

# **New working time systems, work organisation and re-distribution of work**

**Final report for the European Commission on the  
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## Preamble

This report is based on two research projects conducted on behalf of the European Commission with very much the same theme: "Work re-distribution, working time accounts, working time organisation and social security" (DG V) und "Redistribution and Organisation of Work" (DG XII). Both projects investigated current trends in the organisation of working time. The emphasis in the project conducted on behalf of DG XII lay in analysing the connections between working time and new challenges to work organisation using selected working time models or sector-typical working time reforms as an example. The question at the centre of the first project, which was based on a relatively large number of case studies and a description of country-specific working time regulations, was whether and how company interests in longer and more flexible working times can be combined with employees' interests in greater individual autonomy over working time as well as society's interest in the protection, stabilisation and promotion of employment. This question cannot be answered either without considering the connections between working time and work organisation.

The following individual reports were prepared for the project "Redistribution and Organisation of Work" (DG XII):

1. Denmark: Intensive case study of flexible working time organisation at Neckelmann the textile manufacturer (*Ivan Thaulow, Social Forsknings Institutet, Kopenhagen*)
2. France: Intensive case study of the extension of business hours at the manufacturer of electronic printed circuit boards HP-SCI (*Michel Lallement, GRIS, universit  de Rouen; Gilbert Lefevre, SET-METIS-CNRS, universit  de Paris I*)
3. Germany (I): Intensive case study of employment protection and flexibilisation of working time in the German works of Volkswagen AG (*Markus Promberger / Rainer Trinczek, Universit t Erlangen; Hartmut Seifert, Wirtschafts- und Sozialwissenschaftliches Institut in der Hans-B ckler-Stiftung*)
4. Germany (II): Sector study of the change in forms of employment and working time in the German retail grocery trade (*Johannes Kirsch / Martina Klein / Steffen Lehndorff / Dorothea Voss-Dahm, Institut Arbeit und Technik, Abteilung Arbeitsmarkt, Gelsenkirchen*)

5. Netherlands: Case studies of four innovative working time models in industrial and service companies which combine the new organisational concepts with shorter working times *Wilhelm de Lange, IVA Tilburg*).

For the project "Work re-distribution, working time accounts, working time organisation and social protection" (DG V) case studies and country reports on new working time organisation models were prepared by the following researchers:

1. Austria: *Peter Melvyn, Europäisches Zentrum für Wohlfahrtspolitik, Wien*
2. Belgium: *Danièle Meulders / Robert Plasman / Corinne Soudan, Université Libre de Bruxelles*
3. France: *Yves Jean Boulin, Université Paris Dauphine (UR/CNRS 1236); Rachel Silvera, Université de Paris I (SET-METIS)*
4. Germany: *Christiane Lindecke, Institut Arbeit und Technik, Abteilung Arbeitsmarkt, Gelsenkirchen*
5. Netherlands: *Peter Vos, ATOS Beleidsadvies en-onderzoek bv, Amsterdam*
6. Portugal: *Alberto Castro / José Varejão, Universidade Católica Portuguesa, Porto*
7. Sweden: *Dominique Anxo / Sofia Lundström, Centre for European Labour Market Studies, Göteborg*
8. Great Britain: *Jill Rubery / Claire Faichnie, UMIST, Manchester.*
9. Country comparison "Public financial interventions for the promotion of working time reductions and employment in Belgium and France": *Danièle Meulders / Robert Plasman / Dominique Taddei*

An initial overview of the case studies and country reports for the project "Work re-distribution, working time accounts, working time organisation and social security" was presented to the General Directorate V/Employment Policy Unit on 30 September 1998. This final report, which includes this summary, is now based on a total of *53 company case studies from nine* countries. It goes beyond the first report and deals in particular detail with the operation of new working time systems, their interaction with work organisation as well as their significance as regards employment.

The majority of case studies could not have been undertaken without additional financial support. Resources from the DG V ADAPT program were used in the compilation of case studies in Germany, France, Great Britain and Sweden; the sector study on the German retail grocery trade was co-financed by the Hans-Böckler-foundation, the French Ministry of Labour (DARES) as well as the Institut Arbeit und Technik itself. This report also benefits from the results of the labour seminar "Employment protection and job creation as the result of new working time models?" which was organised in Spring 1997 in Gelsenkirchen and financed by ADAPT resources (cf. Lindecke/Lehndorff 1997). Finally, reference is made to research into the retail trade (partly complete, partly ongoing) which is being conducted in part on behalf of the North Rhine Westphalia Labour Ministry as well as within the context of the Social Dialogue in the European commercial sector. At this juncture we should like to express our most sincere thanks to all the institutions providing support.

The following report is based on the great variety of experiences described in the company, sector and country reports.

Steffen Lehndorff

Gelsenkirchen, October 1998

## Executive Summary

In the over 50 case studies from nine countries on which this report is based, new forms of working time organisation are investigated which call into question the core of the conventional standard working day. This is apparent in several typical features of new working time systems:

- the duration of the daily working time fluctuates and/or varies according to employee groups;
- the week is de facto or even explicitly no longer the reference point for defining duration of work, working time is distributed irregularly over the year (which frequently forms the new reference point) or over a period of several years;
- overshooting of the agreed duration of work is not paid for in addition, or only subject to restrictive conditions;
- the same applies to the extension of working hours into hitherto unusual ("unsocial") times such as nighttime or weekends which expressly form part of the standard working time - the blurring of the distinction between "social" and "unsocial" hours and the associated change in social norms (or the reflection of such changes) is one of the most significant features of many new working time systems;
- agreed working time patterns are not rigid, but reversible;
- in addition, the provisional fixing of working time patterns is dispensed with entirely to some extent;
- working time patterns hitherto typical for salaried employees (e.g. flexitime) are now being used in production areas, and vice versa (e.g. shift work);
- in one part of companies the introduction of one or several of the afore-mentioned working time features is linked with reductions in the contractual and/or effective working time;
- this can also take the form of the full-time standard as a reference point being dispensed with or relativised, so that employment contracts are concluded with a scale of varying working times;
- not only different working times, but also different types of employment can be combined with each other, such as full-time with part-time, casual working with teleworking.

If one classifies the emerging new forms of working time organisation in accordance with the company interests on which they are based, the following basic types can be distinguished (cf. box):

1. On the one hand working time models which serve to *prolong* opening and business hours. The essential tool are shift systems which de-couple working time and business hours in the most varied of ways

<b>New forms of working time organisation</b>		
<b>Objective</b>	<b>Methodological approach</b>	<b>Main variants</b>
Extension of opening and of operating hours	<b>Decoupling</b> of working times and operating /opening hours	<ul style="list-style-type: none"> <li>• Decoupling of working and operating <i>days</i> (e.g. multi-manning systems)</li> <li>• Differentiated working times for various employee groups</li> <li>• Spreading-out of workforce numbers over a longer opening time</li> </ul>
Flexibility (I)	<b>Numerical flexibility:</b> Fluctuating manpower levels; adjustment of <i>workforce</i> numbers	Core elements: <ul style="list-style-type: none"> <li>• Part-time</li> <li>• Time-limited contracts, casual labour</li> </ul>
Flexibility (II)	<b>Time-based Flexibility:</b> Adjustment of <i>working time</i> ; change in the duration and length of working time over time (variable working time organisation)	<ul style="list-style-type: none"> <li>• Working time fluctuations negotiated on a collective bargaining basis</li> <li>• Ordered working time fluctuations</li> <li>• Self-managed working time fluctuations</li> <li>• Self-managed working time fluctuations with no working time control (results-based instead of time-based control)</li> </ul>

Source: Own portrayal

1. On the other hand forms (in the sense of the word) of *flexibilisation* of business hours which are in turn based on two different methodological approaches:
- working time models, especially in the service sector, with which foreseeable, but strong and/or short-term fluctuations in traffic flows can be covered by personnel. The essential tool here is the increase in *numerical* flexibility through recourse to part-time working, casual labour and time-limited contracts with the help of which rapid fluctuations in manpower levels can be achieved.
  - working time models in the service sector and in industry with the aid of which fluctuations in the requirement for manpower may be accommodated which can only be planned to a li-

mitted extent or which are not foreseeable. Here, the underlying methodological approach is the increase in *time-based* flexibility through various forms of variable working times. These can in turn be distinguished according to who exercises control over changes in working time: systems in which working time changes are (a) negotiated on a collective bargaining basis, (b) ordered by superiors, (c) self-managed by the employees, and, finally (d) those systems in which management largely dispenses with working time control and replaces it with a pure results-based control.

This process of change in the organisation of working *time* is extricably linked with that of work organisation. The bandwidth of possibilities lies between

- the increase in numerical flexibility at the expense of functional flexibility, on the basis of lower employee competences
- and the increase in time-based flexibility hand in hand with extended functional flexibility and expanded competences.

The first type of flexibility which is essentially Tayloristic appears to be spreading particularly in low-wage/low-qualification areas, in which *price* competition predominates. Examples include service sectors with personnel costs making up large proportions of turnover and strong competition as well as industrial sectors with a high proportion of simple assembly work which are under strong international cost pressure. However, two important distinctions must be made: Firstly, even within these economic sectors there are individual concerns experimenting with alternative forms of flexibility. Secondly, neotayloristic concepts are not restricted to low-wage/low-qualification sectors but are also encountered in activities involving higher-qualified employees.

We therefore warn against the obvious reverse conclusion, that more emphasis on quality competition compared with price competition would automatically drive concerns towards a resolute linking of time-based and functional flexibility with expanded competence of employees. In such economic sectors Tayloristic work structures do enter a state of crisis, but most of the companies investigated in our projects are far from a fundamental re-orientation of work structures and working time organisation. The problem is that many companies *are set on* on the immediate rationalisation effects that can be achieved with new working time systems. The possibility in particular of reducing flexibility-induced personnel costs in the short term deflects from more far-reaching, *strategic potentials* of new working time systems. The use of these can even go so far as to drive costs down to such an extent that a permanent emergency situation is created due



to extreme lack of personnel. The direction of development of working time organisation is therefore to a large extent influenced by structural conditions (sector specifics, competitive parameters), although it is ultimately *strategy-dependent*, in other words can be shaped.

The strategic potential of new working time systems is demonstrated in the approach at some companies which make the *relationship between customer loyalty, product and service quality and personnel commitment* the starting point for a reorganisation of its work structures and working time organisation. The potential for linking working time organisation, personnel strategy and altering the working structures can be seen particularly in the following fields:

- *First of all*, working time reforms can help to overcome specialist or department-specific restrictions that have proved to be an obstacle when increasing quality and efficiency. Here, the reduction in particular of working time in conjunction with reorganisation can fulfil a purpose concerning personnel that has so far received little attention: It offers the possibility of using the time withdrawn from the direct work process for further training.
- The *second* strategic aspect of several new working time systems, the relationship between working time organisation and personnel commitment, emerges from the increasing significance of qualified and committed labour for the improvement in service, for the production of quality and for the increase in utilisation of plant and equipment. With increasing induction costs and increasing responsibility on the part of personnel for expensive plant and machinery stabilisation and flexibilisation of the workforce becomes two sides of the same coin.
- *Thirdly*, and finally, working time systems which decentralise decisions about adjustment of working times to accommodate the order trend or the change in traffic flow in some form, presuppose a fundamental reform of the whole of the work structures. Decentralisation of working time organisation increases coordination expenditure. Variable working times which can be determined by the individual to a greater extent require mutual agreement and the capacity on the part of the employees to represent one another, in other words to be able to conduct various activities and to be up to date concerning processes handled by others. This is very closely associated with higher and broader qualification.

In the companies considered within the context of our investigations the potential of new working time systems were entirely unknown, even though many of these concerns restricted themselves to taking into account the one or other strategic aspect. Only in a few instances was a uniform concept discernible, more often it was a matter of "half reforms".

These observations suggest that the social content of current reorganisation trends concerning working time, and in particular their effects on the position of employees in the work process, can be regarded as still open. As with the talk of an "end to Taylorism" it would be equally premature to hope for an emerging dominance of "innovative" working time organisation, which instead of the working time standard established for decades, would lead to a new balance between company and employee interests and that, on top of everything, positive effects on employment would unfold. Forms of *new social working time* arrangements, *that are sustainable over the long term*, are not yet tangible. The development of such arrangements is a complicated process that will take a long time, although it is doubtful whether market forces alone will bring about a new strategic balancing of interests. Much can be said in favour of the necessity for *negotiated flexibility*. Negotiated flexibility means that in-company reorganisation measures are linked with collective bargaining and state involvement:

*First of all*, this relates to the creation of favourable *in-house* conditions for the new working systems to affect effective employment. As we have found, the pre-requisites for positive effects on employment are virtually identical with the conditions for an increase in the personal working time empowerment of employees. The key questions in both instances are,

- how great is the influence of employees on the planning and organising of their work processes, such that they can also influence the planning and organisation of their own working time;
- whether the material pre-requisites are present, without which the rights to exert influence remain simply a claim which cannot be realised in the day-to-day routine of the company: competences and resources in order to be able to really influence work and working time and personnel cover which is sufficient for the completion of tasks.

*Secondly*, the further reduction in working times plays a key role. Reductions in working time increase the room for manoeuvre as regards flexibility within companies; and promotes both positive employment effects and the taking into account of changed social requirements as regards working time. This is shown inter alia by examples from France, where state subsidies for reducing working time in the last few years have made the transition to new working time models easier for many companies and reduced the learning costs. Such support measures also help to prevent social hardship or to mitigate such effects in that wages are not (or only slightly) reduced despite the reduction in working times. In this way the State acted as a catalyst for the modernisation of in-company working time with positive effects on employment.

*Thirdly*: For a second time qualification proves to be a key question. The more science-based production and services are, the greater the risk that working time reforms and reductions will fail due to the absence of available qualified labour. This becomes most apparent in the case studies conducted in development centres; nevertheless the French management consultancy demonstrates that even highly-qualified and highly-specialised labour is not irreplaceable. The fact that several of the working time systems described incorporated qualification time must be regarded as revolutionary. Nevertheless it should not be left entirely to companies to invest in the qualifications of their employees, as the higher the fixed personnel costs the higher will be the hurdle to overcome when agreeing reductions in working time in the company. Investment must be tackled as a public task, as it is not realistic to expect the mass of companies to invest long-term and "sustainably" in the continued qualification of their employees on their own initiative due to better insight and at the same time agree to shorter working times. Only in this way can a reorganisation of working time which includes reductions in working time be prevented from ending in a fixed cost cul-de-sac. One of the most significant options for state support in this field is the financial funding of work breaks for the purposes of training as have been created in several Scandinavian countries and now in the Netherlands as well.

This leads ultimately to a *fourth* area: The state can facilitate reductions in individual working times which may contribute to substantial dynamism in terms of individual company working time reforms. This may be on the one hand the mitigation of the consequences of part-time phases in the working life of employees in terms of pensions, and on the other hand the financial cushioning generally of interruptions in working lives. This includes part-time phases as well as extended and financially-secured opportunities to interrupt working lives, for example to bring up children or to pursue further education. Generally speaking, if they are not put on the same legal footing, part-time work and full-time work hinder working time reforms, because in some instances the contractual standard working time is reduced so much that it is regarded in law as part-time working.

## **1 Introduction**

As the European Commission's Green Book (1997) rightly points out, the organisation of company working time in the EU countries has been increasingly at the centre of debate for several years now and is causing even more of a stir now. Concentration on this topic and the pressu-

re for change are coming from three different directions (in the following cf. in more detail Bosch/Dawkins/Michon 1994, Taddei 1998):

The strongest push for a review of conventional patterns of in-house working time organisation is coming from the private sector. Increasingly severe competition in the industrial and service sectors is on the one hand mobilising interest in reducing capital unit costs and extending opening hours, which is leading to extensions of standard working times into late evening and the weekend. Furthermore, there is greater emphasis on reducing the amount of capital tied up as well as on the avoidance of paid working time that is not being directly used productively and which is reflected in a variable adjustment of working times to accommodate fluctuating orders and traffic flows.

However, pressure for change is also coming from the labour supply the structure of which is undergoing deep-seated changes. The rapid increase in the number of women in the workplace is putting the consideration of historically new time pressures and needs on the agenda; these pressures and needs frequently being summarised in the political demand for "Compatibility of work and family". The underlying basic trend can be summarised with Rubery (1998) as "Change in the gender contract". Another important structural change on the labour market are the massive numbers of young people in training and looking for jobs which "fit" this stage in life.

