

FINAL REPORT



Innovative firm's performances and internal/external workforce flexibility and personal/social consequences

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EXECUTIVE SUMMARY

1.1 Background

Innoflex grew from an existing Consortium of partners originally created in 1995 to provide the then DGV of the European Commission with A Medium Term Plan for Collaborative Action for the development and dissemination of new forms of work organisation. Subsequent support from DGV enabled the Consortium to develop a deeper analysis of the nature of new forms of work organisation, their implications for European competitiveness and social cohesion, and the obstacles to wider dissemination.

The Consortium's findings (European Work and Technology Consortium, 1997) focused on the concept of a 'high road' of workplace innovation, one which began with the premise that Europe's potential advantage in world markets lay with the ability to do things differently, in ways not easily imitated by competitors. This means the ability continually to re-invent products and services, always keeping one step ahead. However traditional ways of managing enterprises, and traditional ways of organising work, cannot deliver such innovation and versatility. Successful enterprises in the volatile conditions of the 21st Century are those able to develop and harness the knowledge and ideas of employees throughout the organisation as a resource for innovation.

Work organisation is critical to this task. The work environment needs to provide all employees with opportunities to undertake a broad range of rewarding tasks, to be engaged in reflection and innovation, and to be part of a cumulative and collective process of learning. Quality of working life thus becomes a real competitive asset, not just allowing enterprises to recruit and retain labour, but enabling them fully to harness and develop the talent within their workforce. This stands in sharp distinction to 'low road' approaches to work organisation with their predominant focus on cost control and performance measurement, typically at the expense of the organisational 'slack' needed to inspire creativity and innovation.

Reaching the high road is not, however, an easy task. Despite research evidence¹ that new forms of work organisation can lead to tangible gains in performance, enterprises have been reluctant to abandon traditional ways of working for a wide spectrum of reasons including lack of awareness, poor access to evidence-based methods, limited skills and organisational awareness. As the Consortium argued, there is real cause for concern about the increasing gap between leading-edge practice and common practice in European workplaces.

Innoflex grew directly from this concern, and in particular from a desire to gain a better understanding of the conditions within which high-road approaches could be fostered. An understanding of these conditions would have implications not just for

¹ Much of this evidence has been generated by EU-supported research: see for example www.hi-res.org.uk.

individual enterprises but for those organisations that determine the wider context in which companies operate, learn and develop – for example social partners, policy makers, business support agencies and universities. Critically Innoflex centred on the proposition that the high road could achieve a positive balance between economic and social outcomes – in particular that enhanced competitiveness could be achieved through improvements in quality of working life. In short, the task is to reunite customer satisfaction and job satisfaction.

The overarching objective of the project was therefore to identify the conditions under which convergence can be achieved between 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.

During the life of the project, the significance of inter -organisational learning as a means of stimulating and resourcing the development of new forms of work organisation became increasingly prominent. By the second year of Innoflex the design, initiation, management and evaluation of networks to promote inter -organisational learning had become the major focus of project activity for most partners, testing their effectiveness in addressing the obstacles to workplace innovation identified by the preceding research review. Lessons and outcomes from these networks provide key lessons for actors at European, national and regional levels.

1.2 Project methodology and activity

The project design was based on nine Workpackages (WPs):

Table 1: Summary of Workpackages

| Workpackage | Task |
|-------------|---|
| WP1 | To assess the current state of knowledge on the relationship between new forms of work organisation and quality of working life. |
| WP2 | To test the WP1 outcomes with a transnational focus group of companies from each participating Member State. |
| WP3 | To identify the scope and validity of empirical evidence on relationships between competitiveness, quality of working life and new forms of work organisation by testing the evidence gained from Workpackages 1 & 2 through intensive dialogue involving management, trade union and employee representatives. |
| WP4 | To build an action-research approach to modelling the potential convergence between competitiveness and quality of working life in the design and implementation of new forms of work organisation. This will include the creation of learning networks for enterprises, social |

| | |
|-----|---|
| | partners and researchers in each country. Trade union representatives will be included where appropriate: otherwise suitable employee representation will be sought. Participating companies will also receive intensive mentoring support to identify options for change, to support the change process and to provide opportunities for reflexivity and continuous learning. Mentors will also undertake studies of change in each company over the time of its involvement in the project. |
| WP5 | To develop tools to disseminate the results of WP 1 - WP 4 at the European level, including a web -based resource. |
| WP6 | To undertake an initial analysis of results from WP 3, 4 and 5. |
| WP7 | To review and appraise the consortium findings through the organisation of focus groups in each country. |
| WP8 | To prepare and disseminate at least five brief and accessible issue papers (including case studies, tools and other materials) designed to provide a practical resource for companies, social partners and consultants. |
| WP9 | <ul style="list-style-type: none"> • To ensure that the Commission is kept informed of progress during the life of the project. • To provide a clear account of project activities and findings at the conclusion of the project. • To propose guidelines to the European Commission. • To propose guidelines to decision makers in public policy and social partner organisations. |

The implementation and outcomes from these Workpackages are described below:

WP1

During the first six months of the project WP1 focussed on the interrogation of a wide range literature and research by partners in each country. This was reflected in the production of national 'position papers', most of which were presented at the first project meeting in Sevilla during October 2000 and were subsequently revisited in Barcelona at the April 2001 meeting.

It was disappointing that not all partners were able to produce position papers in time for the Sevilla meeting. There were several reasons for this, notably uncertainty about when the Commission would issue contracts, making it difficult to plan research staff workloads. In addition more than one partner experienced difficulties because of employee turnover and the need to induct new research staff into Innoflex.

Nonetheless sufficient papers were available at Sevilla both to identify the broad scope and content of WP1 and to stimulate high -quality dialogue between partners. This demonstrated that all partners had undertaken sound preparation, at the same

time reflecting the benefits of the pre-project orientation meeting held in Nottingham during April 2000.

These position papers fulfil a number of functions:

- They provide a map of the knowledge base which informs the understanding and practice of each institution in relation to work organisation. This strengthens the partnership by enhancing awareness of diversity in culturally-situated practice between different European Member States.
- They also provided partners with an opportunity for critical reflection, identifying weaknesses and gaps in the knowledge base as well as areas of strengths which could make an important contribution to Innoflex.
- Conceptual frameworks and knowledge articulated within the papers provide a significant amount of the raw material for achieving key Innoflex objectives, including the mapping of emerging trends in thinking and practice (project objectives A, B & C) and the theoretical evidence for a convergence between enhanced organisational performance and quality of working life (project objectives D & E).

The considerable diversity in style and content of the papers is not accidental. Given the exploratory nature of Innoflex (especially at its earliest stages) partners were correctly insistent on high levels of discretion in the selection of source material and in the formulation of arguments. In short it would have been inappropriate to define a rigid analytical framework at the beginning of WP1 since this would have run the risk of excluding divergent perspectives and experiences.

At the project meeting in Sevilla the (often contentious) discussion of the papers was underpinned by the premise of 'European diversity as a learning resource' (European Work and Technology Consortium, 1997). An overview of the different presentations highlighted the gap between the 'High Road of Innovation' as an inclusive European paradigm of work organisation and the wide variations in the manifestation of that paradigm which exist in different economic and cultural contexts. Is it even possible to build a common analysis of work organisation and quality of working life covering contexts as diverse as Italian industrial districts on the one hand and Scandinavian 'built-to-last' companies on the other?

The concept of 'local theory' articulated by the Swedish partners sees learning by those involved in organisational change not as the unproblematic diffusion of uncontested objective knowledge, but focuses on how such knowledge is attributed with meaning, contextualised locally and translated into everyday practice through social interaction (Huzzard, T., 2000). However the rationale of Innoflex points not simply to the mediation of the 'High Road' by the specific economic and cultural contexts in which it exists, but to a rather more discursive relationship in which the paradigm is itself continuously reformulated by academic and experiential comparison between diverse models of practice.

This discourse itself is multi-voiced, including interaction in and between employer, social partner, public policy and research communities. With its focus on Dialogue Conferences and Learning Networks, Innoflex explored the nature of this interaction in both conceptual and practical terms. WP1 began to lay valuable foundations for this subsequent challenge during its first six months.

The papers also opened a discussion at Sevilla on the nature of the projected convergence between competitiveness and quality of working life. Innoflex, it was concluded, represents a significant move beyond the QWL programmes of the 1960s and 70s 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 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.

Traditional ways of organising workplaces and traditional styles of management cannot achieve this vision of commitment, agility and adaptability. The High Road in contrast embeds working life firmly within the conditions required for innovation and competitiveness. In this conception 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 which foster learning and innovation. However it is clear that the traditional 'quality of working life' vocabulary is inadequate to embrace this projected convergence between innovation-based competitiveness and new employee aspirations.

Moreover the position papers reveal just how difficult it is for organisations to change their structure and culture. There are no easy recipes, no "one best way". Each organisation has to embark on its own process of learning, experimentation and reflection. A key problem for Europe however appears to be the increasing gap between leading-edge practice and common practice in work organisation, resulting in a 'long tail' of enterprises with inadequate access to understanding or knowledge. Constraints to the modernisation of work organisation can be summarised in the following terms:

- Limited awareness of the nature of emerging approaches to work organisation and their benefits in terms of adaptability, innovation and competitiveness. Lack of awareness is especially acute amongst SMEs. Evidence of benefits is fragmented and hard to access. Business support

organisations in many parts of Europe currently lack this expertise and knowledge.

- Poor access to evidence-based approaches to change. There is a bewildering variety of 'products' available in the form of off-the-shelf cookbooks and consultants' services, but managers complain that it is difficult to access hard evidence of successful approaches or to gain a dispassionate analysis of different approaches to change. 'Innovation decay' is often the consequence of poor preparation and/or the uncritical adoption of a formulaic approach to change without sufficient workforce involvement, dialogue, experimentation and organisational learning.
- The distance between research and practice exacerbates the knowledge gap. Academic knowledge can offer real insight into the lessons from leading edge practice, as well as an understanding of critical success factors involved in sustainable change. But much of this knowledge does not get translated into tools usable by those in the frontline of change, whether managers, employees or trade unionists.
- Many European managers and employees experience too few opportunities for shared learning with their peers in other organisations. Business support organisations and consultants typically operate on a 'casework' basis, treating each client separately. However there is considerable evidence that sustained peer exchange of experience can play a key role in promoting, resourcing and sustaining organisational innovation and learning.

These constraints pose a key challenge for Innoflex: the creation of a learning environment for employers and workforces which enables them to identify opportunities for the 'win-win' modernisation of work organisation. This is the focus of the project's subsequent Workpackages.

During the overall analysis and integration of WP1 findings, attention was drawn to three principal dimensions of this challenge:

1. The critical role of team-based approaches to work organisation in securing convergence between competitiveness and quality of working life. Research suggests that teams can provide a vehicle for combining different perspectives in solving problems and that they can facilitate a fluency of idea generation and flexibility of problem-solving. Such a view has been reinforced by experiences gained by researchers and company representatives during Innoflex learning visits to innovative companies committed to improved performance through the development of human resources (WP2). This is illustrated by the case studies of Ericsson Radio Systems AB in Gävle (Sweden) and East Midlands Electricity (UK), summaries of which can be found on the Innoflex website (www.innoflex.org.uk).

2. If the key to competitiveness is staying ahead of the game rather than merely mimicking others' innovations, organisations need new tools and approaches to stimulate creative thinking and challenge current orthodoxies. A number of emerging approaches aim to stimulate organisational creativity. Arts bodies for example have developed commercial activities including role play, forum theatre, artists-in-residence, corporate art collections and lively arts where employees collectively make an art work or put on a musical or dramatic performance (see www.aandb.org.uk/html/cf/artswork.html). Successful workplace innovation is also about creating hybrids, drawing widely on examples of leading-edge practice but testing and customising them through dialogue both inside and outside the organisation. Effective learning can be enhanced by peer-focussed dialogue enabling experiences to be questioned, compared, synthesised, adapted and improved upon. In ter-company learning networks are often a key resource in helping managers and employees develop their own solutions.
3. There is an increasing distance between leading -edge practice and common practice in European enterprises. Despite increasingly well-documented advantages the spread of new approaches to work organisation and culture remains surprisingly limited. The role of public intervention is to create an environment abundant in learning resources, providing the knowledge base required to stimulate innovation by companies and their employees, creating collective solutions to common problems. This is a challenge for Europe as a whole.

A small editorial group² was established at Sevilla to take responsibility for WP1 deliverables, involving two principal strands of activity:

- Firstly the editorial group produced recommendations for revisions to each position paper. All the amended papers were placed on the public part of the website as reference material and 'work in progress'. Partners also used the papers to inform other Innoflex activities within their own countries. The revised position papers constitute an important deliverable in their own right, meeting the essential requirements for WP1 laid down in the original bid, and which continued to inform subsequent Workpackages.
1. The editorial group condensed key messages from the position papers into a 60 page overview, including discussion of the social and economic significance of convergence between competitiveness and QWL together with its scientific rationale. This paper, written for a broad readership, was used to inform the subsequent learning network activities (WP4) in each country. A draft version of the paper was placed on the website early in 2002, and after several revisions it is currently being printed for publication as an Innoflex Research Report (Huzzard, T., den Hertog, F., Hague, J. & Totterdill, P., 2003). *Better to be Rich and Healthy than Poor and Sick* is published on the

² den Hertog, MERIT; Huzzard, NIWL.DOTT; Hague & Totterdill, UTNOTT

Innoflex website and in hard copy. To promote wider dissemination a version of the paper was presented at the 17th Annual Employment Research Unit Conference at Cardiff Business School on 12th -13th September 2002 (Huzzard, T., den Hertog, F., Hague, J., 2002) .

In addition the actions described above have led to a published research report capable of wider dissemination than originally anticipated. Although this meant the extension of activity within WP1 beyond the original target date (month 7), partners considered that this was justified by the enhanced scope of the resulting deliverables.

WP2

The Objective of WP2 was "to test the WP1 outcomes with a transnational focus group of companies from each participating Member State". It was originally envisaged that the objective would be fulfilled by a series of bilateral exchanges between partners, but discussion at the Sevilla meeting led to a more focussed approach which also gave scope for greater methodological innovation. In consequence WP2 commenced later than specified in Annex 1 and took place over a longer period. In part this reflected the extended nature of the activity, which also enabled greater integration with outputs from WP1.

Innoflex was particularly focussed on inter-organisational learning as a means of overcoming constraints to the modernisation of the workplace. Discussions at both the Sevilla and Barcelona meetings emphasised the need for adequate conceptualisation of how companies actually draw on each others' experiences to stimulate organisational innovation, rejecting simplistic models of 'transferring best practice'. Partners recognised that WP2 (transnational exchanges between companies), WP3 (national dialogue conferences) and WP4 (learning networks) provided important opportunities for experimentation in approaches to inter-company learning, leading to a refined understanding of how knowledge is gathered and used to support change. At the same time this process of experimentation can draw on a wide range of experience within some partner organisations. Berlov (NIWL.DWOT), for example, presented a paper on the Swedish experience of Dialogue Conferences (Berlov, M., 2000), used successfully over many years to animate and guide change within organisations. Berlov and Garibaldo (FILOV) subsequently built on this paper, producing a template for adaptation by Innoflex partners in WP3 (Berlov, M. and Garibaldo, F., 2000).

Likewise Banke and Norskov (TEKI.HRD) drew on widespread experience of intra- and inter-company dialogue to contribute an innovative strand to the transnational exchanges proposed within WP2. The objective of their approach was to establish a dialogue forum among a group of companies all of whom have some years' experience of group organisation and competence development. The methods used represent an alternative to traditional company visits and emphasise practical experience, learning and organisational benchmarking.

Company visits are often used to give a first hand impression of a company's products and strategies and offer a chance for the company to promote itself and its achievements. In business development programmes, company visits serve to give visitors information on products and routines. But visits typically involve short tours in large groups around the company led by one speaker who, at best, tries to give visitors an overview. This is often referred to as 'industrial tourism', providing little time to speak with employees or to question and learn about issues of specific interest.

In WP2 the intention was to dig deeper in extracting the knowledge and experience of the host company. Innoflex has provided an important opportunity to examine how organisations learn from each others' practice, and how the practical utility of such exchanges can be maximised. Two experimental approaches were adopted:

The Learning Visits

Three employers (from Denmark, Sweden and the UK) were selected, and each identified three people (including both management and workforce) to form an investigative team with the following brief:

Drawing on the diverse knowledge and experiences of the participating organisations, to identify effective workplace practices which enable employees to make full use of their skills and creative potential in order to ensure organisational agility and innovation.

These companies visited each other's facilities and worked on a series of topics related to job and organisational development. During the series of visits the companies sought to build common knowledge on quality of working life issues, and established a relationship beyond that which could be achieved in a one-off visit. This made it possible to undertake a level of organisational benchmarking which is much closer to the companies' real life problems.

Organisational issues are often thought of as difficult to debate due to their complex nature. Along with the effort to create shared knowledge between the companies, WP2 also tested a new method for reporting and discussing work organisation. By using digital technology (the "Digital Photo Safari") as the basis for observations during the visit, the work package extended opportunities for the use of visual observation in stimulating subsequent dialogue. Each visit comprised following elements:

- Presentation by the host company with a focus on the history and experiences of job development and group organisation.
- Visual audit of group organisation and job development using digital photo technology.
- Organisational benchmarking on the basis of knowledge accumulated during the visits.

On each occasion the visitors formed groups to investigate key dimensions of quality of working life and competitiveness at the host company. The group findings were presented as a visual presentation to the host company, prompting dialogue and further exchange of experiences.

The impact of the visits on the participating companies has been evaluated. Findings are summarised in a joint report describing the three visits, evaluating the effectiveness of the methodology and its potential for wider use in Innoflex and beyond. (This report now forms part of the toolkit specified as a deliverable for WP8). All three host companies appeared to have been impressed by the level of insight and constructive commentary demonstrated by their visitors. Likewise the visitors themselves gained from the opportunity to evaluate practice in a different type of organisation from their own.

Case-Based Dialogue Workshops

Drawing on the Bjerlov and Garibaldo approach cited above, the second strand of inter-organisational learning within WP2 focused on using a host employer as a case study to stimulate comparison, dialogue and vision-building. There are two Innoflex actions under this heading:

1. The European Hospital Workshop was hosted by Nottingham City Hospital NHS Trust on the 29th – 31st October 2001. The Workshop included participation from hospitals and Innoflex partner organisations in Denmark, Netherlands, Spain and Sweden. Hospitals were selected as a particularly interesting example of transformation because they combine:
 - complex organisations involving interaction between diverse specialisms and professional groups;
 - tensions between traditional organisational demarcations and the need for multi-disciplinary teamworking as a method of improving patient care;
 - pressures to enhance quality of working life as a means of recruiting and retaining skilled staff in a relatively low-pay environment;
 - multiple stakeholders including government, communities, advocacy groups, patients and employees;
 - strong drivers for change including cost pressures, more rigorous approaches to clinical governance, medical/technological innovation and more demanding social expectations.

During the Workshop, input from the host hospital began with a study visit to a unit (Neonatology) involved in significant organisational change, including brief presentations, dialogue and the opportunity to discuss issues with a range of staff. Brief presentations on the hospital's corporate agenda (modernisation, clinical governance, patient pathways, workforce recruitment & retention, patient perspectives) were built into the subsequent programme. However these inputs were intended principally as 'prompts' to dialogue between participants rather than as the content of a traditional study visit. The principal focus of the Workshop was on dialogue close to the underpinning themes of Innoflex:

- A. Can we build a vision of a hospital which combines high quality patient care with high quality working life for its employees? (This discussion took place in small groups based on professions: managers, trade union/employee representatives, doctors, nurses/professions allied to medicine).
- B. What are the obstacles to achieving that vision? (Small group discussions based on a 'diagonal slice' from the above professions).
- C. How do we overcome obstacles to the achievement of the vision? (Country - based groups).

Critically the Workshop succeeded in creating an atmosphere in which demarcations between professional groups and differences in national experience offered no constraint to dialogue. In part this may be because the Workshop sought to focus on aspirations rather than on a detailed comparison of specific practices.

The Workshop demonstrated that the establishment of a European Hospital Network would be of clear value to practitioners and researchers alike. Discussion focused on the need to identify effective ways of improving patient care through workplace partnership, teamworking and organisational change. It led to a realisation that, while the need 'to reunite patient satisfaction and staff satisfaction' was widely acknowledged across the European healthcare community, Europe as a whole was poor at capturing and disseminating knowledge and experience of how this might work in practice. In short there is a need to create networking opportunities and knowledge resources to extend shared learning and collaborative innovation on a transnational basis.

Innoflex resources did not, however, allow for the immediate establishment of a European Hospital Network. Funding was therefore sought from other sources. Early in 2003, support was secured from the SALTSA programme (www.arbetslivsinstitutet.se/saltsa) of the Swedish trade unions. Exploratory discussions and visits involving hospital practitioners were incorporated within the Innoflex meetings at Lyon (10th – 12th) February 2003) and Copenhagen (18th – 20th May 2003). A detailed work programme was agreed between UTNOTT and SALTSA in July 2003, and this will shortly be posted on the Innoflex website. The work programme builds strongly on Innoflex outcomes, both at the wider research level and in terms of the work undertaken with hospitals by individual partners.

2. An Innoflex research paper on the automotive industry and the prospects for a European Car Network was published on the website early in 2002 (Bardi, A., 2001). Product innovation and the introduction of team based manufacturing remain as critical problems in the sector. Coping with these problems suggests the need for a broad range of strategies – amongst which knowledge management plays a key role. In Europe there are many good examples of knowledge management practices diffused amongst different branches of industry. This offers the opportunity for the car sector to learn from a diverse

range of sources in achieving participatory approaches to knowledge management – a challenge which, as the WP1 overview report argues, is at the heart of the Innoflex agenda. A simple way of organising this is to develop benchmarking activity based on plant visits and dialogue workshops.

A second set of problems relate to difficulties in recruiting people, specifically young people, at the factory level. The causes of these problems are notoriously hard to identify but suggest the need for radical new thinking about the nature of work and its relationship to changing aspirations in the workforce.

Following an initial visit by Innoflex partners to the Lamborghini factory during the project meeting in Italy in January 2002, it was agreed to organise a Car Network Workshop hosted by Audi in September 2002. The Workshop addressed the following issues:

- A) The prospects for convergence between competitiveness and quality of working life in the strategies of car industry producers;
- B) The role of workplace partnership, co-operation and teamworking.

A second Car Network Workshop was hosted by SEAT in Barcelona during March 2003. Reports and conclusions from both Workshops can be found on the Innoflex website.

Sufficient interest has been shown by participants, including those from the car industry itself, to suggest that the Innoflex European Car Network may be sustainable beyond the life of project funding. A plan for future activities is currently being prepared and will shortly be posted on the Innoflex website.

Partners recognise that WP2 has taken considerably longer to complete than was envisaged in the original workplan. However this partly reflects increased recognition of the importance of this Workpackage in exploring the nature of inter-organisational learning, and its potential for actions of an innovative nature. Partners therefore believe that the delay in implementation is justified by the scope and quality of the outcomes.

WP3 & WP4

The Barcelona, Sevilla and Bologna meetings provided an opportunity to review and agree partners' plans for the design and delivery of WP3 & WP4 and to evaluate their contributions to Innoflex objectives. Coincidentally, for the reasons identified in the previous section, several of the networks focussed on activities involving hospitals.

