competitiveness of European firms and public sector organisations requires forms of organising whereby people can learn and be creative; to do this people need work to be organised in ways that foster learning and innovation. Such a view is consonant with earlier research arguing for 'high-road' strategies for competitiveness and sustainability that, above all, entail stakeholder convergence, in the particular case of Innoflex between competitiveness and the quality of working life.

We develop our case by arguing not just for an emphasis on forms of work organisation that foster learning in organisations, but also those that foster learning *between* organisations, in particular through learning networks. From an overview of the theoretical literature on inter-organisational learning, we present a number of frameworks for a comparative analysis of the various Innoflex learning networks in seven EU countries in various sectors.

The analysis reveals four distinct network types: strategic networks, learning networks, transformation networks and professional networks. These differ in terms of aims, motives, co-ordination, and the mutual dependency of actors, ownership and resources. They also differ in terms of whether learning is collective or individual. We also show that distinct learning cycles are evident: one amongst the members of a network ('away') and a second when new knowledge and insights from networks is taken back into one's own ('home') organisation for experimentation and reflection. These two cycles are interconnected processually and can be conceived in terms of a figure-of-eight model that extends Kolb's well-known cycle of experiential learning.

The networks appear to reflect the very diverse national cultural traditions in which they are embedded, and diversity could also be discerned in terms of how the networks evolved in relation to the issues of the original Innoflex research questions on convergence. Whilst this suggests that learning networks are problematic as a method for testing specific research propositions, we can nevertheless conclude that the methodology does promote organisational development, although in a limited time scale of one year this manifested itself in many cases at the cognitive rather than the behavioural level of learning. A further finding is that network success is enhanced by the presence of a shared problem yet at the same time a diversity of participants having different perspectives.

The report concludes with implications for policy makers and future research.

More information on the Innoflex project is available at www.innoflex.org.uk.

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1. INTRODUCTION

How can firms, public sector organisations and policy makers ensure that European enterprises remain competitive in the increasingly global marketplace? What kinds of work organisation are appropriate in the context of change to support competitiveness and high performance? What are the implications of change on organisational stakeholders? How can employers encourage employees to use their full talent and creativity? How can the tacit knowledge and experience of employees be translated into a collective resource for innovation across the organisation? What is the role of policy makers and research institutions in reproducing new forms of work organisation that can boost Europe's competitiveness? These questions and the issues associated with them have been the central concern of the Innoflex Project, financed by the Key Action on Socio-Economic Research within the Fifth Framework Programme.

The overarching objective of Innoflex has been to identify the conditions under which convergence can be achieved between the quality of life and business competitiveness through the design and implementation of new forms of work organisation, and to identify means of reproducing these conditions through the actions of public policy makers, social partners and research-based institutions. The central argument underpinning Innoflex is that traditional ways of organising workplaces and traditional styles of management cannot achieve the commitment, agility and adaptability required in the 21st Century. Work organisation is the medium through which employees, individually and collectively, gain the opportunity to use their full range of competencies and maximise their creative potential. Organisations need people who can learn and be creative; to do this people need work to be organised in ways that foster learning and innovation.

Above all, Innoflex is about furthering both our content and process knowledge of new forms of organising that see competitiveness in terms of establishing organisational spaces that liberate human creativity in ways that achieve a dynamic balance between product and process innovation. This stands in stark contrast to discourses on competitiveness that focus on leanness, cost leadership, speed-up and the elimination of waste rather than facilitating structures and processes for organisational learning. The current report is an integrated analysis of these issues and how they have been tackled by the various activities and actors participating in the project. Specifically, the report covers the setting up a number of learning networks as means of facilitating learning processes to generate and diffuse knowledge on new forms of work organisation. Such learning processes would not only contribute positively to competitiveness and performance, but also to employee well being.

We proceed by summarising the changes facing European organisations as identified in previous Innoflex activities. We then discuss further our argument for stakeholder convergence as being a fundamental condition for long-term organisational sustainability and present a conceptual framework for such convergence. The central role of learning networks is then explored both in terms of generating and diffusing knowledge about obstacles to change as well as possible solutions to the problems of remaining competitive. In the next section we examine the role and characteristics of learning networks more closely through a short review of the literature on learning networks that proposes a

number of analytical frameworks for a comparative network analysis. Such an analysis is undertaken in the third section, which discusses the most significant similarities and differences observed by the Innoflex partners in our networks. The final section draws conclusions on animating and sustaining network dialogue, identifies critical success factors for stakeholder convergence, and concludes by considering the implications both for policy and for future research.

1.1 The changing context of work in Europe

Our earlier work in the project confirmed that considerable change was afoot in Europe's labour market. In the Innoflex research paper '*Better To Be Rich And Healthy Than Poor And Sick*' we argued that there are sound reasons for believing that the terms on which European firms are competing are changing fundamentally, as is the European labour market (Hague et al 2003). As markets become deregulated and internationalised it will be increasingly impossible to defend jobs in uncompetitive European organisations through protective measures. Moreover, the high employment levels and stable occupational patterns that characterised the post-war era have now given way to something more uncertain and subject to change. For European employees, an assumption of job security in a relatively stable labour market with few, if any, occupational changes over the life-cycle is now being called into question by an emergent discourse that foregrounds employability as a policy aim rather than full employment (Garsten and Jacobsson 2003). We should of course be careful not to simplify history by saying that change never happened in the past; nevertheless there is evidence that the changes we are now witnessing are fundamental.

A number of drivers of change are having a profound impact on employment in Europe. We have identified, in particular, *changes in physical capital, changes in information technologies*, *changes in human capital and changes in employment expectations and consumption preferences*. We can add that enlargement of the EU will enable producers in the former Communist bloc countries free access to markets in the west. The opening up of such markets will also provide new opportunities for multinationals to relocate and operate from a lower cost basis thus threatening employment prospects in the west.

A particular feature of the current trend is the expanded role of world financial markets, 'increasingly operating on a real-time basis' (Giddens 1998: 30). The upshot of this is that international factors outside the control of European firms and governments are dictating the competitive environments of firms and thereby the terms on which employment is created and maintained on the continent.

On a more world-wide level, it has been argued that we are witnessing a process of globalisation whereby the world economy is becoming dominated by three trading blocs: Europe, North America and the Pacific Rim with multinational companies operating across borders within each bloc and transnational companies active in all three (Bartlett and Ghoshal 1989). We have already mentioned the role of technological change, yet this combined with the global search for low cost production locations is already ushering an outflow of employment to Asia in a relatively new area of employment – that of call centres. Even newer sectors of employment in Europe, it seems, are ephemeral in nature.

1.2 Sustainability and stakeholder convergence

The forces identified above are fundamentally altering the terms on which European firms are competing. Increasingly, many researchers in the field of business strategy argue that the key to genuinely sustained competitive advantage is not solely that of adopting the correct strategy content but, rather, the capacity to innovate and do new things ahead of rivals. This depends on the core competencies of the organisation and these, in turn, rest on the firm's ability to learn collectively (Prahalad and Hamel 1990). Ultimately, therefore, the capacity of firms to add value and compete successfully depends on the pace at which a firm embeds new, unique advantages deep within its organisation rather than its stock of advantages at any particular time (Kay 1993). The key to competitive success, rather than cost leadership, is innovative capacity. This relies on unlocking intellectual capital and human creativity throughout the organisation. In turn, this switches the focus onto innovations in work organisation as being central to Europe's competitive potential.

Although there is evidence that changes in work organisation are afoot, there is also evidence that many innovations represent little more than token change (EPOC 1999; Smith and Thompson 1998). Some organisations may indeed have embraced change, for example, in the form of teamworking, but in many instances such change actually involves more subtle forms of control (Delbridge et al. 1992) rather than a climate that nurtures employee innovation and creativity. Accordingly, our belief in the need to refocus the debate on competitiveness in Europe includes the need to look seriously at new organisational forms that are not simply a rehash of Tayloristic control technologies. In our view, this can be usefully achieved through a rehabilitation of the concept of the quality of working life (QWL).

QWL, we argue, should be seen in terms of opportunities granted to employees to learn, innovate and develop their creative potential in line with the developmental needs of their organisation. In doing this, we are advocating a balanced approach to the employment relationship. This not only encompasses conditions at the workplace, but also sees the relationship as being inextricably bound up with external factors. These include the support frameworks of policy makers, the issue of work-life balance and the linkage between value creation at the workplace with the broader components of social capital (Putnam 1992).

The central argument of the paper is that we need a new language for conceptualising actionable knowledge that involves convergence between innovation based performance and new forms of work organisation whereby human motivation and potential are realised to unleash creativity and individual learning processes. In our view, the latter aspect can usefully be pursued by a discursive rehabilitation of the quality of working life (QWL). But we also argue that in contrast to earlier work on QWL, such a discourse cannot easily be detached from business dynamics (Adler and Docherty 1998).

Sustainable organisational change thus requires a convergence between QWL, however defined, and competitiveness. We also contend that we are now facing a stagnation of knowledge in European change efforts – a state of affairs that calls for new discursive tools to guide change efforts. Such stagnation is evident both

in the area of top-down managerialist interventions and in interventions of a more participative nature that are often promoted by governmental programmes and supported by the labour market parties (Gustavsen 1992). Although QWL can be critiqued as being an organisational ideal (Alvesson 1987; Pruijt 2000), we have nevertheless explored the extent that it can be reintroduced as a concept for informing change efforts through action research that supports learning networks.

Specifically, we argue that there are two quite distinct options for the pursuit of competitiveness, the 'low road' and the 'high road'. Low road solutions focus on the traditional options in work organisation of cost leadership, flexibility, speed and quality. In increasingly fierce global markets there is continuous pressure to deliver faster and better products and services at lower prices. But these are no longer seen as sufficient means for adding value; they are mere 'entrance factors' to the competitive game and offer no guarantee of winning it. Rather, sustainable organisational change needs to embrace high road solutions whereby organisational spaces are created that liberate human creativity in ways that achieve a dynamic balance between product and process innovation.

A further feature of high road organisations is that they necessarily involve a longer time horizon for making decisions. Pressure from the capital markets or even politicians for immediate results on the bottom line can be enormous. The easiest way to achieve such results is very often the quick-fix of downsizing and leanness. There is considerable evidence, however, that such measures are directly detrimental to processes of development and learning that are more decisive to organisational survival and prosperity in the longer term. This also suggests that high road organisations rely more on *dynamic* rather than *static* performance measures. Examples of dynamic measures include individual competence development, organisational development (internal performance) and capacity to adapt, innovate, transform, flexibility, single and double-loop learning (external performance). Static measures on the other hand include rational resource utilisation (internal performance) and the creation of added customer value, productivity and profitability (external performance).