The third significant factor that can lead to changes in working time is politics. Traditionally, working time is regulated in most EU countries by collective bargaining. In the past and in particular as the result of large-scale reductions in working time strong incentives to review in-company hours organisation were triggered. The debate surrounding the possible use of collectively-agreed working time policy as a means of securing and encouraging employment has been raising its head again recently in view of the ongoing employment crisis. Thought is being given at both national and EU level as to how positive measures for employment can be triggered by new forms of in-house working time organisation and possibly shorter working hours and as to which supporting role state authorities can play here ("work re-distribution"). This is reflected in EU Commission documents (White Books, Green Book) as well as in legislative initiatives concerning working time on the part of the French, Belgian, Dutch and other governments. Of particular interest in this connection is the statutory introduction of the the 35-hour week in

France from the year 2000 ("Aubry Law") which is based on experiences with the "Robien Law".<sup>1</sup>

This working time policy scenery which has started to shift is the background to the research project the most significant results of which are summarised and analysed in the following. *At the centre of this project were the two questions, (1) which interactions between new working time systems and changing trends in work organisation are discernible and (2) under which conditions can positive effects on employment flow from new working time systems. As the project was conducted in various countries there is also the possibility (3) of investigating the influence of industrial relations and individual, country-specific working time regulations and initiatives on the change in in-house working time organisation.*

53 company case studies were conducted in nine countries in connection with both research projects. The sectors and companies selected for these case studies were not intended to be representative; they were investigated because they were "trendsetters" whereby certain opportunities and problems concerning new forms of in-house working time organisation can be detected at an early stage. For example, there are several companies in our sample who reduced overtime or even normal working hours without being forced into it by laws or collective agreements. Generally speaking, therefore, no companies were selected that were typical of the majority in the relevant countries, rather those that were attempting to find new ways of organising working time and whose experiences may be of great value to the great mass of companies in the years to come. However, care was also taken during the selection to ensure that various and to some extent even opposing trends of working time organisation were described. In other words, "The end of Taylorism" song is not sung in the following, rather an attempt is made to highlight the inconsistency of the current trends in work and working time organisation. This means therefore that reference is made right at the beginning to the fact that not all examples selected deserve the positive rating "innovative". Many case studies also highlight the possible downsides of new

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<sup>1</sup> Since Autumn 1996 within the context of this law all companies receive time-limited subsidies in the form of a reduction in employers' contributions to social security which, with the aid of reductions in working hours, avoid redundancies by at least 10% or which create new jobs. After one year, over 1000 companies had concluded agreements concerning reductions in working time in conjunction with job creation - amounting to 11% on average of the number of employees. For further information cf. the French country report (Boulin/Silvera). The statutory introduction of the 35-hour week in France from the year 2000 ("Aubry Law") links with the positive experiences with the "Robien Law", but attempts to overcome its limitations (cf. the report by Meulders/Plasman/Taddei). In Belgium a program for supporting in-company agreed working time reductions is being introduced which is similar to the French "Robien Law" (cf. the Belgian country report).

working time systems for employees as well as new problems and conflicts in which some companies have become involved.

The companies in which the case studies were conducted range over a broad range of sectors as this overview shows:

	A	B	DK	F	D	NL	P	S	U K
<b>Mechanical engineering</b>		1			2	1			
<b>Computers</b>	1			2					
<b>Automobile sub-suppliers</b>	1	1			3	1		1	
<b>Chemical industry</b>									2
<b>Food industry</b>				1					1
<b>Other industries</b>		Steel	Textiles	Foundry	Educational aids	Electrical		Metal-processing	
<b>Banks, insurance</b>				1	1		1	1	3
<b>Healthcare and bodycare</b>						2		2	
<b>Civil Service</b>		1				1		1	
<b>Commerce</b>		1			10	2			
<b>Other services</b>				Management consultancy		Post			

The following analysis does not obviate the need to read the country reports and case studies. The unusually rich material includes so many different experiences and such an abundance of sector- and country-specific features that only an initial, hesitant interpretation is feasible.

In doing so, we are dealing with the following topics: Initially, we describe the most significant basic types of in-company working hours models that are currently emerging for the first time (2). Then we address the question as to the extent to which the reorganisation of in-company working hours systems contributes to the desired results as regards an increase in economic efficiency, an increase in the extent to which employees can determine their own working time as well as to the promotion of employment. This leads us directly to the interplay between the new working time systems and work organisation, taking into account the social context of working time reforms (3). Finally, we summarise some of the, in our view, particularly significant experiences and considerations for the design of longer-term, sustainable working time arrangements and for the creation of favourable political boundary conditions for this (4).

In these three stages we carve out the central theme of our report: The *social* content of current working time reorganisation trends, in other words the effects on employment levels and on the position of employees in the work process, is *open-ended*. Just as premature as talk of the "end of Taylorism" is the hope of an eventual pre-dominance of "innovative" working time organisation, which might develop into a new balance between company and employee interests and on top of everything exert a positive influence on employment instead of the working time standard that has been established for decades. The development of *longer-term, sustainable, new working time* arrangements is a complicated process which will take some time yet. Market forces alone will not bring about a new strategic balance between interests. Rather, it is more a question of *bringing* about changes in working time from the *political point of view*. Political impulses - and especially those geared towards the reduction of the effective average working time - can *trigger and speed up the modernisation of working time from both the economic and the social point of view*.

## **2 Fundamental directions of the new in-company organisation of working time**

With the general acceptance of the 8-hour day and, later, the 40-hour week working time standards become fixed in industrialised countries and have certain common features: The duration of working time for full-time employees is restricted by collective agreement and/or legislation; the location of working time is agreed collectively or individually and is either fixed or follows regular, repeating patterns (shift work); in industry this is restricted, apart from specific exceptions, to Monday to Friday, in some service industries the weekend is either fully or partly included. Even the distribution of the agreed working time throughout the week or the year is regular. Exceptions and interruptions are subject to agreed rules. Working time in excess of the agreed duration as well as deviations from the agreed working time locations are subject to additional payment.

These basic features of a standard working day have already been increasingly relativised during the past 20 years through the spread of part-time working and flexible working hours. However, part-time working and flexitime - if to a considerably lesser degree than standard full-time working - is now subject to collectively-agreed regulation and part of established forms of working time. However, in the majority of cases this does not apply to the worktime forms investigated in our projects. These call into question the core of the standard working day outlined above to an incomparably more radical extent than has been the case with flexitime and part-time working. This can be seen in several typical types of working time organisation in the case studies.

They are not all encountered in every company, although the summary illustrates the basic current trend in changes in working times:

- the duration of the daily working time fluctuates and/or differs according to groups of employees;
- the week is de facto, or even specifically, no longer the reference point for defining the duration of work, working time is distributed unevenly throughout the year (which frequently forms the new reference point) or over a period of time involving several years;
- time worked in excess of the agreed working time is not - or only subject to limiting conditions - paid for in addition;
- the same applies to the extension of working time into hitherto unusual ("unsocial") times such as the night or the weekend, which are becoming an explicit and integral part of regular working time - the blurring or levelling-out of the distinction between "social" and "unsocial hours" and the associated change in social norms (or the reflection of such changes) is one of the most significant features of many new working time systems;
- agreed working time patterns are not written in stone, but are reversible;
- sometimes the temporary fixing of working time patterns is dispensed with altogether;
- working time patterns that were typical for employees (e.g. flexitime) are now used in production areas and vice versa (e.g. shift working);
- in some parts of the companies the introduction of one or several of the above-mentioned working time features is associated with reductions in the contractual and/or effective working time;
- this can also take the form of giving up or relativising the full-time standard as the reference point, so that contracts of employment are concluded with a range of different working times;
- not only different working times, but also different types of employment can be combined, for example, full-time working with part-time working, casual working or teleworking.

As mentioned, not all these features are encountered in each of the companies investigated. It is precisely the *variation in models*, the variety of the links between the features listed here that is typical of the new. This variety may relate to companies and departments as well as the individuals.



Naturally there were even some areas hitherto in which one or other of the working time features listed here was encountered, although what was decisive was the exceptional nature, their restriction to particular sectors or occupational groups. This demarcation no longer applies to the working time systems investigated here, rather it is the *dispensation with restriction* that forms the core of the new.

We shall deal with some of the typical features of new working time systems in more detail in the following. To do this, and using selected company examples we shall outline three basic directions in which the new in-company hours organisation are heading. We distinguish these according to the purpose for which they are intended:

If one classifies the emerging new forms of working time organisation in accordance with the company interests on which they are based, the following basic types can be distinguished:

1. On the one hand working time models which serve to *prolong* opening and business hours. The essential tool are shift systems which de-couple working time and business hours in the most varied of ways (2.1).
2. On the other hand forms (in the sense of the word) of *flexibilisation* of business hours which are in turn based on two different methodological approaches:
  - working time models, especially in the service sector, with which foreseeable, but strong and/or short-term fluctuations in traffic flows can be covered by personnel. The essential tool here is the increase in *numerical* flexibility through recourse to part-time working, casual labour and time-limited contracts with the help of which rapid fluctuations in manpower levels can be achieved (2.2).
  - working time models in the service sector and in industry with the aid of which fluctuations in the requirement for manpower may be accommodated which can only be planned to a limited extent or which are not foreseeable. Here, the underlying methodological approach is the increase in *time-based* flexibility through various forms of variable working times. These can in turn be distinguished according to who exercises control over changes in working time: systems in which working time changes are (a) negotiated on a collective bargaining basis, (b) ordered by superiors, (c) self-managed by the employees, and, finally (d) those systems in which management largely dispenses with working time control and replaces it with a pure results-based control (2.3).

## 2.1 Extension of opening times and business hours

Long opening times and business hours which include all or part of the night or the weekend have been par for the course for decades in several industrial and service sectors. Working as a nurse, tram driver or steelworker was and is in most cases synonymous with alternating shifts and nighttime and weekend working. Nowadays, however, working "unsocial hours" is restricted less and less to specific occupational groups. Service even outside the usual opening times and office hours has become a central mark of competitiveness, - this applies to the service and industrial sectors equally. In the case of industry there is, in addition, the massive increase in capital expenditure on modern plant, which means that production at competitive unit costs can only be achieved by longer machine running times. Factories or large-scale retail outlets built on "greenfield sites" are therefore frequently operated from the start on the basis of very long opening hours or machine running times. However, for large sections of the economy the *extension* of opening hours and business hours in *existing* companies with existing manpower is the real problem. An existing team cannot be forced from one day to the next to change, for example, from a two-shift system with alternation between early and late shifts to a three-shift/alternating shift system, or from office hours from Monday to Friday from eight and 17 hours to regular evening, Saturday and Sunday working. The solution to this problem, however, is facilitated in many instances by the fact that longer business hours generally involve greater personnel expenditure (this only applies to a certain extent to opening hours and consultation times, see below).

In the case studies three different approaches to solving this problem are described: First, decoupling working days and operating days, frequently with the assistance of additional shift groups; secondly, the introduction of different working times for different groups of employees; thirdly, the extension of presence times by spreading out the numbers employed to cover the opening hours and consultation times that have so far been customary. With the first two approaches the introduction of shorter working times can play an important part.

With the *first* approach a standard model (e.g. a two-shift system with alternating early and late manning) is replaced by a system in which the days on which the plant is operated and on which each individual employee comes to work are no longer identical (e.g. in the conventional two-shift system the identical working and operating days Monday to Friday). Working days and operating days are therefore de-coupled. This means that the plant can operate six days a week for example, whilst each individual employee works only four days. This is frequently achieved by creating additional shift teams. Sometimes these working time systems are designed in such a way that the daily shift lasts longer than eight hours (frequently nine or ten hours and sometimes

even longer), even though the individual weekly working time is concentrated into four - or fewer - days ("compressed working time", cf. Wedderburn 1997). As a result, it is no longer always the same people who work at each workstation, rather three or four who alternate at each workstation ("multi-manning systems").

The working time model of the AUTOMOBILE MANUFACTURER<sup>2</sup> in Germany is based on extended daily shifts and multi-manning of workstations. Unlike the customary shift of eight hours in the conventional two-shift system this is extended here to eight hours and 35 minutes. The regular weekly company operating time has therefore been extended as it were by five hours 50 minutes with continual production. Production takes place during five days as before, although the individual employee only works a four-day week. The day off rolls as per plan from Friday to Monday. Five employees share four workstations ("5:4 system"). As the working time planned in the shift system is shorter than the collectively-agreed working time of 35 weekly hours, several additional "make-up shifts" have to be worked during the course of the year. If need be, these can be located without extra payment in the early Saturday shift which is then part of the standard working time.

Another variant of the de-coupling of working days and company operating days is practised by the large French bakery chain BREAKFAST. The previous standard system which frequently involved overtime has been replaced by a radical reduction in working time to 33.25 hours per week on average. This meant that it was possible to achieve a four-day week for an individual during six company operating days with two-shift operation (if need be three-shift operation). The structure of such shift systems can be seen in the example of the 17-shift model of a department in BMW-MOTORENWERK in Austria (Fig.1). It replaced a three-shift/alternating shift system from Monday to Friday that was "stocked up" with frequent overtime on Saturday in the relevant bottleneck area. As the shift schedule shows, the early Saturday shift and the night shift from Sunday to Monday was included in the standard working time (without extra payments) with the aid of a fourth shift group. Employees work an average of 4.25 shifts per week. The weekly working time to be worked regularly as specified by the three-shift/alternating shift system is less than the collectively-agreed working time of 38.5 hours. Working time has therefore

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<sup>2</sup> The company names in upper-case letters are taken from the case studies. In some cases names have been changed.

been reduced to 36 hours for the relevant employees so that only a few additional shifts still need to be worked during the course of the year.

Fig. 1: Shift schedule in BMW-MOTORENWERK in Austria

The British food producer COMPANY D chose a similar approach. Instead of a three-shift system with frequent overtime a completely continual shift system with five shift groups was introduced. The contractual working time is unchanged at 1760 hours per year, although 48 hours are now reserved for training purposes. What is crucial above all is that additional work is now remunerated by time off in lieu. These measures have reduced the average weekly working time from 44 to 38.6 hours.

The reduction in working time also plays a key role in the new shift system in the central stores of the Swedish ball bearing manufacturer SKF. With the - voluntary - participation in this working time model<sup>3</sup> workers go without additional payments for overtime, night-time and weekend working. In return, their average working time is reduced to 30 hours per week. The duration of the day shifts has been extended considerably, although the number of shifts has been reduced. The stores are only unmanned for five hours a day during the week and are also open on Saturdays and Sundays (for eight or ten hours).

Fig. 2: Shift schedule in SKF central stores (Sweden)

The *second* approach to extending operating hours is based on varying working times according to groups of individuals. Again, this involves extending regular opening or business hours beyond an established norm (e.g. Monday to Friday, 8.00 to 18.00 hours). Evenings and to some extent nights, Saturdays and sometimes Sundays therefore become part of the regular working time. In contrast to conventional shift systems in industry, whereby the special burdens associated with long operating hours (alternating shifts, night shift, weekend working) are remunerated by additional financial payments in particular, the systems described here use another method. Depending on the situation with regard to working hours separate shift groups are introduced whose contractual working times vary in length for approximately the same wage. In terms of

the companies investigated for our projects this basic model of shift organisation is used among others at ELECTRONIC<sup>4</sup> and FOUNDRY in France and Volkswagen Brussels in Belgium. The basic principle - different shift groups with various working times for various working time locations in order to cover longer opening and business hours - is not used just in industry, but is also widespread in the service sector in particular. It is used, for example, in the retail trade to cover shop opening hours during the evening, on Saturday afternoons and, where appropriate, on Sundays as well. For example, in Dutch supermarkets there is a lot of part-time labour which only works during the evening and in British superstores there is "Sunday only" (Kirsch et al. 1998).

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<sup>3</sup> At the time of the investigation 25 of the 67 workers were participating in the 30-hour shift system.

<sup>4</sup> In this company casual labour is primarily deployed for the weekend shifts, as the capacity of the weekend shifts can be varied more easily in this way. As this manpower always involves the same individuals, they are also used by the company as a pool from which to draw new recruits.

A sophisticated system of varying working times has been developed by the French manufacturer of electronic printed circuit boards HP-SCI. This involved transferring from a two-shift system on five weekdays to continual working in order to achieve payback of investment in newly-developed assembly technology in the shortest possible time.<sup>5</sup> In order not to have to alter too much the working times of those already employed, four additional shift groups with alternating shift systems were set up (Fig. 3). The working time of the first and second shifts was reduced to 34.66 or 33.66 hours, as Saturday (early shift) became part of the standard working time. The average working time in the newly set-up four alternating shifts was 26.8 per week. The basic wage was paid for 37.5 weekly hours uniformly in all six shift groups.<sup>6</sup> The principle *reduction in working time instead of additional payments for "unsocial working hours"* was also utilised here - similar to the examples of SKF and BMW MOTORENWERK described above.

Fig. 3: Continual shift system at HP-SCI (six shift groups, shift cycle of eight weeks)

The principle of different shift groups with different working times for different working time locations is used not only for the purpose of extending business hours during "continual operation" but also for newly set-up operations with long opening or business hours.

Examples of this are the two telephone banks investigated in France (TELEBANK) and Sweden (SCANDIA BANKEN). The SCANDIA BANKEN call centre operates a simple two-shift system with three shift groups. The system is divided into a fixed day shift and a two alternating shifts for evening and weekend work. The employees' contractual working time in the day shift is 38.5 hours a week and 22 weekly hours at 88% of the full-time wage for those employed in the alternating shifts. TELEBANK has a somewhat more elaborate shift system with a total of eight shift groups each with fixed deployment hours whose contractual working time for the same income is between 25 and 35 hours depen-

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<sup>5</sup> Some years later the company working hours were again reduced as the market and the product range of the company changed, which meant that the working time system had to be changed again (see below).

<sup>6</sup> Nevertheless new recruits received a lower wage as different bonuses and seniority premiums were paid for "old" and "new" recruits. "Flexible" types of employment were also used to some extent in this company - similar to

ding on the deployment time. Through the use of varied yet fixed deployment times the company is attempting to exploit the preparedness of individual groups of individuals (e.g. students) to work regularly at particular times of the day or night and apart from other responsibilities.

The *third* approach to extending opening hours, consultation times and business hours is to thin out the numbers deployed to cover the established core times. In contrast to the two approaches described above the working times of the existing workforce are simply distributed differently, so that an increase in the number of employees is largely avoided. The sector study into FOOD RETAILERS in Germany reports on this practice: The primary response in the German retail trade to the extension in shop opening hours was to thin out the numbers deployed and only to a lesser extent by creating new jobs the majority of which involved part-time contracts and limited employment.