For most partners the first twelve months of the Innoflex project permitted the only earliest stages of preparation for WP3 and WP4. It was originally envisaged that the WP4 learning networks would commence during month 13 and continue until month 24. In practice there has been a considerable variation in start dates between the

partners, reflecting different local circumstances and a wide diversity of development processes and methodologies. This has not threatened the eventual quality of outputs from Workpackage 4; indeed this diversity of approaches has led to important learning outcomes. Some networks have continued beyond the 12 month life cycle envisaged in the original bid.

It also became clear that project partners had identified scope for considerable innovation in the design and operation of the national dialogue conferences and learning networks, providing valuable opportunities for the comparison of inter-company learning methodologies.

While encouraging a diversity of approaches, it was seen as critical that Innoflex should demonstrate a consistent methodology for capturing and analysing knowledge and experience generated both by these events and in the learning networks. Though not intended as a rigid reporting structure, the Barcelona meeting agreed a common framework for the capture and analysis of data:

- Rationale
What are the drivers which encourage employers to seek convergence between enhanced QWL and competitiveness/performance? What type of dialogue takes place; how are these forces for change articulated by employers and employees?
- History
Describe the processes of change followed by organisations. What previous experiences of change exist in each organisation? Are these past experiences used as a knowledge resource to inform current change?
- Evidence
What evidence is there for a convergence between improved QWL and competitiveness/performance in the experience of actual employers? Identify good examples of evidence-based practice; analyse critical success factors and key learning points.
- The state of the art
What evidence is there for the wider diffusion of approaches to work organisation based on convergence between enhanced QWL and competitiveness/performance? What are the constraints to wider diffusion?
- Lessons and outcomes
What conclusions can be drawn for companies, employees, social partners and public intervention?

Initial reports from WP3 events were scrutinised at the Bologna meeting of partners on 24th/25th January 2002 and further developments were reported to subsequent meetings. Findings from WP4 began to emerge from most partners during year two in the form of interim papers or verbal reports.

The initial analysis of outcomes from the dialogue conferences and learning networks focused on three key areas:

1. Identifying effective methods for stimulating inter-organisational dialogue. The different networks developed under WP4 embrace a wealth of different approaches and methods, often involving models specifically created for Innoflex. Each partner has evaluated the lessons and outcomes from these networks and these are summarised in reports available through the Innoflex website. Several networks have been conspicuously successful in attracting companies and engaging them in relevant dialogue and learning activities; some of these have achieved sustainability beyond the life of Innoflex.
2. Understanding processes of inter-organisational learning. By evaluating participants' experiences of the learning networks, Innoflex gained a greater understanding of the learning processes and outcomes resulting from inter-organisational learning. An important question lies in the extent to which the individual learning and personal development associated with participation in the networks is translated into organisational knowledge and innovation. In their different ways the networks provided opportunities to enhance reflexivity and innovation through the articulation, conceptualisation and comparison of current practices.
3. Creating the conditions for convergence between organisational performance and quality of working life. Participants in Innoflex network activities typically came with some level of understanding of the relationship between organisational performance and quality of working life, reflected to varying degrees in their organisational practices. Network activities provided an opportunity to capture experiences of 'what works', and to assess the learning resources required for sustainable workplace innovation.

A detailed analysis of findings can be found later in this Report. Final reports from each partner are available on the website.

WP5

The Project Co-ordinators agreed to bring forward work on the Website (WP5) in response to partner requests for an on-line facility to exchange project research and information. The website was launched in time for the Sevilla meeting.

The website (now at www.innoflex.org.uk) was completely overhauled and extended during mid-2002. It provides access to all project outputs, as well as an account of proposed and completed activities. Partners have used it as a resource to promote the project (for example in recruiting companies to learning networks and other activities) and as a means of disseminating outputs. In its current form it provides a learning resource for researchers and practitioners, combining insights into the current 'state of the art' of work organisation in several EU Member States, findings on the scope for convergence between company performance and quality of working life, and practical tools and guidance to support dialogue and inter-

company learning. Links have been established from the website to those of the Commission (Cordis and Projects Database), of project partners and of other relevant organisations. Some partners have also established Innoflex webpages in their own languages.

The website will be maintained beyond the EU funding period to ensure the widest possible dissemination of project outcomes and to track subsequent developments.

WP6

WP6 was concerned with the analysis of findings from WPs 1 -4 and their integration within final project outputs. Lead responsibility was assumed by a small task group³ with the active support of other project partners. In particular this led to the production of a second Innoflex Research Report *Home & Away*, completed in September 2003. *Home & Away* builds on the WP1 Research Report *Better to be Rich and Healthy rather than Poor and Sick*, using its broad approach to build a framework for the analysis of WP4 Learning Network outcomes and lessons. *Home & Away* is available on the Innoflex website and in hard copy.

WP7

WP7 was designed to provide partners with space to reflect on the final outcomes of the project through dialogue with other actors, and to refine national strategies for longer-term dissemination. Partners fulfilled this objective through dialogue seminars or structured discussions with individual actors. These meetings allowed participants and other actors to identify Innoflex achievements and to analyse the reasons why some of the networks had been less successful than others. Overall the WP7 reports indicate a very positive response to Innoflex activities and outcomes, while also capturing some important learning points both for individual partners and the project as a whole.

WP8

Partners developed a series of tools and resources as a means of supporting Innoflex project activities, and these are being made freely available to other practitioners through the website. These six outputs, relating principally to methods for inter-organisational learning and dialogue, comprise:

2. Dialogue in a context of co-operation and competition: a conference methodology. Paper written by Monica Bjerlov and Francesco Garibaldo to explain the methodology for dialogue and search conferences as means of animating inter-organisational learning through discussion and reflection.
3. Photo Safari: a learning platform for organisational benchmarking. This report by the Danish Technological Institute explains the photo safari method for inter-organisational exchanges developed during WP2, and reports on the

³ Huzzard, NIWL.DOTT; de Leede TNO.WE; Totterdill, UTNOTT

pilot visits pioneered by East Midlands Electricity, Ericsson Radio and Scanglobe.

4. The Learning Network Questionnaire. Prior to the establishment of the Spanish Learning Network, a questionnaire was sent to 1500 target organisations as a means of assessing the feasibility and designing the format and content of networking activities. This paper summarises the questionnaire process and its results.
5. Tools for animating dialogue in learning networks. Based on the experiences of the Swedish West Skaraborg Health Project undertaken within WP4, Tony Huzzard describes the methods used to bring partners together from hospitals and primary care organisations to form a 'development coalition' aimed at service improvement through workplace innovation.
6. Transfer of organizational knowledge by problem based learning: intervention methods in the Venlo Network. The Venlo Network in The Netherlands was a highly successful initiative under WP4. Friso den Hertog's account in this paper provides a valuable methodological description and rationale for the instigators of other learning networks.
7. The triptych process for change. ANACT's activities under WP4 focussed on the provision of action-based learning designed to enable the directors of small and very small companies working in a difficult sector to understand the importance of investing in human resources as a means of increasing competitiveness. This paper by the ANACT team offers a description and critical review of the methodology used in the network.

1.3 Dissemination and exploitation of results

During the lifetime of the project, dissemination of 'work in progress' to practitioners as well as to other researchers played a critical role in refining and developing outcomes. National reports under WP1 acted as a focal point for the engagement of companies and other actors in dialogue on convergence between organisational performance and quality of working life. The Innoflex website (WP5) at www.innoflex.org.uk was established early in the project and enabled work in progress (such as the WP1 national reports) to be compared and evaluated by other partners. Likewise WP2 was entirely focussed on testing propositions from WP1 and (as described in section 3.1) engaged a wide cross section of organisations in the Learning Visit, Hospital Workshop and Car Network activities. Several partners subsequently used their national reports to recruit companies to WP3 and WP4 activities. WP3 and WP4 also provided the opportunity to test and substantively develop the WP1 propositions with an even wider range of participants in each country.

WP7 was designed to provide partners with space to reflect on the final outcomes of the project through dialogue with other actors, and to refine national strategies for longer-term dissemination.

The Innoflex website forms a major plank in the strategy for disseminating Innoflex outputs; www.innoflex.org.uk will be maintained by The Nottingham Trent University for the indefinite future, and will be updated regularly with information on spin-off activities such as the European Hospital Network and Car Network. Publicity for the Innoflex website at national level will be organised by partners, using existing networks of researchers, social partners and policy makers, as well as through the websites of their own institutions. At European level the website address will be widely disseminated through the successor to the Commission's EWON group (plans for which are currently under consideration by the European Foundation for the Improvement of Living and Working Conditions in Dublin) and through a series of conferences on work organisation likely to be supported by DG Employment & Social Affairs.

The Research Reports generated by WP1 and WP4 constitute major outputs from the project. In draft form they have already been used to animate dialogue with practitioners and researchers at national level, while at the same time informing other European research projects (see for example www.hi-res.org.uk). They also provide the basis for at least two international conference papers (see section 3.1) as well as several national workshop presentations and discussion papers. In their final published form each partner has plans for the dissemination of the Reports at national level. At European level the reports will be disseminated through the mechanisms cited earlier in this section.

The tools (WP8) as well as the WP4 narratives on learning network activities will provide a resource for researchers, social partners, public policy makers and business support agencies involved in the design and implementation of inter-organisational learning. They will be used at national level to inform partners' discussions with policy makers and others on the role of learning networks in resourcing workplace innovation, and in future project design at both national and EU levels.

2. BACKGROUND AND OBJECTIVES

Innoflex grew from an existing Consortium of partners originally created in 1995 to provide the then DGV of the European Commission with A Medium Term Plan for Collaborative Action for the development and dissemination of new forms of work organisation. Subsequent support from DGV enabled the Consortium to develop a deeper analysis of the nature of new forms of work organisation, their implications for European competitiveness and social cohesion, and the obstacles to wider dissemination.

The Consortium's findings (European Work and Technology Consortium, 1997) focused on the concept of a 'high road' of workplace innovation, one which began with the premise that Europe's potential advantage in world markets lay with the ability to do things differently, in ways not easily imitated by competitors. This means the ability continually to re-invent products and services, always keeping one step ahead. However traditional ways of managing enterprises, and traditional ways of organising work, cannot deliver such innovation and versatility. Successful enterprises in the volatile conditions of the 21st Century are those able to develop and harness the knowledge and ideas of employees throughout the organisation as a resource for innovation.

Work organisation is critical to this task. The work environment needs to provide all employees with opportunities to undertake a broad range of rewarding tasks, to be engaged in reflection and innovation, and to be part of a cumulative and collective process of learning. Quality of working life thus becomes a real competitive asset, not just allowing enterprises to recruit and retain labour, but enabling them fully to harness and develop the talent within their workforce. This stands in sharp distinction to 'low road' approaches to work organisation with their predominant focus on cost control and performance measurement, typically at the expense of the organisational 'slack' needed to inspire creativity and innovation.

Reaching the high road is not, however, an easy task. Despite research evidence⁴ that new forms of work organisation can lead to tangible gains in performance, enterprises have been reluctant to abandon traditional ways of working for a wide spectrum of reasons including lack of awareness, poor access to evidence-based methods, limited skills and organisational awareness. As the Consortium argued, there is real cause for concern about the increasing gap between leading-edge practice and common practice in European workplaces.

Innoflex grew directly from this concern, and in particular from a desire to gain a better understanding of the conditions within which high-road approaches could be fostered. An understanding of these conditions would have implications not just for individual enterprises but for those organisations that determine the wider context in which companies operate, learn and develop – for example social partners, policy

⁴ Much of this evidence has been generated by EU -supported research: see for example www.hi-res.org.uk.

makers, business support agencies and universities. Critically Innoflex centred on the proposition that the high road could achieve a positive balance between economic and social outcomes – in particular that enhanced competitiveness could be achieved through improvements in quality of working life. In short, the task is to reunite customer satisfaction and job satisfaction.

The overarching objective of the project was therefore to identify the conditions under which convergence can be achieved between 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.

This was broken down into the following specific objectives:

- (A) To identify emerging trends in work organisation, including evidence for the empowerment of employees and the enhancement of working life.
- (B) To undertake a thorough review of academic literature in the field throughout Europe, including the identification of different theoretical strands, their convergence and divergence, and priorities for a future research agenda.
- (C) To determine roles and conditions for performance measurement in production processes and to specify relevant criteria of performance including social dimension.
- (D) To identify strategic choices in relation to new forms of work organisation, and to identify how these choices lead to different impacts on quality of working and individual quality of life.
- (E) To examine the empirical and theoretical evidence for models of work organisation which lead to convergence between enhanced competitiveness and improved quality of working and individual life.
- (F) To identify the role of trade unions and other forms of workplace dialogue in supporting 'high road' companies.
- (G) To set up, guide, facilitate and monitor 'learning networks' between large companies, SMEs and intermediate organisations, social partners, employees, etc.
- (H) To identify new paths and spheres for social dialogue and participative approaches in design and implementation of change projects such as introduction of new structures, assessment of performance, etc.
- (I) To develop a typology consisting of different learning networks, their organisation and management and the role of their stakeholders.

(J) To develop guidelines that summarise the cross -national monitoring results and case-study results.

(K) To identify critical success factors for social partners and public policy makers in addressing strategic choices in relation to quality of working and individual life.

During the life of the project, the significance of inter -organisational learning as a means of stimulating and resourcing the development of new forms of work organisation became increasingly prominent, resulting in particular emphasis on objectives (G), (H) and (I). By the second year of Innoflex the design, initiation, management and evaluation of networks to promote inter -organisational learning had become the major focus of project activity for most partners, testing their effectiveness in addressing the obstacles to workplace innovation identified by the preceding research review. Lessons and outcomes from these networks provide key lessons for actors at European, national and regional levels.

3. SCIENTIFIC DESCRIPTION OF PROJECT RESULTS AND METHODOLOGY

3.1 Project methodology and activity

The project design was based on nine Workpackages (WPs):

Table 1: Summary of Workpackages

| Workpackage | Task |
|-------------|---|
| WP1 | To assess the current state of knowledge on the relationship between new forms of work organisation and quality of working life. |
| WP2 | To test the WP1 outcomes with a transnational focus group of companies from each participating Member State. |
| WP3 | To identify the scope and validity of empirical evidence on relationships between competitiveness, quality of working life and new forms of work organisation by testing the evidence gained from Workpackages 1 & 2 through intensive dialogue involving management, trade union and employee representatives. |
| WP4 | To build an action-research approach to modelling the potential convergence between competitiveness and quality of working life in the design and implementation of new forms of work organisation. This will include the creation of learning networks for enterprises, social partners and researchers in each country. Trade union representatives will be included where appropriate: otherwise suitable employee representation will be sought. Participating companies will also receive intensive mentoring support to identify options for change, to support the change process and to provide opportunities for reflexivity and continuous learning. Mentors will also undertake studies of change in each company over the time of its involvement in the project. |
| WP5 | To develop tools to disseminate the results of WP 1 - WP 4 at the European level, including a web-based resource. |
| WP6 | To undertake an initial analysis of results from WPs 3, 4 and 5. |
| WP7 | To review and appraise the consortium findings through the organisation of focus groups in each country. |
| WP8 | To prepare and disseminate at least five brief and accessible issue papers (including case studies, tools and other materials) designed to provide a practical resource for companies, social partners and consultants. |

| | |
|-----|---|
| WP9 | <ul style="list-style-type: none"> • To ensure that the Commission is kept informed of progress during the life of the project. • To provide a clear account of project activities and findings at the conclusion of the project. • To propose guidelines to the European Commission. • To propose guidelines to decision makers in public policy and social partner organisations. |
|-----|---|

The implementation of these Workpackages is described below:

WP1

During the first six months of the project WP1 focussed on the interrogation of a wide range literature and research by partners in each country. This was reflected in the production of national 'position papers', most of which were presented at the first project meeting in Sevilla during October 2000 and were subsequently revisited in Barcelona at the April 2001 meeting.

It was disappointing that not all partners were able to produce position papers in time for the Sevilla meeting. There were several reasons for this, notably uncertainty about when the Commission would issue contracts, making it difficult to plan research staff workloads. In addition more than one partner experienced difficulties because of employee turnover and the need to induct new research staff into Innoflex.

Nonetheless sufficient papers were available at Sevilla both to identify the broad scope and content of WP1 and to stimulate high-quality dialogue between partners. This demonstrated that all partners had undertaken sound preparation, at the same time reflecting the benefits of the pre-project orientation meeting held in Nottingham during April 2000.

These position papers fulfil a number of functions:

- They provide a map of the knowledge base which informs the understanding and practice of each institution in relation to work organisation. This strengthens the partnership by enhancing awareness of diversity in culturally-situated practice between different European Member States.
- They also provided partners with an opportunity for critical reflection, identifying weaknesses and gaps in the knowledge base as well as areas of strengths which could make an important contribution to Innoflex.
- Conceptual frameworks and knowledge articulated within the papers provide a significant amount of the raw material for achieving key Innoflex objectives, including the mapping of emerging trends in thinking and practice (project objectives A, B & C) and the theoretical evidence for a convergence between enhanced organisational performance and quality of working life (project objectives D & E).

The considerable diversity in style and content of the papers is not accidental. Given the exploratory nature of Innoflex (especially at its earliest stages) partners were correctly insistent on high levels of discretion in the selection of source material and in the formulation of arguments. In short it would have been inappropriate to define a rigid analytical framework at the beginning of WP1 since this would have run the risk of excluding divergent perspectives and experiences.

At the project meeting in Sevilla the (often contentious) discussion of the papers was underpinned by the premise of 'European diversity as a learning resource' (European Work and Technology Consortium, 1997). An overview of the different presentations highlighted the gap between the 'High Road of Innovation' as an inclusive European paradigm of work organisation and the wide variations in the manifestation of that paradigm which exist in different economic and cultural contexts. Is it even possible to build a common analysis of work organisation and quality of working life covering contexts as diverse as Italian industrial districts on the one hand and Scandinavian 'built-to-last' companies on the other?

The concept of 'local theory' articulated by the Swedish partners sees learning by those involved in organisational change not as the unproblematic diffusion of uncontested objective knowledge, but focuses on how such knowledge is attributed with meaning, contextualised locally and translated into everyday practice through social interaction (Huzzard, T., 2000). However the rationale of Innoflex points not simply to the mediation of the 'High Road' by the specific economic and cultural contexts in which it exists, but to a rather more discursive relationship in which the paradigm is itself continuously reformulated by academic and experiential comparison between diverse models of practice.

This discourse itself is multi-voiced, including interaction in and between employer, social partner, public policy and research communities. With its focus on Dialogue Conferences and Learning Networks, Innoflex explored the nature of this interaction in both conceptual and practical terms. WP1 began to lay valuable foundations for this subsequent challenge during its first six months.

The papers also opened a discussion at Sevilla on the nature of the projected convergence between competitiveness and quality of working life. Innoflex, it was concluded, represents a significant move beyond the QWL programmes of the 1960s and 70s 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 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.

Traditional ways of organising workplaces and traditional styles of management cannot achieve this vision of commitment, agility and adaptability. The High Road in contrast embeds working life firmly within the conditions required for innovation and competitiveness. In this conception 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 which foster learning and innovation. However it is clear that the traditional 'quality of working life' vocabulary is inadequate to embrace this projected convergence between innovation-based competitiveness and new employee aspirations.

Moreover the position papers reveal just how difficult it is for organisations to change their structure and culture. There are no easy recipes, no "one best way". Each organisation has to embark on its own process of learning, experimentation and reflection. A key problem for Europe however appears to be the increasing gap between leading-edge practice and common practice in work organisation, resulting in a 'long tail' of enterprises with inadequate access to understanding or knowledge. Constraints to the modernisation of work organisation can be summarised in the following terms:

- Limited awareness of the nature of emerging approaches to work organisation and their benefits in terms of adaptability, innovation and competitiveness. Lack of awareness is especially acute amongst SMEs. Evidence of benefits is fragmented and hard to access. Business support organisations in many parts of Europe currently lack this expertise and knowledge.
- Poor access to evidence-based approaches to change. There is a bewildering variety of 'products' available in the form of off-the-shelf cookbooks and consultants' services, but managers complain that it is difficult to access hard evidence of successful approaches or to gain a dispassionate analysis of different approaches to change. 'Innovation decay' is often the consequence of poor preparation and/or the uncritical adoption of a formulaic approach to change without sufficient workforce involvement, dialogue, experimentation and organisational learning.
- The distance between research and practice exacerbates the knowledge gap. Academic knowledge can offer real insight into the lessons from leading edge practice, as well as an understanding of critical success factors involved in sustainable change. But much of this knowledge does not get translated into tools usable by those in the frontline of change, whether managers, employees or trade unionists.

- Many European managers and employees experience too few opportunities for shared learning with their peers in other organisations. Business support organisations and consultants typically operate on a 'casework' basis, treating each client separately. However there is considerable evidence that sustained peer exchange of experience can play a key role in promoting, resourcing and sustaining organisational innovation and learning.

These constraints pose a key challenge for Innoflex: the creation of a learning environment for employers and workforces which enables them to identify opportunities for the 'win-win' modernisation of work organisation. This is the focus of the project's subsequent Workpackages.

During the overall analysis and integration of WP1 findings, attention was drawn to three principal dimensions of this challenge:

1. The critical role of team-based approaches to work organisation in securing convergence between competitiveness and quality of working life. Research suggests that teams can provide a vehicle for combining different perspectives in solving problems and that they can facilitate a fluency of idea generation and flexibility of problem-solving. Such a view has been reinforced by experiences gained by researchers and company representatives during Innoflex learning visits to innovative companies committed to improved performance through the development of human resources (WP2). This is illustrated by the case studies of Ericsson Radio Systems AB in Gävle (Sweden) and East Midlands Electricity (UK), summaries of which can be found on the Innoflex website (www.innoflex.org.uk).
2. If the key to competitiveness is staying ahead of the game rather than merely mimicking others' innovations, organisations need new tools and approaches to stimulate creative thinking and challenge current orthodoxies. A number of emerging approaches aim to stimulate organisational creativity. Arts bodies for example have developed commercial activities including role play, forum theatre, artists-in-residence, corporate art collections and lively arts where employees collectively make an art work or put on a musical or dramatic performance (see www.aandb.org.uk/html/cf/artswork.html). Successful workplace innovation is also about creating hybrids, drawing widely on examples of leading-edge practice but testing and customising them through dialogue both inside and outside the organisation. Effective learning can be enhanced by peer-focussed dialogue enabling experiences to be questioned, compared, synthesised, adapted and improved upon. Inter-company learning networks are often a key resource in helping managers and employees develop their own solutions.
3. There is an increasing distance between leading-edge practice and common practice in European enterprises. Despite increasingly well-documented advantages the spread of new approaches to work organisation and culture remains surprisingly limited. The role of public intervention is to create an environment abundant in learning resources, providing the knowledge base

required to stimulate innovation by companies and their employees, creating collective solutions to common problems. This is a challenge for Europe as a whole.