Low road solutions are typically epitomised by leanness, short-term thinking, static performance measures and work intensity and involve a negative relationship between QWL and competitiveness whereas high road solutions based on longer term thinking, dynamic performance measures and sustainability suggest a positive one. We can summarise the high road - low road contrasts as in figure 1.

Figure 1: The high road and the low road – two contrasting paths of development (source: Huzzard 2003: 94).

High road organisations	Low road organisations
QWL-competitiveness convergence	QWL-competitiveness divergence
Long term decision making horizons	Short term decision making horizons
Dynamic performance measures	Static performance measures
Sustainable work systems	Intensive work systems

Innoflex has also sought to investigate the conditions under which convergence between competitiveness and the quality of working life can be achieved. A

significant move is needed beyond the QWL programmes of the 1960s and 1970s, which were driven by humanistic concerns combined with anxiety about emerging labour shortages. The relationship between quality of working life and competitiveness was only weakly conceptualised or studied. In the 21st Century economy the key to sustainable success lies in the capacity to continually reinvent products and services in ways which meet changing expectations and opportunities, using the rich potential of management and workforce knowledge, skills and experience more imaginatively and effectively. But this is not unproblematic at the organisational level. How can employers encourage employees to use their full talent and creativity? How can the tacit knowledge and experience of employees be translated into a collective resource for innovation across the organisation? This challenge becomes even more serious in Europe's increasingly tight labour markets, where the *meaning* of work becomes central to the ability to recruit and retain skilled people.

1.3 A framework for convergence

The concept of the 'quality of working life' is imprecise and thus difficult to operationalise. Moreover, there is no agreed definition of QWL in the literature. There does nevertheless appear to be a broad consensus that it involves a focus on work design and all aspects of working life that might conceivably be relevant to worker satisfaction and motivation (Ryan 1995). A key element here is that of alternative strategies for designing workplaces, contrasting with those that have sought to rationalise work through the principles of Taylorism. A central concern of the QWL movement has thus historically been that of replacing jobs based on single, repetitive tasks, often on assembly lines, with more 'humanised' forms of work having a less clear-cut separation of conception from execution. Such alternatives, it is argued, allow for jobs that are less alienating, allow for greater job satisfaction, more meaningful work and greater influence on workplace decisions. In turn, such developments generate higher-level organisational performance, less sickness absence and reduced employee turnover.

The concept has been seen as being closely related to sociotechnical systems views of organisational design (Davis and Trist 1974). However, in some countries, for example in Scandinavia, versions of sociotechnical theory go further than job enrichment by emphasising the need for good job design to encompass worker participation and influence in developmental change processes in the organisation. Some authors also argue that QWL has to be linked to the wider notion of 'quality of life' thereby covering factors such as general life satisfaction, leisure and well being beyond the workplace (Stjernberg 1977).

There is some confusion as to whether QWL describes or characterises certain types of change processes or is in fact an outcome of such processes. Our emphasis is on the features of work redesign that can reasonably be argued as facilitating QWL improvements rather than QWL itself in the strict sense of its usage in the earliest definitions. In sum, these features of work redesign can include job enrichment, job enlargement, participation, autonomy, learning opportunites, developmental scope, work environment and work-life balance.

We believe it is useful to distinguish between the more psychologically based dimensions of QWL outlined in the early literature (for example Walton 1973; Davis and Cherns 1974) and versions of QWL that see the concept more in terms of job redesign. The former can be understood as *stakeholder outcomes* afforded to employees from a process of change in work organisation. The impact of such change on QWL is, however, mediated by certain *organisational outcomes* in terms of job redesign. Such redesign is conceptualised as comprising various features appearing to contribute positively to QWL that can be discerned in the literature. Accordingly, we can think of a process whereby value is added for employees as follows:

new work organisation → job redesign → enhanced quality of working life

Discussions on sources of firm competitiveness are commonly conducted with reference to the work of Porter (1980) on generic strategies. Porter argued that there are three fundamental ways in which firms can seek competitive advantage in a particular market. These are cost leadership (producing at the lowest cost in the industry), differentiation (offering consumers some sort of uniqueness in product or service provision that they value highly and for which they are often prepared to pay a premium price), and focus (choosing a narrow competitive scope within an industry). As section 1.2 argues however, other authors have switched the emphasis on competitive advantage away from strategy content to focus more on the embedding of capacities to learn and innovate ahead of one's rivals. In terms of competitive strategy, of most interest to us in the context of convergence are the options of cost leadership and leveraging innovative capacity, since these options are most directly associated with human resource aspects.

Choices in work organisation innovation can provide organisations with the means to be as good as or better than their rivals. Improved competitiveness can thus be seen as a potential organisational outcome of innovative work organisation. In private sector commercial organisations this, in turn, will benefit the organisation's owners since a perceived improvement in a firm's competitive position will normally boost its share price and add shareholder value. By the same token, we can talk about greater effectiveness in public sector organisations benefiting taxpayers or boosting taxpayer value. Accordingly, we can think of a process whereby value is added for owners or taxpayers as follows:

new work organisation → increased competitiveness → added shareholder/ taxpayer value.

We can combine the two processes of adding stakeholder value identified here into a single framework for understanding convergence in a context of organisational development and change as set out in figure 2. It is useful to identify the conditions of change, that is the change drivers at the heart of the changing organisational context. The core processes of change are the actual changes in work organisation that can occur at the organisational level, at the level of particular labour processes or be associated with new technologies. Such processes will have organisational outcomes both in terms job redesign (or QWL facilitators) and competitiveness. In turn, these organisational outcomes will

have an impact on organisational stakeholders: on QWL changes for employees and on added value for shareholders or taxpayers. Clearly, the outcomes in terms of QWL facilitation and competitiveness may converge or diverge. A key question at the heart of the Innoflex Project has been to identify the precise conditions under which convergence might be possible.
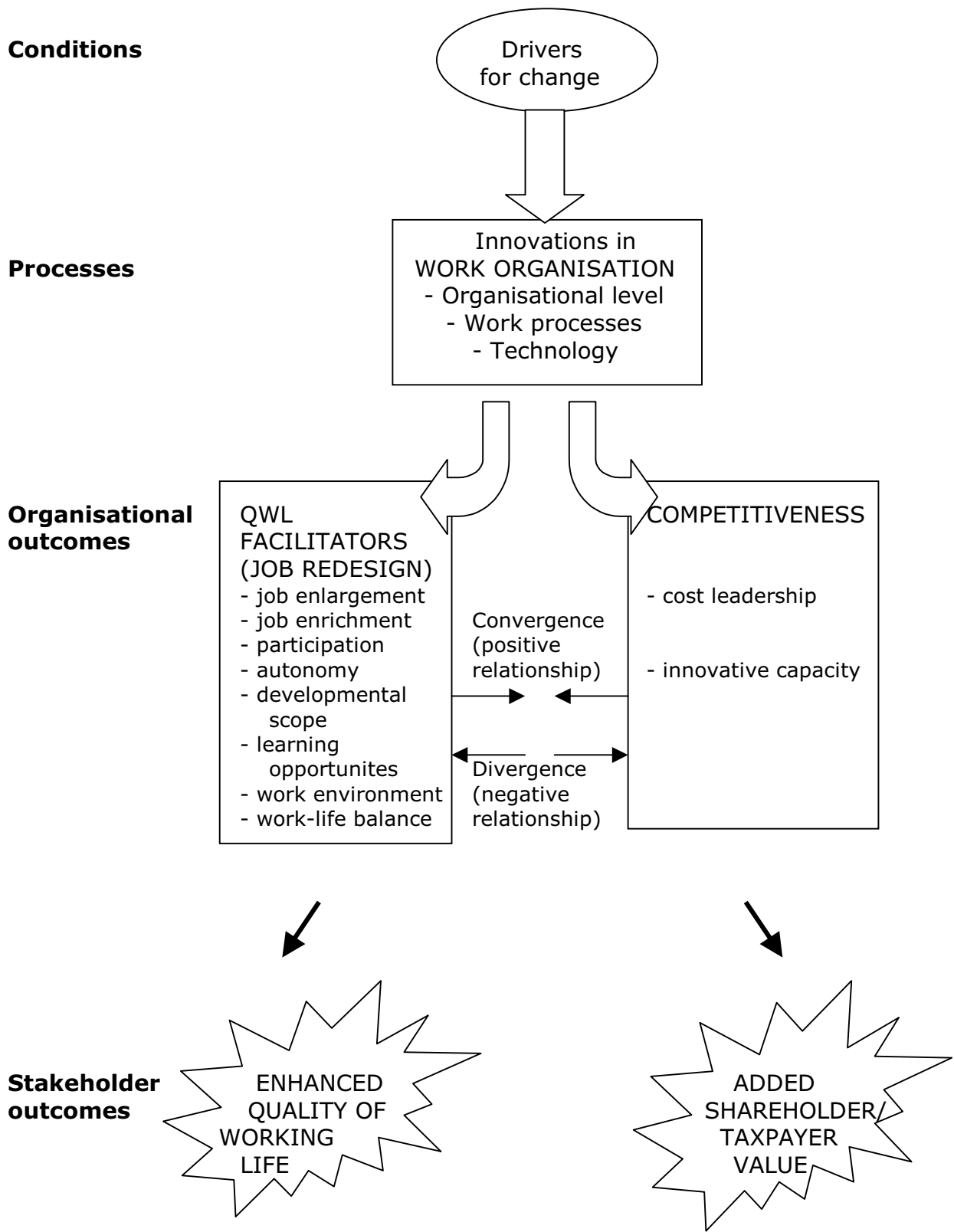

1.4 The role of learning networks

Throughout the Innoflex Project we have argued the case for high road organisations, characterised by innovation-based approaches to competition and growth. Key features of such organisations are structures and processes that facilitate learning. A rich body of literature has developed on learning in organisations that suggests there is little doubt that learning processes can occur in the context of a single organisation, both at the individual level and at the collective level of work groups. Learning, it is argued, can even be detected at the level of an entire organisation seen as a collective entity (Huzzard 2000).