Another example is cited by Rubery/Faichnie in their report on Great Britain. In one of the banks investigated (COMPANY C) a new working time system was introduced during a relatively large-scale re-structuring of the company which extended the basic regular working time from Monday to Saturday 22.00 hours. The aim of management was to enable departments and branches to extend consulting and opening hours without having to pay employees overtime. Working time remained at 35 hours per week, but from then on was agreed on a yearly basis (just under 1600 hours). The agreement concluded with the trade union provides for the preparation of working time plans by the departmental heads one month in advance, whereby three criteria must be taken into account: The working times desired by the employees<sup>7</sup>, the amount of manpower regarded as necessary by the management as well as opening and consulting hours. Saturday working is restricted primarily to volunteers. Additional flexibility is expected by way of a certain amount of additional hours, which the company "purchases" from all those employees prepared to work these hours without specifying when - or even *whether* these additional hours need to be worked.<sup>8</sup>

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ELECTRONIC - for the newly created shifts. Up to 30% of the workforce in the alternating shifts had time-limited contracts.

<sup>7</sup> Consideration of the time restrictions on individuals, due to childcare for example, ought to be guaranteed here.

<sup>8</sup> On balance, the British report says of this working time system: "Overall, management were ambiguous about the impact of changing the working time system. There had been no increased costs from running the system but at the same time they had not really gained anything." The reality of working time is described as largely unchanged, although salaries have fallen. Apparently, the offer by management to the workforce to take individual time preferences into

## 2.2 Fluctuating numbers of deployed personnel

The fact that some specific work can only be done at the time it is purchased is typical of many areas of the service sector. This means that the companies engaged in this sector need to use personnel to deal with fluctuations in traffic flows which are great at times. Although these fluctuations are largely foreseeable and also known (cf.. Kirsch et al. 1998), in order to reduce their personnel costs, the companies attempt to keep the number of personnel during the day, week or year to the absolute minimum that is required.

If the fluctuations in traffic flows that can be planned occur very frequently and the swings up and down are very great, as is the case in the retail trade, the companies tend to divide the total volume (in hours) of their manpower requirements into "small employment and working time units", as cited in the sector study concerning the German RETAIL FOOD TRADE. The most important tool for achieving this is the increase in the in-company part-time quota (Table 1). By way of justification, the sector study states: "The advantage for the companies is that at times of increased work - these times change daily and mostly last for only a short period of time - they are able to deploy "many hands" at the same time."

Table 1: Employment structures in the investigated companies in the retail food trade

Nevertheless, as the sector study states in a further analysis "the potential for meticulous personnel *requirement* planning is not used for equally precise personnel *deployment* planning". Typical of the retail food trade is the practice of improvised working time, which results in variable working times frequently not based on any discernible system: Personnel deployment times are in many instances irregular or deliberately distributed across the various time windows and moreover frequently specified at very short notice<sup>9</sup> (Fig. 4). Even this specification of working time at

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account to a greater extent, has not sufficed to mobilise the employees to work outside the customary working times. This is obviously one of those examples of "working time half-reforms" which are regarded as successful by neither management nor the employees. (see below).

<sup>9</sup> The most common practice was to affix to the notice board on Fridays the deployment schedule for the following week. The maximum planning period was 14 days. - Improvisation of the in-company working time organisation is not restricted to the retail food trade in Germany, as the same authors show in a comparison of four countries (Kirsch et al. 1998).



short notice is unreliable in many instances, and is subject to changes at short notice which give rise to coincidental working time patterns to a large degree (Fig. 5).<sup>10</sup>

Fig. 4: Personnel deployment schedule for two employees at the D-E-1 supermarket

Fig. 5: Working times of one employee at the D-B-1 consumer market

The principle of a fluctuating number of personnel deployed can of course be applied to seasonal fluctuations in the need for manpower. In this case recourse is made to short-term employment contracts or casual labour.

A particularly well-developed example of this is the Dutch case study into the import department of a FLOWER AUCTION HOUSE. The extreme fluctuations in the requirement for manpower during the course of the year are dealt with by setting up an additional evening shift during times when turnover is heavy. This shift is manned with the aid of several measures: The working times of the regular employees are extended with an obligation to make additional payment (with time taken in lieu during the periods when turnover is weak), labour is transferred from other departments, part-time contracts are extended and finally additional manpower is recruited on a short-term basis.<sup>11</sup>

Fig. 6: Requirement for manpower during the year in the import department of a Dutch FLOWER AUCTION HOUSE

Upon closer inspection what is involved are mixed systems in the case of the types of working time organisation described thus far. For example, the working time organisation of the FLOWER AUCTION HOUSE combines the two basic systems of working time models outlined so far, namely working time locations varied according to groups of individuals and the fluctuating levels of deployment. Working time organisation in the retail food trade on the other hand

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<sup>10</sup> In connection with the example in Fig. 5 the sector study comments on the fact that this is perhaps an extreme example that is not necessarily representative. Nevertheless it illustrates the principle of improvised working time organisation: For example, if personnel are missing due to short-term absenteeism, then those planned to work on this day are asked to work longer or other employees are requested by telephone to step in at short notice.

<sup>11</sup> This seasonal workforce is mainly made up of housewives or even self-employed gardeners who are under-employed during the Autumn and Winter. This means that the company can get round the qualification problem that frequently occurs when manpower is deployed on a short-term basis.

combines fluctuating levels of deployment with irregular weekly working times. In contrast to such working time forms the variation in the times worked by individuals is at the centre of the third basic type described in the following, the variable working time system.

### **2.3 Variable working time system**

The group of working time models described in the following involves the flexible matching of personal working times to accommodate fluctuations in the requirement for manpower that can be planned to a certain extent or which are unforeseeable. In conventional working time systems this can only be achieved by additional work for which additional payment must be made and - during longer periods of weak capacity utilisation - by equally costly short-time working. With the variable working time system such fluctuations are incorporated in the standard operation of the working time system.

In these working time systems the duration and location of working time can be altered as time goes on. At the same time the time-frames of the regular working time are frequently extended, in other words extended into the evenings and weekends. This means that paid overtime can be dispensed with either partially or altogether - working time for which additional remuneration is required is replaced by working time for which no additional payment has to be made. However, in many instances the principle of overtime is adhered to, and this is defined either as work carried out during particular working time locations or after a particular daily, weekly or yearly period. The overtime defined in this way can either be paid for in money or by time off in lieu.

The fundamental problem with all variable working time systems is how to deal with deviations from the working time actually worked and that contractually agreed. The boundaries of effective working time as well as the procedures in accordance with which this working time is to be matched with the contractual working time after expiry of a particular period of time, vary very greatly and to the extent that they are specified in detail. *However, the fact that there is a certain set of procedural rules in conjunction with minimum requirements at all, which permits matching over the medium- or longer-term with contractual and actually worked working time, is ultimately the core of variable working time models as we understand them.*

This can be made clear by comparison with the improvised working time organisation outlined above using the example of the retail food trade. For example, there is a trend in the food retail trade when formulating contracts for part-time working, only to agree the duration of the working time and to leave the location and distribution of working time completely open (Kirsch et al. 1998). This permits a variation in working times without additional payments having to be made

and without any particular effort in having to design a variable working time system. This option is based primarily on the fact that systems involving fluctuating deployment levels frequently make use of part-time work in the service sector. With part-time work not do only the possibilities for irregular distribution of working time during the course of the day and the week increase, part-time working is also generally less regulated by collective agreement than full-time work (cf. the sector study concerning the RETAIL FOOD TRADE). For example, in accordance with the collective agreement for the retail trade in Germany, overtime only has to be paid for by premiums from the 41<sup>st</sup> weekly hour, irrespective of whether the contracts are for full- or part-time working. This provides companies with cost-effective room for manoeuvre which can be used in extreme cases to call up work. This practice, described by Kirsch/Klein/Lehndorff/Voss-Dahm as "institutionalised improvisation", is highly flexible, but, as we understand it, cannot be described as a working time *system* as we understand it, as the procedural rules which are at the core of variable working time models are lacking.<sup>12</sup>

Variable working time systems can open up considerable potential for flexibility for companies. From the "technical" point of view, the potential and the costs of an adaptation of working time to reflect the order situation or the traffic flows depend on the specific design of the working time model. This design, in other words the set of procedural rules already mentioned in conjunction with minimum conditions, essentially comprises the combination of the following elements:

- Upper and lower limits can be agreed for the daily or weekly work period, these limits delineating the extent of fluctuation of the personal and the collective working time. If this is not done, then at least the daily maximum working time is specified by statutory limitations. In many countries the weekly maximum working time is specified as well.
- A second feature is the so-called "balancing-out period" within which the contractual working time must be reached on average (if not, as in the so-called "corridor models" see below, page 26 - the contractual working time itself is varied). A balancing-out period must always be defined, if the week is kept as the reference period for defining the contractual working time. However, in many cases companies have already transferred to the year as the reference period, so that a yearly working time of, for example, 1600 hours is agreed. For the practical functioning of the working time model the reference period is of no significance if the conditions are otherwise the same. With both variants it is advisable to use the term "flexible yearly

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<sup>12</sup> Reference is made in the following to examples of an alternative working time form even in the retail food trade.

working times". The balancing-out or reference period can also be rendered dynamic by "rolling" time compensation for example. One variant of the "rolling" time compensation is, for example, the ruling that once a year a balance of 20 hours maximum must be achieved. Finally, the balancing-out or reference period can be extended to several years, so that it is possible to adapt working time to accommodate fluctuations in the economic situation (this is done implicitly at the German AUTOMOBILE MANUFACTURER, for example). In some cases there is no time limitation on the balancing-out period (as with the German AUTOMOBILE MANUFACTURER). Whether working time is controlled at all in such cases depends on the regulations concerning the reduction of credits and debits in the working time accounts.

- Working time "credits" or "debits" built up by employees are generally posted to "working time accounts". Without these accounts no transparency or control is possible, if the personal working times deviate in the medium- or even longer term from collectively agreed ones and are not "balanced out" as planned within the context of fixed shift schedules for the agreed average working time. Besides individually-run accounts collective accounts, i.e. run by departments or divisions, can be set up. An important detail of all working time models in which working time accounts are included, is the definition of the maximum number (in relation to the contractual working time) of too many plus or minus hours that an individual employee may work. Equally important is the question of the consequences of overshooting these upper limits for plus and minus balances. Specific procedural rules are sometimes laid down in this connection.
- In variable working time models there may be specific procedural rules particularly with respect to two questions that arise in practice: *Firstly*, clarification needs to be sought as to which method is used to specify changes to the duration of working time. The bandwidth reported in the case studies range from instructions from superiors through agreements between the directors and representatives of the workforce, whereby specific notice periods must be complied with, to self-management of working time by individual employees, teams or departments. A distinction can therefore be made between instructed, collectively agreed and collectively- and/or individually-codetermined or self-managed working time changes. In companies which practice the last-named variant, reference is usually made expressly to the fact that the right of employees to co-determine or self-manage working time can be restricted by orders from superiors. This is in effect an extension of classic flexitime principles which are now being transferred to production areas as well. However, occasional attempts are made

to dispense fully with control and transparency tools with respect to the actual period of time worked (so-called "trusted flexitime" as is the case with teleworking at HEWLETT PACKARD in Austria). Hence, these companies are building on the self-management capacities of the team and of the individual employees within the context of a performance-stimulating carrot and stick system. The *second* question in response to which procedural rules can be formulated, is how to deal with too many and too few hours worked. Simple solutions to this can be found such as payment for the period of time worked in excess. However, in this instance there is the problem that an overtime practice established within the company may be continued under a new guise, in other words the overtime is officially re-named merely but the working time does not change in reality. In order to avoid this, other procedures can be instigated; for example, the expiry of excessive numbers of hours worked as well as company negotiations concerning organisational or personnel measures which result in a decline in the plus balances.

However, what has to be suspected with all this is that procedural regulations are frequently not worked out in detail. From an objective point of view there is a requirement for a ruling, although in reality and in many instances a vacuum exists which is typical. This may be the outward expression of a developed and informal practice of finding a compromise which does not require meticulous rulings. In many instances in the vacuum caused by an absence of rulings deficits are more likely to arise when handling flexible annual working times and which can lead to labour and employment problems (see below).

The company examples reported in the case studies represent the most varied types of variable working time model. In some instances the basic types of extension in business hours or fluctuating deployment levels outlined above are also combined with elements of variable working time organisation, for example a four-day week combined with a flexible annualised working time. Two relatively well-developed variable working time models are used as an example to show what is meant by a set of procedural rules in conjunction with minimum conditions:

The working time model for the PRINTING MACHINE MANUFACTURER *in Germany* combines two working time variants, a *flexitime* model and a so-called bandwidth model. Both variants are administered using a common working time account. Whilst flexitime is handled by employees at their own responsibility and individually, the bandwidth model provides the option to increase or reduce the working time on a collective basis, i.e. for groups of employees or work areas. A weekly maximum working time of 48 hours is possible on an individual basis, i.e. with flexitime: Mondays to Thursdays are

charged for with up to 10 hours daily working time; Fridays with up to eight hours. Hours above these limits are not charged to the working time account. Working time can be increased collectively to 40 hours maximum per week.

The period of time for settling the individual flexitime accounts is the calendar month: The account should be settled once a month for a maximum of +/- 40 hours. For control purposes flexitime is incorporated in a so-called "traffic light model". In "traffic light models" a "green" area is defined within which employees can build time credits or debits at their own responsibility. On the other hand, responsibilities and modi for account transactions are specified for defined "yellow" and "red" time zones. Generally speaking, the superior must be consulted for the building up and reduction in the working time account in the yellow area and for the red area more comprehensive measures are provided for (e.g. superior and works council jointly responsible for clearing the account). The traffic light model of the PRINTING MACHINE MANUFACTURER defines the "green" zone as +/- 35 hours, the "yellow" between +/- 35 and 39 hours, and the "red" as over +/- 40 hours. When the red zone is reached the superiors in this company are asked to speak to the employees and to urge the settling of the account. In accordance with the company agreement plus hours of 40 or more lapse; and minus hours exceeding 40 are deducted from the wage or salary.<sup>13</sup>

By contrast, the bandwidth model is an organised, collective working time change for the whole company, for parts of the company or groups of employees; other options for adjustment remain unchanged. Here, a bandwidth between 30 and 40 hours per week is possible. Notice periods for altering the working time to the works council are seven calendar days, and three calendar days to employees.

The bandwidth model also flows into the working time account so that its limit is increased to +/- **140 hours**. 40 hours stay as individual flexitime, up to 100 hours can be accumulated using the bandwidth model. The separation between individual and collective account should ensure that employees can dispose of part (the 40 hours) of the working time account as they wish and that company interests do not always prevail. The working

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<sup>13</sup> As reported in the case study, a *plus balance* of *over forty hours* does *not* lapse in practice, employees receive financial *compensation*. Although this provides an incentive to get round the traffic light ruling, *employees attempt*, according to the case study, *to keep to the provisions of the works agreement* and *to take responsibility for the state of their account*. *In most cases the superiors* speak to the *employees if the account has reached a critical stage*.

time account for the bandwidth model must be settled within 12 months in relation to the measure applied for.

The change in working time within the context of the planned bandwidth must be applied for specifically, in other words with the dates for the increase or reduction in working time as well as the balancing-out period sought. This is done as follows: The superior submits a request to the departmental head who in turn has the works manager check the necessity for the change and submits the matter to the works council.<sup>14</sup>

The second example of a variable working time model that has been thoroughly worked out comes from the service sector.

The working time model for the intensive care unit at the MALMÖ HOSPITAL in Sweden was born of a conflict about excessive workloads and an excessive level of overtime. As shown in the case study the shift system now comprises two parts: The first part consisting of 28 hours per week for a full time employee. These hours are scheduled for according to an eight-week rolling timetable and are devoted to the direct care of the patients. Each 24-hour period is divided into four working spells instead of three according to the old working time pattern. The spells are; 06.45-11.45, 11.30-17.00, 16.45-22.15 (the so-called evening spell) and the night shift 22-07.00. The second part of the working time, corresponding to nine hours per week, is placed in a time bank in order to cope with the fluctuations in the workload, meetings and training.

The activities at the intensive care unit have to go on around the clock. Either a person is employed for working the night spell or the daytime spell. Only a couple of nurses work part-time day and part-time night. If working according to a daytime schedule the spells 06.45-11.45 and 11.30-17.00, mentioned above, apply. If working night, the spell 22.00-07.00 applies. The fourth spell, that has in connection been introduced the new working time pattern, 16.45-22.15, apply to both groups. This was also one of the motives behind the new working time pattern, to bring the two groups of staff closer to each other. In the

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1,700 plus hours had accumulated (for about 400 employees) in the time accounts which were in the red zone at the time of the investigation, i.e. just under three years after introduction of the working time model.

<sup>14</sup> According to the case study in most cases the works council had already been informed in advance by confidants and members of the works council from the relevant areas. The works council, as it says itself, is fully prepared to look after the rights to which it is entitled in accordance with the works agreement. If a superior does not adhere to the provisions concerning the bandwidth model, the works council will not agree to a further application of this type again.

prior traditional schedule there is no overlapping and the activities during the day and during the night are two different worlds that never interact.

For those employed to work the night spell they normally work nine hours in four nights according to a rolling eight-week timetable. Prior to the change in working time patterns, these individuals used to start work as early as eight o'clock at night. Now they begin at 22.00 and on four occasions per eight-week period they work the evening spell. Basically, operations taking place at night are of the same nature as those during the day so it is only natural that night staff receive the same opportunities for training etc as the daytime staff.

The staff sign up for the spells or other planned activities such as meetings, training etc that they wish to work in addition to the hours scheduled according to the rolling time table as described above. The head nurse of the section estimates the need for staff in excess of those working according to the rolling time table and then passes the decision on to the employees concerned. There are no fixed routines regarding this approach, for example concerning on how far in advance notice should be given etc. The four teams, therefore, do not always work together since rotation occurs due to the time bank.