A small editorial group⁵ was established at Sevilla to take responsibility for WP1 deliverables, involving two principal strands of activity:

1. Firstly the editorial group produced recommendations for revisions to each position paper. All the amended papers were placed on the public part of the website as reference material and 'work in progress'. Partners also used the papers to inform other Innoflex activities within their own countries. The revised position papers constitute an important deliverable in their own right, meeting the essential requirements for WP1 laid down in the original bid, and which continued to inform subsequent Workpackages. The papers can be found at Annexe 2.
2. The editorial group condensed key messages from the position papers into a 60 page overview, including discussion of the social and economic significance of convergence between competitiveness and QWL together with its scientific rationale. This paper, written for a broad readership, was used to inform the subsequent learning network activities (WP4) in each country. A draft version of the paper was placed on the website early in 2002, and after several revisions it is currently being printed for publication as an Innoflex Research Report (Huzzard, T., den Hertog, F., Hague, J. & Totterdill, P., 2003; see Annexe 3). *Better to be Rich and Healthy than Poor and Sick* is published on the Innoflex website and in hard copy. To promote wider dissemination a version of the paper was presented at the 17th Annual Employment Research Unit Conference at Cardiff Business School on 12th -13th September 2002 (Huzzard, T., den Hertog, F., Hague, J., 2002; see Annexe 4).

In addition the actions described above have led to a published research report capable of wider dissemination than originally anticipated. Although this meant the extension of activity within WP 1 beyond the original target date (month 7), partners considered that this was justified by the enhanced scope of the resulting deliverables.

WP2

The Objective of WP2 was "to test the WP1 outcomes with a transnational focus group of companies from each participating Member State". It was originally envisaged that the objective would be fulfilled by a series of bilateral exchanges between partners, but discussion at the Sevilla meeting led to a more focussed approach which also gave scope for greater methodological innovation. In consequence WP2 commenced later than specified in Annex 1 and took place over a

⁵ den Hertog, MERIT; Huzzard, NIWL.DOTT; Hague & Totterdill, UTNOTT

longer period. In part this reflected the extended nature of the activity, which also enabled greater integration with outputs from WP1.

Innoflex was particularly focussed on inter-organisational learning as a means of overcoming constraints to the modernisation of the workplace. Discussions at both the Sevilla and Barcelona meetings emphasised the need for adequate conceptualisation of how companies actually draw on each others' experiences to stimulate organisational innovation, rejecting simplistic models of 'transferring best practice'. Partners recognised that WP2 (transnational exchanges between companies), WP3 (national dialogue conferences) and WP4 (learning networks) provided important opportunities for experimentation in approaches to inter-company learning, leading to a refined understanding of how knowledge is gathered and used to support change. At the same time this process of experimentation can draw on a wide range of experience within some partner organisations. Berlov (NIWL.DWOT), for example, presented a paper on the Swedish experience of Dialogue Conferences (Berlov, M., 2000; see Annexe 5), used successfully over many years to animate and guide change within organisations. Berlov and Garibaldo (FILOV) subsequently built on this paper, producing a template for adaptation by Innoflex partners in WP3 (Berlov, M. and Garibaldo, F., 2000; see Annexe 11).

Likewise Banke and Norskov (TEK I.HRD) drew on widespread experience of intra- and inter-company dialogue to contribute an innovative strand to the transnational exchanges proposed within WP2. The objective of their approach was to establish a dialogue forum among a group of companies all of whom have some years' experience of group organisation and competence development. The methods used represent an alternative to traditional company visits and emphasise practical experience, learning and organisational benchmarking.

Company visits are often used to give a first hand impression of a company's products and strategies and offer a chance for the company to promote itself and its achievements. In business development programmes, company visits serve to give visitors information on products and routines. But visits typically involve short tours in large groups around the company led by one speaker who, at best, tries to give visitors an overview. This is often referred to as 'industrial tourism', providing little time to speak with employees or to question and learn about issues of specific interest.

In WP2 the intention was to dig deeper in extracting the knowledge and experience of the host company. Innoflex has provided an important opportunity to examine how organisations learn from each others' practice, and how the practical utility of such exchanges can be maximised. Two experimental approaches were adopted:

The Learning Visits

Three employers (from Denmark, Sweden and the UK) were selected, and each identified three people (including both management and workforce) to form an investigative team with the following brief:

Drawing on the diverse knowledge and experiences of the participating organisations, to identify effective workplace practices which enable employees to make full use of their skills and creative potential in order to ensure organisational agility and innovation.

These companies visited each other's facilities and worked on a series of topics related to job and organisational development. During the series of visits the companies sought to build common knowledge on quality of working life issues, and established a relationship beyond that which could be achieved in a one-off visit. This made it possible to undertake a level of organisational benchmarking which is much closer to the companies' real life problems.

Organisational issues are often thought of as difficult to debate due to their complex nature. Along with the effort to create shared knowledge between the companies, WP2 also tested a new method for reporting and discussing work organisation. By using digital technology (the "Digital Photo Safari") as the basis for observations during the visit, the work package extended opportunities for the use of visual observation in stimulating subsequent dialogue. Each visit comprised following elements:

- Presentation by the host company with a focus on the history and experiences of job development and group organisation.
- Visual audit of group organisation and job development using digital photo technology.
- Organisational benchmarking on the basis of knowledge accumulated during the visits.

On each occasion the visitors formed groups to investigate key dimensions of quality of working life and competitiveness at the host company. The group findings were presented as a visual presentation to the host company, prompting dialogue and further exchange of experiences.

The impact of the visits on the participating companies has been evaluated. Findings are summarised in a joint report describing the three visits, evaluating the effectiveness of the methodology and its potential for wider use in Innoflex and beyond. (This report now forms part of the toolkit specified as a deliverable for WP8, see Annexe 11). All three host companies appeared to have been impressed by the level of insight and constructive commentary demonstrated by their visitors. Likewise the visitors themselves gained from the opportunity to evaluate practice in a different type of organisation from their own.

Case-Based Dialogue Workshops

Drawing on the Bjerlov and Garibaldo approach cited above, the second strand of inter-organisational learning within WP2 focused on using a host employer as a case study to stimulate comparison, dialogue and vision-building. There are two Innoflex actions under this heading:

1. The European Hospital Workshop was hosted by Nottingham City Hospital NHS Trust on the 29th – 31st October 2001. The Workshop included participation from hospitals and Innoflex partner organisations in Denmark, Netherlands, Spain and Sweden. Hospitals were selected as a particularly interesting example of transformation because they combine:
 - complex organisations involving interaction between diverse specialisms and professional groups;
 - tensions between traditional organisational demarcations and the need for multi-disciplinary teamworking as a method of improving patient care;
 - pressures to enhance quality of working life as a means of recruiting and retaining skilled staff in a relatively low -pay environment;
 - multiple stakeholders including government, communities, advocacy groups, patients and employees;
 - strong drivers for change including cost pressures, more rigorous approaches to clinical governance, medical/technological innovation and more demanding social expectations.

During the Workshop, input from the host hospital began with a study visit to a unit (Neonatology) involved in significant organisational change, including brief presentations, dialogue and the opportunity to discuss issues with a range of staff. Brief presentations on the hospital's corporate agenda (modernisation, clinical governance, patient pathways, workforce recruitment & retention, patient perspectives) were built into the subsequent programme. However these inputs were intended principally as 'prompts' to dialogue between participants rather than as the content of a traditional study visit. The principal focus of the Workshop was on dialogue close to the underpinning themes of Innoflex:

- A. Can we build a vision of a hospital which combines high quality patient care with high quality working life for its employees? (This discussion took place in small groups based on professions: managers, trade union/employee representatives, doctors, nurses/professions allied to medicine).
- B. What are the obstacles to achieving that vision? (Small group discussions based on a 'diagonal slice' from the above professions).
- C. How do we overcome obstacles to the achievement of the vision? (Country - based groups).

Critically the Workshop succeeded in creating an atmosphere in which demarcations between professional groups and differences in national experience offered no constraint to dialogue. In part this may be because the Workshop sought to focus on aspirations rather than on a detailed comparison of specific practices.

The Workshop demonstrated that the establishment of a European Hospital Network would be of clear value to practitioners and researchers alike. Discussion focused on the need to identify effective ways of improving patient

care through workplace partnership, teamworking and organisational change. It led to a realisation that, while the need 'to reunite patient satisfaction and staff satisfaction' was widely acknowledged across the European healthcare community, Europe as a whole was poor at capturing and disseminating knowledge and experience of how this might work in practice. In short there is a need to create networking opportunities and knowledge resources to extend shared learning and collaborative innovation on a transnational basis.

Innoflex resources did not, however, allow for the immediate establishment of a European Hospital Network. Funding was therefore sought from other sources. Early in 2003, support was secured from the SALTSA programme (www.arbetslivsinstitutet.se/saltsa) of the Swedish trade unions. Exploratory discussions and visits involving hospital practitioners were incorporated within the Innoflex meetings at Lyon (10th – 12th) February 2003) and Copenhagen (18th – 20th May 2003). A detailed work programme was agreed between UTNOTT and SALTSA in July 2003, and this has been posted on the Innoflex website. The work programme builds strongly on Innoflex outcomes, both at the wider research level and in terms of the work undertaken with hospitals by individual partners (see Annexe 6).

2. An Innoflex research paper on the automotive industry and the prospects for a European Car Network was published on the website early in 2002 (Bardi, A., 2001; see Annexe 7). Product innovation and the introduction of team based manufacturing remain as critical problems in the sector. Coping with these problems suggests the need for a broad range of strategies – amongst which knowledge management plays a key role. In Europe there are many good examples of knowledge management practices diffused amongst different branches of industry. This offers the opportunity for the car sector to learn from a diverse range of sources in achieving participatory approaches to knowledge management – a challenge which, as the WP1 overview report argues, is at the heart of the Innoflex agenda. A simple way of organising this is to develop benchmarking activity based on plant visits and dialogue workshops.

A second set of problems relate to difficulties in recruiting people, specifically young people, at the factory level. The causes of these problems are notoriously hard to identify but suggest the need for radical new thinking about the nature of work and its relationship to changing aspirations in the workforce.

Following an initial visit by Innoflex partners to the Lamborghini factory during the project meeting in Italy in January 2002, it was agreed to organise a Car Network Workshop hosted by Audi in September 2002. The Workshop addressed the following issues:

- A) The prospects for convergence between competitiveness and quality of working life in the strategies of car industry producers;
- B) The role of workplace partnership, co-operation and teamworking.

A second Car Network Workshop was hosted by SEAT in Barcelona during March 2003. Reports and conclusions from both Workshops can be found on the Innoflex website.

Sufficient interest has been shown by participants, including those from the car industry itself, to suggest that the Innoflex European Car Network may be sustainable beyond the life of project funding. A plan for future activities is currently being prepared and will shortly be posted on the Innoflex website.

Reports from the Car Network meetings can be found at Annexe 7.

Partners recognise that WP2 has taken considerably longer to complete than was envisaged in the original workplan. However this partly reflects increased recognition of the importance of this Workpackage in exploring the nature of inter-organisational learning, and its potential for actions of an innovative nature. Partners therefore believe that the delay in implementation is justified by the scope and quality of the outcomes.

WP3 & WP4

The Barcelona, Sevilla and Bologna meetings provided an opportunity to review and agree partners' plans for the design and delivery of WP3 & WP4 and to evaluate their contributions to Innoflex objectives. Coincidentally, for the reasons identified in the previous section, several of the networks focussed on activities involving hospitals.

A summary of actions under these Workpackages can be found in the following table:

Table 2: Summary of Dialogue Conference and Learning Network Activities

| | WP3 | WP4 |
|-------------|---|--|
| Denmark | Integrated programme of actions for five manufacturing companies involving internal dialogue conferences, job-swaps and inter-company dialogue conferences. | |
| France | Dialogue conference on generic issues relating to organisational aspects of ICTs. | Modular programme on specific aspects of organisational factors in ICT implementation for telephone engineers. |
| Italy | Two day dialogue conference involving five public and private sector organisations. | Programme of themed meetings and inter-company visits. |
| Netherlands | Dialogue conferences organised by MERIT & TNO to launch learning networks. | MERIT learning network on "Knowledge Enterprises" in Limburg. |

| | | |
|--------|---|---|
| | | TNO facilitated two sectoral learning networks: automotive assembly (5 -10 companies) and hospitals (10). |
| Spain | Dialogue Conference in Barcelona based on market research questionnaire sent to 1500 organisations nationally. | 1. Sectoral learning network for hospitals. 2. Web-based learning network. |
| Sweden | A series of local Dialogue Conferences for hospitals, primary care organisations and local authority social services departments. A paper (Ekman-Philips, M. and Huzzard, T., 2003; see Annexe 8) based on the initial Conference was presented to the 17 th Nordic Conference on Business Studies in Reykjavik on 14 th -16 th August 2003. | Several inter-linked, themed networks arising from the initial local Dialogue Conference. |
| UK | Dialogue conference for prospective learning network meetings in the East Midlands and South West regions. | Parallel programmes of learning network activities in the East Midlands and South West regions. |

For most partners the first twelve months of the Innoflex project permitted the only earliest stages of preparation for WP3 and WP4. It was originally envisaged that the WP4 learning networks would commence during month 13 and continue until month 24. In practice there has been a considerable variation in start dates between the partners, reflecting different local circumstances and a wide diversity of development processes and methodologies. This has not threatened the eventual quality of outputs from Workpackage 4; indeed this diversity of approaches has led to important learning outcomes. Some networks have continued beyond the 12 month life cycle envisaged in the original bid.

It also became clear that project partners had identified scope for considerable innovation in the design and operation of the national dialogue conferences and learning networks, providing valuable opportunities for the comparison of inter-company learning methodologies.

While encouraging a diversity of approaches, it was seen as critical that Innoflex should demonstrate a consistent methodology for capturing and analysing knowledge and experience generated both by these events and in the learning

networks. Though not intended as a rigid reporting structure, the Barcelona meeting agreed a common framework for the capture and analysis of data:

- **Rationale**
What are the drivers which encourage employers to seek convergence between enhanced QWL and competitiveness/performance? What type of dialogue takes place; how are these forces for change articulated by employers and employees?
- **History**
Describe the processes of change followed by organisations. What previous experiences of change exist in each organisation? Are these past experiences used as a knowledge resource to inform current change?
- **Evidence**
What evidence is there for a convergence between improved QWL and competitiveness/performance in the experience of actual employers? Identify good examples of evidence-based practice; analyse critical success factors and key learning points.
- **The state of the art**
What evidence is there for the wider diffusion of approaches to work organisation based on convergence between enhanced QWL and competitiveness/performance? What are the constraints to wider diffusion?
- **Lessons and outcomes**
What conclusions can be drawn for companies, employees, social partners and public intervention?

Initial reports from WP3 events were scrutinised at the Bologna meeting of partners on 24th/25th January 2002 and further developments were reported to subsequent meetings. Findings from WP4 began to emerge from most partners during year two in the form of interim papers or verbal reports.

The initial analysis of outcomes from the dialogue conferences and learning networks focused on three key areas:

1. Identifying effective methods for stimulating inter-organisational dialogue. The different networks developed under WP4 embrace a wealth of different approaches and methods, often involving models specifically created for Innoflex. Each partner has evaluated the lessons and outcomes from these networks and these are summarised in reports available through the Innoflex website. Several networks have been conspicuously successful in attracting companies and engaging them in relevant dialogue and learning activities; some of these have achieved sustainability beyond the life of Innoflex.

2. Understanding processes of inter-organisational learning. By evaluating participants' experiences of the learning networks, Innoflex gained a greater understanding of the learning processes and outcomes resulting from inter-organisational learning. An important question lies in the extent to which the individual learning and personal development associated with participation in the networks is translated into organisational knowledge and innovation. In their different ways the networks provided opportunities to enhance reflexivity and innovation through the articulation, conceptualisation and comparison of current practices.
3. Creating the conditions for convergence between organisational performance and quality of working life. Participants in Innoflex network activities typically came with some level of understanding of the relationship between organisational performance and quality of working life, reflected to varying degrees in their organisational practices. Network activities provided an opportunity to capture experiences of 'what works', and to assess the learning resources required for sustainable workplace innovation.

A detailed analysis of findings can be found later in this Report. Final reports from each partner, available on the website, are included in Annexe 9.

WP5

The Project Co-ordinators agreed to bring forward work on the Website (WP5) in response to partner requests for an on-line facility to exchange project research and information. The website was launched in time for the Sevilla meeting.

The website (now at www.innoflex.org.uk) was completely overhauled and extended during mid-2002. It provides access to all project outputs, as well as an account of proposed and completed activities. Partners have used it as a resource to promote the project (for example in recruiting companies to learning networks and other activities) and as a means of disseminating outputs. In its current form it provides a learning resource for researchers and practitioners, combining insights into the current 'state of the art' of work organisation in several EU Member States, findings on the scope for convergence between company performance and quality of working life, and practical tools and guidance to support dialogue and inter-company learning. Links have been established from the website to those of the Commission (Cordis and Projects Database), of project partners and of other relevant organisations. Some partners have also established Innoflex webpages in their own languages.

The website will be maintained beyond the EU funding period to ensure the widest possible dissemination of project outcomes and to track subsequent developments.

WP6

WP6 was concerned with the analysis of findings from WPs 1 -4 and their integration within final project outputs. Lead responsibility was assumed by a small task group⁶ with the active support of other project partners. In particular this led to the production of a second Innoflex Research Report *Home & Away*, completed in September 2003. *Home & Away* builds on the WP1 Research Report *Better to be Rich and Healthy rather than Poor and Sick*, using its broad approach to build a framework for the analysis of WP4 Learning Network outcomes and lessons. *Home & Away* is available on the Innoflex website, in hard copy and at Annexe 10.

WP7

WP7 was designed to provide partners with space to reflect on the final outcomes of the project through dialogue with other actors, and to refine national strategies for longer-term dissemination. Partners fulfilled this objective through dialogue seminars or structured discussions with individual actors, and the outcomes can be found in Annexe 11). These meetings allowed participants and other actors to identify Innoflex achievements and to analyse the reasons why some of the networks had been less successful than others. Overall the WP7 reports indicate a very positive response to Innoflex activities and outcomes, while also capturing some important learning points both for individual partners and the project as a whole.

WP8

Partners developed a series of tools and resources as a means of supporting Innoflex project activities, and these are being made freely available to other practitioners through the website. These six outputs, relating principally to methods for inter-organisational learning and dialogue, comprise:

1. Dialogue in a context of co-operation and competition: a conference methodology. Paper written by Monica Bjerlov and Francesco Garibaldi to explain the methodology for dialogue and search conferences as means of animating inter-organisational learning through discussion and reflection.
2. Photo Safari: a learning platform for organisational benchmarking. This report by the Danish Technological Institute explains the photo safari method for inter-organisational exchanges developed during WP2, and reports on the pilot visits pioneered by East Midlands Electricity, Ericsson Radio and Scanglobe.
3. The Learning Network Questionnaire. Prior to the establishment of the Spanish Learning Network, a questionnaire was sent to 1500 target organisations as a means of assessing the feasibility and designing the format and content of networking activities. This paper summarises the questionnaire process and its results.

⁶ Huzzard, NIWL.DOTT; de Leede TNO.WE; Totterdill, UTNOTT

4. Tools for animating dialogue in learning networks. Based on the experiences of the Swedish West Skaraborg Health Project undertaken within WP4, Tony Huzzard describes the methods used to bring partners together from hospitals and primary care organisations to form a 'development coalition' aimed at service improvement through workplace innovation.
5. Transfer of organizational knowledge by problem based learning: intervention methods in the Venlo Network. The Venlo Network in The Netherlands was a highly successful initiative under WP4. Friso de n Hertog's account in this paper provides a valuable methodological description and rationale for the instigators of other learning networks.
6. The triptych process for change. ANACT's activities under WP4 focussed on the provision of action-based learning designed to enable the directors of small and very small companies working in a difficult sector to understand the importance of investing in human resources as a means of increasing competitiveness. This paper by the ANACT team offers a description and critical review of the methodology used in the network.

These tools can be found in Annexe 12 to this report.

3.2 Work organisation, competitiveness and quality of working life: mapping the state of knowledge

3.2.1 The rationale for change

As we enter a new millennium, the ability to secure high employment levels in Europe will depend more than ever on the competitiveness of European firms and the ability of public sector organisations to deliver services that represent value for money. As markets become deregulated and internationalised it will be increasingly impossible to defend jobs in uncompetitive European organisations through protective measures. Yet there are sound reasons for believing that the terms on which European firms are competing are changing fundamentally, as is the European labour market.

We argue here that in the knowledge age, new forms of work organisation based on high levels of competence, high trust and high quality are core elements of high performance companies and public sector organisations that have a genuine capacity to innovate. These factors are increasingly becoming the cornerstones of European competitiveness. Yet the evidence suggests that such a view has far from universal acceptance. Accordingly we urgently need to develop new models for the shaping of company structures that add value to ensure both the future competitive strength of European firms and public sector organisations that deliver quality services to taxpayers. Such models should not only address the content aspects of workplace design, but also the processual aspects of managing change and the wider social networks in which such change processes are embedded.

Central to the argument we advance here is the need for convergence between competitiveness and the quality of working life for employees (QWL) as the basis for promoting employee commitment, personal development and the unleashing of innovative organisational potential. We develop the rationale behind the argument with empirical evidence from case illustrations, present evidence on what innovations succeed in improving competitiveness, identify critical success factors and draw out some of the lessons from the history of QWL initiatives in Europe.

New labour market conditions

There can be little doubt that radical change is afoot in Europe's labour market. New conditions are facing commercial firms and public sector organisations and these conditions are having major implications on employment prospects throughout the continent. 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, job security in a relatively stable labour market with few, if any, occupational changes over the life-cycle has been superseded by a world of uncertainty, change and in many cases periods of unemployment. 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 (see eg Snowden, 1998; also quoted in Mazzanti, 2001: 11). First, changes in physical capital. In the first part of the twentieth century the introduction of capital goods prevailed. This gave rise to economies of scale and enhanced the production of standardised, undifferentiated consumption goods and enabled high increases in labour productivity. More recently, capital equipment has become much more flexible and thus given rise to economies of scope. The introduction of newer capital equipment and the development of information technologies have radically changed the nature of work. In vehicle manufacturing, for example, long assembly lines have been replaced by small working groups, with a high degree of job rotation and task variety (EPOC, 1999).

Secondly, we are witnessing change in information technologies. New technology has enabled firms to process information flows promptly and make rapid adjustments in behaviour in response. Moreover, it has had the effect of lowering transactions costs thus making outsourcing an increasingly attractive strategy. The rapid development and diffusion of information technology has also become associated with the rise of the so-called 'new economy'. Gordon (2000) sees the new economy as being linked to three different trends: i) the development of the internet; ii) the increase in computational capabilities of both computers and telecommunication networks; and iii) a decline in the level of prices of both hardware and software. Above all, knowledge is increasingly seen as the key source of added value.

Thirdly, changes in human capital are evident. The structural dynamics associated with the two drivers outlined above will almost certainly tend to generate a shift in labour demand. The demand for skilled workers has increased steeply with respect to the demand for unskilled workers. Machin and Van Reenen (1998) show that in the last 25 years the percentage of employees with medium -to-high educational backgrounds has increased remarkably. A consequence of this shift in the demand for labour is the dramatic change in the structure of relative wages between skilled and unskilled employees. Moreover, the ratio of unemployment rates between unskilled and skilled workers has increased sharply.