Increasingly, however, individual learning is considered as necessary but not sufficient as a means of developing competitive advantage. New knowledge and understandings need to be codified and diffused so that groups or organisations can learn collectively. A key challenge for high road firms and public sector service providers is thus to provide structures and processes that enable new knowledge to be surfaced, made sense of collectively and diffused as a means of levering collective capabilities. This is not easy; it may indeed be the case that individual learning and collective learning are in conflict (Van der Krogt 1998). Research has also identified a number of barriers to learning or 'learning disorders' (Snyder and Cummings 1998). But where does learning come from? What are the sources of new knowledge?

Clearly, genuinely new knowledge can emerge from within. Internal events or innovative ideas can trigger new action sequences and subsequent reflection on experience that generate new knowledge in context (Kolb 1984). Moreover, such knowledge, which may be tacit in the first instance, can be codified as explicit knowledge and travel onward within the organisation seen as a closed system (Nonaka, 1994). Such processes can indeed lever performance and competitiveness. But it is now widely accepted that a closed system view has its limitations as a knowledge system and that higher levels of learning are possible when organisational actors are exposed to influences and sources of inspiration beyond those from within their immediate organisational boundary. In effect, this involves learning from the experience of others and can involve greater scope for challenging and questioning one's own taken for granted assumptions. Accordingly, the significance of learning has become recognised not just at the organisational level, but also at the inter-organisational level (Noriah and Eccles 1992; Bessant 1995; Van der Krogt 1998; Karlöf et al 2001; Knight 2002).

In sum, we are approaching a new kind of industrial order where production of both goods and services is increasingly dependent on the exchange of knowledge. Researchers are now arguing that the most critical skill is that of developing both internal expertise as well as maintaining ongoing sources of collaboration with external knowledge sources (Powell and Brantley 1992). The implication for organising is that a new organisational form has emerged that is

Figure 2: QWL and competitiveness – an analytical framework (adapted from Huzzard 2003:24).

Conditions

Drivers for change

Processes

Innovations in
WORK ORGANISATION
- Organisational level
- Work processes
- Technology

Organisational outcomes

QWL
FACILITATORS
(JOB REDESIGN)
- job enlargement
- job enrichment
- participation
- autonomy
- developmental
  scope
- learning
  opportunites
- work environment
- work-life balance

Convergence
(positive
relationship)

Divergence
(negative
relationship)

COMPETITIVENESS

- cost leadership

- innovative capacity

Stakeholder outcomes

ENHANCED
QUALITY OF
WORKING
LIFE

ADDED
SHAREHOLDER/
TAXPAYER
VALUE

quite distinct from those of market and hierarchy. The competitive and authority logics respectively of the latter pairing can be clearly distinguished from the logic of negotiation, trust and collaboration associated with networks (Knight 2002). In terms of research, the new network forms have led to an increasing interest in network perspectives on organising (Van der Krogt 1998).

Learning and innovation, however, do not come cheap. They require resources as well as the time and space to reflect (Shani and Dochery 2003). In particular, small and medium sized firms can find it difficult to acquire the necessary resources and capabilities (Bessant 1995). But even larger organisations such as regional health authorities can find it difficult to create spaces for innovation (Ekman Philips et al 2003). Accordingly recognition of the significance of inter-organisational relationships has also been an emergent feature in the literature on organisational development. By the mid 1990s researchers such as those working on action research-based interventions in Scandinavia had become well aware of the limitations of field experiments in single firm settings and keenly sought out better ways for diffusing new ideas than the standard publication of scientific reports (Gustavsen 1998).

In our overview of the various national work organisation-related development programmes we arrived at a similar conclusion, suggesting that a key role of research and a key challenge for practitioners – at least, those having 'high road' aspirations – was that of seeking new forms of inter-organisational collaboration not only to offer additional opportunities for generating new knowledge, but also a means for diffusing it (Hague et al 2003). In sum, this requires an increasing recognition of the role of learning networks comprising actors from different organisational affiliations usually having some point of shared interest.

In particular, Innoflex has shown that inter-organisational exchanges of experience and network activities can provide useful arenas for learning and reflection on both the obstacles to change and their possible solutions. For example, the Innoflex Hospital Workshop brought together health practitioners and researchers to surface the obstacles and solutions to change in the health sector prompted by surprisingly many similarities in context across international borders.

Nevertheless, the evidence to date that learning networks actually do lever organisational learning has been anecdotal at best (Tell 2000: 308). In what sense, then, has Innoflex added to the research findings that do exist? Before answering this question it is necessary to undertake a careful conceptual overview of the field. It is to this that we now turn in the following section.

2. CONCEPTUALISING LEARNING NETWORKS

…successful firms are those who learn most rapidly how to gain from external linkages without creating enemies or behaving opportunistically (Powell and Brantley 1992: 371)

Organisational networks have been studied from various perspectives (see eg Grandori and Soda, 1995; Monge and Contractor, 1999; Barringer and Harrison, 2000 for reviews); the specified approach of Innoflex, however, is inter-organisational learning. The idea that organisations can be considered as learning entities, analogous to people, has attracted increasing interest amongst scholars of organisations and management. From a keyword search of journal articles, Crossan and Guatto (1996: 107) have shown that 'the 1990s have seen exponential growth in interest in the field'. In a context of disenchantment with more established managerial paradigms associated with instrumental rationality, the decade was marked by a tentative embrace of the ideas on the 'learning organisation' (Garratt 1987; Senge 1990; Watkins and Marsick 1993; Marquardt 1996; Pedler et al. 1997). Few would now dispute that learning has become widely recognized as a key dimension of work organisation (Shani and Docherty 2003).

Despite this level of interest, however, there is little consensus on a definition of 'organisational learning' (Huzzard 2000; Shani and Docherty 2003) and the field is littered with conceptual tensions and dualities. Any empirical work on learning in organisations, therefore, requires a robust conceptual framework that structures the what, who, where and how of learning. This is particularly relevant in complex accounts that not just encompass learning within organisations, but also investigate learning in inter-organisational settings such as networks (Beeby and Booth 2000). Accordingly, this section attempts to set out a number of concepts from the literature as a means of facilitating our analysis of the Innoflex learning networks. These consider the 'what' of learning, the 'who' of learning, the 'where' of learning and the 'how' of learning. The section concludes by discussing what the literature has to say on the questions of prerequisites for learning (as well as the conditions for network establishment, maintenance and survival) and learning outcomes in terms of impact on organisational performance.

2.1 Learning content, exploitation and exploration

In terms of learning content, the possibility of inter-organisational collaboration through networks has identified that such networks can exist at all sites along the value chain. For example, in a study of networking in biotechnology firms in the US, Powell and Brantley (1992) deemed it useful to analyse biotechnology agreements in the areas of R&D, marketing, licensing as well as development/marketing. More specifically, the learning networks of the Innoflex Project on which the current paper is based aimed to offer examples of networks in the area of learning on process design in work organisation. These sought to make linkages between this and broader aspects of human resource management that could illustrate convergence between competitiveness and QWL. Furthermore, in some cases where service occupations have been selected for supporting network activities, such a focus has inevitably extended to include

a customer focus (in the case of telecommunication engineers in France) or a patient focus (in the case of health care in Sweden; see also Provan and Milward, 1995, on the latter). Convergence is thus seen as reconciliation between three rather than two groups of stakeholders.

It is suggested that inter-organisational networks can contribute to learning processes in several ways. For example Bessant (1995: 264) sees such networks as having a variety of roles:
- As a validator of continuous improvement activities
- As a resource bank
- As a source of new ideas
- As a benchmarking resource.

Each of these may influence processes of innovation and development in different ways. Indeed, in some networks such roles may have a more direct impact on value creation than others. This would imply that the content of learning may vary according to the type of network that is involved and the shared aims on which it is constituted. Despite this apparent diversity, Bessant concluded from an empirical study of technology transfer in SMEs in the UK that networks *do* 'represent a viable option in helping enable the transfer and adoption of organisational innovations' (ibid.). On the other hand, this categorisation of roles does not make explicit who is learning from such networks and for what reasons. Nor does it make explicit who is the beneficiary of such learning.

An insightful analysis of what is learnt in inter-organisational networks can be undertaken by analysing learning in terms of *exploitative* and *explorative* modes (March 1991). In essence, the former is concerned with drawing on what one already knows and has stored in a memory with a view to improving outcomes largely from a pre-given repertoire of activities or routines. The notion of an organisational memory as expressed in routines can be understood to be the institutionalised outcome of learning from past actions. March (1991) terms this as the exploitation of old certainties in organisational learning whereby existing technologies are refined and used in optimal ways. This contrasts with the phenomenon of exploration whereby actors engage in experimentation or 'creative action' (Ford and Ogilvie, 1996) to explore new technologies, that is, depart from prevailing routines. Underlying March's distinction between exploitation and exploration is the contrast between the notions of routine and non-routine action - a distinction (and tension) central in the theorisation of organisational learning (Crossan et al., 1999). Organisations, so it is argued, are well advised to balance both learning through exploitation and learning through exploration.

Exploitation is largely a matter of standardisation from a narrow knowledge base that has been predefined and codified (Vera and Crossan 2003). This is typical of benchmarking and attempts to diffuse what is believed to be 'best practice'. We might reasonably believe such activity to occur in learning networks, particularly if the participants are confident that there is sufficient similarity in contexts between the source and targets of the knowledge being diffused (Bateson, 1973). Exploration, on the other hand, involves less of an emphasis on conforming to standards and a more heterogeneous knowledge base. Such learning efforts are closer to what might be understood as genuine innovation

rather than that of copying the innovative efforts of others (Vera and Crossan 2003). This type of learning might occur, rather, through being inspired or influenced by an idea or practice illuminated 'away' in a network (Hage and Rogers Hollingsworth, 2000) but reflected on and contextualised and infused with new meaning in the 'home' organisation. Thereafter it is subjected to experimentation and further rounds of reflection with 'home' colleagues which are then fed back into further dialogue 'away' in the network (Kolb 1984; Ford and Ogilvie,1996).

Although some researchers have argued that networks can facilitate both exploitation and exploration (Barringer and Harrison, 2000), Bessant (1995: 268) in assessing the relative roles of exploitation and exploration in learning networks of diverse SMEs for transferring technology, is adamant in stressing the latter:

> …such networks…are not, primarily about transferring a stock of knowledge but rather about developing knowledge across a broad front through a process of experimentation.