Within the framework of the time bank different weightings are set depending on the nature of the activity. If the hours in the time bank are used for the direct care of patients the weighting is higher than for the remaining time. A working time reduction is possible due to the fact that working with patients normally corresponds to a weighting of 1.75 meaning that every hour worked in excess of the rolling time table will count as one hour and 45 minutes. Furthermore, the working time model also includes a stand-by system. Stand-by means that if someone is scheduled to work and is however not needed that person can stay home or go home if the spell already started. Those on stand-by have to be prepared to be at work within half an hour. The weighting for stand-by is 0.5 (Fig. 7).

The staff are free to plan their work individually according to the time bank and in a longer perspective. Follow-up initially took place every six months and the employees on that occasion had to be within the limits of  $\pm 30$  hours in their individual time bank. Now there is no such specific time period of follow-up but follow-up takes place continuously.

Fig. 7: MALMÖ HOSPITAL: The weightings of the time bank system



When considering variable working time systems an initial decision has to be made which aspects among the wealth of details are of particular interest. For example, it may be appropriate to compare the various solutions to specific flexibility problems in particular sectors,<sup>15</sup> although it would also be feasible for example to investigate various options of combining working time accounts with part-time working for pre-retirees<sup>16</sup> For the purposes of this report it appeared to us to be appropriate to organise the material in accordance with the question as to what degree of *responsibility* employees take for day-to-day working time management. We hope to be able to show that this responsibility represents one half of the key criterion for the effects of the new working time systems on employment levels and on the position of the employees within the work process, meaning for that which was described at the start of the text as the social content of current trends in working time reorganisation. The other half of this key criterion cannot be determined from the working time models alone, only once the social reality is also included: The resources and competences with which the employees are equipped in order to be able to really take responsibility.

If the variable working time models described in the case studies are organised in accordance with the criterion of employee responsibility for the management of their working time, then four groups of variable working time systems can be identified: Collectively-negotiated work time changes (1.3.1), working time changes ordered by superiors (1.3.2), self-managed working time changes with working time check (1.3.3.) and self-managed working time changes with a check on outcome instead of time (1.3.4).

### **2.3.1 Collectively-negotiated working time changes**

Examples of collectively-negotiated working time changes come from large companies in the processing industries: VOLKSWAGEN AG and the AUTOMOBILE MANUFACTURER in Germany as well as as the truck manufacturer SCANIA in Sweden. In all three instances the main aim of the working time changes is the adaptation of *business hours* for the whole works or whole departments to accommodate fluctuating demand, the primary condition for which is collective changes in working time. To some extent the option should also be created for increasing the degree of capacity utilisation or deployment levels during times when there is a particularly high requirement for manpower.

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<sup>15</sup> Inter alia the material permits sector comparisons in automobile plants, industries with fully continual shift systems, R&D centres and banks.

<sup>16</sup> Cf. the VOLKSWAGEN AG study.

The reduction in working time at *VOLKSWAGEN AG* from 36 to 28.8 hours made headlines and was doubtless one of the most significant impulses for the European debate on the protection of jobs in companies through the reduction in working time. Less well-known is the push for the reorganisation of working time at Volkswagen in the years after 1993 which this reduction in working hours triggered. The previous organisation of working time which was largely standardised - two-shift systems were the norm in Production (cf. Lehndorff/Bosch 1993) - was replaced by a plurality of new shift systems and works- and department-specific working time systems. For example, 60% of the employees worked in various systems involving the four-day week and 30% in systems involving the five-day week. The shorter working times permitted numerous options for combining shift systems which resulted in very short as well as very long business hours depending on the order situation and technical capacities, and opened up in particular the possibility of changing business hours in small stages - a fine tuning that would have been unthinkable with the eight-hour day and the 40-hour week.

The original approach - protection of employment through reductions in working time - was replaced or eclipsed by two subsequent agreements in 1996 and 1997 forming a new approach - flexibilisation on the basis of relatively short working times. The company coined the catchword "the breathing factory" to describe this. The standard time was extended to 30 hours a week.<sup>17</sup> The planned average personal working time is 30 hours within twelve months. At the same time a bandwidth of between 28.8 and 38.8 hours a week applies within which working time (this also applies to any overtime) is not subject to additional remuneration as a matter of principle. Time-limited deviations from the 30 hours must be agreed with the works council and notified two months in advance. For example, it was agreed for some departments within the Wolfsburg head company that the standard working time would be increased to 36 hours during the second half of 1998.

There are two variants for such working time extensions. Either time is taken off at a later date to compensate for the excess time worked, so that working time within a shorter or longer period fluctuates around the average of the contractually-agreed working time (30

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<sup>17</sup> The official linguistic ruling of both contracting parties at Volkswagen stated that the 28.8 hour week would continue to apply, but that employees would make available to the company a work contribution amounting to 1.2 hours a week without full pay. Irrespective of diplomatic formulations the standard working time is therefore 30 hours. This is still five hours less than the collectively-agreed standard for the German metal-working industry (Volkswagen is not subject to collective agreements for the metal-working industry, but concludes its own collective agreements with IG Metall).

hours at VW). Or it is agreed - or realised at a later date -, that time off in lieu is unrealistic and the excess time worked is paid for. With this variant the contractual working time itself - and with it payment - is therefore periodically adapted to reflect fluctuations in orders.<sup>18</sup> There is certainly still overtime in this system. It occurs for example when the notice period of two months is not adhered to. Overtime is only subject to additional remuneration once the agreed upper limit of 38.8 weekly hours has been exceeded. As the overtime statistics for Volkswagen show in the case study overtime has increased sharply in the last few years. It should be noted, however, in this respect that this is subject to additional remuneration only to a lesser extent.

As already outlined above, the working time system for the other German AUTOMOBILE MANUFACTURER investigated is based on de-coupling the individual four-days weeks from the five-day business hours on the basis of the 35-hour week. Again, in this context the factory can "breathe". One factor of flexibility is the possibility of special shifts on Saturdays for which no additional remuneration has to be paid. These shifts are fed by employee "make-up shifts". In addition, there is recourse to the individually work-free fifth weekday during periods when there is the need for a lot of working time (e.g. model launch). In this way plus hours are accumulated in the working time accounts which are then compensated later during periods when there is less need for manpower (e.g. when a model is being phased out) through collective days off or an extended works holiday. The room for manoeuvre for this is great, as the maximum permissible balances are +/- 200 hours.<sup>19</sup>

These fluctuations in working time are also negotiated. In accordance with the German Industrial Constitution Law special shifts require the agreement of the works council anyway and the same applies to collective free shifts and works holidays. Decisions about flexibilisation measures to be brought in are made in project groups composed of the competent production managers, the works council and the personnel departments. According to its own statements the works council regards the actual extension of the balan-

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<sup>18</sup> In the German chemical industry for example this option of time-limited extensions and reductions in the contractual working time is provided for in the sector collective agreement and is described as "working time corridor".

<sup>19</sup> Even with the AUTOMOBILE MANUFACTURER the official language differs from the actual intention. Officially, the company is subject to a collective agreement which prescribes the achievement of the contractual working time on average of twelve months maximum. What is actually intended, however, is to use the working time accounts for accommodating medium-term fluctuations in capacity utilisation (economic and model cycles). Management and

cing-out period and the maximum amount of balances in the working time accounts as unproblematic, because it has sight of the planning documents and can therefore see whether and when compensation is possible.

Similar to VOLKSWAGEN and the AUTOMOBILE MANUFACTURER in Germany, SCANIA in Sweden possesses a combination of individual with collective elements in its variable working time organisation. The truck manufacturer produces in the one-shift system on the basis of the 39.5-hour week, whereby employees work flexitime (7.00/8.00 hours to 15.00/17.00 hours) and keep working time accounts. Furthermore, there is the option of collective working time fluctuations within a bandwidth of between 35 and 45 weekly hours. Such changes must be negotiated: The local trade union must be informed six months in advance about the company's intentions, and after the negotiations the change in working time must be announced four weeks (in the case of an extension) or two weeks (in the case of a reduction) in advance. Time credits and deficits which occur are recorded in the working time accounts and the salary is paid for a constant 40 hours a week. It is possible for a settlement to be made over a period of several years, in particular therefore during the course of fluctuations in the economic cycle. Hours which exceed the working time level agreed in each case are booked or paid for as overtime subject to mandatory requirement for additional remuneration.

The examples cited here are *collective* working time changes which are also *negotiated* collectively in particular because the industrial relations system advises it.

### **2.3.2 Ordered working time changes**

Arranged working time changes are on the agenda when the organisation of working time is improved (cf. the retail food trade above). But it is precisely the retail food trade which also demonstrates that changes at short notice in working time by superiors should not be regarded as a system of command and obedience. In the sector study working time improvisation is interpreted as a *personalised process of negotiation* about working times which is perceived by employees as a process of "give and take". Company management gets complete flexibility when planning deployment of personnel and in return offers employees the opportunity to express working time preferences as well as the occasional opportunity to swap working times with

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works council can only move securely therefore in this grey zone, as the other side in each case is predictable and reliable due to their well-adjusted negotiating practice.

colleagues at short notice. However, the sector study states that "the opportunities in this system of negotiation are unevenly distributed. According to statements made by the employees who were interviewed requests concerning working time and the swapping of rosters must be kept within limits, and management decides in each case and without keeping to fixed rules when which working time requests are taken into account or when and how often manning times can be swapped. The ultimate determining factor for working time organisation are the company time requirements alone."

Working time changes arranged at short notice are described as a problem in a raft of case studies (c.f. for example FLOWER AUCTION HOUSE in the Netherlands, the large bakery BREAKFAST in France).<sup>20</sup> Symptomatic, because connected with the methodical approach of working time organisation, appears to be the example of the two chemical companies investigated in Great Britain (COMPANY B and COMPANY E):

These are two organisations which operate on a continual basis (meaning with shift working round the clock seven days a week) and which, prior to conversion of the working time organisation, had conventional four-shift systems which involved the regular weekly working time to be worked by employees being substantially longer than the contractual working time. In four-shift systems time worked in excess of the contractual working time<sup>21</sup> is usually made up by days off. These days off, however, are frequently not taken in practice, because the amount of work is too great and/or some must deputise for absent employees. It is precisely those companies therefore with continual opening or business hours which frequently have high volumes of overtime, in particular in organisations with high levels of sickness. In addition, there was the "overtime culture" which is typical of Great Britain in both the chemical companies that were investigated (see below), with the result that in the one company an average of 16% of wages was paid in overtime prior to the working time reform; skilled workers worked an average of 700 to 800 and production workers about 450 hours overtime per year.

This problem can be solved by setting up one or several additional shift groups. COMPANY B converted to five-shift operation, COMPANY E to six-shift operation. In

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<sup>20</sup> Rubery/Faichnie remind us in their report, however, that the traditional practice of overtime was frequently associated with short-term, stressful working time changes.

<sup>21</sup> The necessity for this can be explained using a simple calculation as an example: If one divides weekly business hours of 168 hours per week (seven days @ 24 hours) into four shift groups, an average working time of 42 hours per week results for each shift group.

such systems the weekly working time regularly worked is shorter than the contractual weekly working time.<sup>22</sup> The employees therefore owe the company working time the volume of which depends on the contractual working time. This working time debt must be made up for by shifts to be worked in addition. These "make-up shifts" can be used to increase capacity at times when there is a strong flow of orders (during which, for example, unused plant is temporarily in use), or they can be used to stand in for absent employees.<sup>23</sup> The starting point for this basic working time organisation model is therefore a reduction in the working time effectively worked by reducing overtime. Furthermore, in COMPANY E - and which is advisable with the introduction of a six-shift system - the *contractual* working time was also reduced (from 37.5 to 36 hours per week). However, 172 hours less are incorporated permanently in the shift schedule, of which 72 are used for training. There remain 100 hours which the employees owe the company and which can be called up at short notice to iron out personnel bottlenecks (and which are also paid if they do not have to be worked). In COMPANY B as well the company can call upon employees at short notice to work part of the make-up shifts.

For the purposes of comparison, reference is made at this point to the practice of the five-shift system in German chemical companies: Part of the make-up shifts are also used for training purposes. The other part is used within the context of a schedule agreed with the works council to cover holidays (and not to deal with short-term absence due to sickness). - Yet another possibility based on self-management for dealing with make-up shifts in conti-systems is described in the following chapter using the Danish textile firm NECKELMANN as an example. However, it can be stated at this point that the choice between negotiated, arranged and self-managed working time changes is present even within otherwise similar working time systems.

### **2.3.3 Self-managed working time systems with working time checks**

In several of the working time models described responsibility for daily working time planning and therefore the changes in working time which become necessary in the medium or short term

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<sup>22</sup> This can be explained schematically: If business hours of 168 hours are divided into five instead of four shift groups, an average weekly working time of 33.6 hours per shift group is the result.

<sup>23</sup> A special feature of both British chemical companies is that in addition to these make-up shifts a fixed overtime contingent paid in advance is retained, so that a relatively large volume of additional shifts results which the company can demand of the employees (so-called "committed hours"). In this way COMPANY B replaced the previous 200 overtime hours per employee and per year by 130 "committed hours".

is decentralised and delegated to employees. The working time organisation is therefore transferred to *teams* which generally only then need to consult with their superiors.

These case studies lead to the conclusion that this approach to working time organisation is encountered mostly in industrial and service companies with a highly-qualified workforce, although examples are reported of self-managed working time systems in low-wage/low-qualification sectors such as the retail food trade.

In the *Danish textile company NECKELMANN*, which operates continually, production workers have the choice in two pilot departments between a rigid and a flexible five-shift system. With the rigid system employees receive an annual shift schedule in which their total contractual working time of 1600 hours is rigidly divided up. Employees who choose the flexible option have a working time reduced by 80 hours. They also receive an annual schedule, although not all shifts are rigidly specified. These employees start so to speak with a working time debt of ten make-up shifts. They also have a working time account with a maximum balance of +/- 155 hours. Weekly maximum working time is 48 hours.

Within this context working time is largely planned autonomously by so-called "self-governing teams". The extent of their competences is left to the teams by management and it is up to them, according to the case study, to decide which range of competences they are prepared to assume. In one of the two pilot departments investigated the distribution of tasks within the group was the task of the teams as well as working time planning but not production planning. The following method of working time planning results from this double structure: the annual shift schedule caters for operation with normal plant capacity utilisation. If it becomes clear that capacity is not sufficient due to the volume of orders management announces a phase of above-average capacity utilisation. Employees with flexible contracts then agree their make-up shifts within the team and register their shifts themselves. The upper limit for make-up shifts is not the contractual working time but the maximum balance in the working time account of 155 hours. Within this band with no overtime payments are made (overtime must be arranged), although an additional payment of 27 kroner is paid for each hour worked in make-up shifts. Demands made of the workforce with flexible contracts is a common problem, although the teams themselves decide whether unforeseen absences, due to sickness for example, really does have to be made good. Interactions within the teams is also highly significant. The risk of unforeseen and arranged working time changes falls on those employees who do not plan auto-

nously and register their make-up shifts on a timely basis. Interestingly, according to the case study female employees with children manage this working time system very well and complain the least about unforeseen working time changes which could conflict with their household duties.

One example of self-managed working time in the service sector is the intensive care unit at the MALMÖ HOSPITAL already mentioned. Other examples are ADVANCED HOMECARE in the same Swedish hospital, the Dutch old people's home SWELLENGREBEL as well as German INSURANCE.

The working time systems in both care units are comparatively informal. With ADVANCED HOMECARE employees give two weeks notice of their working times based on their knowledge of personnel requirements that are becoming apparent. These working times are then simply coordinated by the ward sister. The only restriction on the individual working time schedules is the necessity to state two lots of night stand-by duty. Generally speaking, the working time announced by the employees is shorter than the contractual working time in order to leave some room for manoeuvre. In the SWELLENGREBEL old people's home working times are decided jointly in quarterly team meetings and updated on a weekly basis. The shifts planned and actually worked are recorded by employees using software.

The working time model for INSURANCE is worked out in more detail by comparison, but is equally strong on decentralisation and self-management. There is flexitime with no core time between 6.30 to 19.00 hours with a maximum daily working time of ten hours. When planning their working time autonomously the teams must guarantee response time ("service readiness") with respect to customers between 8.00 and 16.00 hours (under the old flexitime system service readiness was two hours shorter and identical with core time). A "traffic light model" is used to regulate the handling of plus and minus balances in the working time accounts (see above), in which the works council is involved.

However, self-managed working time organisation is encountered not only in organisations with highly-qualified staff. Kirsch/Klein/Lehndorff/Voss-Dahm in their sector study on the German RETAIL FOOD TRADE cite the example of a decentralised and self-managed working time system in this sector in which low pay/low qualification strategies tend to prevail.

In the CHEMISTS MARKET COMPANY the intention is to solve the problem of absenteeism with the aid of teamworking and the stronger social control that is associated



with it. The practical consequence is the pilot project involving a "co-worker-supported personnel deployment plan" that is described in the sector study as follows: Employees themselves specify in advance and within the team the location and distribution of their working times in accordance with the amount of work which is notified to them. Advance planning of working time is four weeks. The branch manageress posts a weekly schedule in which the volume of work in the company is recorded but not the working times of the individual employees. The employees enter their manning times in this weekly schedule once they have agreed these in teams of two. If the working time plan has not sufficiently taken into account the actual requirements for working time, overtime is used primarily to deal with an increased amount of work in the company, and this overtime is compensated by time off in lieu. After prior agreement with the branch management the employees themselves choose the time of the days off in lieu and enter it in the personnel deployment schedule. Requirements for flexibility arising from absence of employees are the exception according to the branch manageress: sickness levels have tended towards zero since the introduction of co-worker-supported personnel deployment planning.

In all these examples self-managed working time planning is effected within a context composed of three elements: First of all, management regards a certain *manning level* as necessary, secondly from the management's point of view certain *times* need to be worked, and thirdly employees and superiors, as well as representatives of the company's interests keep an eye on adherence to the contractual maximum working time. This framework may be more strict and precise or less so, but in one form or another, more transparent and active or less, it encompasses these self-managed working time systems. These elements can be summarised as *time-based checks*.