Fourthly, markets are being transformed by changes in employment and consumption preferences. The increase in the average educational level of employees has transformed employee preferences away from monotonous and fragmented jobs and in favour of more varied, creative and challenging work. So far as the demand for consumption goods is concerned, consumer tastes increasingly favour product variety and personalised goods and services.

On a more world-wide level, we are witnessing a process of globalisation as a result of increasing competitive pressure, global outsourcing, developments in communications technology, a reduction in tariffs and a homogenisation of consumer tastes. A widely referenced view is that of Bartlett and Ghoshal (1989) who argue that 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. Moreover, what particularly marks out 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.

It can easily be concluded that the extent of change in the European economy is profound – but mapping out the final destination is less easy. Previously, policy makers sought to maintain employment through the macroeconomic techniques of demand management by national governments and efficient and effective management of firms and other organisations through rational techniques such as planning. However, it is the central argument of this paper that as we enter the early years of the new millennium these approaches no longer seem appropriate.

The changing face of competition

The forces identified above are fundamentally altering the terms on which European firms are competing. Moreover, the changes in the real economy are prompting new approaches to theorising about competition in the research community. Traditional views on the sources of firm competitiveness and added value 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 stated, however, European firms are now engaging in competitive markets on radically different terms than those identified in the traditional business literature.

Porter's views on strategic choices for maintaining competitiveness have subsequently been called into question. Researchers such as Prahalad and Hamel (1990) noted that in the information age, firms have an increasing capacity to imitate and copy a rival who was faithfully following Porter's business and corporate strategy prescriptions. The key to genuinely sustained competitive advantage, therefore, was not that of adopting the correct strategy content but, rather, the capacity to innovate and do new things ahead of rivals. This depended on the core competencies of the organisation and these, in turn, rested on the firm's ability to learn collectively. 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).

Above all, the forces for change discussed above are changing the terms on which European firms are competing. Responses to the current changes can be seen in terms of a contrast between 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, winning organisations need 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.

Tidd et al (1997: 4) argue that 'whilst competitive advantage can come from size, or possession of assets etc., the pattern is increasingly coming to favour those organisations which can mobilise knowledge and technological skills and experience to create new products, processes and services'. Moreover, research suggests a strong correlation between market performance and new products. In more mature markets where competition through price is more likely, cost leadership is not itself enough – high performers supplement this approach with non-price factors such as design, customisation and quality. This suggests that market leadership requires much closer relationships between those in firms actually producing goods and services and their customers than has hitherto been the case in bureaucratically managed organisations that separate the conception of work from its execution.

A key feature that distinguishes high road from low road organisations is that the former explicitly recognise the need to foster creativity (Henry, 1991; West, 1997). Whilst it is overwhelmingly accepted that knowledge is a key factor of production,

there is a need to distinguish between existing knowledge and new knowledge. Firms may indeed be able to enhance their competitiveness through product and process innovations from existing knowledge that they and/or their competitors already have at their disposal. Yet such innovation is unlikely to lead to sustained competitive advantage as competitors will have access to such knowledge. Rather, sustained advantage increasingly depends on innovation through newly generated knowledge (Ford & Gioia, 1995). This emphasises the need for organisations to engage in experimental activities that involve creative action (Ford & Ogilvie, 1996; West, 1997) as well as challenging existing assumptions (Unsworth, 2001). It is only through creativity that variations from expectations can arise that are uniquely innovative and not just reactions to external events. Sustained competitive advantage requires uniqueness - in other words, an organisational climate that encourages and supports creativity and practices that enable individual creativity to be transformed into organisational creativity. These are key ingredients of competitiveness in the high road organisation (Tidd et al, 1997).

There is evidence, however, that 'low road' concerns currently dominate the thinking of many if not most managers and policy makers. Such thinking is also evident in public sector organisations where cost-cutting has been prioritised over the development of service delivery. From a long-term perspective, however, such an approach to strategy will not be enough as a means for underpinning economic growth and securing employment. At best, the approach can be regarded merely as a defensive reaction to competition from outside Europe. The key to competitive success, rather, is innovative capacity, which relies on unlocking intellectual capital and human creativity throughout the organisation. This, in turn, switches the focus onto innovations in work organisation as being central to Europe's innovative potential.

Innovation, learning and new forms of work organisation

An innovation-based model of competitiveness implies the need for radical approaches to workplace and job design. Research suggests that organisational innovation depends on a number of factors (Rogers, 1995: 379ff). First, leaders should be positively disposed to change personally. Secondly, organisations should have a number of internal design features, ie they should have decentralised structures, be composed of diverse individuals with high levels of knowledge and expertise, should not be governed by over-reliance on formal rules, should have effective interpersonal networks connecting the various operational units, should have some degree of slack, that is, the availability of uncommitted organisational resources, Thirdly, innovative organisations should exhibit openness towards their external environments (ibid). Clearly, therefore, choices on work organisation have a major impact on competitiveness and the generation of added value.

There is, however, a need to distinguish between different types of innovation. Moreover, as the research on organisational innovations suggests, the two contrasting low road and high road options imply radically different approaches to the organisation of work. Some innovations can of course be motivated by the low road options identified in section 1.2 above such as rationalisation and downsizing.

Such innovations are likely to reduce the demand for labour as well as the quality of working life. On the other hand, high road innovation strategies geared towards the development of new products, markets or processes are more likely to have the opposite effect. Such development in basic aspects of the business, moreover, occurs in parallel with individual development of employees. The type of work organisation associated with high road innovation, as opposed to the low road alternative, is therefore likely to consist of more functional flexibility including job enlargement and job enrichment as well as greater autonomy and empowerment. In other words, high road options potentially entail the convergence between improved competitiveness and improvements in the quality of working life.

The future of European competitiveness thus relies on the development of high road organisations. In turn, this requires the support for research into the key characteristics of such organisations and how the linkages therein between human resources and performance are managed. Yet although there is evidence that changes in work organisation are afoot, there is also evidence that many innovations represent little more than token change (Smith & 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. These low road workplaces, as exemplified by many call centres, offer a continuation of Taylorism rather than its demise and, we argue, should not be the model to guide practitioners and policy makers.

A core element of the high road to innovation is the linkage between product innovation and process innovation. Many European firms have witnessed productivity improvements in recent years through introducing innovative production processes, a development that we would normally expect to reduce the demand for labour in the firms concerned and thereby increase the prospects of unemployment. But it is unlikely in current economic circumstances in Europe that such a fall in labour demand can be compensated for alone by selling greater quantities of existing products in existing markets. What is also needed is the balanced development of new products and new markets as well as innovations in work organisation, and that these changes should mutually support each other.

Above all, the capacity to innovate through high road solutions requires organisations to learn. In organisations that learn, processes are such that the creation and diffusion of knowledge becomes increasingly significant (Nonaka, 1994) and organisations should be seen as learning systems with appropriate designs to match (Senge, 1990; Pearn et al, 1995). An emphasis is placed on individual learning and development in organisational development, as well as the empowerment that accompanies decentralisation. People are seen as an investment rather than a cost, and the conditions for learning are intimately bound up with work design that should enable autonomous reflection and autonomous action upon such reflection. In support of the 'learning organisation' idea, Senge (1990) has argued that 'the rate at which organisations learn may become the only sustainable source of competitive advantage' (ibid: 3). Such learning is also fostered by inter -

organisational networks that, in turn, are embedded in a social infrastructure comprising social partners, policy makers and researchers.

The learning in organisations that is increasingly seen as a crucial source of competitive advantage does not, however, limit itself to adopting known and codified formulae for success and benchmarking from others. Of rather more importance is the internal generation of non-codified or 'tacit' knowledge derived from reflecting on experimental actions. This requires both a capacity to innovate as well as a capacity to convert the outcome of such learning into codified form for onward diffusion within the firm (Nonaka & Takeuchi, 1995). The management of such knowledge and the people responsible for its production have become cornerstones of the quest for competitiveness.

3.2.2 Quality of Working Life and Competitiveness

Prospects for convergence

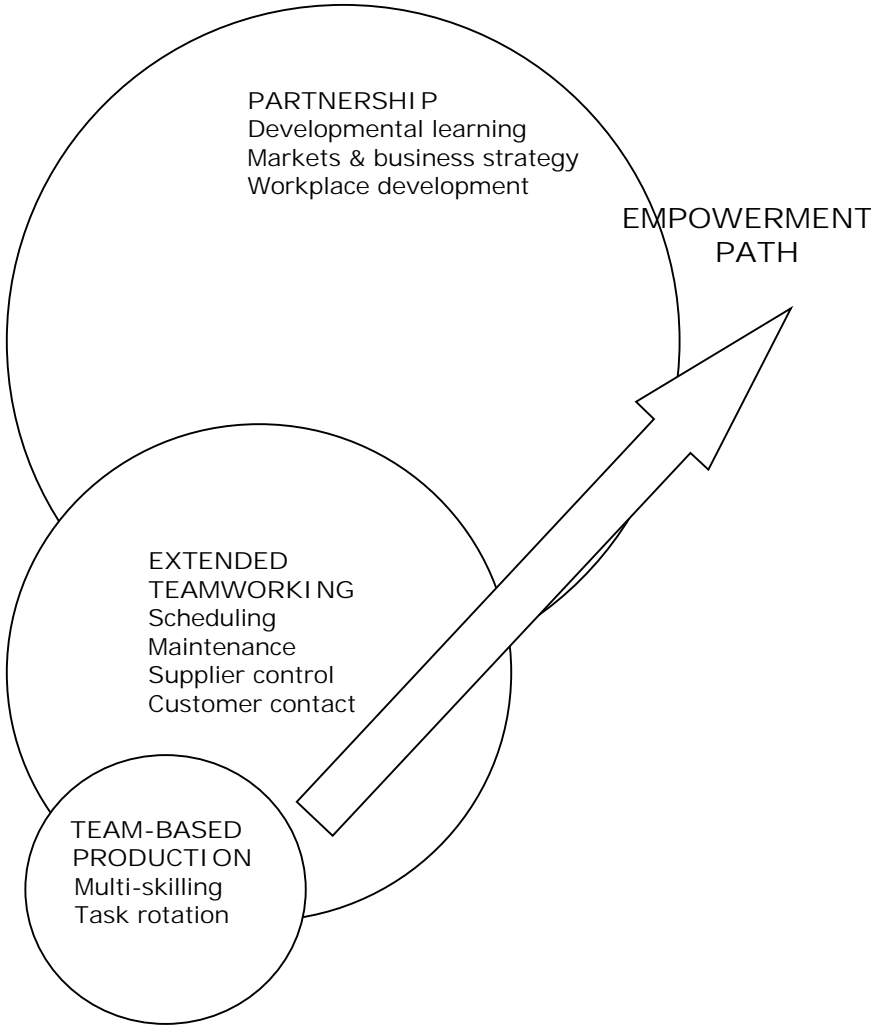
The concept of the 'quality of working life' is imprecise and thus problematic to operationalise. Historically, it can be traced back to the quality of working life movement that largely consisted of a number of industrial psychologists in response to a perceived disenchantment with the organisation of work in the late 1960s and early 1970s (Walton, 1973; Stjernberg, 1977; Littler & Salaman, 1984). A number of reports published in both the US and UK sought to develop models of job redesign that aimed to improve utilisation of worker initiative and reduce job dissatisfaction thereby offering an alternative to the technocratic rigidity and inflexibility of Taylorism. QWL has also been associated with organisational changes aimed at increasing the levels of job widening (greater horizontal task flexibility) and job enrichment (greater vertical task flexibility including the taking on of new responsibilities including those formerly undertaken by supervisory or managerial personnel). Crucially, the idea is that of attaining higher levels of involvement and thereby motivation by improving the attractiveness of the work itself rather than through improving the terms and conditions of work (Hertzberg et al, 1959 : 52).

The form of work organisation that is generally seen as most favourable to innovation and learning is group work. Precise designs of group work, however, vary considerably; some models offer little in the way of employee empowerment, autonomy and scope for creativity and development. Nevertheless, experiments suggest that teams can provide a vehicle for combining different perspectives in solving problems and they can facilitate a fluency of idea generation and flexibility of solution be they in the context of project teams, incremental cell working, cross-functional groups or inter-organisational networking arrangements (Tidd et al, 1997).

Nevertheless, teams or groups can be designed according to both low road and high road rationales as illustrated in the model in figure 1. Group work can mean merely multi-skilling and job enlargement on an assembly line. Under this low road approach functional flexibility is achieved through job rotation. On the other hand, the high road approach also entails flexibility, but achieves this through employees

having responsibility for the production of a part, or a complete product with latitude for autonomous work planning. The latter option clearly presupposes a positive trajectory in the quality of working life offering scope for employees to develop in their work, build relationships with customers and suppliers and thus be sources of operational and strategic innovation. The model illustrates that low road companies seek to develop work organisation from limited models of teamworking that offer job enlargement and little else as a means of flexibility and rationalisation motivated by cost reductions. But as such firms seek to adopt high road solutions involving more job enrichment and scope for development, they allow greater employee empowerment and QWL improvements as prerequisites for an innovation based approach to competitiveness.

Figure 1: Models of Teamworking (source: Innoflex Project)



Recent research surveys of innovations in work organisation undertaken as part of the Innoflex Project have revealed considerable evidence that high road solutions can lead to performance improvements and that QWL is thus a potential driver of competitiveness. Such a view has been reinforced by the experience gained by researchers and company representatives at learning visits of innovative companies that are committed to improved performance through the development of human resources. Such innovation is illustrated by the case studies of Ericsson Radio Systems AB in Gävle, Sweden, and East Midlands Electricity outside Nottingham in the UK, summaries of which are set out in Exhibits 1 and 2 (below).

Exhibit 1: Innovation at Ericsson Radio Systems AB, Gävle, Sweden

In anticipation of the third generation of mobile telephony (3G), Ericsson is building a new factory for the production of the new transmission equipment in Gävle, 150 kilometres north of Stockholm. At the same time, the company is aware of the need for a stress prevention programme. Accordingly, Ericsson managers have decided to experiment with new ideas in the production process that combine goals of efficient assembly of the new products with a human resource policy that emphasises high staff motivation, stress avoidance, competence development in line with employee needs, and a proper work-life balance.

The new factory, built in a former wholesale distribution warehouse, has been designed around cellular working that envisages individuals at work stations being responsible for all operations including customer ordering, assembly of processor boards and testing. In particular, a new culture and new competencies are seen as required to move away from high volume production, enable closer relations between production and product design and test development. The culture is summarised by the five themes of development, team-spirit, respect, responsibility and new thinking.

The means to manage change has been the setting up of a project 'The Good Workplace' with trade union support that aims to recruit and motivate staff whose performance contributes to increased profit and profitability. Managers of the new plant stress the need for delegation, participation and individual competence development plans in line with company goals that include developmental training on teamwork and leadership as well as personal development. Particular individuals have been specially trained as 'inspirers' to enthuse other employees on the aims of the project.

The work environment has been designed in close liaison with the company Medical Officer not just to allow for functionally efficient production, but also to allow staff to relax at certain times with a view to stress prevention and the encouragement of a creative spirit. This has involved recovery rooms including an ergonomically designed 'Green Room' that enables individuals to withdraw for contemplation, reflection and creative thinking individually or brainstorming in small groups.

The changing face of competition suggests that firm performances will increasingly depend on the motivation, commitment and development of their employees. In other words, Europe's economy will require high road solutions whereby competitiveness and the quality of working life converge as illustrated as tentatively suggested in Figure 2. It would be a mistake, however, to assume that practitioners and researchers have universally embraced QWL and high road thinking: for example, opinions differ on how the various group work designs on

offer actually contribute to organisational performance and thereby competitiveness.

There is evidence, however, that the more general logic of the high road to competitive success and organisational development has not been universally embraced by firms or public sector organisations. In Italy, for example, although moves to more flexible working are widespread and have been designed to give workers more autonomy and responsibility, they have only been accompanied by minimal skills development (Mazzanti, 2001: 27). In Sweden, there is considerable evidence that many firms and public sector organisations, especially in the 1990s, have prioritised rationalisation strategies such as downsizing and lean production (Huzzard, 2000: 59ff).

Exhibit 2: Innovation at East Midlands Electricity, UK

East Midlands Electricity based at Castle Donington, 10 miles from Nottingham, has a vision of being the UK's 'leading utility distribution asset manager' of electricity. The company's strategy to realise this is to grow through acquisition and joint ventures in the electricity market, and through further expansion in electricity gas and water. A fundamental aspect of the strategy has been physical change, moving the company's headquarters to a greenfield site and reducing its sub-offices from 26 to 5. Core staff have been reduced by 50%.

This was accompanied, however, by changes in the psychological environment including a new culture, a partnership approach with the unions and a new relationship with those 'going forward with the business'. This includes a focus on communication and personal development planning, addressing work-life balance through flexible working and a new rewards system. At the heart of the new approach was the belief that a relaxation of direct management control, resulting in greater employee autonomy, would foster a climate for creativity, innovation and acceptance of inevitable changes within the workforce.

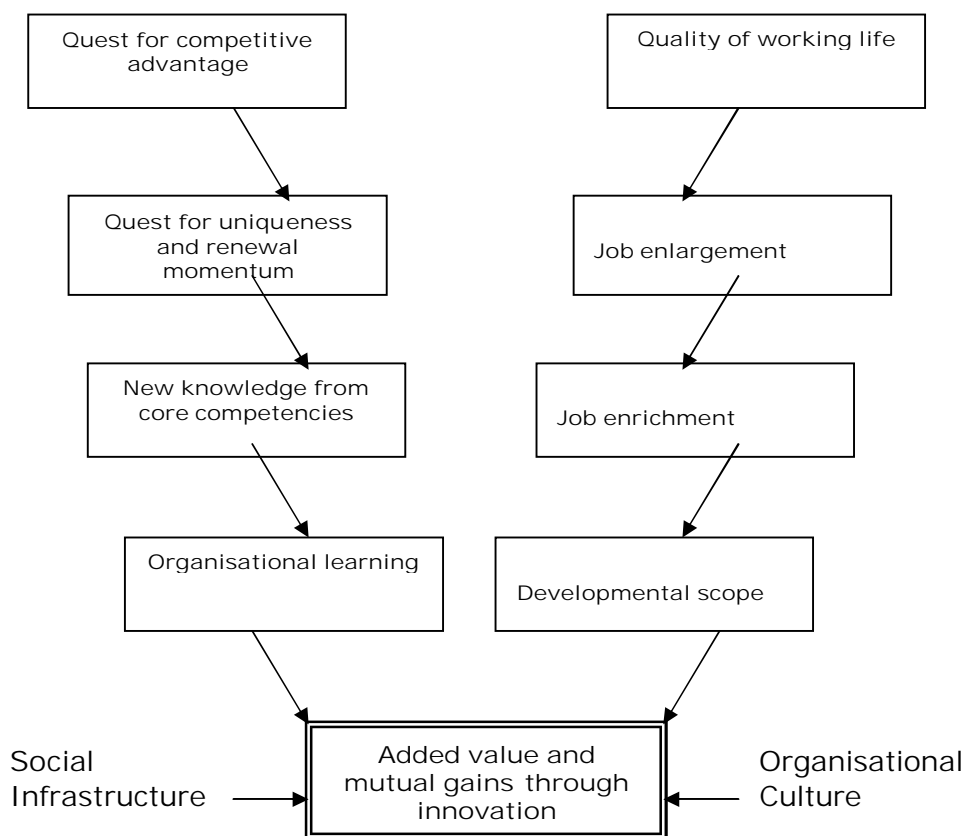
The new culture was also supported by the policy of 'green working' whereby staff were encouraged to take two 'green days' per week with a view to reducing costs, encouraging flexibility, reducing the environmental pressures of commuting and enabling employees to secure a better work-life balance. Green days were considered to be taken where staff shared cars, cycled to work, used public transport. Moreover, working at home was actively encouraged through the provision of laptops, remote access and state of the art telephony. Such a policy also enabled the company to reduce costs by using less office space as staff were expected to use any available desk ('hotdesking') when they were at the office.

A random sample showed that 61% of EME employees regularly teleworked and 22% opted for regular car sharing. Controls are agreed between managers and teams and any green working is based on a voluntary partnership between individuals and their respective line manager. Flexibility has also been promoted through the negotiation with the unions of annualised hours and variable working weeks and fortnights at the discretion of each employee. Such policies offer clear prospects for staff to manage their own work in line with their personal requirements thus enhancing the quality of working life.

At the heart of the debate over the future trajectory of European firms and public sector organisations is the fundamental question of whether improvements in the quality of working life are compatible with competitiveness. As yet, however, the debate remains unresolved, but it appears that cost cutting and flexibility are not in

themselves sufficient conditions for competitiveness. The successful and sustained penetration of higher value markets requires researchers and practitioners to work together to enhance our understanding of how knowledge, innovation and human creativity can be harnessed to build and maintain a competitive edge. There is clearly, therefore, an urgent need to develop knowledge and practical tools on the relationship between competitiveness and work organisation, and the conditions under which the human aspects at the core of innovation processes can converge with performance. Such a task is an urgent priority, both for research and for those practitioners on whom European competitiveness, growth and employment security depends. The Innoflex project makes one inroad into meeting this demand.

Figure 2: The convergence between QWL and competitiveness



Re-thinking QWL for the 21st Century

In the 1970s and 1980s, issues relating to the Quality of Working Life received considerable research attention. However a large amount of the QWL debate focused on job redesign within individual enterprises. Much of this research has been targeted at large-scale manufacturing, and in the area of teamworking, automobile manufacturing has enjoyed an almost obsessive level of academic interest. However as manufacturing throughout the EU restructures, there is a need

to reposition the QWL debate to encompass the changing labour market and the emergence of the so-called 'new economy'.

Early discussions about QWL in the 1970s (see below) were built upon the premise of humanising working conditions in an era of mass markets. In addition, labour markets were particularly tight, resulting in attempts to differentiate conditions of employment. However, as competitive pressure grew in the 1990s for adaptability, high quality and responsiveness, the QWL debate was re-contextualised around issues of 'empowerment' and the development of 'high performance work systems' and the term QWL somewhat fell out of fashion.

Buchanan and Huczynski (1997) illustrated how QWL issues had been redefined during the 1990s, and a key objective of the Innoflex project is to ensure further re-appraisal relevant to the new century. Traditionally QWL has encompassed a range of issues including workplace partnership, reward and recognition, and employee involvement. However the transformation of Tayloristic working practices through job-redesign has been a core preoccupation. The 'up-skilling' of work through job enlargement and enrichment processes, and the development of self-managing (or semi-autonomous) teamworking has provided benefits for both companies and employees in traditional organisational settings. But employment patterns are changing and there is evidence to suggest that traditional organisation and career structures will be challenged by more flexible modes of employment. So what types of change might emerge and how can concepts of Quality of Working Life develop to meet emerging challenges in the world of work?

The rapid change in demographics, technology and global markets will be a continuous challenge to manufacturers and service providers. Research evidence from the European Commission (2001) suggests that :

- Innovation and technological change are (and will remain) the principal driving forces in job creation.
- 1 in 4 EU countries see labour shortages as a barrier to expansion.
- While 80% claim to be 'satisfied' in their work, there is recognition that job quality must be improved in a sustainable way to avoid people falling into unemployment or leaving the labour market.