A similar view is advanced by Tell (2000) who sees the potential for learning networks as a means for using knowledge to explore different ways of acting and thinking rather than benchmarking. Clearly, exploitative learning entails the rather straightforward transfer of what is already known or codified. As such it is largely concerned with explicit knowledge. On the other hand, experimentation concerns that which is not (yet) codified – exploration thus entails knowledge of a more tacit nature. Indeed, it is argued that the very logic of why business networks come into existence is that tacit knowledge is difficult to commodify. For this reason, collaborative relationships in the form of networks will generally make more sense than market exchange (Barringer and Harrison, 2000).

In sum, we can analyse what was learnt in the Innoflex networks along a list of categories as set out in figure 3.

Figure 3: The content of learning – an analytical framework

Network	Topics of dialogue	Exploitation/ exploration	What was learnt: content/process
UK1			
UK2			
I1			
I2			
NL1			
NL2			
Etc.			

2.2 Levels of Learning

Early treatment of organisational learning in the literature focused on the learning of individuals in organisational contexts (Huzzard, 2000). Such a focus has now largely given way to a general acceptance that learning can be collective in nature (but see Simon, 1991, for a contrary view). It is now generally argued that collectivities engaged in 'organising' (Weick, 1979) can have shared cognitive structures and that behaviour can be collective in the form of interlocking routines. In general, however, collective learning cannot occur without some learning happening at the individual level (Argyris and Schön, 1978); nevertheless, aggregated individual learning, although necessary, is not in itself a sufficient condition for collective learning (Shani and Docherty, 2003). Although competence in organisations resides at the individual and sub-unit levels, this nevertheless requires support from the organisation as a whole for it to be integrated elsewhere in the organisation and facilitate change in knowledge, behaviour, attitudes and values.

Collective learning can arise at a number of different levels (Crossan et al, 1999; Beeby and Booth,2000; Shani and Docherty, 2003). Clearly collective learning can happen at the group level – indeed the learning potential of groups has been a major reason for the introduction of teamwork in recent years (Hague et al., 2003). Group level learning can occur both on the shop floor as well as at managerial levels and interdepartmental group levels in mature organisations (Beeby and Booth, 2000). When group members interact to work together in what Lave and Wenger (1991) have coined as 'communities of practice', they develop accepted ways of acting and thinking. As they identify problems they develop a shared a cognitive map – a similar way of looking at things. This, in turn, can trigger collective action sequences that, following reflection can result in new interlocking behaviours (Levitt and March, 1988). Yet it is also claimed that such learning can occur at the level of the entire organisation (Crossan et al, 1999). But as with the movement from individual to group learning this is not guaranteed. This requires structures and systems to draw conclusions from group learning and draw wider benefits through knowledge diffusion. The occurrence of such diffusion is mediated by cultural assumptions and becomes a key responsibility of management in a 'learning organisation' (Shani and Docherty, 2003).

The learning process, seen as the feed-forward and feedback of knowledge between levels (Crossan et al, 1999) doesn't stop at the organisational level. Learning and knowledge creation – be it at the individual level, the group level or organisational level requires a rich dialogue with those from the outside who are better placed to challenge the existing assumptions and norms on which existing practices are anchored. In the words of Schein (1996: 8, quoted in Tell 2000: 309):

." . . if learning only occurs ultimately in a community of practice, and if transformation of learning involves changing of some cultural assumptions, it must be mediated by a consortium of practise who provide . . . an outsider perspective that permits local cultural assumptions to be surfaced and examined."

Exposure to such dialogue is thus a facilitator of moving up to the next level of learning and is more likely to be double-loop in nature given the questioning of norms and assumptions that it implies (Argyris and Schön, 1978). Even where the knowledge and competencies already exist to aid development processes, the role of external relations is often 'to flush them out and nurture them' (Tell 2000: 305). At the organisational level, however, such higher-level learning requires some sort of ongoing relationships with other organisations; such inter-organisational relations may also occur at the inter-group level. Indeed, there is considerable evidence in the research to date that the inter-organisational level, specifically in the form of networks (Knight, 2002), is where 'the locus of innovation will be found' (Powell et al., 1996: 116). It is deemed useful here for purposes of analysis to identify four levels at which learning actors can exist:

- The individual level
- The group level
- The organisational level
- The network level.

2.3 Arenas of learning and network types

The various levels of learning identified in the previous section above can be considered both as the entity that is engaged in learning (the 'learning agent') and the arena where learning is taking place (the 'learning arena'), (Knight 2002). This section will focus specifically on the network as an arena for learning. Although it can be argued that 'every network is unique' (Tell, 2000: 314), four distinct network categories will be discussed here as a basis for understanding the networks of the Innoflex Project.

An inter-organisational configuration in the form of a network can be seen as consisting of a number of positions or nodes and the relations between them. Typically, these nodes might be occupied by firms, business units, universities, research institutes, governments, suppliers, customers or other actors (Tidd et al, 1997). Conceptually, various measures have been developed to assess the individual actors occupying these nodes as well as the nature of the relations between them. The networks themselves can be measured along a number of dimensions: size, inclusivity, component, connectivity, connectedness, density, centralisation, symmetry and transivity (Monge and Contractor, 1999). The application of such an array of concepts is beyond the scope of the current paper; however, we believe it is useful to draw attention to four quite distinct network types that have been encompassed within the Innoflex Project. We label these here as strategic networks, learning networks, transformation networks and professional networks.

Strategic networks (also termed 'formal' networks – see Bessant and Francis 1999) are those that owe their establishment and maintenance to high levels of mutual dependency on exchange relations as a prerequisite of adding value in business processes. These may be between SMEs or between representatives from strategic business units in larger firms who enjoy relative autonomy. Examples of such arrangements are supply chains (Dyer and Nobeoka, 2000; Lane 2001), strategic alliances (Larsson et al, 1998; Hage and Rogers, Hollingsworth, 2000; Child, 2001), joint ventures in R&D collaboration (Powell et al, 1996) and so on. The gains from such arrangements have a direct link to

- Formal setting up, rather than informal evolution.
- A primary learning target – this defines what learning/knowledge the network is intended to enable.
- A structure for operation, with boundaries about who is in and who is outside.
- Processes which can be mapped on to the learning cycle.
- The measurement of learning outcomes which feeds back to operation of the network and which eventually enables a decision to be taken as to whether or not to continue with the arrangement.

The Innoflex Project, however, yielded a third category of networking quite distinct from that of the strategic and learning networks outlined here – that of networks that have an explicit ambition of transformation, often across organisational boundaries. Such networking – which we call here 'transformational networks', has been described in the literature as that of 'development coalitions', whereby a number of organisations see their own development as being inextricably tied to the development of organisations with whom they interact (Ennals and Gustavsen 1999). Often these organisations may occupy the same geographical area or they may comprise the constituent activities on a value chain.

The notion of a development coalition has stressed in particular the regional aspect of development processes. The aim of such coalitions is to reveal the regional interdependencies of organisations, the region-wide nature of learning and knowledge as well as developing a shared sense of the region as a 'relational landscape of previously unrecognised relational resources' (Shotter and Gustavsen, 1999: 10). Although the spatial aspects of inter-organisational networks have been particularly well documented by the case of the industrial districts in Italy (Lipporini, 1994), the main action research in the area has been undertaken in Scandinavia, notably the 'Enterprise Development Program' in Norway (Gustavsen et al., 1998). The external relationships of such coalitions or networks, in our terminology 'learning away', are motivated by a desire for integrated and mutually dependent change and have been characterised by Ennals and Gustavsen (1999: 51) as follows:
- Access to ideas and experiences.
- Possibilities for seeing oneself as a figure against others as a background.
- Mutual support through enterprises being parts of a broader movement.
- Possibilities for mobilising resources and relationships that would otherwise not be possible, since they would go well beyond the capacity of the individual organisation.
- Possibilities to move in parallel, to be part of a collective, without losing the possibility for each participant to be at the front line, to create something new, and not be left only to 'apply' what others have already created.

As with the learning networks described above, such networks cannot be described as imaginary and usually require co-ordination by a central managerial authority perhaps at the political level such as a regional health authority or researchers or both. In some instances regional development coalitions can be more accurately described as networks of networks involving a complex arrangement of different actors from different organisations and different professions working in individual networks each with particular sub-goals within

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the macro-development effort (Ekman Philips et al., 2003). Clearly, where explicit development aims are laid down, the practitioners have a high degree of ownership of the network and the researcher role, if there is one, is that of a light-touch facilitator.

The final network that appears to have characterised those involved in the Innoflex Project has been a coming together of like-minded professionals. This seems to describe well the evolution of the hospital learning network in the Netherlands. It has been widely recognised in the literature on professional organisations that their work practices are more similar to network enterprises than traditional industrial firms (Gray, 1999). In particular, this is due to the intersection of semi-autonomous systems (Castells, 1996: 150-200). Lawyers and academics, for example, participate actively in relationships with peers beyond their immediate organisational affiliation. It may well be the case that professionals in more traditional enterprises that do not automatically lend themselves to networking – such as machine bureaucracies – seem to find some benefit from exchanges with like-minded peers in order to keep abreast of developments in their field, for example strategic or human resource management.

Although such networks may well arise out of research-led efforts such as Innoflex, it seems more realistic to understand the co-ordination mechanism for such networks as typically being that of normative isomorphism (DiMaggio and Powell, 1983). The network participants are nevertheless not highly dependent on the network whose activities may well be somewhat distant from the 'home' organisations of the participants. Indeed, it maybe the case that no direct benefit to the 'home' organisational is discernible and that the existence of the network can be alternative source of power and thereby conflict.

In each of the network types outlined here and summarised in figure 4, we can distinguish between learning in the network and learning from the network. Clearly the former is something done by the individual network members 'away' in the network and such knowledge and insights gained may then be transferred back to the 'home' organisation to trigger possible collective learning at the group or organisational level.

Alternatively, it is argued in the literature that the network itself is a learning entity: network organisations can have knowledge structures – and changes to such structures can be understood as 'network learning' (Knight, 2002). This is by no means restricted to those networks that are specifically co-ordinated and convened by actors such as researchers – shared cognition can also occur in networks of a more imaginary nature, for example in the form of Spender's notion of 'industrial recipes' (1989). Accordingly, networks can acquire not just the declarative knowledge of their specified learning target, but also procedural knowledge about the management of the network itself: its set-up, maintenance and survival. Clearly, then, network learning is more than the sum of the learning of its component parts.