A final group of working time systems is based on the fact that the time-related check is replaced by a *results-based* one.

### **2.3.4 Working time systems with results- instead of time-based check**

Typical of results-based checks - both in the sense of management control as well as self-control, is the fact that the time worked ("used/consumed") is no longer of primary importance, but the completion of certain tasks or the achievement of certain goals.<sup>24</sup> It is the "end of the time-

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<sup>24</sup> On the subject of "management by objectives" cf. for example the case study of Hewlett Packard in Austria where only very limited results have so far been obtained with the reform of working time systems.

passing culture” (Weidinger 1995), or, as Lindecke puts it in her report: “Working time models the aim of which is to adjust working time to reflect the order situation are based on "thinking through the situation" and "adaptation" rather than simple presence." This approach, which is ultimately geared more to the way in which the self-employed work is by tradition widespread among executive managers in particular whose employment contracts contain no agreement about working time.

For several years now the underlying philosophy behind results-based control has been applied increasingly to functions below senior management level, in other words to areas of activity with contractually agreed maximum working times. In order to bring a defined working time into line with results-based control, the amount of time required for the completion of certain tasks must be quantified. Generally speaking, this primarily involves a minimum standardisation of work-related tasks. The main contradiction between defined working time and results-based control resolves itself therefore into two practical questions: First of all, is the amount of time estimated for the completion of certain tasks realistic and - secondly - is the existing personnel sufficient to cover this necessary amount of time?

Two possible answers to these questions in practice are described in the case studies of the Dutch TAX OFFICE and the French management and works council consultancy company BETA.

The TAX OFFICE working time model is a pilot project undertaken by a team in the Groningen tax office which is responsible for taxing the retail food trade and which works away from the tax office for substantial amount of time. Standard times that have evolved through experience apply within the team for the processing of certain business transactions. There are also performance criteria which must be complied with by everyone (e.g. maximum permissible waiting times for customers). Finally, there are rulings which guarantee customers access (binding consultation times). There is no check on the effective working time of individual employees and the times they are present.<sup>25</sup> Working times and the division of time between inside and outside work are decided within the team. Whoever wants a day off must ensure that he has a stand-in. Business transactions must be divided and agreed between the team members in such a way that of those pre-

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<sup>25</sup> The pilot scheme is taking place in a working environment that is still strongly marked by conventional civil service structures. For example, there are electronic time-clocks that are not paid any attention by the team leader as he regards them as "insignificant and inefficient".

sent in the office there is always some who is in a position to provide customers with information. The organisational restructuring lasted three years.

Working time reform in the management consultancy BETA was triggered by a dispute with employees who felt they were under increasing pressure and whose overtime was increasingly on a massive scale. The company agreed with the trade unions a reduction in working time that is subsidised by the state in accordance with the Robien Law and which was accompanied by the creation of new jobs (see below). An annualised working time model was introduced at the same time as the reduction in working time. The company does not carry out any checks on working time and restricts itself to specifying a volume of consultancy work that must be provided in the contractually planned number of working days per year as defined by experience. Work planning, and therefore decisions about days off, is left entirely up to the consultants. As previous experience shows, this model which was only introduced in 1997 is not yet complete. One indication of this is the postponement that can be observed of part of the holiday entitlement by two thirds of employees whilst days off are taken. The realistic estimation of the time required for overhead tasks is becoming a particular problem. Whereas the amount of time required for direct consultancy work can be quantified precisely (and planned to a certain degree) - it can after all be charged to the customer - general preparatory work is underestimated when quantifying time and personnel expenditure.

Reference is also made to the inadequate and unrealistic quantification of time and personnel expenditure in the two German case studies of the R&D centres of car plants. Although time-based controls still exist at VOLKSWAGEN and the AUTOMOBILE MANUFACTURER, the trend is to circumvent these controls and manage ad absurdum. In both development centres overtime levels are rising which can only be reduced periodically by payment. The case study of the AUTOMOBILE MANUFACTURER describes in vivid detail the dilemma of a works council which cannot find any common starting point for practical working time controls with a workforce split between "having handed in its notice in its head" and "career orientation which is breaking every working time framework". It is tempting under such conditions for a company to formally dispense with working time controls and to make a virtue of a necessity. The case studies of BETA and the TAX OFFICE on the other hand at least demonstrate *approaches* to finding solutions involving a system of results-based controls within the context of self-managing teams. They ultimately expose one of the key problems of all variable working time systems: *quantification*,

*transparency and control of the connection between tasks to be completed, the time necessary for this and appropriate personnel allocation.*

The overview provided here of the new working time systems has not only demonstrated the variety involved; it has already become clear how provisional, undeveloped and unclear the development stage is. This is not surprising given that in-company reorganisation of working time only started a few years ago. This must also be taken into account with the analysis which follows. The process of change involved in the organisation of working *time* is inextricably linked with the organisation of work. Nevertheless, uniform approaches which place the development of new working time systems in a wider context than that of attempting to achieve short-term personnel cost reductions so far appear to be the exception rather than the rule.

### **3 Organisation of working time and work: Between short-term cost savings and strategic arrangements**

Reference was made at the start of the text to the three fundamental driving forces behind the reorganisation of working time: firstly companies' interest in longer capital utilisation times and more cost-effective flexibility, secondly structural changes in the amount of work available, thirdly the challenges that the employment problem presents to the state, management and labour to create initiatives concerning working time. The case studies prepared for our project demonstrate the effect and the significance of these three driving forces in close-up as it were. We take the information contained in the case studies about the goals being pursued with the new working time systems to the start of the investigation via the connection between working time and work organisation. In most of the examples of companies company interests are at the start and the heart of working time reorganisation. However, cost reduction goals that can be realised in the short term (3.1) must be distinguished from wider-reaching employment and strategic personnel approaches (3.2). Finally, we turn to the companies' handling of employee interests (3.3) before we deal with the possible effects on employment (3.4). These keywords outline the area of conflict in which new working time systems are being developed. Our central thesis is that working time arrangements that are sustainable longer term require these various interests to be taken into account and to be consciously balanced.

### 3.1 Economic increases in efficiency that can be realised in the short term

As far as companies are concerned there are two goals that are practically always at the heart when new working time systems are introduced: Firstly, a reduction in capital unit costs and an extension of consultation and opening times which results in the extension of standard working times into late evening and weekends; secondly, a reduction in the amount of capital tied-up and the avoidance of paid working time that is not directly used in productive work, which is reflected in a variable adaptation of working times to accommodate fluctuating order levels and traffic flows. In order to understand the companies' motives it is important to stress that they are not simply concerned with longer business hours and more flexibility, rather - given the increased significance of these two variables - the *reduction in additional costs* which have so far been associated with longer opening and business hours and with flexibility.

The urgency with which a reduction in personnel costs during longer and more flexible business hours is being sought, is increasing for several reasons:

- The increase in international competition in the processing industry, in particular the appearance of Eastern European suppliers is increasing awareness of the differences in wage and salary costs.<sup>26</sup> This means that personnel expenditure generated by flexibility comes under additional pressure.
- With the increasing capital intensity of production, management is also concerned with faster pay-back periods for plant and equipment: The French electronics firm ELECTRONIC reports that the break-even point is only reached once capacity utilisation reaches 95%.<sup>27</sup> Unit costs can be reduced considerably within the shortest possible time by extending business hours (cf. Fig. 8).

Fig. 8: Unit cost trends at the PCB manufacturer HP-SCI after the introduction of the new shift system

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<sup>26</sup> For example, ELECTRONIC's (France) management points out that the same components can be produced in Poland at 10% of French personnel costs.

<sup>27</sup> This has a side effect that is reported in several case studies: Expensive plant and equipment are utilised as fully as possible whereas flexibility loads within the companies concerned are concentrated on those works and countries with the lower flexibility costs. In the case of ELECTRONIC this is the Spanish subsidiary works.

However, changes in the markets for products can mean that a company's interest in working time can change direction literally overnight, as described in the example of the French FOUNDRY: Whereas it was a matter of the fastest possible pay-back period for plant and equipment with the first in-company working time reform, the second reorganisation involved the protection of employment first and foremost. A still more radical change of direction took place at HP-SCI where the fully continual shift system was dropped again and replaced with various, product-specific working time systems with shorter business hours due to changes in the product market, technology, competition and ownership.

- Service companies such as banks hope to achieve competitive advantages by extending opening or consulting hours into the evenings and Saturday and by avoiding a "mismatch" between customer flows and working times (e.g. the COMPANY F bank in Great Britain, INSURANCE in Germany, TELEBANK in France and SKANDIA BANKEN in Sweden). The greatly increased options for recording and forecasting fluctuating customer frequency with the aid of computers can be used to do this (cf. also COMPANY F in Great Britain as well as the German sector study on the RETAIL FOOD TRADE).
- Similarly, companies in the processing industry are working on how to improve their competitiveness by implementing just-in-time structures (including SKF in Sweden, the AUTOMOBILE SUB-SUPPLIER in Germany, and the large bakery BREAKFAST in France). Just as in the service sector it is a matter of avoiding of paid idle times and the cost-effective location at short notice wherever possible of working times during times when the flow of orders is strong.
- Even medium-term and economic fluctuations in demand are to be managed more cost-effectively (cf. VOLKSWAGEN AG and the AUTOMOBILE MANUFACTURER in Germany, the truck producer SCANIA in Sweden). For example, the management at FOUNDRY (France) reports that the previous customary change between overtime and short-time working generated additional personnel costs amounting to 60%.
- Reference to a significant cost reduction which many companies are seeking with variable working time models is made in the summarising chapter on the German case studies: "With flexible working time arrangements "typical reasons for absence" (illness of a child, hangover) can be reduced. With rigid working times employees are forced, as it were, to "go on the sick" with time problems such as these. With flexible systems such time bottlenecks are solved in a

better fashion. Instead of a "phoning in sick" employees can phone up at short notice and take a "day off/Friday".

In the same report the nature of new working time systems is summarised as follows as a *rationalisation instrument* in terms of the reduction sought in personnel costs: "The flexible working time models investigated appeared to be aimed at getting through the day's business with just the right number of permanent staff. Excess work is dealt with by additional hours and casual staff, whilst a shortage of work is cushioned by the working time model. Because all companies have spare flexibility for dealing with extra orders, the policy seems to be to have a base team of permanent staff who work either when there is a large increase in the number of orders or which is supplemented by casual workers. The signs are that production companies are seeking to accommodate fluctuations in orders with minimum personnel cover with and through flexible working time models or are even to some extent seeking to have the working time models provide the option of building up plus hours in the working time account as an alternative to time-limited jobs as well as permanent plus hours as a replacement for job creation."

In fact, many of the companies investigated appear to succeed in achieving short-term savings with the new working time systems, although there are also signs of many companies focussing overmuch on such direct rationalisation and in particular on the reduction of flexibility-induced personnel costs which frequently deflects concentration away from the wider-reaching, *strategic potential* of the new working time systems.

### **3.2 The strategic potential of new working time systems**

As several case studies show, strategic potential in relation to the realisation of work-related and strategic personnel goals is related to three closely interconnected aspects: firstly, the personnel *structure*, secondly personnel *commitment* and thirdly *work structures*.

#### **3.2.1 Personnel structure**

The reform of the personnel structure plays a particularly striking role in several of the British organisations investigated. For many companies in great Britain this involves moving away decisively from the traditional overtime *culture* with the aid of new working time systems. In industrial relations in this country the strict, specialist demarcation of work areas was a crucial primary condition for direct control of working time at the workplace by employees and trade unions. The trade unions were always keen to retain the option of increasing the income of their members by in-company or department-specific extensions of working times. Breaking up this

intermeshing of *job control* and - as several managers in the organisations investigated called it - *self-generated overtime* is at the heart of the new working time systems, especially in the industrial companies described.<sup>28</sup> Overcoming demarcation, the development of (more or less broadly interpreted) multi-skilling and the reduction in overtime within the context of "annualised hours" systems are therefore part of the attempt to extend, and in extreme cases to regain, management control of the work process. It is therefore typical of most of the working time systems described that employees must now commit themselves to working additional hours ("committed hours"), whereas previously it was management that could be committed to providing paid overtime. However, the new compromise in several organisations is that not all these "committed hours" actually have to be worked, even though they are part of the fixed monthly wage. The management simply reserves the right to demand these hours if required. Whether this compromise is sustainable, may be doubtful. Some case studies describe how difficult it is in practice for management to actually call up "committed hours", particularly at weekends. These are obviously only half reforms; what mattered for management in particular was to be able to, as it were, turn the tables with working time control without resolutely decentralising working time planning. The practice described of the ad hoc handling of "committed hours" also calls into question how transparent and comprehensible personnel allocation is for employees (and possibly for management as well).

Case studies from other countries also describe the fact that working time reforms are used as incentives or catalysts for changes in work organisation and personnel structure that are already planned but not yet realised. This applies in particular to the overcoming of disciplinary and departmental demarcations which had proved an obstacle to improving quality and efficiency. Some French company examples in particular show that the introduction of new working time systems on the basis of considerably shorter working times facilitated larger-scale in-company reorganisations right through - as regards qualification structure - to actual new compositions of the workforce. For example, the FOUNDRY report details how the previous "war" about responsibilities between departments could only be ended by the many new recruits during the course of reducing working time. The composition of departments according to qualifications and competences was re-mixed - the reduction in and reorganisation of working time gave the company the opportunity to implement plans that had long been entertained.

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<sup>28</sup> To some extent this is happening without or against the trade unions. In other cases the initiative of the companies is being taken up by individual trade unions and used as an opportunity to attempt a strategic re-organisation of labour relations.



The reference to the association of new working time models with shorter working times is particularly significant in this respect, as the contrast between in-company implementations at the BFB BANK in Portugal on the one hand and for example VOLKSWAGEN BRUSSELS on the other hand shows: In the one case the increase in the volume of work and the re-structuring of the workforce goes hand in hand with longer working times (Portugal), whereas it is associated with a reduction in working time in the other case. In the latter case re-structuring could be effected without reducing personnel or making redundancies. On the other hand the example of VOLKSWAGEN AG in Germany shows that reductions in working time can also *force* greater in-company mobility.

To sum up: Reductions in working time may nowadays replace the room for manoeuvre and the opportunities for re-structuring workforces under the social contract that were previously present as a result of high economic growth rates.<sup>29</sup>

The reduction in working time in conjunction with reorganisation can fulfil a further purpose as regards personnel: It offers the opportunity to use part of the time withdrawn from the direct work process for further training. For example, those working time models for continual shift operation are aimed at reducing the effective working time and converting part of the employees "make-up shifts" which then occur (see above) into qualification times (e.g. the British food processor COMPANY D and the French electronics company ELECTRONICS). Of particular interest is the example of the intensive care unit at MALMÖ HOSPITAL in Sweden, where the requirement for the provision of qualification times triggered the search for a new working time model and where the available time for further training within the context of paid working time only resulted from the reorganisation of the shift system in conjunction with revised personnel allocation (increase in the number of hours made available in total to the department with simultaneous reduction in working time for full-time employees).

### **3.2.2 Personnel commitment**

The second strategic aspect of several new working time systems, the connection between working time organisation and personnel *commitment*, is the result of the increasing importance of qualified and committed personnel for improving service, the production of quality and for increasing plant utilisation.

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<sup>29</sup> I should like to thank Dominique Taddei for this information.

The trigger for reflection on the connection between personnel commitment and quality may be a particularly high level of sickness. For example, sickness-related absenteeism of 25% at the British chemical company COMPANY B as well as in the Dutch old people's home SWELLENGREBEL were the reasons for the reorganisation of working time systems. The aim was to improve job satisfaction on a lasting basis through a comprehensive reform of work structures including working times (understood at COMPANY B as the "stakeholder approach"). Both companies regard their approach as successful in retrospect; for example SWELLENGREBEL was able to reduce sickness levels to 3%. Reference is also made to the connection between sickness-related absenteeism and working time organisation in the sector study of the German RETAIL FOOD TRADE: The widespread practice of constant manoeuvring at minimum personnel levels results in the severe malfunction of working time organisation. A negative spiral of absenteeism and improvised personnel deployment planning is criticised in the sector which - according to the authors' conclusions - amplified problems with recruitment. The pilot schemes in the DISPENSING CHEMISTS MARKET CHAIN involving a decentralised and self-managed personnel deployment planning, as described above, are regarded by this company as a very promising alternative.

One motive behind the reorganisation of working time that is associated with the reduction in sickness levels is the reduction in fluctuations in personnel. It should be noted here that fluctuations in personnel are in many cases regarded as a desirable flexibility tool by the companies. The exploitation of so-called "natural" fluctuations is one of the most significant traditional means of adjusting to economic fluctuations. However, when implementing "total quality management", and in seeking to acquire a committed and qualified regular workforce many companies come into conflict with their conventional flexibility tools. This is reported among other things by the Swedish truck manufacturer SCANIA. This company is basically attempting to adjust personnel levels to reflect economic conditions with the aid of the variable working time model, as it did previously with the aid of "natural" fluctuations.

This aspect is very prominent in the example of the Danish textile manufacturer NECKELMANN. This is particularly noteworthy because - unlike countries like Germany for example - a company policy of "hire and fire" involves only a small cost as a result of employment protection which is institutionally weak in Denmark. In his study of NECKELMANN Thaulow writes "today, it is broadly recognised within the company that it takes at least six months for a new worker to obtain the necessary skills. A large number of the persons interviewed even say one year! Recruitment costs are therefore considered to be high and thus there is a

relatively strong economic incentive to keep the turnover rate down." Stabilisation and flexibilisation of the workforce is regarded by this organisation as two sides of the same coin.