A contestable area in recent debates concerns the way in which employees themselves will view work. Richard Scase (1999) argues that that work will become a 'central life interest' with a proliferation of the 'long-hours culture'. While some may indeed choose – or feel coerced into working long hours, we have already noted that other commentators such as Giddens (1998) foresee problems for employers who cannot provide 'meaningful work' in an age when opportunities for travel, leisure pursuits and concerns for work/life balance are of increasingly significant in employment options. For some, traditional forms of employment are too restrictive and new patterns of work are beginning to emerge notably in the

'creative industries'. But what these organisational forms will look like, and the extent of their diffusion in coming years, is the subject of much conjecture.

A study led by the Future Unit of Great Britain's Department for Trade and Industry (DTI) attempted to envisage the UK economy in 2015 and engaged a number of academics and policy-makers in predicting possible patterns of 'work in the knowledge-driven economy'. Two leading scenarios were devised to provide a context within which policy makers, social partners and others could develop future-orientated thinking about their own spheres of competence; these are entitled Built to Last and Wired World. In 2001 the DTI launched its FutureFocus centre as a high-technology locus for such dialogue.

Built to Last is based on fairly traditional company structures but prioritises knowledge as a principle source of competitive advantage. A challenge for Built to Last companies is to find ways of capturing and internalising such knowledge. New forms of work organisation and employee retention are therefore key constituents of business strategy; characteristics of the Built to Last landscape will include the use of incentive packages (opportunities for education, share ownership, pension and healthcare), the importance of branded products and the utilisation of networking technologies.

Wired World assumes the growth of coalitions of individuals and small firms able to form and re-form on a project-by-project basis to meet the requirements of particular customers, contracts or projects. Organisations, real or virtual, are set up on an ad hoc basis in response to contingent opportunities and needs. Individuals involved are often self-employed portfolio workers linked by strong inter-personal networks. High speed Information and Communication Technologies (ICTs) play a critical role in ensuring the cohesion and responsiveness of these networks.

These scenarios are not seen as mutually exclusive: rather a key task for future-focused dialogue is to explore how elements from each scenario might combine to form a 'matrix', and to identify ways in which key actors can influence that process. For example organisational structures at the centre of Wired World tend to fall outside traditional debates on quality of working life or job redesign; they provide able knowledge-workers with exciting opportunities for variety, personal development and entrepreneurship, but at the expense of considerable insecurity. As the emergence of Wired World begins to offer more attractive ways of working for talented knowledge workers (even if largely restricted to people in high technology or design-based sectors) conventional companies will need to transform management styles and cultures if they are to recruit and retain able staff. Indeed there is increasing recognition that employees are seeking a better balance between work and leisure, forcing many employers to introduce benefits such as guaranteed TOIL (time off in lieu), sabbaticals and career breaks.

It has already been observed that the focus of QWL debates has changed over the past thirty years or so, and the table in Figure 3 incorporates Buchanan and Huczynski's (1997) attempt to illustrate this evolution. However the table has been amended to translate the principles of historic QWL debates to match emerging

challenges in the 'new economy'. As the table shows, issues such as 'flexibility', 'autonomy', and 'training and development' may become even more of a concern as people opt to shape their own careers and working lives. As ICTs increase opportunities for interconnectedness between individuals and organisations, so may opportunities grow for more autonomous working. This represents a serious challenge for traditional models of organisational development and QWL. Similarly organisations that continue along the 'built-to-last' track may not only face demands for participation and partnership from workers seeking greater opportunities for self-fulfillment and gainsharing, but will also answer to an increasing body of customers and investors who recognise that employee involvement is a key constituent of organisational effectiveness and business success.

Accordingly, our belief in the need to refocus the debate on competitiveness in Europe includes the rehabilitation of QWL. 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 such as 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). Yet each country in Europe has different institutional, cultural and employment traditions and such differences are reflected in differences in how QWL is defined and how debates on working life have evolved throughout the continent. In France, for example, QWL is seen in terms of the relationship between remuneration and working hours on the one hand and learning and achievement in organisations on the other (Sacquepèe and Dufau, 2001). In Scandinavia, debates on 'Good Work' have tended to focus more on objective parameters of work organisation (Banke and Norskø, 2000; Huzzard, 2000). The debate in Spain has focused more on occupational health and participation (Oncins et al, 2002). Other versions see QWL as being more of a subjective concept rather closer to notions of job satisfaction. Because of these differences, we do not think it productive to adopt a tight definition of QWL in the point of departure for our research.

We also argue that QWL and competitiveness should be seen dynamically – as central concepts in processes of change management. Crucially, we reject the view that the management of change in organisations has to require the concentration of power within top management. Indeed, the history of change programmes across the continent provides ample evidence that such approaches are often doomed to failure. We also wish to avoid arriving at conclusions on change that comprise of simplistic checklists drafted around supposedly tried and tested change parameters. The challenge, rather, is to provide discursive tools for dialogues on change among the social partners that help develop new perspectives on reality. For this reason, too we have not used a tight, closed definition of QWL.

Table 3: Re-positioning QWL for the 21st Century

| QWL in the 1970s | Empowered teams in the 1990s | Aspirations for work and leisure in 2010 | |
|--|---|--|--|
| | | Built-to-last | Wired-world |
| Aimed to reduce costs of absenteeism and labour turnover and increase productivity | Aims to improve organisational flexibility and product quality for competitive advantage | Recruitment and retention strategies key issues in a tightening labour market. Organisations seek to differentiate their working conditions and allow for greater work life balance. | Individuals and organisations develop 'networking' abilities. Virtual organisations may form to provide custom services. |
| Based on argument that increased autonomy improves quality of work experience and job satisfaction | Based on argument that increased autonomy improves skill, decision making, adaptability and use of new technology | Team autonomy, the development of organisational creativity and the use of collective memory central to product and process innovation. | Individuals have autonomy to design portfolio careers in locations of their choice, and which coincide with leisure aspirations. |
| Had little impact on management functions | Involves redefinition of management function, particularly for supervision | A loosening of 'command and control' management approaches. Employees may be invited to participate in decision-making, strategic thinking and financial gain-sharing. | Individuals become self-managing and are the architects of their own networks, employment patterns and career paths. |
| 'Quick fix' applied to problematic groups | Can take significant time to change organisational culture, attitudes and behaviour | Organisational culture aims for trust relationships built upon dialogue and partnership. In addition, the diversity of employees will be seen as a key organisational resource. The organisation may offer opportunities for social and community initiatives. | Network culture based upon mutual trust. The Internet will link individuals and small enterprises, but social contact will remain vitally important. There may be a blurring between work and leisure pursuits which will occur both through electronic and physical contact. There may be a blurring between work and leisure pursuits. |
| Personnel administration technique | Human resource management strategy | Holistic people management techniques, such as work organisation, job enrichment, family friendly policies will provide measurable 'bottom-line' benefits. | Career development may be self-directed but intermediaries such as government, business support agencies and universities, may broker contacts, knowledge and facilitate both technological and geographical networking. |

Adapted from Buchanan, D., & Huczynski, A. (1997) Organizational Behaviour . London: Prentice Hall.

3.2.3 The Evidence

Are there really alternatives to traditional, low road forms of organisation and do they actually work? This is the basic question for anyone professionally involved in organisational change. Theories, inspirational visions and well-formulated plans are not enough. Decision makers like to see the evidence. However, 'evidence' in organisational change has a different meaning than in the physical sciences. Change initiatives and organisational experiments never take place under uniform and controlled conditions. Evidence here emerges from real life in an enormous variety of social and economic contexts. Furthermore evidence can fulfil different functions during different stages of the innovation process:

- Well known success stories about pioneering initiatives undertaken by the real frontrunners can play an important role when change is being considered. Such examples show that alternatives do exist. They can inspire decision makers to follow other routes and can be regarded as the key landmarks in the development of organisational thinking.
- As new approaches begin to spread, managers and other stakeholders want to understand the relevance for their own organisations. The need for comparison grows as actors seek greater certainty about the benefits of seemingly complex and risky processes. Benchmarking, surveys and other cross-sectoral studies become important resources at this stage.
- Once organisations are fully involved in the change process another kind of evidence is needed, one based on the experiences of others involved in similar transformations and identifying critical factors likely to produce successful outcomes.

Pioneering cases

When the Dutch Philips engineer Frederiks moved in 1986 to the Northern city of Stadskanaal he knew that his new job as plant manager of the semi-conductor factory would be a tough one (Haak 1994). During the mid-eighties the economic tide was still low and competition in the components market was severe. He knew that his last job before his retirement could involve the closure of the factory. At that stage Philips had no intention of investing substantially in the plant. Employment creation had been one of the original considerations for building the factory in this location, and unemployment was still a major problem in the region. Frederiks and his new team became strongly committed to keeping the factory open. They won company support to develop a strategy which could make the plant competitive again. Their final plan was not based on technological measures, rigorous cost cutting and downsizing but upon a form of sociotechnical redesign which Frederiks had already implemented in another Philips factory. Components of this approach were:

- The change from functional to flow- and product oriented structures.
- The development of self managing production teams with each team responsible for a rounded ('complete', or 'whole') task.
- A shift of part of the staff functions to the production teams.
- The formation of integrated staff teams working close to the shop floor.
- Flattening hierarchies.

- Opening and sustaining dialogue with teams.

Implementing such basic changes in a large and complex organisation did not prove to be easy. Building trust between production workers, staff, senior management, middle management and customers was crucial but painstaking. Yet eventually the project became a success and for many years the company was an iconic example of organisational innovation in The Netherlands, providing the focus for several postgraduate theses and conferences on organisational change. The approach appeared to provide a real answer to severe problems in a harsh economic environment.

In 1993, just at the moment the Stadskanaal factory seemed to be on track again another factory was closed. It was a factory which enjoyed far wider, even world-wide fame in the field of organisational innovation: Volvo's revolutionary car plant at Uddevalla. This factory, opened four years earlier, was arguably the most ambitious attempt at introducing mass vehicle manufacture according to sociotechnical design principles (Sandberg 1995). Here self-managing teams did not produce a tiny electronic component but a whole car. Volvo put all its technical and organisational know-how into developing a real alternative to the assembly line delivering the prospect of genuine improvements in quality of working life. The plant had enormous symbolic significance in the search for new organisational forms, combining attractive work in a tight labour market with high levels of productivity in a very competitive environment (Sandberg 1995, Huzzard, 2000). But Volvo nonetheless hit hard times. Car sales declined especially in the home market and production capacity had to be downsized. The subsequent closure of Uddevalla led to fierce debates about the fundamental question of whether improvements in the quality of working life are compatible with competitiveness (see for example: Adler and Cole 1993, Berggren 1994).

So when we compare both cases, what evidence is there for the value of new organisational forms based on innovation and flexibility? Two possible answers are certainly wrong. The first wrong answer is that Philips finally solved production problems in the semiconductor industry. The second is that the closure of the Uddevalla plant signified the demise of Volvo's QWL policies. Organisational innovation remains a continuous process in both firms, in good times and bad. Both cases undoubtedly played a highly important role in the diffusion of organisational innovation on a national or even on a world-wide scale. There always will be a need for inspirational stories from pioneers showing that boundaries can be moved. However cases like these lose their impact when they are used as 'real and final proof' of the effectiveness of new organisational practices. At best, these stories represent challenges, offering propositions to be tested and adapted in new situations.

Where do we stand?

The two cases show how difficult it is to compare complex change processes and evaluate their outcomes, especially when we lack insight into the context in which change is happening. This clearly limits the value of comparative research of a quantitative nature. A recent literature review (Savage, 2001) shows that the volume of hard data on the benefits of new forms of work organisation is still very limited. Savage offers a number of possible explanations:

- differences in the definition of new organisational forms;
- limitations in the scope of the studies;
- differences in time perspectives (long term versus short terms effects);
- the variety of performance indicators used.

In addition researchers often have to rely on the words of the actors involved – and of course the words of individuals don't always give the full story.

However the number of comparative studies and cross organisational surveys appears to be on the increase. Part of this growing body of research is carried out in the context of EU initiatives or (in the case of many Northern European countries) of national policy programmes - see for example the Employee Participation and Organisational Change study (EPOC, 1997) and the evaluation of the Swedish Working Life Fund (Gustavsen et al., 1996). We shall focus here on a few significant findings from these studies.

Organisational innovation is now a real issue on the management agenda – and it works

The origin of 'work reform' or 'organisational reform' can be found somewhere in the late sixties, typically in environments experiencing high growth and a tight labour market (Hague, 2000; Huzzard, 2000). For many managers this 'human centred' approach to organisational change seemed out of place by the early 1980s when the Western economy was hit by a serious recession. However many realised in the middle of recession that a new perspective on the organisation was a basic condition both for recovery and for sustainable competitive advantage. Flexibility and quality suddenly became high priorities, challenging the inertia embedded in traditional organisational cultures. More recently managers are coming to realise that innovation is not an event but a continuous process. These conclusions are amplified by a number of findings from research as set out as Exhibit 3 (below):

Exhibit 3: Innovation and Human Resources in Europe – Research Summary

- The EPOC study (1997) indicates that 4 out of 5 workplaces in ten European countries practice some form of direct participation by employees.
- A study of 10 leading European steel companies published by the European Federation of Steelmakers (Eurofer) indicates that the management of organisational change and human resources is a crucial factor in achieving competitive advantage in an increasingly knowledge-intensive industry (Den Hertog and Mari 2000).
- A Swedish survey by the National Institute of Working Life (Wikman et al. 1999) revealed that three quarters of the respondent firms had implemented changes involving the delegation of responsibility and job widening.
- A local survey of 200 organisations in the United Kingdom (Hague and Aubrey 1999) demonstrated that between 1995 and 1998 some 30% of the sample implemented working practices including multi-skilling, teamworking and problem-solving groups. The early 1990s appears to represent a turning point in which the diffusion of these practices became significant, at least amongst larger firms.
- 65% of British managers were reported in the 1998 UK Workplace Employee Relations Survey (Cully, 1999) to use teams in their work places.
- According to a case survey of 35 Dutch software firms (Huizenga 2001) teamworking has become the standard both for daily operational tasks and for product and service innovation. Multifunctional groups proved to be critical for the latter task.
- An American survey of Fortune 1000 companies (Lawler et al. 1995) showed that 68% make use of self-managing teams.

A growing number of studies indicate that organisational innovation and new forms of work organisation have a positive impact on organisational performance. This is different from saying that new organisational forms are in themselves more effective. Rather it is recognised that new approaches create the conditions for wider and more fundamental changes. Illustrative in this respect is the Eurofer study (Den Hertog and Mari 2000) in which ten leading European steel firms participated. The study shows that the radical reconstruction of the steel industry would not have been possible without multi-skilling, investment in competence building, flattening of the organisational structures and removing functional boundaries. The same applies to the implementation of new information and communication technology. Several studies, among them the Innoflex national reports from Denmark, France, Sweden and The Netherlands, (Banke and Norskøvn, 2000; Sacquepée and Dufau, 2001; Huzzard, 2000; den Hertog and Verbruggen, 2000) indicate that new forms of work organisation enable firms to profit from the implementation of new technology. New organisational forms are not 'stand alone' systems but only appear to work as part of a larger integrated configuration.

Some examples from the growing stream of research findings are given in Exhibit 4:

Exhibit 4: New Organisational Forms in Europe – selected research findings

- A survey of production supervisors in 104 Danish companies indicates that the most important drivers for teamworking in production are increased productivity, efficiency, flexibility, employee satisfaction and motivation (PLS Consult, 1999). The most significant results in practice appear to be related to flexibility, productivity and employee satisfaction. Only 10% of respondents claim that the aims were not fulfilled completely.
- A recent study commissioned by the Swedish Ministry of Industry (NUTEK 1999) examined the ability of flexible work organisation to increase productivity. Flexibility was defined in terms of the organisation of human capital, the distribution of responsibility and reduced bureaucracy. From the study flexible organisations emerged strongly as more productive with lower levels of labour turnover and absenteeism. These organisations also tend to have greater capacity to realise basic transformations such as the implementation of new technologies and organisational innovation.
- The evaluation of the Swedish Workplace Development Programme (Gustavsen et al., 1996; Brulin and Nilsson, 1995) revealed important facts about the impacts of innovation in work organisation. A random sample of 1500 projects indicated that workplace development and productivity improvement go hand in hand. Projects resulted in increased job rotation, greater involvement of shop-floor employees in planning, control and participation in change activities. Key figures on lead times, throughput times, supply times and retooling times were discernible as being higher at fund-supported workplaces than in a control group.
- Researchers in The Netherlands (Dhondt et al, 1998) tried to explain organisational performance on basis of two sets of change: organisational and technological. The study was carried out by means of a national survey involving 3.600 companies, set up to establish the state of workplace reform in the country. Results indicate that high performance is strongly affected by a combination of both forms of change. The report argues that the combination of advanced technology with modern sociotechnical organisational forms is a precondition for high performance.
- A study of 63 medium-sized Dutch firms (Cobbenhagen, 1999) demonstrates that well developed horizontal (or lateral) organisational structures which cross functional boundaries and are based on multifunctional teams and cross functional career paths can be crucial for product, service and process innovation.

At the level of the workplace, convergence is well illustrated by the experiences gained from The Swedish Work Environment Fund. The Fund supported the establishment of a new body, AMBIV, The Joint Committee for Action Against Strain Injuries in Industry. This group set up nine sub-projects at workplaces between 1989 and 1995 where there was local agreement on the desirability to introduce innovative reforms to the work organisation and review payment systems in directions that were of mutual benefit to both sides (Huzzard, 2000). Reports on five of the projects were published, and an overall summary of these is set out in Table 4:

Table 4: The Swedish AMBIV Project - summary of outcomes in cases published

| Workplace | Change motive | New work organisation | Result |
|-------------------------|--|---|--|
| ASSA AB, Eskilstuna | High turnover rates; high levels of repetitive strain injuries; poor supply precision. | Flow production: teams with full assembly responsibility, customer contact and work planning. | Reduced turnover from 50% per year to 3%; improved supply provision from 20% to 99%. |
| Nokia AB, Motala | High levels of industrial injuries; high costs; poor quality; low effectiveness. | Teams of ten assembling diverse products. New responsibilities included supply quality, materials handling, maintenance, fault finding and reporting and production technology. | Number of strain injuries reduced from 150 per year (1980s) to zero at completion of project. Savings of 15% in indirect time. Increased individual flexibility. |
| Norwesco AB, Öregrund | Industrial injuries; mutual dissatisfaction over payments system. | Some teamworking in high-volume production. General extension of job content linked to product development. | Steady increase in productivity compared with constant level pre-project. Job widening and greater openness. |
| TVAB, Töcksfors | High turnover and sickness absence; high quality costs; increased customer demands on quality and supply precision; rapid company expansion. | Stimulation of teamwork via organising production around products. Weekly and daily planning in teams; also responsibility for results, quality, supply times and working hours. | Reduction of 80% in sickness absence and 75% in injuries. Improved quality, supply precision and productivity. 80% reduction in throughput times. |
| Volvo Trucks, Umeverken | Need for creation of greater effectiveness in production; high levels of strain injuries. | Nine independent teams in the press shop each having 10-12 members. Team duties included all direct manual duties as well as some indirect duties. Pace governed by human capacity and time to learn. | Improved psychosocial environment through greater skills development, job widening and delegation of responsibility. Inclusion of more indirect duties in the teams. Holistic view of operations and learning. |

Closing the gap between leading edge-practice and common practice

The extensive Employee Participation in Organisational Change (EPOC) survey undertaken by the European Foundation, clearly demonstrated that new working practices were emerging across Europe. Other research also points to a widespread reappraisal of traditional working practices, (Cully, et al, 1999; Hague and Aubrey, 1999; NUTEK, 1996; Pettigrew and Fenton, 2000). However, as Section One highlighted, there is considerable variation between emerging organisational practices. Some have sought organisational renewal through a radical reappraisal of job design, employee involvement and process innovation and this has been described as the 'high road' to organisational change. However, it appears that many organisations have tended to follow a more limited, or 'low road' adaptation of existing organisational forms.

While this trend would appear to be of concern, perhaps it is more worrying that many organisations have yet to implement any strategies of organisational renewal. But why is this the case? Why have many organisations, and smaller enterprises in particular, seemed to have taken the 'no road' option when it is clear that working practices based upon 'divide and rule' principles and the division between 'mental' and 'manual' tasks are no longer a sustainable option? This would seem particularly surprising for a number of reasons:

Firstly, it has been recognised for many years that technology alone cannot provide a competitive edge. Mistaken approaches to restructuring by Fiat in the 1980s (Sisson, 1996) plus the various studies of anthropocentric and human-centred manufacturing clearly illustrate how vital it is to develop the skills and competencies of individuals (Brodner, 1990; Corbett, 1990). At the same time individual competencies do not represent an effective asset unless they are deployed in an organisational environment where they can be realised to the full. The importance of developing an organisation's collective competence needs therefore to be recognised, while 'organisational memory' and workforce diversity can be a vital resource for problem-solving, creativity and innovation.

Secondly, it has become a cliché to hear managers pronounce that 'people are our greatest asset'. However, an increasing amount of research evidence demonstrates that innovation in work organisation based on greater employee involvement can have a significant influence on business performance. A ten year longitudinal study undertaken by the Chartered Institute for Professional Development (CIPD) in the UK has identified that the contribution of people management practices (i.e. a focus on employee involvement, culture and work organisation) account for as much as 17% variation in the profitability of companies (West et al, 1998).

Thirdly demographic change coupled with economic growth has resulted in a labour market that has become increasingly tight in some countries and sectors of the European Union. Companies are therefore seeking to provide working environments that both attract and retain labour and meet the growing requirement of many employees to have more varied and meaningful work (Giddens, 1998). In addition, employees are seeking greater opportunities to pursue leisure interests or to find a better balance between their work and home lives.

In summary the reasons for change are compelling. Why then does there appear to be an increasing gap between leading-edge practice and the so-called 'long tail' of companies (and SMEs in particular) that are lagging behind? The next section will consider some of the reasons why new forms of work organisation remain limited, both in terms of their potential for employee involvement and in their diffusion within European firms.

3.2.4 Transforming Working Life

The previous chapters have highlighted the very real benefits that new forms of work organisation can have upon the quality of working life for individuals while enabling organisations to meet the challenges of rapidly changing consumer choice, markets and technology. However, as research evidence has shown, the diffusion of such practices remains surprisingly limited (see Benders et al, 1999; European Work and Technology Consortium, 1997). This section will examine some of the reasons for the failure of a wider transformation of work organisation, and will illustrate emerging concepts, tools and processes which offer new opportunities for sustainable organisational change.

Why is change so difficult?

As the impact of globalisation began to be felt during the 1980s and 1990s, many European enterprises started to search for new modes of working which would allow increased quality, flexibility and responsiveness. As a result the ability to change became to be considered a key organisational competence. The art and practice of 'change management' has been an enduring theme of management books and seminars. Indeed, there can be few people who could argue that their working lives had not be effected by change in some way. However despite all the methodologies devised and the vast amount that has been written, the process of change remains fraught with difficulty, disillusionment and failure. But why is this the case? In the following section, some of the obstacles to change are identified and analysed.