Figure 4: Network types – a summary

Network type	Aim/purpose	Motive	Co-ordination	Mutual dependency	Network ownership	Resources
Strategic networks	Reduction of transactions costs	Economic	Trust. 'Imaginary organisation'	High	None (imaginary organisation), but usually centred around a focal firm	From within
Learning networks	Learning through exchanges of experience or formal input	New sources of innovative inspiration	Researcher/ consultant as facilitator	Low	Network participants and researchers together	External support, especially SMEs. Some professional expertise.
Transformational networks	Collaborative trans-organisational development	Integrated change	Researcher/ consultant as light-touch facilitator	Medium to high	Sponsoring organisations	From within and external support
Professional networks	Keeping abreast with latest developments in the field	Personal development	Normative isomorphism	Low	Network participants and researchers together	External support and contacts with professional bodies

In order to assess the 'who' and the 'where' of learning we can combine the two categorisations developed here of levels of learning ('learning agents') and network types to arrive at the analytical table set out in figure 5. The various arrows in the figure depict how we might expect the iteration to occur between learning away (in the network) and learning at home (in one's own organisation) if the learning is such that the networks succeed in line in with their aims and ambitions. This does not, however, assume that any learning necessarily takes place. In some instances the most truthful depiction of a network would involve no arrows at all.

Figure 5: Network types and learning agents – an analytical framework

Network type	Learning agents			
	Organisational learning	Group learning	Individual learning	Network learning
Strategic networks		← →	← ┈	→
			← ┈	→
Learning networks	← ┈			→
		← ┈		→
			←	→
Transformational networks	←			→
		←		→
			←	→
Professional networks	← ┈			→
		← ┈		→
			←	→

Note: solid arrows denote necessary iterations for network success, broken arrows denote the most likely additional iterations.

Clearly, where learning does occur, the level at which learning at home occurs will vary. In strategic networks, knowledge of relations with partners will certainly be a part of organisational learning; it is less apparent, however, that such learning will feedback to the group or individual levels (hence the broken arrows in the figure). Those participating in both learning and professional networks, however, will be more distant from the strategic level than those participating in strategic networks. Hence the learning will more likely to be by individuals and learning at home occurs through feed-forward from the individual to the collective levels (Crossan et al, 1999). The participatory nature of transformation networks, on the other hand, is such that learning at home necessarily has to happen at all levels since permanent change in relationships and behavioural repertoires is the explicit objective of the networking effort.
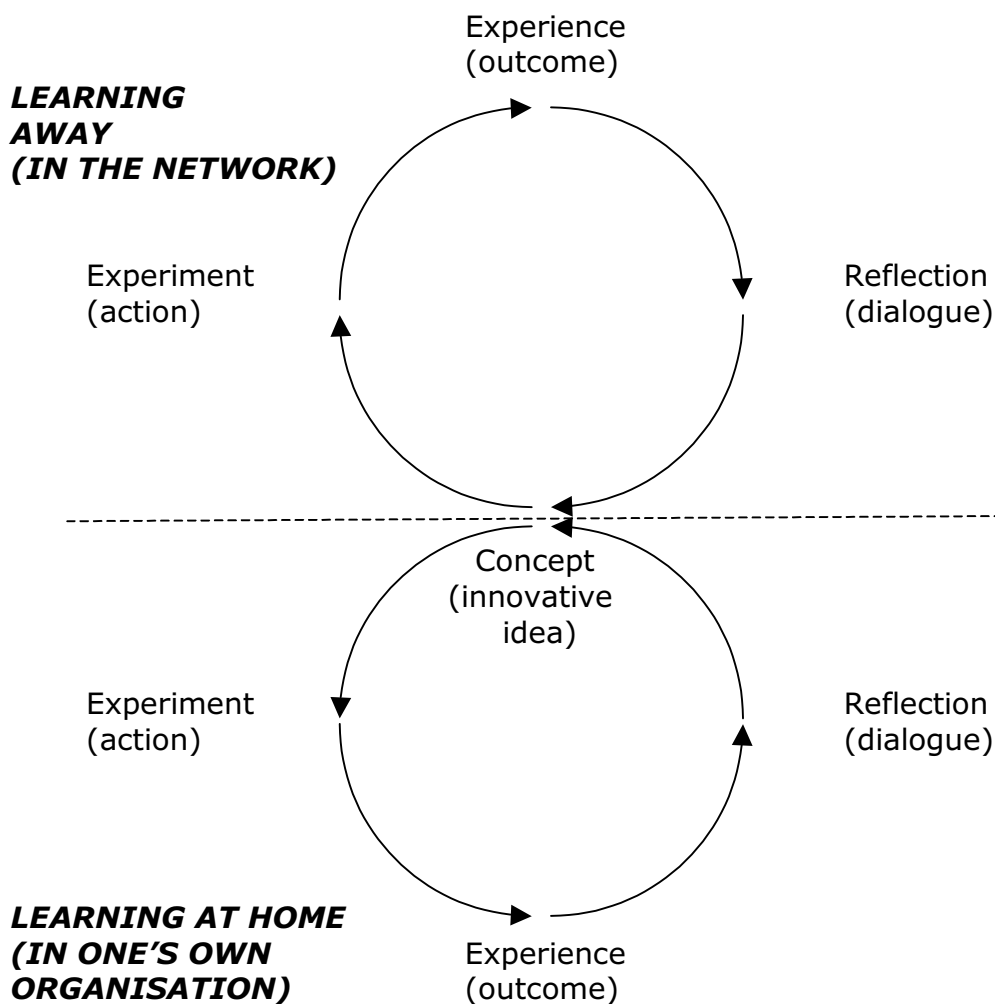
2.4 The dynamics of learning

The title of the current paper denotes that actors in networks can learn both within the network itself (what we term 'learning away') and within their own organisations (what we term 'learning at home'). Participants learn both within their network and from it. This suggests that potential experiential learning processes happen in two distinct arenas. These arenas, however, and the learning processes associated with them are interlinked. The idea and logic of learning networks is that network participants undertake learning activities through interacting with others 'away' within the network and take back new ideas, insights or sources of inspiration to share with others in their 'home organisation'. Conceivably, this could mean contextualising new ideas and trying out an experiment with them. Following reflection on putting such ideas into use at home, participants then take their experiential accounts of the experiment back into the network for further reflection.

A helpful means of conceptualising the two interlinked processes of learning away and learning at home is that of extending Kolb's well-known model of experiential learning (Kolb 1984). In Kolb's model, individual learners engage in '*concrete experience*', for example organizational or network members engage in the practices that gather information from the external environment. For Kolb, concrete experience is followed by *reflective observation* by the individual learner. Reflective observation is followed by *abstract conceptualisation* whereby individuals draw conclusions from experience. Finally, Kolb sees the individual learner as testing out his or her conclusions through *experimentation*; such action serves both to test the interpretation and to generate new information to continue the learning, thus completing a cycle.

If this cycle is seen as operating both at 'home' and 'away', we can arrive at the model set out in figure 6. This is in effect a 'figure of eight' process model which offers a useful means for analysing the dynamics of network development. Clearly, however, there is no guarantee that any network will successfully progress through all stages of both cycles. For whatever reason, network members may refuse to move on to the next stage of the process or be faced with obstacles, say in their home organisation. It may be the case that network learning (Knight, 2002) and individual learning takes place in the upper cycle of the figure but little or no advances are made with regard to the lower cycle. Kolb and others (eg Bessant and Francis, 1999) would argue that full learning can only be deemed to have taken place when all stages of the learning cycle are complete – in the case of learning networks this consists of movement around both cycles in a 'figure of eight'.

The two cycles depicting learning away and learning at home may involve individual learning or collective learning. As shown in figure 5, we believe that the four network types we have identified will in all likelihood vary in the extent to which they feature individual or collective learning, and whether collective learning in the 'home' organisation occurs at the group level or organisational level. Although network learning (ie: learning away in the network) is likely to have both an individual and collective character, our experience with the professional network, for example, was that subsequent learning at home had a very individual character. While this was undoubtedly of benefit to the individuals concerned, direct linkages to organisational performance were difficult to discern.

Figure 6: Home and away - the Innoflex learning process (adapted from Kolb 1984)

Experience
(outcome)

**LEARNING
AWAY
(IN THE NETWORK)**

Experiment
(action)

Reflection
(dialogue)

Concept
(innovative
idea)

Experiment
(action)

Reflection
(dialogue)

**LEARNING AT HOME
(IN ONE'S OWN
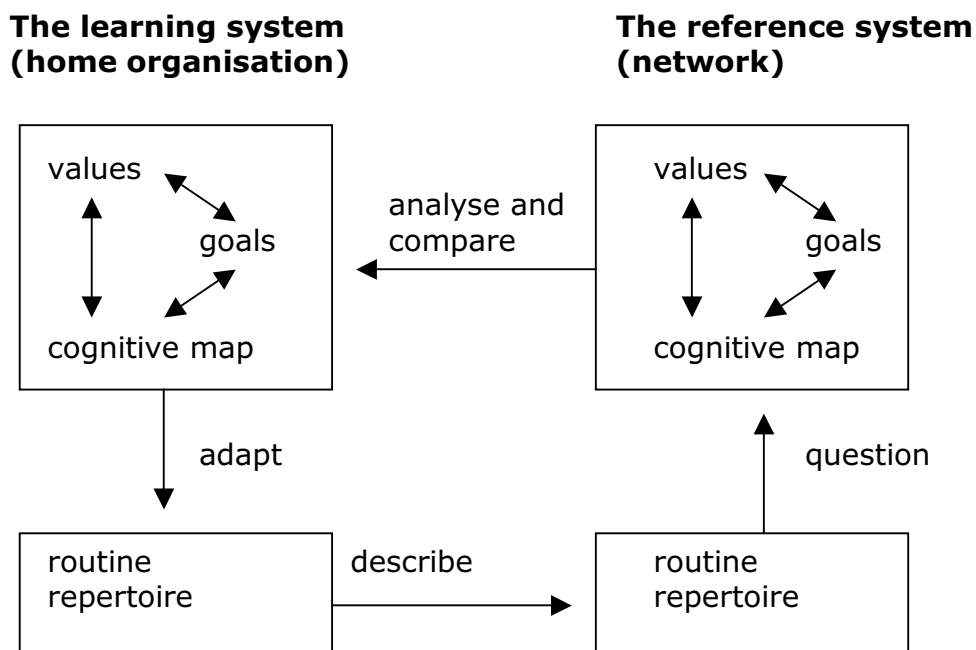ORGANISATION)**

Experience
(outcome)

Network members should be wary, however, of simply identifying what is understood to be 'best practice' from a network and copying it their 'home' organisation as a straightforward benchmarking exercise. This can hardly be a way to attain competitive advantage in the long run, if it is so easily codifiable and replicable. Moreover, and even more significant, as organisational solutions evolve in highly distinct contexts it is unlikely that a blueprint hatched in one organisation will work in another. For this reason it may well be better to talk of the translation of innovations rather than their diffusion, a preference notably advocated in the language of actor network theory (Callon, 1986; Latour, 1987; Law and Hassard, 1999).