Attention is drawn in the study of VOLKSWAGEN AG to a further aspect of the same topic. The guarantee of employment (even though it is time-limited), which has formed the basis of comprehensive working time reforms since 1993 in this company, is also a crucial primary condition for the process of "continuous improvement". As soon as employees fear that their own jobs are going to be rationalised away through their commitment to continuous improvement in work productivity, the improvement dynamic desired by the company might not materialise. For example, Promberger/Seifert/Trinczek state in their case study that "It would have been thinkable indeed that the special rationalisation efforts related to changes in the organisation of work in the first place would have met with a fair amount of scepticism, if not even resistance on the part of the workforce. The fact that no such resistance was observed can be explained mainly by the employment guarantees agreed upon in the course of the negotiations on the cuts in working hours. These guarantees represented the reassurances employees needed for playing an active part in the process of rationalisation without endangering the viability of their jobs."

A new working time organisation may therefore play an important role in the implementation of JIT/TQM concepts which are based on a combination of personnel commitment, motivating employees to implement continual improvement processes and increases in individual responsibility for quality production.

### **3.2.3 Reform of work structures**

A fundamental reform of all the work structures is a pre-requisite for working time systems which in some form decentralise decisions as to adaptation of working times to reflect order trends or the change in traffic flows. Decentralisation of working time organisation increases expenditure on coordination and adjustment. Variable working times and working times that can be determined to a greater extent by the individual require mutual agreement and the capacity of employees to deputise for one another, meaning they need to learn a variety of activities and keep up to date with procedures implemented by others. It is extremely closely associated with higher and broader qualification. In most of the companies investigated changes in work organisation - for example the introduction of teamworking - preceded the change in working time system. However, in some companies the introduction of a new working time model was also the occasion (sought for a long time) to reform work structures.

Extracts of the description of the large French bakery BREAKFAST is cited here in an attempt to reflect what is typical of the various types of work changes described in a series of case studies:

“Responsibilities are identified for the whole group on each line. Five control indicators have been defined. These are followed up by computer by all the operators and serve to evaluate the team (award of a bonus) :

- labour productivity, material production and finished product quality are monitored on a daily basis ;

- cleanliness and prevention are monitored on a monthly basis.

This operating method calls into question the usual demarcations between the various disciplines. For example, at Breakfast, a baker ("white apron") is responsible for his product at the same time as the cleaning and maintenance of the machines. Inversely, the machine technicians ("blue rating") are also evaluated in terms of product quality.

During the course of developing multi-skilling on the lines, reference is no longer made to the classifications "baker" or even "kneader". Henceforth they are two categories at production level : 'either one is a production agent which in effect corresponds to maintenance posts, or one is a machine operator, in other words one is multiskilled and totally responsible for one's post' (site manager).

...

‘Since working time reduction one could say that my work has really changed : I am much more concerned with the product, I have assumed responsibility for checking all the raw materials which was done by the laboratory before. Before, the line leader was more among the teams, now he is more in the office’. (An employee) ."

The idea of extending this work-related approach to working *time* organisation would appear to be obvious. Thoughts in this direction are summarised in Germany in terms of the catchword "time-autonomous group" (Fig. 9). Companies moving towards such a model, calculate that in the new requirements for flexibility and performance employees will not only see additional burdens but also additional opportunities for themselves and therefore consciously accept the burdens. In other words, with the extension of responsibility to include working time the plan is to awaken fresh potential for developing productivity in which the independent willingness on the part of employees to perform is encouraged.

Fig. 9: "Time-autonomous group" tasks

With the introduction of time-autonomous groups both companies and employees are moving into unknown territory. For employees these strategic arrangements are ambivalent, because working time and order situation are connected, which means that working time is no longer dictated "from above" rather organised independently on a quasi-entrepreneurial basis as a result with a view to customers - meaning within the context of time constraints dictated by supra-company circumstances! Together with increased responsibility, the entrepreneurial risk is also delegated to employees. Time-autonomous groups are not without risk for the companies either, as they are letting themselves in for the hazardous business of a fundamental restructuring of the work process and the company which might lead to measurable increases in efficiency only in the long term. A management whose strategy gives absolute priority to the short-term increase in 'shareholder value' will tend to shy away from this risk. Not without reason are "time-autonomous groups" still the exception rather than a mass phenomenon. According to a survey of German capital equipment manufacturers only 6% of the relevant companies had introduced such work and working time systems in Germany in 1996. Most of these were pilot schemes and not large-scale (Lay/Mies 1997:4). It cannot be assumed that the trend is more greatly developed in other European countries.

Some of the case studies document hesitant - and sometimes not entirely conflict-free - steps in this direction which, despite all the shortcomings, prove the feasibility as well as the economic viability of this approach in industrial and service sectors: for example, in France the consultancy BETA, in Germany INSURANCE inter alia and the pilot departments of the MEDICAL EQUIPMENT MANUFACTURER and of the PRINTING MACHINE MANUFACTURER, in the Netherlands the TAX OFFICE inter alia and the electronics company HOLEC LCG, in Sweden the intensive care unit and the care service of the MALMÖ HOSPITAL, in Denmark the textile company NECKELMANN.<sup>30</sup>

In the summary of his case studies of Dutch organisations tackling the introduction of new working time systems as an integral part of a fundamental reform of work structures de Lange states:

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<sup>30</sup> The description of NECKELMANN, like that of the PRINTING MACHINE MANUFACTURER, demonstrates the great importance of the persons involved, in which various departments within these organisations are described

" The introduction of self-management in teams is a gradual process that takes a lot of time, because it is a radical cultural change. From the experiences (in these organisations), we can derive a number of conditions for a successful implementation of self-managing teams.

- *Trust*: Although improvement of organizational results is always one of the most important objectives for the introduction of self-managing teams, employees must be able to rely on management, who should make sure that these changes will be advantageous for them as well. For a number of employees, position and status will change. All employees must be sure that these consequences will not be neglected by management.
- *Communication*: It must be clear for everybody involved, middle management, executives, specialists, etc. why the changes are taking place, what the objectives are, what the consequences will be for them etc. This demands great and continuous effort from management.
- *Involvement*: Not only because of the character of a cultural change (or even 'revolution'), but also for the growth of the new organization itself, it is good that teams are given ample opportunity to speak about problems and can look for solutions themselves. It increases their involvement in the process of implementation.
- *Education*: Being or becoming multi-skilled always is an essential part of the process of change and of self-managing teams. Employees should be given ample opportunity to learn new skills. This, too, demands great effort on the part of the organization.
- *Coaching*: Coaching, too, can contribute a lot to the new organization. Not only new employees, but also 'old' workers have been proven to be in need of coaching and support.
- *Middle management*: Middle management plays an important role. It can take the initiative (Tax office) or contribute to the development of the teams. Very often, middle management feels threatened by the introduction of self-managing teams, because they lose tasks, status and competences. They are often in a position to delay or stop changes.
- *Works council*: Works councils can play an important role in the process of change. The introduction of self-managing teams has far-reaching consequences for employees, and

also for their working conditions. Involving employee representatives in the process of implementation is always advisable. If a whole firm or a large part of it is concerned, it is an absolute necessity. If only a small part of a firm (as in the case of the Tax office) is concerned, direct participation of the department concerned can be sufficient.

- *Reward system*: Not initially, but after some time, employees will want an adjustment of the reward system to fit in with the new work organization. Their skills and responsibilities have increased and, mostly, so have the results of the team or organization. People want to be rewarded for that and to share in the positive outcomes.
- *Evaluation*: Continuous evaluation of the process and its results is necessary too. Management has to follow closely what the developments are, so that corrections can be made quickly."

Our impression is that the inclusion of in-company working time reforms in total work-related and strategic personnel concepts is one of the most important longer-term conditions for the success of these concepts. However, even among the companies described in the case studies, such inclusion has only been consciously sought to a limited extent to date. We even suspect that the proportion of companies here with such a strategic approach is strongly over-represented, as - as stated at the start of this report - this type of company was expressly sought for the purposes of the project. This rather sceptical view is also based on the observations summarised in the following concerning the consideration of employees' interests during the reorganisation of working time. As this overview shows, more far-reaching strategic work-related and personnel approaches offer greater room for manoeuvre for new working time arrangements than concentration on short-term reductions in personnel costs to the exclusion of all else.

### **3.3 The new compromise with employees**

The working time interests of employees, which are undergoing fundamental changes especially with the increasing number of women working, are one of the central themes of current working time changes. As the consideration of the new working time systems shows, they have so far been more of a factor to take into account than a driving force. The main initiative lies with the companies, and although the extent to which as well as the type and method with which they take into account the working time interests of their employees and the structural changes in the

amount of work available, these are frequently not yet geared to permanently sustainable solutions that we would describe as *strategic working time arrangements*.

Lack of sustainability is not only a problem as regards employees, it also concerns the companies. As soon as employees gain the impression that the reform is one-sided and will be at their expense, the economic success will be limited. For example, two British banks report that although Saturday is officially incorporated in the standard working time, in actual fact nothing has really changed as regards the reality of working time. The same applies to the additional shifts in the British chemical companies that were mentioned - many employees withdraw from a system they regard as unfair. Working time systems can be implemented in many instances, as in difficult economic times they promise employees a higher degree of workplace security or are to some extent even associated with (time-limited) workplace guarantees. However, the more limited the acceptance of these systems, the more limited their success.

It should also be noted, that even rulings the nature of which appears initially to be one of compromise, must prove themselves in difficult times, if they are to last. The summary of the German case studies points out that employees need to know that these are not simply "fair weather rulings".

Nevertheless, the rarity of new strategic working time arrangements cannot be attributed to the dominance of company interests alone. The new work structures and working time systems throw up completely new questions for all those involved. Typical of these are particular problems concerning management structures and systems of labour relations to which reference is variously made in the case studies. "Top down" working time reforms carried out without the involvement of employees and/or their representatives have only limited effects or may even lead to economic failure. Even in the case of the Swedish truck manufacturer SCANIA, where the flexible annualised working time was negotiated with the trade union, it was nearly impossible to implement day to day in the company because management and union had failed to inform and involve the employees fully. Whereas in France industrial relations repeatedly proved to be the Achilles' heel as regards a fundamental re-organisation of working and working time systems, in several of the German companies the fact that lower and middle management were unconvinced proved to be a hindrance to reorganisation. This is not at all surprising, given that the character of



this hierarchical level undergoes fundamental changes when an organisation is decentralised and its existence is endangered to a certain extent.<sup>31</sup>

Rubery/Faichnie summarise these structural problems in their report on Great Britain: "Perhaps paradoxically it was in company A, the only case study where there were no unions, that the company experienced most difficulty in implementing the new working time scheme. It was in this company where there was least attention paid to the associated changes in work organisation that might be necessary to implement new working time patterns, and it was here that line management were given greatest discretion in how to implement the system, without efforts being made to ensure that line managers were convinced of both the need for change and the efficacy of the scheme as drawn up. As a consequence in major areas of the organisation, the new scheme led to little change as management were unconvinced of the need for change and anticipated considerable reluctance from staff if asked to make changes to their working patterns."

It is structural difficulties - or conditions for success -, which are simply a manifestation of ill thought-out plans and relative openness that have so far proved typical of the development of new working and working time systems. These are outlined in the following on the basis of the following aspects: the subordinate role played so far by working time reforms initiated by employees, the consideration of group-specific working time interests the nature of which is precarious to some extent, the wages problem and, finally, on the basis of the most difficult problem, namely that of the situation which is unclarified in practice of increasing responsibility and increasing workloads, which hides behind the requirement for "working time empowerment" of employees.

### **3.3.1 Working time reforms initiated by employees**

Compared with the dominance of company interests when new working time systems are created, only a few instances are described in which working time reforms were created directly on the initiative of employees. Such examples are the working time reforms in the French management

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<sup>31</sup> In the case of the Danish textile company NECKELMAN about 80% of middle management jobs were removed as a result of in-company re-structuring of working and working time systems. However, even the traditional structures of employee interest representation can be available in the new systems as Lindecke shows in her report (cf. for example the case study of the development department of the AUTOMOBILE MANUFACTURER). - Completely new problems also arise with the collectively-agreed regulation of working time by the new working time systems. In countries or sectors with a high break-even rate its significance as regards new working time systems moves increasingly to a framework of minimum conditions and/or procedural rules for the individual or group-related negotiating processes. Again, in a country like Great Britain, as several of the examples described show, the introduction of new working timemodels by the companies - to some extent in cooperation with willing trade unions - is used to re-organise the system of industrial relations from top to bottom (cf. for example COMPANY B).

consultancy BETA as well as in the intensive care unit of MALMÖ HOSPITAL, whereby great pressure had been exerted beforehand on the management by the employees. In both cases the number of personnel had not kept pace with the increase in business volume (BETA) or the high workload. The example of the hospital is particularly interesting in that - as already mentioned - a substantial reason for the dissatisfaction was that there was scarcely any time for the further training provided for in the contract of employment due to excessive time pressure.<sup>32</sup>

In some companies, however, new working times were the indirect result of pressure from employees and trade unions. This is frequently the case when reductions in working time are implemented and reform of the company working time organisation forms an integral part of the compromise. Several case studies reflect examples of this, for example, the one concerning VOLKSWAGEN BRUSSELS; a large part of the working time changes in the German metal-working industry can be seen in this connection (cf. Lindecke/Lehndorff 1997; Herrmann et al. 1998), just like many new working time models in Germany which serve to reduce overtime (Lehndorff/Mansel 1998).

### **3.3.2 Linking with group-specific working time interests**

Despite the obvious imbalance between company and employee interests as triggers for reorganisation, companies must - or want to - *take into account* employee interests when reorganising working time, however determinedly.

One of the linkages with employee interests are group-specific working time interests which are addressed with various offers concerning type of employment and location of working time. This concerns for example offers of part-time working geared to women in particular (e.g. HEWLETT PACKARD in Austria, the RETAIL FOOD TRADE in Germany as well as the telephone banks in Sweden and France), or pure night and weekend shifts in which students are interested and which can also be used as a route to finding subsequent employment in other areas of the company (SKANDIA BANKEN in Sweden). However rudimentary, the attempt to use the above-mentioned longer-term structural changes in the work available for the benefit of the company surfaces.

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<sup>32</sup> It is certainly no coincidence that in the case studies from Sweden more than in the other country reports the time interests and needs of employees are shown to be an important impulse for working time reform. It becomes clear what a large role social norms - especially as regards the employment of women or the acceptance of public childcare - play as outline conditions for the reorganisation of company working time systems.

To some extent, however, employees are pushed into these types of employment and working time using more or less gentle pressure, whereby the transfer is made easier by financial incentives. This practice is reflected in the British report with the example of COMPANY F bank, where full-time posts were converted into part-time jobs and the possibility of being able to remain in a full-time post was structured as a performance incentive for employees. The French example of ELECTRONIC also shows the conflicting nature of some differentiated working time offers: For non-time-limited employees participation in the pure weekend shift really is voluntary: for casual labour, however, it is more or less a primary condition for entry into the company. The sector study of the German RETAIL FOOD TRADE shows how the strategy of dividing work up into "small employment and working time units" is used at the same time to avoid redundancies when reducing the volume of work. Sales assistants accept the conversion of a full-time post into a part-time post in order not to lose their jobs entirely. At the same time it is evident that by using this strategy the company can make use of the prevailing trend towards employing women and that this fact is one of the main reasons for the relative stability of customary working time practices in this sector.

An important linkage with employee interests when introducing new working time systems is the offer of relatively long blocks of free time. This is practised in the case of shift systems in particular which are aimed at achieving longer business hours by "compressing" the individual working week (e.g. in the 30-hour week for shift workers at SKF in Sweden). Particularly far-reaching examples of this policy are weekend shifts at ELECTRONIC and the alternating shifts at HP-SCI (both France), which offer payment under full-time conditions for working times of less than 30 hours per week. It is precisely at these two companies, however, that there are also problems which call the sustainability of such approaches into question. In both companies management described the difficulty of ensuring the provision information and coordination in the case of such short weekly working times with long individual absences from the company. Even in the case of work structures which are still largely Tayloristic, like HP-SCI, large friction losses were the result. The "smaller" the employment and working time units, the higher the demands made on superiors as regards coordination and flexibility (or of other employees with longer working times as examples from the retail food trade show). Full-time employees and superiors become the "flexibility anchor" in work structures which are built especially around numerical flexibility in the form of many small employment and working time units.<sup>33</sup> The Tayloristic

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<sup>33</sup> The strategy of the "full-time core" is pursued for example quite consciously by the British bank COMPANY F.

nature of this approach can also be seen in the fact that weekend shifts or similar do provoke the employees concerned into taking second jobs. Under such conditions commitment to work tasks can scarcely be expected, as was already seen by HP-SCI management as a problem when Tayloristic conditions prevailed - in work structures which aim at TQM, for example, the problem might be greater still.<sup>34</sup>

### 3.3.3 The wage problem

Many new working time systems mean additional time-based flexibility demands and/or work during "unsocial" hours for employees. The work is also frequently associated with lower pay, as hours which were subject to additional payment previously are incorporated in the standard working time and/or the effective working time is shortened. In her summary of German case studies Lindecke states the following: "For the employees (or for a part of every workforce), flexible work time models lead to drops in income, since overtime is "defined away" and overtime bonuses are thus lost. At the same time they are expected to orient their work time to meet company requirements. Put bluntly, employees are expected to take on more responsibility for less pay."

With the in-company compromise the problem of pay can be addressed either directly in principle through new working time systems or can be dealt otherwise by political means. The latter means that "countertrade" is concluded whereby employees are offered benefits elsewhere in return for lost pay. The most well-known countertrade in this connection is the employment protection contract at VOLKSWAGEN AG from 1993 which was renewed in the years 1995 and 1997 and the context of which was extended (see above). Time-limited guarantees of employment were given for a series of other working time agreements reported in the case studies (in particular in France and Belgium). Even in some British examples employment protection in connection with reduction in overtime played an important part even when no formal guarantees were given.