"We don't know enough about it!" One of the difficulties confronting researchers when attempting to answer this question, is that we simply do not know enough about organisational change. Large scale surveys have proven useful in mapping trends in organisational practice, but deeper analysis of the way change is triggered, negotiated and resourced is still relatively scarce in the research literature. Although there have been calls for more longitudinal research (Dawson, 1994; den Hertog and van Eijnatten, 1982; Pettigrew, 1990), researchers have been constrained by short-term funding and the growing use of fixed-term contracts. Moreover, despite much debate, many leading research journals maintain a continuing commitment to papers written within a positivist paradigm which fails to capture the way that change emerges and is shaped and interpreted by multiple voices at the local level.

For many organisations, access to knowledge about effective change processes remains a constraining factor. In a survey of organisations undertaken in Greater Nottingham, 64% of respondents considered uncertainty about the consequences of change as being a major barrier in implementing new working practices (Hague and Aubrey, 1998).

Case studies can provide useful insights, but few explore change processes in any detail and tend to focus on the content and outcomes of successful change. Studies which reveal the reasons for failure remain rare, as do accounts of change in smaller enterprises. It is hardly surprising that some managers struggle to equate celebratory accounts of 'best practice' in multinational businesses with their own circumstances.

"Been there, done that... and it didn't work!" The organisational techniques developed in Japan and the US in the 1980s and 1990s were enticing to managers faced with an urgent need to respond to the pressures of globalisation; certainly the apparent success of the US and Japanese economies and the claims made for work organisation systems such as 'Just-in-Time' (JIT) and 'teamworking' were compelling. Case study evidence illustrated that managers could expect improvements in efficiency and productivity while at the same time reducing absenteeism and labour turnover. Indeed during this time there was an explosion in the range of change recipes and check lists that all espoused success to those adhering to the 'golden rules'. There is little doubt that many were 'bewitched' by the fads and fashions of managerial thinking (Buchanan et al, 1999).

Many people attempted to implement change programmes within their organisations and many reported success in the initial stages. However results were mixed and often short-lived as innovation 'decayed' and organisations reverted to former working practices. In a recent review of the development of 'learning organisations', Peter Senge, a pioneer of the concept, estimated that over the past the years or so there have been as many failures as successes in transforming organisational cultures (Senge et al., 1999). Likewise, commentators have also pointed to the high failure rates of job redesign experiments (Kelly, 1982) and teamworking (Buchanan, 2000). Grey (2001) cites research that indicating that 90% of TQM projects fail to meet expectations that there is a failure rate of between 50% and 70% for BPR initiatives.

There are many reasons cited for the 'atrophy' of change programmes, including a lack of 'top down' commitment, failure to involve employees in a 'bottom up' process of negotiation and experimentation and the legacy of Taylorism which has for many decades stifled innovation and creativity (Andreasen et al, 1995; Kristensen, 1990).

Previous failure can therefore be a major obstacle to organisations not wishing to go through the pain and expense of being 'burnt' a second time.

"We just don't have the resources!" Sustainable organisational change requires sufficient resourcing and one of the major reasons for the failure of change initiatives is where resources are either unavailable or were under-estimated at the start of the project. Many managers argue that they simply 'do not have the time' to devote to organisational development, indeed it is argued that a lack of 'organisational slack' (Boer, 1991) or 'design space' (Bessant, 1983) can seriously impede many enterprises.

For organisations with few financial resources, and SMEs in particular, it can be difficult to identify external support. Funding regimes are often complex, linked

to the attainment of vocational qualifications, or geared towards the development of specific competencies; the use of ICTs for example.

In addition, it can be extremely difficult to source impartial advice on the development of new forms of work organisation. Academic discussion can appear inaccessible to practitioners. Consultancy often fails to provide evidence-based illustrations of organisational transformation and may over-emphasise particular change methodologies. Certainly many managers dismiss academic work as irrelevant and are mistrustful of consultants, particularly if they have had bad experiences in the past.

Paradoxically, while some managers argue that they lack knowledge or resources to support change they fail to use important assets within their organisations, namely the skills, knowledge and experiences of employees. Although many would argue for employee involvement as a means of avoiding resistance and mistrust, experience of participatory methods of organisational development remain limited.

Animating change and overcoming obstacles

Despite being one of the most discussed and practised aspects of organisational life in recent years, the process of change is an area which is poorly understood, feared or under resourced. In the following section emerging approaches will be illustrated with brief case study examples.

Building trust and dialogue

It is widely recognised that the emergence of sustainable forms of work organisation are the result of an ongoing process of negotiation and experimentation (European Work & Technology Consortium, 1997). Richard Scase (1999) in an analysis on the future of the British economy suggests that creativity will become an increasingly key constituent of future competitiveness. Scase argues, however, that creativity can only occur in organisational cultures characterised by a high degree of trust. Managerial demands for employee compliance – rather than trying to unleash creative potential – will smother Britain's attempts at becoming a high performing economy.

The development of workplaces characterised by 'high trust' was a key theme in the EU Green Paper Partnership for a New Organisation of Work (European Commission, 1997). For some, the implementation of new work practices can be perceived as a threat to employment, challenge the status of certain supervisory and middle management roles and lead to the abandonment of locally negotiated trade union agreements (Parker and Slaughter, 1988). Therefore the Green Paper sought to trigger discussion on how partnership could be viewed as a prerequisite for new forms of work and offers a genuine convergence between quality of working life and company competitiveness.

For individuals, new working practices can lead to greater autonomy, access to new skills and more varied and meaningful work, while organisations can benefit from enhanced flexibility, multi-skilling and a motivated and satisfied workforce. While these outcomes have been sought through workplace partnership for many years (Heller et al, 1998), the role that partnerships can have upon the

emergence of new work forms of work organisation is less understood. However, many employees in the EU are not represented by trade unions – nor are formal partnership agreements commonplace at the local level. A challenge exists, therefore, to encourage greater joint working both within and outside of formal trade union agreements. Exhibit 6 highlights an inventive way in which organisations from different sizes and sectors have started a process of organisational renewal.

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| <p>Exhibit 5 – Using Theatre to Trigger Dialogue and Organisational Development</p> |
| <p>The development of workplace partnership has often been seen as the foundation for effective change. For many larger organisations in the EU, formal partnership agreements are well established. However in smaller organisations, and particularly those without trade union representation, terms like ‘social partnership’ have little meaning. Funded by the UK Government’s ‘Partnership at Work’ programme, a coalition involving Nottinghamshire County Council, The Nottingham Trent University and the Partners @ Work Theatre Company has helped eight business in the East Midlands region to develop a partnership approach based on identifying collective solutions to common problems.</p> |
| <p>Experienced researchers and professional actors visited the companies and spoke to groups of employees from all levels of the organisation. The researchers questioned employees about improvements that they would like to see in their companies; participants were particularly asked to illustrate their answers with stories and shared memories of what had happened in the past. While this has some similarities with more widely used organisational auditing methods, what was unusual in this case was the method of feedback. Rather than presenting the management with a written report of the audit findings, a play was developed which was performed to as many company employees as possible. The drama itself was completely fictional and great care was made to ensure that no real person could be recognised as a character in the play; nevertheless the themes and issues that emerged from the interviews were incorporated into the piece.</p> |
| <p>Where possible, the plays were performed in the actual workplace. In one small engineering company this meant that the play was presented on the factory floor among the lathes and milling machines. The thirty employees watched an entertaining drama which displayed the tensions and conflicts found in everyday company life. During the forum theatre session, members of the audience were empowered to stop the play, and were allowed to question the characters about their behaviour and underlying motives. On some occasions the employees took charge of the scene themselves by volunteering to take over the characters in the piece.</p> |
| <p>Following the drama, employees were asked in groups to look at their own working practices and to suggest areas for improvement. These ideas were addressed through the formation of a ‘partnership team’, comprising of people from all levels and departments of the business. The partnership teams were given support over the first few months and many practical solutions resulted from the teams’ meetings including the development of appraisal systems, work scheduling, better administrative procedures and improvements in the office environment.</p> |
| <p>At the end of the programme the participating companies met together to see another play about the process of partnership building based upon the experiences of all eight organisations. This helped to reinvigorate the partnership process in some cases encouraged others to join the teams who had been a little unsure about joining in the first instance.</p> |

The truth is out there somewhere ... isn't it?

Organisations faced with the need to change are presented with a huge array of methods and approaches. For many there is a serious danger of ‘initiative overload’ as enthusiastic managers embrace every new fashion. Of course many fail and it is often quite easy to spot the flotsam and jetsam of former change

programmes; target boards with no targets, unread mission statements and the fading minutes of a long-forgotten quality circle. But why is it that many organisations fail to turn the initial excitement into more sustainable processes?

An important explanation may lie in the continuing attempts of some 'experts' to discover the 'one best way' of managing organisations. While there is an increasing rejection of universal approaches, the argument of contingency theory that there may be 'one best way' for particular organisational types is, for some, still persuasive. The same logic can be clearly see in some benchmarking exercises which contain normative expressions of what constitutes 'best practice'. As Hamel and Prahalad note, benchmarking others' innovation will not be enough:

Creating the future is more challenging than playing catch up, in that you have to create your own road map. The goal is not simply to benchmark a competitor's products and processes and imitate its methods, but to develop an independent point of view about tomorrow's opportunities and how to exploit them. (Hamel and Prahalad, 1994)

Exhibit 6 – Taking bottom up seriously

It is often argued that successful change needs to take place from the 'bottom up'. The rationale for such a proposition is that imposing an external solution upon people can result in resistance to change processes that they have not designed themselves. Secondly it is suggested that employees close to a particular problem might already have insights into potential methods for improvement.

The Danish Technological Institute (DTI) have moved beyond rhetoric about promoting change 'from the bottom up', developing an innovative method of organisational development. Facilitators from the DTI encourage small groups of workers to analyse their working environments. Suggestions are sought about even the smallest changes that could bring about a benefit for the organisation. Each group is given both time to explore ways in which their production processes could be improved, and the resources if a video production team who help them take their ideas and turn them into a broadcast quality presentation.

Once completed, the films are presented to management and an action plan in drawn up on how to deal with the issues raised. There have been several successful outcomes of the approach which have resulted in both hard business benefits and more intangible – yet significant – benefits for employees who feel that they have had some ownership of the improvement process and have a sense of achievement.

Successful change processes can be easily forgotten, but this approach allows for improvements to be recorded and celebrated. In one company they have made over fifteen films which serve as a useful organisation 'aide memoir' and a resource for further development.

The tendency for some organisations to rely on external solutions is problematic in a number of ways. Firstly some commentators have argued that change programmes have failed due to an over-reliance on external change agents (Engeström, 1992; Pava, 1986). This has meant that, in some cases, change programmes may have been adopted without adequate critical assessment, and the abdication of ownership of the process to an external consultant has failed to develop internal expertise or innovative capacity.

Furthermore, expertise has been regarded as an external commodity rather than a function of the collective knowledge and know-how of employees within an organisation. For many commentators, the only way for sustained competitiveness is through the nurturing of collective and creative processes. Peter Senge (1999) has challenged organisations to 'learn' and to draw upon their joint histories and to use processes of collective remembering as a resource for innovation (Middleton and Edwards, 1990). A practical example of an initiative which aims to draw upon experiences of employees is illustrated in Exhibit 6 (above).

Thinking out of the box!

If the key to competitiveness is by staying ahead of the game rather than merely mimicking others' innovations, organisations will need new tools and approaches which stimulate creative thinking and challenge current orthodoxies. For much of the Twentieth Century, the orthodoxy of organisational life was to divide jobs between managerial and operative functions, and to break tasks down into smaller and smaller elements. Organisations were compared to machines which could be designed, re-engineered and restructured. Indeed, for many people work felt like being a 'cog in a machine'. Charlie Chaplin graphically illustrated the feeling of many workers, when he (literally) got caught up in the wheels of industry in the film *Modern Times*. In recent times several commentators are encouraging 'unorthodox' thinking about a range of organisational issues – working time, job design, reward systems and so on - that contribute to organisational life (Morgan, 1993; Senge et al., 1999; West, 1997) As workers' aspirations change and management seek new competitive advantages, fresh possibilities exist to create alternative organisational practices based on mutual gains and the convergence of organisational effectiveness with quality of working life.

A number of emerging approaches aim to stimulate organisational creativity. Arts bodies in particular have developed commercial activities including role play, forum theatre, artists-in-residence, corporate art collections and lively arts where employees collectively make an art work or put on a musical or dramatic performance (see www.aandb.org.uk/html/cf/artswork.html).

As work organisation is changing with the emergence of self-managing teams and 'factories with factories' it is also important to reconsider the built environment in which people are employed. Large organisations have incorporated team-meeting rooms alongside work areas to enable shop-floor employees to discuss arising issues. However as the example of Ericsson Radio Systems AB shows (see Exhibit 1 above), organisational environments can also be constructed which trigger, resource, and nurture creative activity (see also Ennals, 1999).

In the UK, Hewlett Packard Consulting have constructed a dedicated creative space on a large scale within its 'Open Innovation' theme park as illustrated in Exhibit 7:

Exhibit 7 – Open Innovation™: an environment to stimulate creativity

Many organisations recognise that success in business is not just about adopting new ideas, or mimicking others' 'best practices', but rather about having the ability to be innovative and keep ahead of the competition. For some organisations creativity occurs when an individual has both an idea and the ability to persuade others to turn it into reality. In other situations a group of people might have an idea and then be able to convince senior management of its potential benefits. However consultants at Hewlett Packard's Open Innovation Park in Bristol suggest that these approaches are too restricted and unreliable, and have therefore created an 'open' environment in which groups of people are simulated into innovative thinking.

Inspired by popular theme parks such as Disneyland, the originators of Open Innovation have created a series of inter-related spaces designed to provide a seamless passage between blue-sky thinking and realisable action plans. Participants visit different 'zones' in which external stimuli are used to trigger a creative response. In the 'Innovation Zone', groups are encouraged to splash out ideas in the Rainstorms area; worries and anxieties are then dealt with at the Grey Clouds on the Horizon area. Others zones include:

- Future World: where participants can envision what challenges and opportunities might beset them in the future.
- Treasure Island: in this area competition is identified from Ye Olde Spyglasse Hill and outline business plans are developed at Fortune Spring.
- Around the World in 90 days is the final zone visited where all the ideas are pulled together to ensure that the business can be launched as quickly as possible.

Throughout the process all the participants' ideas are recorded so that nothing is lost. Even if ideas are not incorporated into the day's action plan they may be subsequently used by future visitors to the park.

The team at Open Innovation also provide a creative experience which mediates between members of different 'ecosystems'. During the 'eco-play', approximately fifty people from diverse backgrounds such as academia, industry and business support, are invited to share ideas and knowledge in a way which is open and fun.

3.2.5 Learning from each other

Sharing knowledge and experience

As previous sections have suggested, the implementation of organisational change is no single measure or operation in which one malfunctioning part of the organisational body is replaced by another. It is a process in which changes of behaviour take place on basis of learning and experimentation. The paradox here is that the more an organisation is in need of change the less prepared and equipped it is to accomplish that change. Consequently, if we want to implement change we have to 'ready the unready'. We learn from most case reports that the start of the process is often difficult and painful (see for example Hague, 2000; Banke and Norskøv, 2000; Hertog and Mari, 2000). Think about firms which are in deep trouble yet where workers, supervisors and other groups hardly feel any urgency for change, or where there is active resistance to change because some groups in the workforce feel highly insecure about the need to change established skills, habits and practices. Likewise organisations already committed to change are hungry for evidence of 'what works' and for advice on avoiding pitfalls.

We have already argued that organisational change should not be seen in terms of 'catching up' through the transfer of codified rules and standards representing 'best practice'. Rather the process of workplace innovation can be likened to a journey through a complex landscape in which success depends on continuous observation, experimentation and reflection. There are beacons in this landscape from which lessons can be drawn but each organisation must necessarily map its own route, inevitably involving some degree of trial and error. In other words successful workplace innovation is about creating hybrids, drawing widely on examples of leading-edge practice but testing and customising them through dialogue both inside and outside the organisation.

Research can have a key role to play in capturing, explaining and contextualising innovative practice, though it is clear that too few bridges exist between academic knowledge and practitioners with the result that much remains inaccessible. However effective learning is also enhanced by peer-focussed dialogue enabling experiences to be questioned, compared, synthesised, adapted and improved upon. Inter-company learning networks help managers and employees develop their own solutions. Participants are given the opportunity to learn from the experiences of others, many of whom are facing similar issues and challenges. By listening and learning, they can avoid repeating the mistakes others have experienced and thereby reduce the level of risk. This can have powerful, cathartic effects. It can build motivation, confidence and self-esteem in individuals. People are encouraged and motivated to try out new ideas, to make changes, to innovate. Learning networks also help to build bridges between the needs of practitioners and academic research, offering an environment to scrutinise and discuss the relevance of findings.

There are many benefits in face-to-face contact but technology also affords many opportunities to engage in dialogue. For example an email loop can enable a small team of managers and a facilitator to have confidential conversations about a whole series of issues a team are facing. The conversations will encourage managers to reflect on the way they plan and organise their work, their personal and collective styles, and so on (see Banke & Norskøv, 2000; Huzzard, 2000).

Yet while exchanges between practitioners can play a crucial role there are often too few opportunities for such knowledge-based networking. In many parts of Europe sectoral or regional employer organisations are unable to function as a vehicle promoting leading-edge practice, while publicly-funded business support typically pursues an individual casework approach rather than building collective solutions to common problems. However network programmes such as Innoflex can provide exemplary opportunities for exchange as well as much needed innovation in techniques for inter-organisational learning (see Exhibits 8 & 9 below):

Exhibit 8 – The Innoflex Photo Safaris

Innoflex is particularly focused on inter-organisational learning as a means of overcoming constraints to the modernisation of the workplace. Early project discussions emphasised the need for adequate conceptualisation of how companies actually draw on each others' experiences to stimulate organisational innovation, rejecting simplistic models of 'transferring best practice'. At the same time this process of experimentation can draw on a wide range of experience within some partner organisations. For example Bjerlöv (Swedish National Institute for Working Life) presented a paper on the Swedish experience of Dialogue Conferences used successfully over many years to animate and guide change within organisations (Bjerlöv, 2000).

Likewise Banke and Norskøv (Danish Technological Institute) drew on widespread experience of intra- and inter-company dialogue to contribute an innovative strand to the transnational exchanges proposed within the Innoflex project. The objective of their approach was to establish a dialogue forum among a group of companies all of whom have some years' experience of group organisation and competence development. The methods used represent an alternative to traditional company visits and emphasise practical experience, learning and organisational benchmarking.

Company visits are often used to give a first hand impression of a company's products and strategies and offers a chance for the company to promote itself and its achievements. In business development programmes, company visits serve to give visitors information on products and routines. But visits typically involve short tours in large groups around the company led by one speaker who, at best, tries to give visitors an overview. This is often referred to as 'industrial tourism', providing little time to speak with employees or to question and learn about issues of specific interest.

In Innoflex the intention was to dig deeper in extracting the knowledge and experience of the host company. Innoflex provided an important opportunity to examine how organisations learn from each others' practice, and how the practical utility of such exchanges can be maximised. A key innovation in this respect can be found in the methodology for the Innoflex Learning Visits (see Exhibit 9 below).

Exhibit 9 - The Learning Visits

A group of three very diverse companies (Scanglobe, Denmark; Ericsson Radio Systems, Sweden; East Midlands Electricity, UK) visited each other's facilities and worked on several topics related to job and organisational development. Visitors included managers and representatives from the shop floor. During the series of visits the companies sought to build common knowledge on quality of working life issues, and established a relationship beyond that which could be achieved in a one-off visit. This made it possible to undertake a level of organisational benchmarking which is much closer to the companies' real life problems.

Organisational issues are often thought of as difficult to debate due to their complex nature. Along with the effort to create shared knowledge between the companies, Innoflex also tested a new method for reporting and discussing work organisation. By using digital technology (the 'Digital Photo Safari') as the basis for observations during the visit, the project experimented with the use of visual observation in stimulating subsequent dialogue. Each visit included the following stages:

- A presentation by the host company with a focus on the history and experiences of job development and workplace organisation.
- A visual audit of job development and workplace organisation using digital photo technology. Visitors were allowed to explore the workplace in their own groups and to talk to any personnel they encountered. Digital photographs were taken as an 'aide memoir' for the subsequent analysis of findings.
- Analysis of findings by each visiting group, including benchmark comparisons relating to key dimensions of quality of working life and competitiveness at the host company.
- Presentation of the visiting groups' findings to the host company (incorporating the digital photographs), prompting dialogue and further exchange of experiences.

The impact of the visits on the participating companies has been evaluated and findings are summarised in a joint report describing the three visits. This includes an assessment of the effectiveness of the methodology and its potential for wider use in Innoflex and beyond. All three host companies appeared to have been impressed by the level of insight and constructive commentary demonstrated by their visitors. Likewise each group of visitors gained from the opportunity to evaluate practice in a different type of organisation from their own.

The Innoflex website also provides examples of learning networks established by project partners.

What can we learn from each other?

Organisational change is a learning process

One of the most powerful strategies in organisational change is to pursue continuous, reflexive confrontation with experiences gathered in the course of the change process itself. People are far more willing to lose their rigid attitudes and behaviours when they start to engage with and to understand the underlying mechanisms of change. Furthermore we begin to understand that learning from the experiences of others should not be limited to 'best practice'. Banke and Norskøv (2000) show how new knowledge gained during problematic change

projects can be very valuable too. The Danish experience draws particular attention to the following lessons:

- Identify the mechanistic and Tayloristic features embedded in the existing organisation which limit the degree of freedom for change, for example plant layout, machinery, and control and planning systems.
- Do not underestimate the amount of time it takes to carry through a reorganisation, and especially to consolidate new roles and practices. Running-in periods for new technology are taken for granted but are rarely included when planning changes in work organisation.
- Supervisors and front-line managers can be trapped in unpleasant situations when they continue to feel accountable for functions and targets for which responsibility has actually been shifted to the shop floor. Indeed this can be a major cause of failure for projects involving the modernisation of work organisation. There is a considerable need for rethinking traditional supervisory and front-line management roles.

In a more general sense most case reports and case comparisons (see for example Hague, 2000; Banke and Norskøvn, 2000; Hertog and Mari, 2000) underline the importance of the following conditions for change:

- Serious commitment from the top: showing that "this time it is for real".
- Active participation of the various actors in the shaping the change process.
- Effective training and education: training as a continuous effort, closely linked with the relevant developments in technology, the market and the organisation.
- Trust, which must be built up and earned.

Commitment & involvement

This report creates a rather positive image of the (actual and potential) impact of workplace innovation. This does not mean that there have been no failures, disappointments and resistance - the closure of the Volvo plant in Uddevalla and the ensuing post-mortem certainly indicates that the field of work organisation lies on contested terrain. Scepticism and resistance to change among workers and lower management ranks are quite normal, especially where firms have experienced a series of successive reorganisations. Top management and specialists can also block change.

Two factors appear to be crucial (see for example Banke and Norskøvn, 2000; Hertog and Mari, 2000): firstly commitment from the top; secondly the active involvement of all the workers and supervisors concerned. Strong leadership and intensive participation go hand in hand. A manager from an Italian steel company argued that:

'Workers and managers of the firm have to feel it in their bones: this time it is for real. Our top management is not only involved and committed, but also leading, monitoring and steering from close range'.