The limitations of the simplistic copying of 'best practice' as contained in the notion of benchmarking have been widely recognised. Not least is this evident in the work on 'benchlearning' developed by Karlöf et al (2001). This concept concedes that all organisational ideas as contained in routine repertoires are embedded in a distinct context. Of particular significance in such a context or

learning system are the values, goals and cognitive maps that characterise that system. When looking for inspiration from other organisational contexts or learning systems (what we call learning 'away' and Karlöf et al call 'the reference system'), serious consideration needs to be made of whether the values, goals and cognitive maps of one's own ('home') learning system are congruent with those of the 'away' organisation. Direct diffusion can only be advisable in cases where such congruence exists. The concept of benchlearning is illustrated in figure 7.

Figure 7: Learning at home, learning away and benchlearning
(adapted from Karlöf et al, 2001)

The learning system
(home organisation)

The reference system
(network)

values

goals

cognitive map

analyse and compare

values

goals

cognitive map

adapt

question

routine repertoire

describe

routine repertoire

2.5 The prerequisites of learning

The nature and extent of the learning occurring in a network is naturally dependent on the conditions prevailing in the context of the network and the character of the learning process. Three main aspects of the network context are the character of the network itself, the character of the participants and the character of the knowledge being transferred or generated in the network (Salk & Simonin, 2003)

An important aspect of the character of the network is its raison d'être: why was it formed, by whom and with what formal purpose? Who owns the network? A common form of network in the business world is alliances or coalitions between companies. These usually have formalised contracts stipulating goals, strategies, plans, management routines and each partner's responsibilities, tasks and investments (Håkansson & Johansson, 2001). The development of the partners' capabilities and knowledge development and transfer are often explicit goals for such networks, especially in knowledge-intensive areas under very rapid development such as biotechnology and information and communication technology. These are many examples of networks which are characterised by

the partners' reasonable understanding of the purpose of the network, their mutual dependence and their expected investment of resources in human and social capital as well as financial capital. The human capital may well be defined in terms of numbers of people and their qualifications. The partners have 'bought into' the network.

There are other networks which may be formally regulated, but in which the partners have, to a greater or lesser extent, "been bought into" the network. Considering learning networks, a major class in this category are networks formed by a third party initiative, for example by a government or regional body, with the purpose of developing individuals', companies', sectors' or regions' capabilities. In such cases the networks may well be organised as development programmes in which the body initiating the programme is responsible for the goals, resources and administration of the networks. The participants may vary to a considerable degree in their goals, expectations, experience and commitment (Thång & Wärvik, 2001; Nilsson, 2004). The participants in such learning networks have less influence over the planning, resources and activities in the network.

Networks vary considerably in their cohesion and viability. These factors are dependent on the character of the learning process and the perceived effectiveness, efficiency and efficacy of the network for its partners. If the network is in reality an arena for formal education, then it is less dependent on group cohesion than if it is a forum for joint exchange of experiences and joint problem-solving. In the latter case, it is questionable if learning, at least at the group level, can take place before the basic development process for a functioning group has taken place (Tuckman, 1965). If formal attention is not paid to this process, then there is real risk that the viability of the group will suffer as individuals' commitment may be undermined.

Partners or participants in networks are continually estimating the value they are getting for their investment of time, energy and even money in the network. Their commitment is dependent on the perceived relevance and degree of integration of the network activities with prioritised issues in their home organisation. What legitimacy or sanction does the network have in the participant's home organisation? Are its goals, its working and its performance evaluated in a defensible fashion? Are the culture and norms and the climate of the network conducive to learning? For example, is there a norm of openness and reciprocity so that all members share their experiences and comment constructively on that of others? A learning climate is characterised by openness, risk-taking, readiness for change, social support, management support, trust and tolerance of conflict (Docherty, 1996).

A second important aspect of networks is the character of their participants. Naturally the functioning of the network will depend on the intent or goals of the participants, their personal and organisational agendas, their experience and their commitment. Closely related to experience is the concept of absorptive capacity at the individual and organisational level (Cohen & Levinthal, 1990; Van den Bosch et al., 2003). Cohen and Levinthal define a company's absorptive capacity as its ability to recognise, assimilate new external information and apply it to commercial ends. They regard it as critical to the company's innovative capabilities. It is regarded as being strongly related to prior related knowledge

for both companies and individuals. Depending on the character of the relationships between the parties, for example the degree of trust, and the organisational culture and climate, the partners or participants may evolve different learning strategies emphasising their own as distinct from the network's learning (Larsson et al., 1998). Another variable related to trust is transparency, or the willingness to share information. Larsson et al. examine barriers to inter-organisational learning and point out that there are both motivational and ability barriers as well receptivity and transparency barriers.

Factors concerning the character of the knowledge shared and generated in networks that influence the functioning of the network are its relatedness and value to the needs of the participants, its uniqueness, its complexity, its ambiguity and its tacitness (Salk & Simonin, 2003).

2.6 The outcomes of learning networks

The partners' different agendas will naturally affect the learning that may be achieved at the individual, organisational or network level. Considering the relationships between organisations, it is mainly in the cases of alliances and coalitions that there is a conscious or formal interest in learning at the network level. However, this is not necessarily the case. Companies' learning strategies may be integrative, i.e. optimising learning for all partners, or distributive, some or all partners maximising their own learning, without any interest in others' learning. Larsson et al. (1998)also relate companies' learning strategies , integrative and distributive, in alliances to their level of reciprocity and transparency. Hamel (1991) reports that many networks and strategic alliances may be regarded as learning races in which alliance partners with competitive intent, low transparency, and high receptivity were favoured in the race to learn over partners with collaborative intent, high transparency and low receptivity. This inter-organisational learning dilemma underlines the need for companies to consider both the integrative and distributive dimensions simultaneously. A compromise strategy of medium receptivity and transparency, is the only one that balances the integrative and distributive dimensions and appears to provide stable, moderate learning over time.

Norus (2002) describes how different partners in alliances may change learning strategies when they regard themselves as having reached as having reached a competence level that gives them a new capability. The viability of networks is dependent on the outcomes of the partners' or participants' individual cost-benefit and risk assessments. Third party initiated networks have difficulty in surviving when the third party no longer provides the resources and organisational infrastructure and administrative routines for the networks. Other alliances and networks have difficulty handling the different barriers to inter-organisational learning failures that frequently occur.

3. ANALYSIS OF THE INNOFLEX LEARNING NETWORKS

3.1 Learning content

A close reading of the Innoflex national learning network documents (see the WP4 reports on the Innoflex website www.innoflex.org.uk) reveals real diversity in methods, outcomes and scale of the learning networks. In addition, the goals and the content of the learning networks are not similar on a detailed level. Despite all these differences, we claim that on a somewhat more fundamental level, all learning networks were aimed at one ultimate goal: identifying the conditions for convergence between competitiveness and quality of working life. In other words, as stated before, all of our learning networks were trying to enhance our insights in developing the high road of innovation, in seeking the best of both worlds: added value for the stakeholder/taxpayer and enhanced quality of working life. In figure 8, we summarise some of the characteristics of the Innoflex learning networks.

Figure 8: Learning networks and the content of learning

Network	Topics of dialogue	Exploitation/ exploration	What was learnt: content/process
Denmark: Educational Planning	Development of work organisation	exploration	both: education plans and developing them
France: FICOME	Transition phone technicians to service providers	exploration and some exploitation	both: CRM, Skills management, knowledge management
Italy: Industrial Network	Suppliers relationship system	exploration and some exploitation	both: organisational issues in SCM
Italy: Hospital Network	QWL and co-operation among regional partners	exploration	both: e.g. flexible work contracts and subcontracting as well as participative process methods
Netherlands: Venlo Network	New strategies for value creation	exploration	both: ICT, HRM and organisation in knowledge intensive firms
Netherlands: LN Hospitals	Health & Safety issues	exploration	both: how to reduce absenteeism
Netherlands: LN Assembly	Flexible work in production companies	exploration	both: design and implementation of flexible labour policies
Spain: Health Sector National LN	New forms of work organization	exploration	both: how to change public organisations into private ones
Sweden: West Skaraborg Development Coalition	Patient centred care, new forms of work organisation and QWL	exploration and some exploitation	both: e.g. medicine direct, palliative team concept, how to improve collaboration
UK: East Midlands LN South West LN	Transformation of the workplace and QWL	exploration	both: design and implementation of teamworking, partnership and innovation

In terms of the dichotomy 'exploitation-exploration', most of the learning networks were aimed at exploring the issue of convergence, by exchanging ideas, experience and knowledge from other companies. An example is the Venlo Network (Netherlands) where the entrepreneurial CEOs of ten knowledge intensive firms exchanged ideas on organisational innovation. The network provided a well-organised forum to explore issues of management of change. Most other networks also explored issues of convergence. Some network participants also exploited the results of their learning network within their own

organisations. For instance, the Italian Industrial Network not only explored issues of the supplier relationship system, but also implemented some innovatory ideas such as early involvement of suppliers at an early stage of product development.

All of our learning networks were characterised by learning both on content and on the network process. The learning of content was predominant in all of the learning networks. The Danish network was originated to assess educational planning and the identification of important aspects within this field (e.g. the typology of qualifications, technical, personal and general qualifications). However, the 'how-to-question' was even more important. The process of developing the right qualifications for employees by using the dialogue game was quite an experience for the participating medium-sized companies, making them aware of their learning potential and the areas where there is a need for further qualification.