A further option used by a series of companies is the creation of formal or actual opportunities for co-determination by employees of their own working time. How great the room for manoeuvre as regards availability really is, depends however on several outline conditions such as the

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<sup>34</sup> These working time models also prove a conflict for employees, as they are regarded in law as part-time labour in France if working hours are less than the 30-hour threshold, which means that pensions are reduced disproportionately (whereas the companies benefit from the part-time nature, in which they profit from the reduced employers' contributions to social insurance/security).

actual structure of the working time models, company culture and work organisation (we shall revert to this in the next chapter).

In addition to such countertrade - and to some extent in connection with it - the attempt is made in some companies to directly avoid or mitigate the reduction in pay. The statutory outline conditions that were initially created in France with the Robien Law and now progressively in Belgium in similar fashion have proved advantageous. In some of the French companies cited as examples it is shown that state subsidiaries for employers when reducing working time act as a lubricant for the re-organisation of working time if they are also used to avoid or minimise reductions in pay. One case is even described in which wages were higher than before as a result of reorganisation despite shorter working time (FOUNDRY), although such examples might be the exception. New working time systems introduced particularly in connection with the reduction in overtime are generally associated with reductions in wages that are substantial in some cases (cf. the current examples cited by Lehndorff/Mansel 1998).

It should not be forgotten that, as a result of the low increases in real pay during the last few years in most Western European countries, the threshold for many employees to accept income loss with the introduction of new working time systems is somewhat higher. A stagnation or even a reduction in income narrows the room for manoeuvre when introducing new working time systems associated with shorter effective working times.

In connection with this problem the attempts described in some case studies to change the pay *system* at the same time as changing the working time system, have become somewhat explosive. As a matter of principle, a reform of the pay system is sooner or later on the agenda anyway with respect to many in-company restructurings, particularly with the introduction of teamworking. However, to some extent this topic is regarded as the most complicated problem, which means that in many instances it is only tackled at the end of a chain of reorganisation measures (this applies to Germany in particular, as confirmed in several case studies<sup>35</sup>). Generally speaking, a change in the wage system in conjunction with working time reform means that performance factors make up part of the wages. A certain amount of "individualisation" of working time organisation then goes hand in hand with an "individualisation" of performance measurement and remuneration. In the company negotiating process this mainly creates the opportunity to

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<sup>35</sup> The reform of industrial wage systems is particularly complicated in Germany not least because co-determination rights of the works council are affected, which would disappear upon transfer from performance to an hourly paid wage system. In countries such as France or Great Britain there are other industrial traditions controlling the pay/performance ratio, and the hourly wage is substantially more widespread in industry than in Germany.

ultimately keep the average income constant on the basis of a new basis for calculation (cf. inter alia the British chemical company COMPANY E).

The connection between working time, wages and work organisation is both structural as well as political. At times the change in working time organisation can only be brought about from the political aspect by associating working time with pay reform. This is shown in the Swedish report by the example of SCANIA where flexible annualised working time was only accepted by the employees once it has been tied in with the introduction of a performance bonus in a larger package. Such packages can of course, like several examples in the German report, be formulated gradually. In whatever sequence they may occur, the association of the various aspects of work organisation with one another ultimately puts *package solutions* on the agenda.

### **3.3.4 New responsibility, new loads - more working time empowerment?**

New working time systems, which lead to greater potential for co-determination on the part of employees with respect to the distribution of their working time and free time and which also opens up more opportunities for gaining qualifications, can be regarded as compensation for greater flexibility and a high degree of "unsocial" working times, and which can even be regarded as a significant improvement in working conditions. Nevertheless, the reality is mostly more complicated and contradictory. The swapping of "more flexibility for more individual control over working time" touches upon perhaps the most complicated problem of the new working time systems and the heart of current trends towards the reorganisation of work structures, namely the relationship between responsibility and competences.

"Responsibility" is the keyword in all new working and working time systems geared towards decentralisation and self-management. The big problem with these systems always becomes apparent, however, when company time requirements clash with personal ones. That such conflicts can get onto the agenda at all, is already a noteworthy development in itself. Traditionally, the demand for working time empowerment, which is understood to mean the opportunity for employees to influence the duration, location and distribution of their working time themselves, is contrary to the conventional contract of employment. This contract states for which period and at which time labour is sold to the company.<sup>36</sup> The rigid contrast between working time empowerment and contract of employment has already been broken by the spreading of flexitime working.

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<sup>36</sup> The classic conclusions which the trade unions drew from this fact was the attempt to obtain more *time* sovereignty by reducing *working* time.

Officially, flexitime systems enable employees to influence their working time personally, whereby they generally have to agree their working time with their colleagues.<sup>37</sup> However, flexitime working is "to be regarded" fundamentally "as a form of self-regulation of the use of labour with fluctuating workload", given that generally speaking when time credits accumulated are being drawn down company requirements must take priority" (Bosch/Lehndorff 1995: 27). This conflict - an extension of working time empowerment under the pre-condition of the priority "company requirements" - is now both *extended* as well as *intensified* with variable working time systems to ever increasing areas of activity (including tangible production), because the company requirements, as outlined at the start, involve ever greater demands on employees for adjustment.

The central issue for the question whether and how employees involved in such working time models can actually succeed in matching their own personal working time needs with those of the firm, is their competences and resources which enable them to bring about a compromise on a case-by-case basis between company and individual or collective working time interests and needs. Due to the priority "company requirements" these competences and resources are the same as those required by employees to fulfil their obligations to the company, in other words their increased responsibility for adherence to deadlines, quality etc. within the context of the new work structures. There is a lot to be said for *matching responsibility on the one hand and competences and resources on the other hand* being the identical key question both for the success of new work structures (roughly as a basis for JIT/TQM) and for the sustainability of variable working time systems. If, on the other hand, the demands are increased and extended without adjusting the outline conditions to reflect this, then this equates precisely with the mistake of the "commonly held definition (which) equates power with responsibility" (Babson 1995: 4): "Since this definition fails to account for those cases where workers are given additional responsibility without matching resources to get the job done, it can just as easily serve as a formula for stress."

We encounter this basic problem in numerous case studies. Interviewees frequently report wondering whether changes in working conditions - in other words the increase in stress - are connected with the new working time organisation. Nevertheless, it is ultimately stressed again and again that such changes do not have a single cause, such as the reorganisation of working time, as the changes in company working time organisation are closely intermeshed with other rationali-

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<sup>37</sup> Generally speaking, as experience with flexitime shows, this in no way results in constantly fluctuating working time. In most instances the working times of flexitime employees is organised on a regular basis, but in accordance with individual needs and social pressures (traffic, opening times of kindergartens etc.) There is only occasional

sation measures and in-house reorganisation. The change in working conditions must be connected with the *complex* of in-house reorganisation an integral part of which are the new working time systems. This applies in particular to two changes to which reference is constantly made in the case studies: the increasing intensity of work and the difficulties with the decentralisation of responsibility.

With the increasing intensity of work, as the example in the study of ELECTRONIC (France), it is a matter of a "change in the nature of this intensification which translates less into physical than mental fatigue : stress increases as a result of the change in the relationship with the equipment (essentially one of control) and also, for those who work unusual hours, due to the absence of numerous services which make the possibility of a breakdown more onerous."<sup>38</sup> The personnel manager of the works is quoted as making the assessment: "I am sure that operator stress is greater than a few years ago and that employees dream of the factory. ... It's true that operator responsibility is greater than 5 years ago... I do not know if this is fatigue, it's more like stress. But it is not associated with the reduction in working time: we can compare with another site. There was the same phenomenon of instensification of work but without the reduction in working time." The deeper-lying cause for this stress is actually not a result of working time organisation, but - more generally - the *type* of delegation of responsibility. This is made clear in the comment by a trade union representative of this works: "I do not think that there has necessarily been a deterioration in this respect since the agreement. In effect, with automation work changes...the current problem is that work is more impersonal, you are associated with breakdowns, dependent on the tackler to come and mend it, on machine adjustments, which means that employees are much less in control of situations... They want to make the personnel more responsible, but this is only for negative reasons : rejects, the number of breakdowns, productivity and not in the action taken to improve the company."

This descriptions reinforces our estimation of the core problem: the discrepancy between the additional responsibility which is frequently delegated to employees in the new work structures, and the options and competences given to them in order to deal better with the additional responsibility. With working time organisation as an important aspect of this problem the discrepancy

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deviation from the usual time schedule where there is need - an experience which has been confirmed again by several case studies in our project.

<sup>38</sup> In the reports on night and weekend shifts, however, an opposite phenomenon is frequently referred to: The absence of superiors leads to the work being perceived as quieter and less disturbed.



between responsibility and competences is discernible in the problems to which attention is drawn in several case studies:

- The contradiction between the increased influence of employees on the organisation of their own working time associated with the decentralisation of working time scheduling and the right of management to demand at short notice the working of additional hours by employees (e.g. in the British bank COMPANY C).
- The problem that employees involved in variable working time models complain about again and again is that the contractually-agreed notice period for working time changes is not adhered to (e.g. in the large French bakery BREAKFAST).<sup>39</sup>
- The design of several continental shift systems with "compressed" working week which despite increased employee responsibility specify their free time and holiday times in the long term such that employee control over their own time is in fact reduced, - instead of decentralising the calling-in of free time entitlement as well (e.g. in both British chemical companies).

These problems are symptoms of the discrepancy, or at least the unclarified relationship between responsibility and competences, which justify the doubt as to the degree of development of a considerable portion of company solutions, which the case studies report.

The case studies of the (few) pioneering examples on the other hand confirm the significance of that which has already been described several times in this report as decisive pre-conditions for the functionality and sustainability of new working time systems: Qualified persons must be available to the companies. They must not only - and nowadays this is a commonplace - work together in a responsible fashion in teams but must also possess the *realistic* (i.e. supported by resources and competences as well as adequate personnel cover) possibilities, *to organise and divide up their work independently*.

However, as will be shown in the following, these are at the same time the key questions for the future concerning the effects on employment of the new working time systems.

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<sup>39</sup> In this company the discrepancy between the reform of work structures - see above - and working time changes ordered at short notice by management is particularly striking. Despite the criticism by employees of this working time practice as stated in the case study the satisfaction dominates everything according to the case study. It is suspected that the radical reduction in working time to 33.25 hours, which has had only a small effect on wages due to the state subsidies, but also the job enlargement and job enrichment described above. Promberger/Seifert/Trinczek in their investigation of the acceptance of the new working time organisation at VOLKSWAGEN AG found that such employees who are particularly interested in "job enrichment" according to their own statements state that they are above average satisfied with the shorter (and therefore more flexible and worse paid) working time.

### 3.4 Effects on employment

The protection and promotion of employment was the trigger for the reorganisation of working time in a series of organisations investigated. This was partly due to pressure from trade unions (VOLKSWAGEN BRUSSELS in Belgium, SKF in Sweden), and partly due to management initiative or a joint initiative by management and employees' representatives (AUTOMOBILE SUB-SUPPLIERS in Germany, FOUNDRY in France).<sup>40</sup> A case study of KOMMUNE VÄXJÖ in Sweden reports on the initiative of a political agency which gave public sector employees the opportunity to choose between increases in income and reduction in working hours in order to permit re-distribution of work and to facilitate a better match between professional and personal needs. The Belgian report (PUBLIC SECTOR) contains information about more wide-spread models for the voluntary and individual reduction in working time in the public sector. In both cases individual reductions in working time plays an important part in the form of part-time working prior to retirement.

Furthermore, in a series of case studies the positive effects on employments as the result of in-company reorganisation of working time is reported. In many instances the companies are those which extend their business hours considerably and therefore require more staff that cannot be made available solely through re-distribution in-house.

In some cases the effects on employment also took the form of a re-distribution of work volumes. For instance, in KOMMUNE VÄXJÖ individual working time reductions - in addition to a small number of new posts - were used to stock up part-time contracts in particular. In the Dutch DEPARTMENT STORE the result was stabilisation and a slight increase in employment as the creation of standard, flexible annualised working time contracts for part-time and full-time labour blurred the distinction between part-time and full-time and a number of people who were previously casual labour were taken on with fixed part-time contracts.<sup>41</sup> Even in the example of the Danish textile company NECKELMANN, in which the previous customary policy of "hire and fire" was rebuffed with the aid of the new working time system, stabilisation of employment played a part in this connection.

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<sup>40</sup> If one specifically considers the initiatives involving the reduction of overtime, then it would appear, at least in Germany, the main initiative to come from trades unions and works councils (cf. Lehndorff/Mansel 1998).

<sup>41</sup> In many other instances that were investigated and despite the reorganisation of working time, companies to a large extent kept rigidly to the additional flexibility buffer or time-limited employment contracts or casual labour (inter alia some of the French companies and the Dutch mechanical engineering firm MCC).

Despite such examples two fundamental problems must not be overlooked. The first problem relates to the relationship between micro and macro levels. The prevailing neo-liberal view is that a positive effect of flexible working time models on employment is ultimately justified by the winning of additional market share by the companies involved, in other words a jump ahead of the competition by the winners of rationalisation. From a purely economic point of view this is certainly correct, although in our opinion there are shortcomings. From the macro-economic viewpoint zero-sum games are possible, as a job gained by one person can mean the loss of a job by another. Positive macro-economic effects on employment can only be expected once the advantage of rationalisation through flexibilisation of working time has established an advantage in terms of national location compared to other economies, or once additional overall economic demand which would otherwise be held back is mobilised through the effects on service of new working time systems. The other problem is that companies that are successful in the marketplace respond with an extension in working time and can therefore buffer the possible effect on employment as a result. If positive connections between flexible working time organisation and employment are to be encouraged, then - in contrast to the attempts current neo-classical approaches make - there can be no dodging the key issue: the statutory and/or collectively agreed regulation of working time as well as the reduction and control of hours actually worked.

We therefore come back to the micro-economic level and herein lies the second problem: Where there is an extension in business hours involving the creation additional shift groups, the occurrence of positive effects on employment (again only at micro level) is undisputed. What is far more problematic are those cases where working time is reorganised and which do not necessarily involve an additional requirement for personnel on "technical" grounds. This applies to all the companies included in our project in which working time was primarily reorganised on the grounds of rationalisation. As with any other rationalisation, these working time systems are also aimed at saving work. Nevertheless, they can lead to positive effects on employment under certain pre-conditions, namely when a compromise about the distribution of gains from rationalisation is found which can include employment guarantees or (if only time-limited to start with) new jobs. The decisive micro-level pre-condition for the positive effects on employment of new working time models is that the effective average working time is reduced and taken into account when allocating personnel. This can be done by reducing contractual working time or reducing overtime - both within the context of new working time models. This link is especially clear in the case study examples in France, which is not surprising given that proof of the effect on employment is the pre-condition for state subsidies.

The last-named aspect, the reduction and control of working time actually worked, is closely connected with the "design features" of new working time systems with the new work structures. This is particularly apparent in the case studies from Germany, where to some extent working time models are worked out and negotiated in more detail than in some other countries: It depends in particular on which regulations permit compliance with the contractual working time on average over a medium-term period (see above). These include, for example, the amount of the maximum permissible plus balances in working time accounts, the transparency of working time accounts, procedural regulations to cope with the overshooting of maximum permissible time credits and, last but not least, agreements which take into account the connection between working time, work and personnel allocation in some form. The tangible effects on employment may take time to emerge even when such criteria are met, and the design of the working time models is closely associated with the new work structures as with some of the German "best practice" examples (Fig. 10). Because all the reserves for rationalisation are initially used up and the organisations investigated are always operating with the minimum numbers of personnel, relatively large effects on employment can really only be anticipated once growth has become a constant (with rates above productivity gains) and the corresponding expectations of growth in the companies involved have firmed up.

Fig. 10: Working time, work organisation, employment

In several case studies the so-called "specialist" problem is described (e.g. the examples of development centres and the computer department of the Portuguese BFB bank). as perhaps the most complicated in-company obstacle to positive effects on employment of new working time systems. Other case studies on the other hand provide definite examples of the potential for the reduction of working time for executive employees. The works manager of the large French bakery BREAKFAST, which reduced and reorganised working time for workers and salaried staff, is quoted as saying "it is not the managers who work the most who are the most effective".

The case study of the French management consultancy BETA shows how the connection between working time, work and personnel allocation can also be made in the areas of activity involving highly-qualified employees. Here, time-based control mechanisms are dispensed with, and the definition of the connection between work, pay and working time is made solely through the agreement of time workloads for the completion of certain tasks. This system naturally hides incentives to intensify work and according to the report is perceived as unjust by those employees who require more time for the completion of certain tasks than others. Nevertheless, it creates

that minimum of transparency which is the fundamental pre-requirement for linking reduced working time and positive effects on employment. This is also noticeable in that the lack of experience of newly-recruited employees has been taken into account in the time workloads, which meant that in the start-up phase of the new working time system measurable work productivity declined noticeably (and the effect on employment was initially disproportionately high, in other words precisely the opposite effect occurred as in the German companies).<sup>42</sup>

Once again the significance of the national context as regards the development and social content of new working time systems is clear from the effects of the Robien Law described in the French case studies. For example, it was possible for the management consultancy BETA to absorb the additional costs incurred with the reduction in working time and the associated reorganisation easily due in particular to the subsidies within the context of the Robien Law. Of course this subsidy runs out after several years, although by then average productivity will have increased again - an impressive example of the business management logic of the French system of state subsidisation of working time reductions. As a result of this experience the company intends to reduce and reorganise working time yet again within the context of the new provision of the Aubry Law.