An HR manager from a Swedish steel company agreed:

'We praised the day when our chairman climbed on stage and addressed workers and managers in the company, face to face. At that moment people began to believe in the operation'.

Active employee participation in planning and implementation is well known as a tool - perhaps the most important tool – in accomplishing sustainable change in work organisation. This message is strongly underlined in almost every report about workplace change from the Nordic countries (see for example Banke and Norskø, 2000; Huzzard, 2000). However, striving toward participation is quite different from replacing worn-out parts in a production machine. It is a learning process for which trust, dialogue and management commitment are absolutely indispensable.

Dialogue as a competitive advantage

A literature review on the role of direct participation and social partners in organisational change (Fröhlich and Pekruhl 1996) indicates considerable distrust and disinterest among actors in many countries. The case for active involvement in organisational change is not yet won. Interesting in this respect are the experiences of the steel industry, which went through a process of radical restructuring and renovation. Building common ground for change has been a condition for survival. The Eurofer study (Den Hertog and Mari 2001) shows that constructive communication between management and workers' representatives has been a basic condition for the accomplishment of major organisational changes.

Board members of the Austrian steel maker Voest Alpine have even called their constructive co-operation with the workers council 'a competitive advantage'. The study shows that in the past management and unions often tried to 'buy time', defer conflicts and delay decisions. Endless talk served to slow down any innovation in the firm. Today managers emphasise that in the modern global economy 'time' proves to be very costly. The postponement of strategic decisions, and of technological and organisational innovations can be disastrous. Hence, according to the Eurofer study, the quality of the communication between management, the unions and the workforce at local level has acquired a new importance. In most of the 10 firms studied, local social dialogue has been instrumental to the success of the change process, providing an effective resource for innovation. According to one steel manager:

'Trust from both sides had to be earned, and barriers had to be brought down. But the improvement did not translate into more and more and longer talks. On the contrary, companies have observed that communication has in fact become more efficient, with fewer and shorter meetings to reach better results'.

Organising: towards continuous innovation

Do new forms of work organisation such as self managed and multifunctional teams, or job enrichment, provide solutions for concrete problems faced by companies? A growing body of case evidence indicates that there is no linear one-to-one relationship between organisational innovation and organisational performance. In recent years it has become steadily clear that organisational innovation represents a strategic choice rather than a tactical manoeuvre – an integral part of the re-orientation towards higher value-added products and services in the knowledge-driven economy. The focus on continuous improvement characteristic of the 1990s is now shifting towards continuous innovation.

A recent Dutch longitudinal study among 37 middle sized firms is illustrative in this respect (Den Hertog and Cobbenhagen 2001). The study showed that within a period of seven years most of the firms moved very clearly towards added value activities and higher margins. Textile firms concentrated on design, marketing and distribution rather than bulk manufacturing. Plastics producers changed from bulk producers into solutions providers. Pre-press firms moved towards design and chain integration. Producers of construction elements became developers of construction systems. In effect the developmental axis of the organisation is gaining ground at the expense of the operational axis. More and more time will be devoted to the renewal of products, services and processes throughout the whole value chain. Consequently work will become more developmental, project orientated and team-based (even downstream in production, operations, logistics and services). It represents the high road of innovation (Brödner et al., 1999) creating sophisticated organisations which can deliver products and services not easily imitated by competitors. In contrast the low road of innovation where competitiveness remains dominated by price offers far less opportunity for meaningful organisational renewal.

This new trend towards more knowledge intensive work organisation is recognised in most of the Innoflex country reports (see for example Sacquepée & Dufau, 2000; Huzzard, 2000; den Hertog and Verbruggen, 2000). The implication is that in gathering and transferring knowledge and experience about organisational innovation the focus will shift from “organisation” as an entity towards “organising” as a continuous process. That is the challenge for the knowledge community.

1.1 Home and Away: Making Inter-Organisational Learning Work

3.3.1 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 leveraging 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 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 (Eccles and Noriah 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 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, a 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 work organisation development programmes in Work Package 1 of Innoflex we arrived at a similar conclusion that suggested 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. Such topics were a central feature of the cross-country exchanges that took place in Work Package 2. 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. Similarly, the difficulties of identifying obstacles to change and overcoming them were a centrepiece of discussions at the national dialogue conferences of Workpackage 3 (see Annex 9).

The ambition of facilitating higher levels of learning and development through inter-organisational collaboration networks has thus been a fundamental influence on the methodology of the Innoflex Project. 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.

3.3.2 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 organization’ (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.

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 well 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 assessing learning in terms of exploitative learning and explorative learning (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). Such 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 using a list of categories as set out in Table 5:

Table 5: The content of learning – an analytical framework

| Network | Topics of dialogue | Exploitation/ exploration | What was learnt: content/ process |
|---------|--------------------|---------------------------|-----------------------------------|
| UK1 | | | |
| UK2 | | | |
| I 1 | | | |
| I 2 | | | |
| NL1 | | | |
| NL2 | | | |
| Etc. | | | |

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 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 practises 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.

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. As to the networks themselves, they 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 which 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 performance and the rationale behind their existence is generally economic in character. Dependencies can be based on technical factors, logistical factors or informational factors. Such relations not only involve market exchange, they also require ongoing knowledge transfers of each other's requirements and the integration of these into operations (Hedberg et al 1997). The strategy literature in particular has increasingly stressed the significance of such networks in leveraging competitive advantage (Beeby and Booth, 2000).

Although such networks may often appear to be formal in character, they often have no obvious management or co-ordination mechanism of their own. This insight has led researchers to describe them as 'imaginary organisations' (Hedberg and Holmqvist, 2001). Rather, relations are reliant on the build up of reciprocity and mutual trust. Hedberg et al (1997) have listed the properties of such networks or systems as follows:

- Virtual organisation as a network.
- Sharing of resources – cooperation.
- Leader: focal enterprise.
- Goal oriented activity.
- Single identity and shared culture.
- No conventional limits (time, space, structure, language, legal).

The vast majority of the networks in the Innoflex Project, however, have no direct linkage to value creation or strategic activities. In these instances the primary aim and motivation of the networks was learning that had only an indirect relationship with performance. Although learning is a central feature in

all network types discussed here, we call this second category 'learning networks' because learning as an end in itself is the primary motivation and ambition of the network. The benefits of such learning are then exploited elsewhere and are not an explicit element of the network activity (Bessant and Francis, 1999).

In these types of networks, learning has more of an indirect or facilitating role rather than being directly linked to a specific organisational objective (Tell, 2000). Unlike strategic networks, they appear to require some degree of co-ordination, as the reasons for shared interest may not seem as compelling as those evident in market exchange. A co-ordinator is generally required to tease out the themes of shared concern among the network members. In our case this role was played by members of the Innoflex research team. Accordingly, such networks cannot be considered to be 'imaginary' (Hedberg and Holmqvist, 2001). No direct economic benefits are discernible and no business or exchange relationship usually exists between network members.

The second category of networks identified here and labelled 'learning network' has been defined by Bessant and Francis (1999: 377) as 'a network formally set up for the primary purpose of increasing knowledge, expressed as increased capacity to do something'. Tell (2000: 305) describes the ambition of learning networks as 'a better informed tomorrow'. Clearly the emphasis is on increased capacity to do something rather than the 'thing' itself suggesting learning as involving rather more emphasis on cognitive or attitudinal change than behavioural change (Huber, 1991). Bessant and Francis (ibid) identify the following features of such networks:

- 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 further 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 'transformation 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 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 learning networks in the UK. 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 Table 6 (below), 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.

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 Table 7. 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.

Table 6: 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 |

Table 7: 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.

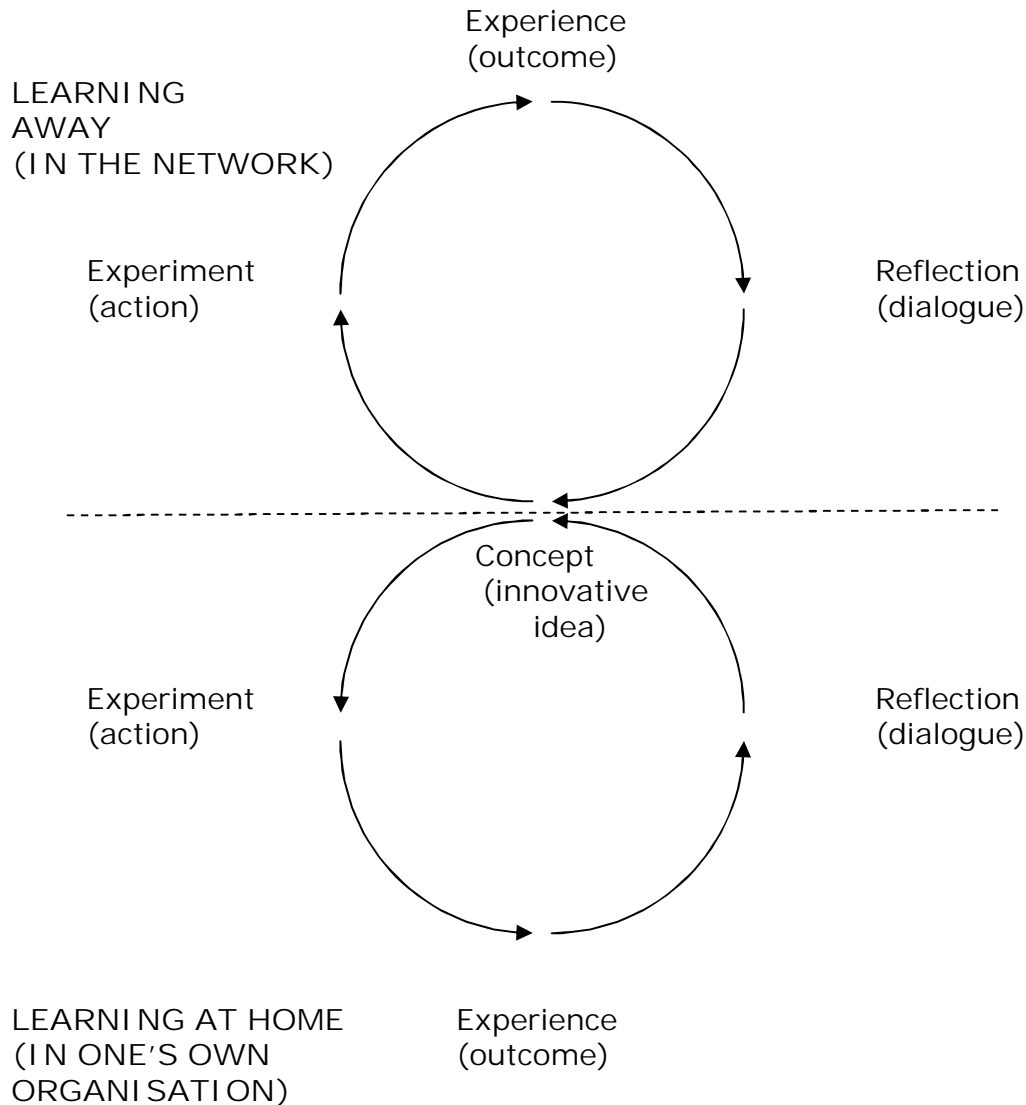
Clearly, where learning does occur, the level at which learning at home occurs will vary: in strategic networks: knowledge of relations with partners will certainly be a part of organisational learning; it is less apparent, however, that such learning will feedback to the group or individual levels (hence the broken arrows in the figure). Those participating in learning 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.

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.

Figure 6: Home and away - the Innoflex Learning Process (adapted from Kolb, 1984)



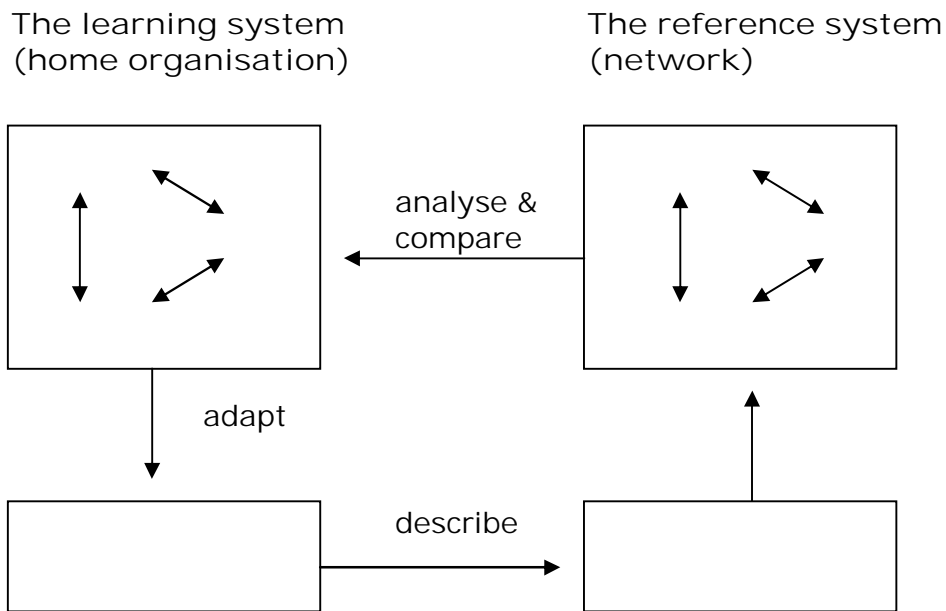
A helpful means of conceptualising the two interlinked processes of learning away and learning at home is that of extending Kolb's well-known model of experiential learning (Kolb 1984). In Kolb's model, individual learners engage in 'concrete experience', for example organizational or network members 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 (above). 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'.

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 as advocated in the language of actor network theory (Callon 1986; Latour 1987; Law and Hassard 1998).

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)



3.3.3 Analysis of the Innoflex Learning Networks

Learning content

A close reading of the Innoflex national learning network documents (see the WP4 reports at Annexe 9) 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 Table 8 (below) we summarise some of the characteristics of the Innoflex learning networks:

Table 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, 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 networks were also established to exploit the results of the learning network within the participating organisations. For instance, the Italian Industrial Network explored issues of the supplier relationship system, but also implemented some elements (such as early involvement of suppliers at an early stage of product development).

All of our learning networks were characterised by learning both about content and about the network process. The content of the learning was dominant 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 had 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 learning 'away'. An example of the latter is the Dutch Learning Network Assembly, where one company decided not to develop an external labour pool based on the mixed experiences discussed at one of the network meetings. 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.

The Innoflex network types

In Section 3.3.2 (above) we developed a typology of four network types: strategic networks, learning networks, transformation networks and professional networks. Table 9 shows how our networks fit within this scheme.

Table 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 |
| Transformational networks | Sweden: West Skaraborg Development Coalition | Collaborative trans-organisational development | Integrated change | Researcher/consultant as light-touch facilitator | Medium to high | Sponsoring orgs | From within and external support |
| Professional networks | Netherlands: LN Hospitals | Keeping abreast with latest developments in the field | Personal devt. | Normative isomorphism | Low | Network participants and researchers together | External support and contacts with professional bodies |

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 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 contractual bounded.

The Swedish learning networks could be viewed as transformational types. They were all part of the development coalition around the West Skaraborg Hospital. Each network had one particular subject/problem and consisted of participants focused on this problem, mostly from one profession. They were oriented at solving that particular 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 interdependency of 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 taken place to provide more effective care through reducing task duplication. At the same time this leads towards reduced work load for health care employees. A fine example of convergence.

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 had not 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.

Innoflex researchers prepared a formal report on each network (see WP4 reports, Annexe 9) and performed an ex-post evaluation based on a questionnaire. Based on this evaluation, network characteristics and outcomes are summarised in Table 10:

Table 10 - Characteristics of the Innoflex Networks

| Network type | Innoflex network | Aim/purpose | Number of participants and frequency of meetings | Background participants | Network methods | Network devt. | 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 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 Devt. 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 and Jensen (1977) 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

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 LN Hospital did not reach this stage, although also here 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".

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 LN assembly 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.

Some concluding remarks

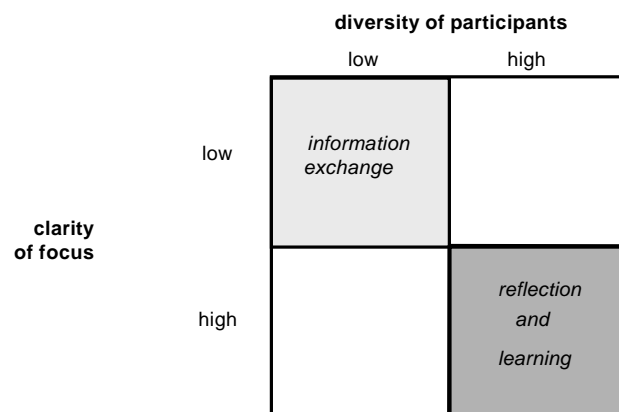
The world of work is fascinatingly diverse across Europe, across sectors and across organisations. Our learning networks reflect the diversity of this world. Is it true to conclude that there are many paths to the high road of innovation? At the very least we may conclude that learning networks are culturally 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.

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 (Figure 8):

Figure 8: Key success factors for inter-organisational learning in networks



In addition, learning networks need a diversity of activities, such as expert input, workshops, study visits, role plays, 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 AND POLICY IMPLICATIONS

4.1 Conclusion and reflections on the Innoflex project

The previous section includes critical reflections on Innoflex activities over the life of the project, including its contribution to understanding the conditions for convergence between organisational performance and quality of working life, and its emphasis on inter-organisational learning as a resource for high road approaches to workplace innovation.

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 which 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 which 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. WP1 national reports (as well as outcomes from the national networking activities within WPs 3 & 4) demonstrate the wide diversity of circumstances and conditions which 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 Innoflex 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. Rather 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). Public policy intervention has a key role to play in building such capacity, and it is to this agenda that the next section of the report is addressed.

4.2 Policy implications

4.2.1 Work organisation, QWL and public policy in Europe

The high road to competitiveness is inextricably bound up with an approach to work organisation based on high employee commitment and opportunities to channel individual creative energies into the innovative capacity of organisations. Discussions on such approaches to work organisation have typically focused on functional flexibility, employee involvement, job enrichment and participation schemes. Such language and practices can be traced back to the 1960s and 1970s, commonly subsumed under the generic 'QWL' label (Thompson and McHugh, 1995). However, the history of public work organisation programmes directed at QWL development is both uneven and contested.

What conclusions can be drawn from the various QWL policy initiatives in Europe over the last three decades? We answer this by offering a brief account of the history of publicly-initiated work reorganisation programmes in Europe since the initial work on job redesign commenced in the 1950s. The survey, which has a macro-political focus, shows that northern Europe has considerable experience of QWL initiatives, but policy-led change has not generally been evident in the south. However, the development of the initiatives has been uneven both within countries and across them, and that such initiatives rarely happen in a policy vacuum. Moreover, the roles of the social partners have varied over time and space, as has the support of governments and research institutions. These factors appear to be of considerable significance in determining both the extent of programmes and their ability to diffuse organisational innovations.

The early days: Tavistock and socio-technical systems theory

The earliest initiatives in the field of job redesign that sought to depart from the rigid 'one best way' approach of Scientific Management were the systems approaches developed by researchers at the Tavistock Institute in London. The first work of significance is generally recognised as being a study of the mining industry in Britain by Trist and Bamforth (1951). They became convinced that managerial choice should be exercised in favour of methods that paid greater heed to socio-psychological needs through groups performing whole tasks and that were rewarded by collective bonuses and a degree of self-regulation over job allocation. Researchers at the Tavistock Institute went on to develop the idea that organisations were not just open systems, but open socio-technical systems comprising both a production system of material technology and a social system of the people operating the apparatus. Under such an approach, design problems centred around the 'best fit' between the technical and social components of the system, and the generally preferred design solution

was that of the autonomous and self-governing work group (Buchanan and Huczynski, 1997; Hague, 2000).

Although the chronological origins of the QWL movement and socio-technical systems theory were to be found in the UK, the real pioneers in terms of putting the ideas into practice were in Norway under the leadership of Einar Thorsrud in the 1960s. Thorsrud, drawing directly on the influence of Fred Emery of the Tavistock Institute, believed that democratisation of industrial relations had to be embedded in the structure of work organisation and job content. Accordingly, socio-technical systems design could be used both for democratisation and for organisational effectiveness (den Hertog and Schröder, 1989). The period from 1966 to 1975 thus saw a great deal of experimentation on industrial democracy in Norway with particular regard to work restructuring and the introduction of semi-autonomous working groups.

Socio-technical ideas also attracted considerable interest elsewhere in Scandinavia, particularly in Sweden. In Denmark, a sporadic critique of Taylorism emerged in the 1960s supported by the social partners, but this did not intensify until labour markets tightened at the end of the decade (Banke and Nørskov, 2000). By the late 1960s, practitioners in Denmark started to take an interest in group production in the metal industry by initiating a number of experiments on new work organisation. However, these they were not as profound in their extent as corresponding initiatives in Sweden. The latter became particularly noted for its early field experiments in job redesign, not least because of the greater incidence of large firms that had had the 'organisational slack' to facilitate trial and error. Structurally, the Danish economy has been dominated by smaller firms.

The realisation that attracting and retaining staff was essential, particularly when labour markets were overheated, was also recognised by firms in the Netherlands as early as the 1960s. Firms such as Philips accordingly launched a series of job reform or 'work restructuring' programmes in the 1960s and early 1970s (den Hertog and Verbruggen, 2000). The stress in the Netherlands was, however, on experiments originating in the firms themselves rather than being policy or research driven as was the case in Scandinavia.

The programmes of the late 1970s and early 1980s: learning from experience [1]

In Sweden, co-determination legislation was enacted in 1977, subsequently resulting in local agreements; this fostered a spirit in which both employers and unions agreed to take part in a series of programmes supported by the state with the purpose of developing the organisation of work. This included the Programme for Development (1982-1988) and a joint body, the Productivity Delegation, that was created in 1989 to analyse recent productivity development in Swedish industry (SOU 1991: 82).

To a large extent, the Danish experiments were inspired by socio-technical perspectives (Thorsrud and Emery, 1969) which, deriving from teamworking experiments in Norway, had formulated a series of psychological job design standards. These included, for instance, opportunities for learning on the job plus sensitivity towards the psychological need for social acceptance, control and autonomy. The first experiments in Denmark were started in seven metal industry enterprises in the period 1971-1973 (Banke and Norskø, 2000) and chiefly constituted an attempt to prove that the social partners were able to work together on job development. These experiments were followed by a number of practical job development initiatives summarised by Banke et al (1978).

In Germany the powerful IG Metall trade union promoted a strong agenda to improve the quality of work as long ago as the early 1970s. It succeeded, for example, in establishing minimum requirements in the Norbadan/Nordwürttemberg region. At the same time the employers' associations and political parties took seriously the debate on the social consequences of developments in technology and work. Research on working life has been actively supported by the German Ministry of Research and Technology (BMFT) with its long-term policy of supporting demonstration projects which achieve concrete innovation in firms.