The Innoflex learning networks have also developed company specific knowledge. Decisions to change the work organisation, or on the contrary, not to adopt an organisational innovation were made on the basis of their participants learning 'away'. An example of the latter is the Dutch Assembly Learning Network, where one company decided not to develop an external labour pool based on the mixed experiences discussed at one of the network meetings. Still, at the same time, all the networks discovered how network learning takes place, or not. In the Danish network, the companies learned in the series of nine workshops how to work together; they learned to spend more time for preparation and in the case of future events to focus more on dialogue processes in connection with group development.

3.2 The Innoflex network types

In chapter 2 we developed a typology of four network types: strategic networks, learning networks, transformation networks and professional networks. Figure 9 shows how our networks fit within this scheme. From this table we can see that the majority of the Innoflex networks fall into the "learning network" category: learning through sharing ideas and experiences. In most cases formal input is provided by researchers or other experts, though in some cases it is just learning from each other by sharing experiences by the participants.

The Innoflex learning network reports confirm that some networks suffered from the sporadic participation of members. Learning networks must offer something special (i.e. knowledge, ideas and experiences of colleagues from other companies on one shared subject). If this 'offer' is not special enough it generates little commitment from members. The two Dutch learning networks illustrate this mechanism perfectly. The hospital network was composed of one occupational profession: health & safety officers. They were not dependent on each other, shared no common problems and therefore were not committed to the network. This network therefore, could be described as a professional network. The other learning network (Assembly) consisted of more diverse participants (line managers and HR managers) and were strictly focused on the

Figure 9. A typology of the Innoflex networks

Network type	Innoflex network	Aim/ purpose	Motive	Co-ordination	Mutual dependency	Network ownership	Resources
Strategic networks	Italy: Industrial Network	Maintain competitive	Economic	Trust between suppliers and focal firm	High	None but centred around the focal firm	From within and some external funds
Learning networks	Italy: Hospital Network	Learning through exchanges of experience	New sources of innovative inspiration	Researcher/ consultant as facilitator	Low	Network participants and researchers together	External support, especially SMEs. Some professional expertise.
	Netherlands: LN Assembly	Learning through exchanges of experience	New sources of innovative inspiration	Researcher and consultant as facilitator	Low	Network participants and researchers together	External support
	Denmark: Educational Planning	Learning through exchanges of experience and formal input	New sources of innovative ideas on educational planning	Researcher and consultant as facilitator	Low	Network participants and researchers together	External support
	France: FICOME	Learning through exchanges of experience and formal input	Transformation into service provider is needed	Researcher and consultant as facilitator	Low	Researchers	External support
	Spain: Health Sector Network	Learning through exchanges of experience and formal input	New forms of work organisation in hospitals	Researcher and consultant as facilitator	Low	Researchers	External support
	UK: East Midlands and South West Network	Learning through exchanges of experience and formal input	Developing resource to change	Researcher and consultant as facilitator	Low	Network participants and researchers together	External support
	Netherlands: Venlo Network	Learning through exchanges of experience and formal input	Economic: value creation	Researcher and consultant as facilitator	Low	Joint ownership university and chamber of commerce	From within and external support
Transform- ational networks	Sweden: West Skaraborg Development Coalition	Collaborative trans- organisational development	Integrated change	Researcher/ consultant as light-touch facilitator	Medium to high	Sponsoring organis- ations	From within and external support
Professional networks	Netherlands: LN Hospitals	Keeping abreast with latest developments in the field	Personal develop- ment	Normative isomorphism	Low	Network participants and researchers together	External support and contacts with professional bodies

subject of labour flexibility. They all experienced problems in managing the right mix of flexible labour strategies and were eager to learn from each other how to deal with it. The combination of these two networks leads towards the following conclusion: *learning networks need one shared focus and many different perspectives*.

The Italian industrial network can be characterised as a strategic type, because the focal firm here is developing with its suppliers new forms of collaboration. That is transformational by nature, although it is led by the researchers. Learning is not the primary objective, the network is oriented at changing the relationships between the firms into a more efficient supply chain, in other words: reducing transaction costs. The interdependency between the participants of this kind of networks is higher compared to the other types. In this case they are contractually bounded.

The Swedish learning networks could be viewed as transformational types. They were all part of the development coalition around the Lidköping Hospital in the district of West Skaraborg. Each network had one particular subject/problem and consisted of participants focused on this problem, from diverse professional categories in health care. They were oriented at solving their specified problem, and proposed new working methods to deal with that problem. Here the transformation of a shared problem owned by the participants was the objective. Like the strategic network, the interdependencies between the participants were medium to high. For example, the Örjan Project (the largest Swedish network with 12-17 participants) is oriented at mapping out the patient pathways for older patients, providing one-stop care. Various care providers are working together to develop more patient-centred processes. Examples are the experiments on 'Medicine Direct' and 'One Stop Care' in which organisational boundary-crossing is proposed to provide more effective care through reducing task duplication. At the same time this leads towards reduced workloads for health care employees: a fine example of convergence.

3.3 The Innoflex network characteristics and learning processes

This section explores the relationships between the network characteristics and the outcomes in terms of learning processes, both 'home' and 'away'. This is a difficult area, because of the diversity of the networks and because the networks were not driven by the sole research objective of learning how to learn in networks. Instead, all the networks had their own objectives of organisational change and convergence between QWL and competitiveness, reflecting the different needs of their constituent members. Innoflex partners expended considerable effort to ensure that the style and content of the networks reflected local demand and conditions. Participants therefore came with their own agendas and shaped the learning network process.

Most of the learning networks were rather focused on a specific aspect of convergence of competitiveness and QWL, reflecting the backgrounds of the participants. Most network participants had similar goals and interests, some shared also their values, but the vast majority had different competences and roles and positions in their 'home' organisations. This points again to the

importance of the issue of a clear focus on a shared issue, which may be combined with a diversity of competences, roles and positions.

The networks used a whole range of different methods. All networks used expert input. The Dutch Venlo network, the French FICOME network and the UK Networks are good examples of bringing in experts on specific issues and thus bringing in new knowledge into the network. The Venlo network was more or less a school setting, including a teacher, homework and participant presentations. For specific reasons expert input can be very fruitful in learning networks. Experts may be used as a wake-up call. A good example is the UK learning networks which started with the expert presentation of the future in 2020 (8 billion people in the world, 2 billion graduates of which only half in the western industrial world). However, experts may not be enough to bring about effective learning and reflection. Other mechanisms should be added. Our networks showed that a diversity of activities like study visits to the participating organisations, workshops, focus groups, photo safaris, role plays, are necessary for learning.

A special note is needed to the use of web sites. Some of our learning networks used a website (UK networks, Spanish health care network, Italian hospital network). In particular the Spanish health care network used a web site for communication and discussion. A specific reason for this was the large amount of participants in the network (60 participants, of which 5 hospitals were the core group, with 5 other hospitals in a second circle and 50 hospitals within the outer circle. In addition the possibility of meeting on a frequent basis in a big country like Spain is limited, due to travel time. Even in smaller countries like the Netherlands the travel time to the network meeting location is an important issue for attendance. The evaluation of the web tool in the Spanish learning network is not unambiguously positive. The web site has been very useful for disseminating information about the project (being part of the web site of the Ministry of Labour and Social Issues, it reached a high hit rate of more than 125.000 visitors per month!), but it has not been a powerful tool for enhancing discussion on specific topics. Therefore, the use of websites do not automatically lead to reflection and learning within learning networks.

Most of the networks reached the developmental stage of performing. At least they reached the level of getting down to effective work within the network. That means that the participants of these networks were learning how to deal with each other within the network, the 'forming', 'storming' and 'norming' stages were successfully accomplished. All agreed that a key outcomes involved learning more about how the network should be run and sustained. Only the Dutch hospital network did not reach this stage, although here also the learning for the organisers was significant But learning does not come cheaply: it is sometimes painful, and failures must be seen as an important part of the process. One reservation must be expressed concerning network development and outcomes: some networks existed only one year, perhaps not sufficient time to reach the 'performing' stage. Some Innoflex researchers reported in their evaluations on network development and outcomes that it was "too early to say".

Figure 10: Innoflex network characteristics

Network type	Innoflex network	Aim/ purpose	Number of participants and frequency of meetings	Participant backgrounds	Network methods	Network development	Outcomes
Strategic networks	Italy: Industrial Network	Supplier relationship system	7 participants, once every 1-3 months	similar goals/values, different interests, competences and roles	experts, study visits, organisational models	performing (a)	changed individual thinking, network learning
Learning networks	Italy: Hospital Network	Learning through exchanges of experience	6 participants, once every 3-6 months	similar goals/values, different interests, competences and roles	experts, workshops, search conference, website	performing (a)	changed individual thinking, changed collective thinking and routines 'home', network learning
	Netherlands: LN Assembly	Learning on labour flexibility	around 25 participants, once every 6 months	similar goals/interests, different competences and roles	experts, study visits, workshops	performing (a), (b)	changed individual thinking, changed collective thinking and routines 'home', network learning
	Denmark: Educational Planning	Learning on educational planning	8 participants, once every 2 months	similar goals, different competences and roles	experts, games, study visits	performing (a), (b), (c)	changed individual thinking 'away' and 'home', changed collective routines 'home', network learning
	France: FICOME	Learning on transformation into service provider	15 participants, once every 1-3 months	similar interests and roles, different goals/values/ competences	experts, organisational models, questionnaires	performing (a), (b), (c) and adjourning	changed individual thinking 'away' and 'home', changed collective thinking and routines 'home', network learning

	Spain: Health Sector Network	Learning on new forms of work organisation in hospitals	35 participants, 2 meetings, virtual network	similar goals/ interests/ competences/ roles, different values	experts, study visits, website	performing (a)	changed collective thinking and routines 'home', network learning
	UK: East Midlands Network and South West Network	Learning on how to change	11 and 10 participants	similar goals/values/ interests, different competences and roles (all senior)	experts, study visits, organisational models, website	performing (a)	changed individual attitudes/thinking 'home', changed collective thinking 'home', network learning
	Netherlands: Venlo Network	Learning on value creation	12 participants	similar goals/values/ interests, different competences and roles (all senior)	experts, school setting, organisational models	performing (a), (b), (c), (d)	changed individual thinking 'away' and 'home', changed collective thinking and routines 'home', network learning
Transformational networks	Sweden: West Skaraborg Development Coalition	Collaborative trans-organisational development	8 learning networks with 3,6,7,4, 6,12-17,6 participants, meeting once a month	different for each learning network	study visits, focus groups, dialogue group	performing (a), (b), (c), (d), some adjourning	too early to say but: changed individual thinking, network learning
Professional networks	Netherlands: LN Hospitals	Keeping abreast with latest developments in the field	5-8 participants	similar competences/ roles, different goals/values/ interests	experts, study visits	storming	changed individual thinking

Note: Network Development was asked to be assessed by the well-known Tuckman (1965) group development stages 'forming', 'storming', 'norming', 'performing' and 'adjourning'. Performing was categorised and tuned to our learning networks as follows:
a) getting down to effective work in the network
b) taking lessons/insights from the network back to the home organisation and trying them out
c) reflecting on b)
d) taking such reflections back into the network.
The full process of performing (a-d) can be seen as equivalent to the completion of the home and away 'figure-of-eight' learning process illustrated in figure 6.