The establishment in 1974 of the Humanisierung des Arbeitslebens (HDA) Programme took place in parallel to that of similar programmes elsewhere in Europe. The programme was initially designed on fairly traditional lines, enabling firms to seek financial support for the introduction new technology and/or new forms of work organisation. An early lesson was that the social partners were better suited than researchers to undertake generalisation and diffusion activities. But further problems emerged with the growing unwillingness of the employers to allow too much union influence, thereby undermining co-responsibility. Partly in consequence the technological strands were subsequently channelled into a new programme, the Fertigungstechnikprogramm (den Hertog and Schröder, 1989).

The HDA Programme received a setback in 1982 when the government asked participating companies to finance half the evaluation costs. This was seen by the unions as jeopardising its independence and research credibility. Moreover, there was concern in union circles that the programme was creating solutions in isolation without any attempt at capturing and disseminating good practice. For their part, the employers felt that the economic and business aspects were being downplayed with insufficient attention to competitiveness.

France, with a strong culture of centralisation, has relied on central government as the main driving force behind organisational, technological and workplace development. The Ministry for Research and Technology co-ordinates the funding of a number of research institutions active in the area of workplace development – these include the National Centre for Scientific Research (CNRS) and the National Bureau for the Improvement of Working Conditions (ANACT) first set up in 1973 (Sacquepée and

Dufau, 2001). ANACT initially helped firms to improve working conditions including workplace safety issues. After 1975 the term 'physical working conditions' took on a broader meaning to include organisational design, rewards and training. But the concept of 'work environment', common in Scandinavia, has been little used in France; the same could be said of QWL.

Historically the country has been reliant on heavy industry but this came under pressure in the late 1970s and early 1980s. The government response was to pursue rapid developments in information technology, an area where France saw itself as a laggard. The role of the social partners has been less prominent in change processes than in, say, Scandinavia or Germany. The unions are numerically weak, and although they are effective in conducting industrial action such methods of non co-operation are not well suited to positive agendas for workplace and QWL development (den Hertog and Schröder, 1989). Moreover, researchers have seen French industry as hierarchical and patriarchal, a structural feature that does not lend itself well to social partnership and dialogue on development (Wilpert, 1988).

The programmes of the late 1980s and early 1990s: learning from experience [2]

In the latter part of the 1980s the Swedish government levied a special work environment tax on firms in the first instance to rehabilitate sick employees, but the need to address related fields such as work organisation was quickly realised. However the focus switched from rehabilitation towards productivity as Sweden entered recession in the 1990s and firms fought for survival in an increasingly competitive global marketplace. In all some 25,000 projects were generated by the fund (Gustavsen et al, 1996). At approximately the same time a second fund was set up to support workplace change initiatives - the Swedish Work Environment Fund. This was a mainstream programme to finance applied work-life research in various sectors of the Swedish economy. This fund supported, amongst other initiatives, the NIWL's Programme for Learning Organisations backed by unions and employer organisations and comprising development projects at some 40 organisations in both private and public sectors (Docherty, 1996).

By the mid-1980s the HDA Programme in Germany has become focused on areas such as:

- humane use of new technologies in office environments, foundries and factories;
- humane design of working conditions in the forging industry and in the transport sector;
- working conditions and the health and safety of workers including noise reduction and the risk of cancer at the workplace;
- humane design of working conditions in coalmining;
- fundamental research and issues of general relevance to the HDA Programme

(BMFT, 1987: 45).

Although there is a considerable tradition of institutional support for workplace development initiatives in Germany, there has been criticism from the social partners relating to perceived bias in programme design. Moreover, den Hertog and Schröder (1989: 40) have concluded that the German experience appears to lack an integrated design tradition compared with, say, Sweden. Moreover den Hertog and Schröder also criticise a general narrowness of project objectives in Germany combined with low aspirations for the diffusion of experience.

The 1980s saw two major programmes led by the French government, the Programme on Technology, Employment and Work (HT&T) and the Interdisciplinary Research Programme on Technology, Work, Employment and the Way of Life (PIRTTEM). These both involved action research methods, evolving on similar lines to programmes elsewhere in Europe. The former programme focused on developing new working conditions to accompany technological change, and was underpinned by the philosophy of 'dual commitment' - that modernisation requires simultaneous economic and social dimensions (Sacquepée and Dufau, 2001). The PIRTTEM Programme also sought to develop research to meet both economic and social needs, focusing in particular on the impact of new technologies. Its starting point was the need to prioritise social knowledge requirements and the replacement of poor scientific equipment. The Programme comprised some 80 or so projects that covered subjects including new production systems, ergonomics, the economic and psychosocial aspects of information technology, training and qualifications, as well as the structural determinants of unemployment.

The Dutch government has played a limited yet stimulating role in the area of workplace innovation, notably in the form of financial support for research institutes and programmes - for example the Technology, Work and Organisation Programme (TAO) between 1986 and 1993. The aim was to pursue the balanced development of new product and process technologies, thereby strengthening scientific infrastructure in the field. The key concept of the programme was that of design-oriented research, seeking to develop a knowledge base for the integral design of socio-technical systems (den Hertog and Schröder, 1989).

The impetus for change in the Netherlands has also come from within the firms themselves. Despite the stagnation of the 1980s, certain firms found that traditional methods of maintaining competitiveness such as cost-cutting had lost their edge, and sought instead to develop human resources. This was seen as the rebirth of the job reform movement in the Netherlands, exemplified by the Philips semi-conductor factory in Stadskanaal transformed from a functional organisation into a flow-oriented, team-based system (den Hertog and Verbruggen, 2000). A number of further renewal projects in both industry and the services have been documented (Van Hooft et al, 1995), but no systematic effort has been made to compare and evaluate the projects. Den Hertog and Verbruggen (2000) argue that any such inventory would show that the diffusion of such efforts has always remained limited and subject to employer resistance.

The only Northern European country (excluding Ireland) which did not promote experimentation during the period was the UK (Geary and Sisson, 1994). In 1974, a conference was organised by the Social Science Research Council which sought to learn from the Scandinavian experiences on work organisation, and following this event a working party was established to investigate issues in work organisation research SSRC (1978). The report's findings advocated a significant funding to aid research, however this was only supported in part (Brown, 1992). At that time, the modest Work Research Unit was established, but this was disbanded in the 1980s (Cressey et al, 2000). The Conservative government shared the US position that 'quality of working life programmes' could be promoted by individual organisations rather than being a concern of public policy (Burnes, 1996). Conservative Party ideology strongly supported the prerogative of employers and the marginalisation of unions. Workplace change was largely promoted by employers and typically included managerialist fashions such as quality circles, total quality management and business process re-engineering. These, however, had little or no connection with QWL.

Mid-1990s to date: prospects for renewal?

The experience of the UK is instructive in demonstrating the difficulties involved in securing an integrated policy framework for QWL and work organisation, even though the changing political environment since 1997 has improved overall prospects for policy innovation. The UK Employment Action Plan for 2001 emphasises the need to spread leading-edge practice in workplace partnership and work organisation, citing emerging activities led by the social partners and the UK Work Organisation Network (a new coalition of researchers, business support organisations and social partners). As the Government's 1998 Competitiveness White Paper correctly argues, new knowledge-based resources are needed to support change at enterprise level. Yet experience indicates a high level of fragmentation in public policy, business support and the distribution of knowledge and expertise within the UK. It also demonstrates the need for new forms of active brokerage, animation and exchange involving employers and other key actors.

Until recently the policy framework led by the Government's Department of Trade & Industry (DTI) includes a wide range of individual initiatives including dissemination of 'best practice' through websites and publications, grant schemes and the direct delivery of business services to companies. Many of the components for an effective strategy to promote workplace innovation have been correctly identified and some very successful individual initiatives are in place. A prime example is the "Partnership Fund" which predominantly supports small scale projects to change work practices based on collaborative action between management and employees. To date a diverse range of projects has been funded, addressing changes such as teamworking, continuous improvement, working time, family-friendly practices and telework. Most projects focus on change in individual workplaces though in some cases they involve the wider dissemination of good practice. While a formal evaluation has yet to be published there are encouraging signs that the

Fund is producing positive results and that the initiative will be refined and expanded. Moreover it is stimulating a process of learning and reflection inside the DTI which should benefit the long-term renewal of industrial policy.

Yet overall there is a marked lack of coherence and co-ordination, with little sense of how different actions might work together to create an integrated portfolio of support measures with a sustained impact. The DTI is characteristically project-driven rather than strategy-driven: Competitiveness White Papers typically read like a shopping list of quite separate initiatives, each with a different internal logic and no explicit decision rules about how to select appropriate types of intervention for particular problems. The efficacy of different types of intervention and their applicability to different problems need to be explored in a more rigorous way. This includes decisions about when it is appropriate to deliver a service directly, when it should be contracted out to another organisation or when a network of external actors should be resourced to achieve the same result in different ways.

A key feature of many projects in Sweden in the late 1990s was the emphasis on workplace development as part of regional networks often with the support of EU objective 4 structural funds. A frequently quoted example is that of the regional economy in the rural area of Gnosjö in south-western Sweden where Brulin (1998) has drawn parallels with the industrial districts of northern Italy. Brulin's research has also considered the role of universities and trade unions as proactive agents in the development of local and regional firms in networks by exploring Putnam's concept of social capital (Putnam, 1992). Many Swedish universities now explicitly include in their mission statements their role of using research outputs and expertise to promote industrial and regional development as a 'third task' beyond the basic activities of teaching and research (Brulin, 1998).

More recent work in France has covered areas such as employee participation (Sacquepée and Dufau, 2001) as well as the Jobs through Innovation Programme, which has sought to explore the conditions for social and economic innovation inside and outside the firm to promote employment. This is seen to be in contrast with business strategies based on cost reduction, and is thereby a clear echo of the 'high-road versus low-road' debate (see Section 1 above). A further issue in contemporary France is the 35 hour week, which has been linked in many respects with choices on more flexible forms of working. Researchers in France have suggested that the recent recovery in the European economy could presage a return to discussions on work as a social objective (Sacquepée and Dufau, 2001).

Conclusions from the European policy experience

The earliest field experiments - in Norway - were deemed successful but, on the other hand, less success was registered on the diffusion of the ideas they generated. Further reflection on the shortcomings of diffusion then led to a refinement of action research instruments that were

subsequently tested elsewhere, notably Sweden. A feeling that researchers were playing too dominant a role resulted in a new approach in the mid-1980s to early 1990s. This was based on democratic dialogue (Gustavsen, 1992), cross-sectional and vertical representation of organisational actors in change projects together with inter-organisational learning through networks (Gustavsen, 1998) with, in many instances, such features being formally codified in collective agreements.

The influence of changing economic, political and institutional conditions has led to step changes in public programmes throughout the countries surveyed. Such stepwise development can also be attributed to the internal learning processes associated with the programmes themselves. The early years from the 1960s to the early 1970s were characterised by the development of new ideas associated with the socio-technical tradition. This was followed by the early field experiments of the 1970s and early 1980s. The results of these were then evaluated and lessons were learnt on the problems of diffusion.

At the beginning of the current decade however, the pattern of policy intervention across Europe looks very patchy and inconsistent. Many parts of southern Europe remain untouched by such programmes while even in the north there is little continuity in most countries.

4.2.2 Building social capital

The role of public intervention in the 21st Century

This report argues repeatedly that in the 21st Century economy the key to sustainable success lies in the capacity to continually reinvent products and services using the rich potential of management and workforce knowledge, skills and experience more imaginatively and effectively. But this is not unproblematic at 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.

For many people in Europe work organisation is, above all, a matter for the individual company and its employees. The need for public intervention, whether at European, national or local level, is not self-evident. Yet the individual firm can begin to look somewhat frail when compared with the scale of the strategic and organisational challenges it may need to face during the current decade. Even large firms may lack the range of knowledge and experience needed to animate and resource effective change, driving them to seek external support through research or consultancy.

Previous sections of this report discuss the distance (arguably the increasing distance) between leading-edge practice and common practice in European enterprises. Despite increasingly well-documented

advantages the spread of new approaches to work organisation and culture remains surprisingly limited. Inertia combined with short-term approaches to investment seriously inhibit the pace of workplace innovation. Many managers, employees and trade unionists have little overview of how the world is changing, yet are overwhelmed by external pressures. They fail to understand the nature and potential of workplace innovation, or they believe that experiences elsewhere cannot be relevant to their own enterprise. This appears to be particularly true of SMEs, where the exposure of management to alternatives is often very limited. Likewise the knowledge base accessible to those leading change in the field of work organisation and working life is certainly a serious problem, especially in SMEs. Many organisations lack the concepts, methods and practical tools needed to analyse, to plan and to implement the process of change.

Workplace innovation is intimately related to the firm's external environment, the semi-public infrastructure of institutions, networks and other resources which provide it with opportunities to access knowledge, exchange experience and share resources. The quality of this environment has a significant impact on a firm's ability to overcome obstacles to change. Given the rapid evolution of new approaches to work organisation it is vital to build a public sphere of knowledge in which cumulative and collective learning can take place. The role of public intervention is to create an environment abundant in learning resources, providing the knowledge base required to stimulate innovation by companies and their employees, creating collective solutions to common problems.

This is a challenge for Europe as a whole. Europe's diversity represents an enviable learning resource for workplace innovation, but we have not been successful in capturing and distributing the resulting knowledge and experience. Access to specialist support and resources remains very patchy across the EU. Yet in parts of Europe there is hard experience of public intervention to promote workplace innovation; the accumulated knowledge and experience resulting from these programmes provides strong guidance for future action.

The policy gap

The EU's 1997 Green Paper Partnership for a New Organisation of Work recognises the concept of the high road of innovation, seeking to promote a European approach to the modernisation of work organisation which:

- builds on established traditions of social partnership;
- draws on a wide range of knowledge and experience;
- achieves a balance between organisational flexibility and security for employees;
- seeks convergence between competitiveness, employment and quality of working life.

The ability to develop and disseminate such an approach to work organisation is correctly seen as central to the future of European competitiveness and employment. Yet the Green Paper does not provide

prescriptions. On the one hand it chooses to explore the issue of regulation at some length. But the nature of regulation (or re-regulation) likely to prove effective in promoting the dissemination of new forms of work organisation is not clearly defined. Indeed, at least in the North of Europe, there appears to be no concrete evidence of contractual or legislative obstacles to the modernisation of work organisation. During consultations on the Green Paper several Member States questioned regulation as a means of modernising work organisation and the Commission itself has subsequently produced few firm proposals of a regulatory nature.

On the other hand the Green Paper discusses the need for proactive animation and resourcing of change in the workplace. Although the content of such measures is not discussed in detail in the Green Paper itself, the European Work & Technology Consortium (1997) identified a number of constraints on the modernisation of work organisation including:

- limited awareness amongst managers of leading-edge practice, or of the benefits of new forms of work organisation for competitiveness;
- lack of access to 'evidence-based' packages of business services corresponding to the obstacles which employers and employees face in modernising work organisation;
- a poor environment to support sustainable change including
 - the absence of relevant competencies in the wider workforce (eg: communication, problem solving and teamworking skills);
 - limited opportunities for peer exchange between managers, trade union representatives and others.

The subsequent EWON paper Government Support Programmes for New Forms of Work Organisation (Business Decisions Ltd, 2000) demonstrate the success of targeted public programmes to overcome these constraints. Such programmes typically include:

- accumulating, analysing and distributing knowledge of leading-edge practice and evidence-based approaches to change;
- the establishment of closer links between researchers and practitioners;
- action research to promote workplace innovation;
- the development of new learning resources to support workplace change;
- the provision of knowledge-based business support;
- the creation of inter-company learning networks.

This raises several challenges for the Commission:

1. Policy initiatives to support the development and dissemination of new forms of work organisation remain scarce in much of Europe. Even where they exist the scale of funding rarely matches the scale of the

need. Discontinuity of funding is also a problem. Action is need to animate and resource such initiatives across the EU.

2. Europe lacks a system of knowledge management. There is no mechanism to allow national programmes to share knowledge and experience with each other on a systematic basis; project practitioners in each Member State are therefore forced to reinvent the wheel. The need is to ensure that publicly funded projects across Europe contribute to a managed process of cumulative and collective learning thereby reducing duplication and enhancing impact.
3. A more focused approach to research at European level is required. Innoflex has demonstrated that we still know too little about the conditions under which companies reach the high road to innovation and, especially, how they sustain it. During the Innoflex project we have learnt a great deal about the effectiveness of specific types of intervention, especially in relation to inter-company learning. However we have also identified a lack of opportunity for longitudinal research to understand the conditions for sustainable workplace innovation, in particular the role which inter-organisational learning and peer review can play in animating and sustaining change. The Commission should support a sustained programme of research and development in the field of work organisation, encouraging diversity of approaches but with a rigorous approach to overall evaluation, analysis and dissemination of results across the EU.
4. The European Social Fund (ESF), a major source of EU intervention in the fields of employment and enterprise, rarely achieves its aim of becoming a resource for supporting new forms of work organisation. 'The modernisation of work organisation' is defined as an ESF objective in Brussels, but is typically not fully understood by national administrations and is largely ignored in regional development plans and project scoring measures.

In summary there is an overall failure in Europe to build an effective knowledge landscape for enterprises seeking evidence-based approaches to change. The existing policy framework in many Member States contains significant gaps in provision relating to the awareness, knowledge and resources needed to support change:

It is clear that the Commission itself needs to gain a much clearer understanding of the concrete issues affecting the modernisation of work organisation in real workplaces, enabling it to generate action to animate and resource change at ground level. The Commission should give far more attention to the issues raised in the first part of the Green Paper relating to 'the provision of adequate support to firms . . . who wish to change, but lack the resources or expertise to do so.' Without this, intervention will be of little relevance to practitioners.

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. This paper has argued that large parts

of Europe suffer from policy deficits at each of these three levels. 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.

Final remarks

Many researchers argue that action research interventions aimed at workplace development were most successful where they were concept-driven and, above all, that the 'how' (ie process) of change has been of more significance than the 'what' (ie content) of change (den Hertog & Schröder, 1989; Gustavsen et al, 1996). Research in the 1990s has emphasised network building rather than field experiments (Gustavsen, 1998). But the challenge now is to enter a new phase where networks and other tools are created that enable workplace development in the new context of the knowledge-based economy and the business focus on high value markets. Above all, network building should be a means for facilitating inter-organisational learning not just on the content of new workplace innovations, but also, and probably more importantly, learning on the processes of how to learn from others. Looking back at Europe's experience with QWL programmes to date, a number of key issues of central interest to policy makers are recurrent:

1. methodologies of change at the organisational level, in particular the need for involvement and participation of all actors in change efforts;
2. the key role of dialogue, the precise forms it takes and the arenas in which it is conducted;
3. the diffusion of new knowledge and lessons from innovative experiments into mainstream management thinking and practice in both private and public sector organisations;
4. the diffusion of new knowledge and lessons learned from national level programmes into projects at regional and local levels.

The quality of working life concept disappeared from organisational discourses in the middle of the 1980s as a neo-liberal ascendancy sought to usher in a period of employer prerogative. Yet 'hard' HRM options, based on unitarism and a relegation of union influence failed to boost Europe's competitive standing. Given that the competitiveness of European enterprise now rests upon harnessing people's competencies as the driver of innovation it is time to develop new methodologies for workplace intervention. QWL must be reinvented and rehabilitated as a central plank in Europe's high road strategy.

5 DISSEMINATION AND EXPLOITATION OF RESULTS

This section summarises dissemination and exploitation activities both during and after the project. Details of dissemination and exploitation activities by each partner can be found in Annexe 13).

During the lifetime of the project, dissemination of 'work in progress' to practitioners as well as to other researchers played a critical role in refining and developing outcomes. National reports under WP1 acted as a focal point for the engagement of companies and other actors in dialogue on convergence between organisational performance and quality of working life. The Innoflex website (WP5) at www.innoflex.org.uk was established early in the project and enabled work in progress (such as the WP1 national reports) to be compared and evaluated by other partners. Likewise WP2 was entirely focussed on testing propositions from WP1 and (as described in section 3.1) engaged a wide cross section of organisations in the Learning Visit, Hospital Workshop and Car Network activities. Several partners subsequently used their national reports to recruit companies to WP3 and WP4 activities. WP3 and WP4 also provided the opportunity to test and substantively develop the WP1 propositions with an even wider range of participants in each country (see Annexe 9).

WP7 was designed to provide partners with space to reflect on the final outcomes of the project through dialogue with other actors, and to refine national strategies for longer-term dissemination. Outcomes from WP7 dialogue activities can be found in Annexe 10).

The Innoflex website forms a major plank in the strategy for disseminating Innoflex outputs; www.innoflex.org.uk will be maintained by The Nottingham Trent University for the indefinite future, and will be updated regularly with information on spin-off activities such as the European Hospital Network and Car Network. Publicity for the Innoflex website at national level will be organised by partners, using existing networks of researchers, social partners and policy makers, as well as through the websites of their own institutions. At European level the website address will be widely disseminated through the successor to the Commission's EWON group (plans for which are currently under consideration by the European Foundation for the Improvement of Living and Working Conditions in Dublin) and through a series of conferences on work organisation likely to be supported by DG Employment & Social Affairs.

The Research Reports generated by WP1 and WP4 constitute major outputs from the project. In draft form they have already been used to animate dialogue with practitioners and researchers at national level, while at the same time informing other European research projects (see for example www.hi-res.org.uk). They also provide the basis for at least two international conference papers (see section 3.1) as well as several national workshop presentations and discussion papers (see Annexe 13). In their final published form each partner has plans for the dissemination of the Reports at national level. At European level the reports will be disseminated through the mechanisms cited earlier in this section.

The tools (WP8) as well as the WP4 narratives on learning network activities will provide a resource for researchers, social partners, public policy makers and business support agencies involved in the design and implementation of inter-organisational learning. They will be used at national level to inform partners' discussions with policy makers and others on the role of learning networks in resourcing workplace innovation, and in future project design at both national and EU levels.

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ANNEXE 1
Project Deliverables

| Deliverables specified in bid (Annexe 1) | Actual outcomes |
|---|--|
| <p>Overview of current knowledge and research, involving both desk research and dialogue with the wider academic community.</p> <p>Develop hypotheses and common methodology.</p> <p>Validation of consortium methodology, including academic consultation.</p> | <ol style="list-style-type: none"> 1. Six National Reports based on literature reviews and dialogue. 2. WP1 Research Report takes and overview of National reports and further develops Innoflex concept. 3. Core Innoflex methodology developed through meetings of project partners. Adapted to meet national conditions through wide consultation. |
| <p>Intermediate reports to the European Commission.</p> | <p>Reports delivered at 6, 12, 18, 24 and 36 months.</p> |
| <p>National learning networks.</p> | <p>10 networks established.</p> |
| <p>Reports on National Dialogue Conferences in participating Member States.</p> | <p>Reports on dialogue conferences and related activities are attached as an Annexe to this Report.</p> |
| <p>Creation of tools and materials:</p> <ul style="list-style-type: none"> • design a web site and contents; • design an Intranet facility. | <p>Website established at an early stage of the project, including a 'Members Only' section.</p> |
| <p>Integration of findings.</p> | <p>Editorial group established to integrate findings.</p> <p>WP4 Research Report published as an additional project output.</p> |
| <p>Toolkit comprising five brief issue papers.</p> | <p>Six methodological 'tools' published on the website and available in hard copy.</p> |
| <p>Report for policy makers.</p> | <p>Detailed policy recommendations included in WP1 and WP4 Research Reports.</p> |