The majority of the networks demonstrate changed individual thinking, both 'away' and 'home'. Some networks even reported changed collective thinking and changed collective routines at home. In these cases (Italian hospital network, Dutch assembly network and Venlo network, Danish educational planning network, France FICOME, Spanish health sector and both UK networks) the two Kolb circles are linked together: the participants learned 'away' within the network, reflected on it, brought into their home organisation new concepts, experimented with them and experienced the outcomes. Sometimes the individual reflection on these issues was not made in the home organisation but took place in the network itself (away). For instance, the entrepreneurs of the Venlo Network, experimented in their home organisations with new strategic changes. They used the network meetings for their own individual reflection on these changes, by discussing these issues with colleague-entrepreneurs and experts of the network.

It is not scientifically sound to relate our network outcomes to network characteristics, but we are able to generate some working propositions. One is that the frequency of the meetings and the amount of time spent together is related to network development and network learning. Another one is the diversity of activities: the more the activities are adapted to the needs of the participants, the more sensible it is that learning (both individual and collective, away and home) could take place. A third one is the diversity of backgrounds that is needed for learning together with a clear and shared focus on the problem/issue.
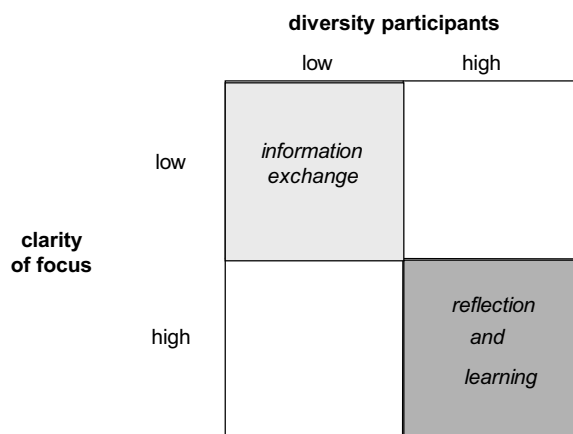

3.5 Some concluding remarks

The world of work is fascinatingly diverse across Europe, across sectors and across organisations. Our learning networks reflect the diversity of this world. Is it true to conclude that there are many paths to the high road of innovation? At the very least we may conclude that learning networks are culturally embedded. Learning takes place (both home and away) in the cultural context of the organisation and within culturally grounded approaches to learning, and the role of managers, employees consultants and government. Likewise the cultural and political context shapes the form and process of learning networks.

To illustrate the cultural flavour of our learning networks a short tour d'horizon is outlined here. We recognise within the Swedish learning networks the typical Swedish all-actors inclusive approach, similar to the concepts of democratic dialogue (Gustavsen, 1992). The Danish network emphasize the creativity and democratic processes within their photo safaris, job swaps and dialogue games. The French network reflects the well organised multi-level approach: the national centralised level is very important, but the diffusion on sectoral level is not forgotten. The Dutch learning networks reflect a down-to-earth approach, with a lot of emphasis on the participating companies, building consensus between employers and employees, and without much interference by the state. In Italy, the rich regional industrial district heritage is reflected in the Italian network approach. In Spain, we see a rather big network, a bit centralised and nurtured by the big institutes. The UK learning networks were built on close relationships between senior managers and researchers, where some typical British issues

were discussed like participation of employees within a more or less antagonistic system of industrial relations. The downside of the diversity of learning networks is the lack of usefulness of the learning network as sound methodology for answering specific research questions.

There are good reasons for this. Learning network participants are thoughtful actors. The networks must involve a high degree of ownership by the practitioners who inevitably have their own agendas. They may or may not coincide with those of the researchers. For instance the Dutch hospital learning network suffered from the different agendas and expectations of the practitioners and researchers. Learning networks are difficult to plan. That is an inherent feature of action research methods in general. All Mintzberg's concepts of intended, realised, unrealised and emergent strategies could be found in our networks. Therefore, network learning is not a linear process.

Figure 11: Key success factors for inter-organisational learning in networks

diversity participants

	low	high
low	*information exchange*	
high		*reflection and learning*

(left axis label: **clarity of focus**)

Learning networks do not learn per se. Reflecting, learning, and discussing norms and standards are not easy things to do. From our collective experience in Innoflex we may conclude that a learning network, in order to be a *learning* network, needs to have a clear and shared focus on a particular problem, shared by the participants. It is the shared problem which provides the commitment to the network. At the same time, a diversity of participants is needed. The different perspectives from different participants around one shared issue creates the right foundation for learning and reflection. Otherwise, a network becomes little more than a vehicle for exchanging information. The distinction between learning networks and information exchange and the key roles of clarity of focus and participant (perspective) diversity is illustrated in Figure 11.

In addition, learning networks need a diversity of activities, such as expert input, workshops, study visits, roleplays, focus groups and web sites. The different methods should be carefully tuned to the learning network characteristics such as the number of participants, frequency of meetings, travelling time, learning needs and backgrounds of members.

4. CONCLUSIONS

To summarise, the Innoflex analysis seeks to:
a) Avoid prescription.
b) Allow for change processes to be explored in ways which recognise the complex and untidy path which change may take.
c) Move beyond a list of 'key learning points' and offer opportunities for deeper analysis and exploration of the dilemmas and choices posed during the change process.
d) Facilitate a more integrated analysis of overlapping themes and issues.
e) Allow for the inclusion of external influences upon change processes.

Many change recipes suggest that transformation occurs through a rational and incremental process. Lewin's classic analysis that organisational transformation occurs through linear 'freezing-unfreezing-refreezing' processes has provided the theoretical basis for many contemporary change agendas (Lewin, 1951). However we have stressed that the actual practice of change is far from tidy; rapidly changing markets, technologies and labour market expectations have rendered the logic of rational-incremental change redundant – even assuming their practical relevance in the first place.

While the logic of 'best practice' is pervasive, the supposition that there are definitive ways of organising – even for specific types of organisation - remains problematic. This is also inconsistent with the many observations that innovation and creativity are the key to sustainable competitive advantage, whereas 'best practice' largely relies on mimicking the innovative practices of others. We stress that workplace innovation cannot be defined in terms of the identification and implementation of a series of blueprints to change discrete aspects of an organisation. Although the traditional way to accomplish change is through the application of generalised concepts to specific problems according to a predetermined set of rules, it is now increasingly argued that this approach has emerged as a roadblock rather than a motor for change in organisations. Rather it is important to understand the complex learning paths which characterise change in real situations.

Case study data provides useful rich description, but its translation into 'key lessons' has been notoriously difficult. Part of the reason for this lies in a replication of the 'one best way' logic, whereby analysts have attempted to make *universal* generalisations, which simply cannot be supported empirically. Even those check lists, or 'key learning points' which make no claim to universality, have often failed to offer much more than a list of organisational truisms – useful, but failing to go beyond managerial commonsense.

Of course this analysis has made the task of the Innoflex partners much harder, making it impossible to justify the production of a 'best practice guide to change' as a project output however robust or convincing the evidence base on which we could draw. The Innoflex analysis is grounded in an implicit criticism of a-contextual approaches and argues for a greater focus on the internal and external contexts that drive, inform and constrain change. It challenges the common perception of change within management texts as rational and incremental, and thereby conducive to the use of normative change models.

Instead change is a dynamic and uncertain process that emerges through the interplay of many factors.

Innoflex necessarily reflects the essential messiness of organisational innovation – a journey through an unpredictable landscape in which experimentation, trial and error, and uncertainty are unavoidable features. National perspectives and experiences within the project demonstrate the wide diversity of circumstances and conditions that exist both in different parts of Europe and in different sectors. Innoflex, through its conceptual approach and through its experiences of practical intervention, represents an attempt to translate this European diversity into a legible learning resource, providing a framework in which actors can interrogate different bodies of knowledge and experience as stimuli to innovation.

Innoflex places great emphasis on shared learning and exchange of experience between actors from different organisations. In their varied ways, inter-organisational activities within Innoflex have demonstrated that actionable knowledge is created through interaction both between practitioners and between practitioners and researchers. Yet there is no straight-line, sequential relationship between knowledge creation, learning and workplace change. In many respects the project reveals how *little* we know about these relationships and has done more to define questions than to provide answers. We conclude from this that renewed research attention is required on sectors, networks and spatial clusters of interrelated activity to explain how firms learn from and contribute to the *cognitive arenas* in which they associate. In particular, longitudinal research focusing on the firm and its external environment is required to examine the interaction and interdependence of knowledge creation, learning and workplace change over time, helping to identify the conditions for sustainable change and the avoidance of innovation decay.

The findings of the project also send clear messages to policy makers, business support organisations and social partners. Innoflex points to the possibility of strongly reciprocal relationships between individual organisations and their external contexts. However such reciprocity rarely happens spontaneously. There are also too few spaces in which companies can come together to share experiences and identify common needs. Business support organisations typically focus on individual casework, missing the need to resource and sustain change through shared learning and peer exchange. Reciprocal relationships typically need to be animated and mediated by intermediate structures and institutions, even where culturally defined patterns of activity are predisposed towards networking and collective action (see Ennals and Gustavsen, 1999). Employer learning networks are thus relatively rare in many parts of the EU and there is a need for measures, especially at regional level, to animate and support exchanges of knowledge and experience over extended periods. Public policy intervention has a key role to play in building such capacity.

Public intervention needs to work at different levels: change in the individual workplace, inter-company learning and the enhancement of infrastructure at EU/national level. A focused programme would therefore help to shorten 'the long tail' not just through intervention in individual workplaces but by building a more effective networked learning environment.

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