The case studies from France and some of those from Belgium (e.g. COCKERILL-SAMBRE) generally provide the richest material for considering the introduction of new working time systems on employment grounds. The protection ("defensive option) or the creation ("offensive" option) of employment in the examples of the companies described is always to the fore due to the construction of the Robien Law. However, the significance of the new working time system is not exhausted in any way in this respect. In every case the companies use the offer of state subsidy to modernise working time organisation - and also work organisation in many instances (see below). On the basis of the French country report the effect mechanism can basically be summarised as follows: With its offer of a subsidy the state triggers a wave of working time-related reorganisation activities by companies which grows ever wider. In most cases it is management which takes the initiative to make these working time reforms not employee representatives. The trade unions are even split to some extent in their attitude to these working time reforms, although a company coalition always forms as a result which drives reorganisation

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<sup>42</sup> In contrast, the report about the development department of the AUTOMOBILE MANUFACTURER in Germany illustrates how much trade unions and employee representatives rely on widespread "anchoring" among these groups of employees if - as with BETA - they want to implement an actual connection between working time, performance and personnel allocation.

forward. This is therefore a state-encouraged and state-subsidised trend towards in-company working time modernisation. The subsidies help the companies to make the transition to the new working time models and reduce their learning costs. At the same time they help to avoid or to reduce social hardship in that wages are not (or only slightly) reduced despite the reduction in working time (in one case wages even rose). From the point of view of the companies who initiate the change individual cases, the effect on employment is a desirable side-effect of this modernisation of working time. From the point of view of the state which creates the focus for change, modernisation of working time is a desirable side-effect of the effect on employment: *The state as catalyst for in-company modernisation of working time with positive effects on employment.*

#### **4 New working time systems, work organisation and re-distribution of work: Intermediate assessment and practical conclusions**

The great variety of connections between new working time systems and work organisation is illustrated in the case studies. It becomes clear that working time is an inseparable part of work organisation (cf. Fig. 11). Sometimes reorganisation of working time triggers innovation in other areas - such as the introduction of a new pay system - and sometimes the change in work structures - such as the introduction of teamworking - triggers change in the working time model. What is always observed is that fundamentally working time organisation moves in the direction in which company and work organisation is going.

Fig. 11: Working time and work organisation

This basic direction, and the *social* content of this direction in particular, is not at all fixed. The only thing that is certain is that the connection between working time and work organisation has started to move. In the advanced industrialised countries the search has begun for work forms which correspond with changing performance and requirement profiles. Concentration on the customer, time-based flexibility of availability of the workforce and personal responsibility on the part of employees for the quality of the result of their work are keywords for this trend. In the industrial sector, as in the service sector, new forms of *market-oriented working time organisation* are being tried out (cf. in more detail Lehndorff 1998). Whereas regular working time patterns have so far been the pre-requisite for rationalisation and work volumes have been accommodated

by overtime and short-time working and then redundancies or new jobs depending on fluctuations in demand, working time organisation today has itself become a rationalisation tool and a direct competitive factor.

Market-oriented working time organisation can also be sought using very different routes. The bandwidth of possibilities lies between

- increasing numerical flexibility at the expense of functional flexibility on the basis of less employee competence
- and increasing time-based flexibility hand in hand with expanded functional flexibility and expanded competences.

The present case studies represent the full bandwidth of the trends that are encountered. A prototype of neo-tayloristic trends is the RETAIL FOOD TRADE in which the reduction in the proportion of turnover taken up by personnel costs is one of the most important competitive parameters. Part-time working is now becoming, or already is, standard in many areas of the retail trade . This goes hand in hand with the restriction of better-paid, qualified work to the fewest possible key positions and "flexibility anchors". Companies have less room to manoeuvre in terms of dealing with in-company requirements for flexibility and the resources to handle these in terms of work organisation.. Instead, the whole of the work volume is divided into small employment and working time units to form the central flexibility tool. Functional flexibility is reduced to a limited amount of versatility which goes hand in hand with limited competences. Numerical flexibility takes the place of functional flexibility.

This understanding of flexibility, which is essentially Tayloristic in nature, appears to be spreading in low-wage/low-qualification areas in particular in which *price* competition prevails: examples are service sectors with high proportions of turnover taken up by personnel costs and intense competition as well as industrial sectors with a high proportion of simple assembly work under strong international cost pressure. However, two important distinctions must be made:

Firstly, in these economic sectors there are also individual companies which are experimenting with alternative forms of flexibility (see below). Secondly, neo-tayloristic concepts are not restricted to low-wage/low-qualification areas, but are also encountered in the activities of more highly-qualified employees. Whereas, for example, INSURANCE in Germany is expanding areas of activity, features of a Taylorisation of employee activity is observed in British banks (COMPANY A, COMPANY C). The result there is a *decrease* in the flexibility of employees who have fewer options than before to balance out their own work time (in other words concen-

trating on the most urgent work first and delaying until later work which is less urgent). This reduced flexibility also means less control over personal working time. This reduced control is expressed inter alia in that the structure of the working time models involved provide for a certain amount of additional (paid) working time which can be called off by superiors if need be. As a matter of principle, therefore, there emerges a type of standby duty (which does not function in practice as planned, because employees attempt with withdraw from this element of force, even if it is paid for). Here again the context in which these models have been created is important: the search for ways out of the overtime culture. What is significant for the connection which is of interest here is the observation that the attempt to develop alternatives to the overtime culture is linked to re-standardising (or Taylorisation) of activities. The case studies of the companies concerned conclude that this route is also problematic for the companies, which meant that in one case (COMPANY A) management admitted difficulties in winning employees over to the idea of working outside the previous standard working times, and awarded employees overtime payment again.

These observations arouse scepticism as to the obvious assumption that a greater emphasis on *quality* competition rather than price competition would drive companies to resolutely link time and functional flexibility with expanded employee competences. In such economic sectors Tayloristic work structures do enter a state of crisis, but most of the companies investigated in our projects are far from a fundamental re-orientation of work structures and working time organisation. The problem is that many companies *are set on* on the immediate effects of rationalisation that can be achieved with new working time systems. The possibility in particular of reducing flexibility-induced personnel costs in the short term deflects from the far-reaching, *strategic potential* of new working time systems. The benefit of these immediate effects can even go awry if costs are driven down to such an extent that a permanent emergency situation is created due to extreme lack of personnel. The direction of development of working time organisation is therefore influenced to a large extent by structural conditions (sector specifics, competitive parameters), although it is ultimately *strategy-dependent*, which means it can be shaped.

A series of case studies show in approaches the *possibilities* of future working time organisation in an environment of increasing functional flexibility. The newly-emerging interplay between working time and work organisation in both service and production activities becomes visible under these pre-conditions: Decentralisation of organisation - including working time organisation - increases coordination expenditure. Variable working times and ones over which the individual has greater control require mutual agreement and the capacity to deputise, in other words to master



a variety of activities and to keep up to date with procedures carried out by others. This is extremely closely associated with further qualifications: An interesting example of this is furnished in the report about the French management consultancy BETA, in which newly-recruited labour and experienced core employees form a "tandem" within which the tasks are divided up and which serve to integrate the younger ones as quickly as possible into the company.

Such examples mainly involve strategically-oriented companies which make the *relationship between customer loyalty, product and service quality and personnel commitment* the starting point for a reorganisation of their work structures and working time organisation. The potential for linking working time organisation, personnel strategy and altering work structures can be seen particularly in the following fields:

- *First of all*, working time reforms can provide opportunities or act as catalysts for changes in work organisation and personnel structure that have already been planned but not yet implemented. This applies in particular to overcoming specialist or department-specific restrictions that have proved to be an obstacle when increasing quality and efficiency. Here, the reduction in particular in working time in conjunction with reorganisation can fulfil a purpose relating to personnel that has so far received little attention: It offers the possibility of using the time withdrawn from the direct work process for further training.
- The *second* strategic aspect of several new working time systems, the relationship between working time organisation and personnel *commitment*, emerges from the growing significance of qualified and committed labour for the improvement in service, for the production of quality and for the increase in utilisation of plant and equipment. With increasing induction costs and increasing responsibility on the part of personnel for expensive plant and machinery stabilisation and flexibilisation of the workforce becomes two sides of the same coin.
- *Thirdly*, and finally, working time systems which decentralise decisions about adjustment of working times to accommodate the order trend or the change in traffic flow in some form, presuppose fundamental reform of the whole of the work structures. Decentralisation of working time organisation increases coordination expenditure. Variable working times which can be determined by the individual to a greater extent require mutual agreement and the capacity on the part of the employees to represent one another, in other words to be able to conduct various activities and be up to date concerning processes handled by others. This is very closely associated with higher and broader qualification.

If these strategic potentials of the new working time systems are considered in tandem, then it becomes clear that they can form a significant portion of the approach described as "offensive flexibility" or "high road" strategy. JIT/TQM concepts are also based on the same fundamental philosophy of linking qualification, personnel commitment, motivation of employees concerning continuous improvement processes and increasing individual responsibility for quality production. This approach is not only current for economic sectors in which quality competition dominates. Even in the retail trade - if only a few so far - companies are encountered which utilise this philosophy to supplement the price competition that prevails in this sector with increased service quality. Those companies that gear themselves towards such a model, calculate that in the new flexibility and performance requirements employees will see not only additional burdens but also additional opportunities for themselves, and therefore accommodate the burdens consciously. With the extension of responsibility to include working time, new possibilities for developing productivity should also emerge whereby the autonomous willingness of employees is encouraged. The radical nature of such concepts is based on a fundamental pre-requisite: Employees must not simply be given additional responsibility; they must also be furnished with competences and resources which they require to be able to fulfil their increased responsibility. Providing it is resolutely followed this approach offers opportunities for new strategic working time arrangements which take the place of the traditional working time compromise in Taylorism.

Such strategic arrangements are thoroughly ambivalent for employees. Under certain conditions (see below) they can of course extend the individual's control over his or her working time, but this is only possible when working time and the order situation are linked. Along with increased responsibility the entrepreneurial risk is also delegated to employees. In the eyes of its advocates this ambivalent delegation of competences and risk makes for the real strength of the "high road" strategies (cf. EC Commission Green Book), although it is at the same time a barrier which prevents it becoming more widespread.

Because this strategic approach is not without risk even for the companies. A high degree of patience and readiness to compromise on the part of those involved is required when walking along this long, unknown and stony road. They take a risk in undertaking a fundamental restructuring of work processes and of the company that might only lead to measurable increases in efficiency over the longer term. The results of the EPOC study, a European survey of managers carried out recently (Wickham 1998), also favour the relationship between participative work structures and efficiency increases which is as yet loose and not at all clear. Company manage-

ment which increasingly favours the short-term increase in "shareholder value" will not necessarily want to take such risks (Kern/Schumann 1998).

In the companies considered within the context of our investigations the potential of new working time systems was certainly not unknown, even though many of these concerns restricted themselves to taking into account the one or other strategic aspect. Only in a few instances was a uniform concept discernible, more often it was a matter of "half reforms".

These observations suggest that the social content of current reorganisation trends concerning working time, and in particular their effects on the position of employees in the work process, are to be regarded as still open. It is doubtful whether market forces alone will produce new social working time arrangements that are more sustainable in the long term. It is questionable whether a new strategic balancing of interests can be expected to emerge as long as the increase in competitiveness continues to the main, and in many cases, the only, driving force behind the development of new working time systems. However, what is striking is the fact that the other two significant reasons for the growing pressure for change on the traditional, in-company and social working time organisation - the increasing paid economic activity of women and the persistent employment crisis - are of altogether far less importance for the new working time systems investigated than the initiative on the part of the companies. Only when new working time systems are nourished by a variety of social streams will arrangements that are more sustainable in the long term emerge that will increase employees' control over their working time and at the same time secure and promote employment. However, this pre-supposes *negotiated* flexibility. The pressure to take into account various working time interests changes the conditions for realising new forms of working time organisation in the companies and in turn affects the formation of strategy by companies. Negotiated flexibility means that in-company reorganisation measures are linked with collective bargaining and state involvement:

*First of all*, this relates to the creation of favourable *in-house* conditions for the new working systems to affect effective employment. As we have found, the pre-requisites for the possible positive effects on employment are virtually identical with the conditions for an increase in individual working time empowerment of employees (cf. Fig. 12). The key questions in both instances are,

- how much influence do employees exert over the planning and organisation of their work processes, so that they can also influence the planning and organisation of their own working time;

- whether the material pre-requisites are present, without which the rights to exert influence remain simply a claim which cannot be realised in the day-to-day routine of the company: competences and resources in order to be able to really influence work and working time and personnel cover which is sufficient for the completion of tasks.

Fig. 12: Starting points for the design of variable working time models

*Transparency* therefore proves to be the "conditio sine qua non" both for employment effectiveness as well as the feasibility of individual working time empowerment

*Secondly*, the further reduction in working times plays a key role. Positive employment effects and the taking into account of changed working time needs in society are both stimulated considerably by general reductions in working time (cf. Bosch/Lehndorff 1998). Reductions in working time also increase the room for manoeuvre as regards flexibility within companies; this experience in a series of instances leads to companies planning less working time on a fixed basis than contractually agreed, in order to gain spare time for coping with bottlenecks as well as for qualification measures - an important step to "the end of the time-passing culture". Several examples illustrate this and not only those from Germany where trade union policy of reducing working time has triggered and influenced many reorganisation processes in companies. In France as well, state subsidies for reducing working time in the last few years have made the transition to new working time models easier for many companies and reduced the learning costs, as the French case studies show. Such support measures also help to prevent social hardship or to mitigate such effects in that wages are not (or only slightly) reduced despite the reduction in working times. From the point of view of the companies the effect on employment is a side-effect of this working time modernisation. From the point of view of the state which creates the setting for change, working time modernisation is a desirable side-effect of the employment effect. Such subsidies are justified especially by the savings in state expenditure for financing unemployment. In this way the State acted as a catalyst for the modernisation of in-company working time with positive effects on employment.

*Thirdly*: Again, qualification proves to be a key question. The more science-based production and services, the greater the risk that working time reforms and reductions will fail due to the absence of available qualified labour. This becomes most apparent in the case studies conducted in development centres; nevertheless, the French management consultancy demonstrates that even

highly-qualified and highly-specialised labour is not irreplaceable. The fact that several of the working time systems described incorporated qualification time must be regarded as revolutionary. Nevertheless, it should be left entirely to companies to invest in the qualifications of their employees, because the higher the fixed personnel costs the higher will be the hurdle as regards the agreement on reductions in working time in the company. Investment in training must be tackled as a public task, as it is not realistic to expect the mass of companies to invest long-term and "sustainably" in the continued qualification of their employees on their own initiative and as a result of better insight and at the same time agree to shorter working times. Only in this way can a reorganisation of working time which includes reductions in working time be prevented from ending in a fixed cost cul-de-sac. One of the most significant opportunities for state support in this field is financial funding of work breaks for the purposes of training, as have been created in several Scandinavian countries and now in the Netherlands as well.

This leads ultimately to a *fourth* area: The state can facilitate reductions in individual working times which may contribute to substantial dynamism in terms of individual company working time reforms. This may on the one hand be the mitigation of the consequences of part-time phases in the working life of employees in terms of pensions, and on the other hand the financial cushioning generally of interruptions in working lives. This includes part-time phases as well as extended and financially-secured opportunities to interrupt working life, for for example in order to bring up children or pursue further education. Generally speaking, part-time work and full-time work hinder the reform of working time if that they are not put on the same legal footing, because in some instances the contractual standard working time is reduced so much that it is regarded in law as part-time working.

The observations and reflections outlined here permit the following conclusion: In strategically-oriented companies which link customer loyalty, product and service quality and personnel commitment to form the starting point for reorganising their work structures and working time organisation, there indeed emerge favourable *links* for extended control over working time by employees as well as for the protection - or even creation - of jobs. However, control over working time and positive employment effects do not come as part of the package for nothing. First of all, the links which such "high road" strategies provide really must be capable of being utilised, and, secondly, substantially more companies than hitherto must develop an interest in venturing into the unknown territory of "offensive" flexibility. Both pre-suppose that employees, trade unions and state represent - with considerably more insistence than hitherto - working time demands which arise from the personal and social interests in a just distribution of work and a more

effective personal control of working time. Otherwise, it will not be possible to develop social working time arrangements that are more sustainable over the long term to replace the balance which is being lost in the essentially Tayloristic working time standard.

**5**

## Appendix

### 5.1 Bibliography

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## 5.2 Illustrations, Tables

**Fig. 1: Shift schedule in BMW-MOTORENWERK in Austria**

Week or overtime [?]	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
A	F	F	F				
B	S	S	S	S	S		N
C	N	N	N	N	N		
D					F	F	

Source: BMW Motoren GmbH (Melvyn report)

**Fig. 2: Shift schedule in SKF Central Stores (Sweden)**

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	22.00-06.00	22.00-06.00	22.00-06.00	22.00-06.00	22.00-06.00		
2						08.00-14.00	08.00-14.00
3			07.00-18.00	07.00-18.00	07.00-18.00		
4	07.00-18.00	07.00-18.00	07.00-18.00				22.00-06.00

Source: Anxo/Lundström report



**Fig. 3: Fully continual shift system at HP-SCI (six shift groups, Shift cycle of eight weeks)**

Post	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
week 1							
Morning	1	1	6	1	6	1	3
A-Midday	4	2	2	2	2	6	6
Night	3	3	4	4	5	5	5
week 2							
Morning	3	1	1	1	1	2	6
A-Midday	2	2	5	2	5	5	5
Night	6	6	3	3	4	4	4
week 3							
Morning	1	1	4	1	4	1	5
A-Midday	6	2	2	2	2	4	4
Night	5	5	6	6	3	3	3
week 4							
Morning	5	1	1	1	1	2	4
A-Midday	2	2	3	2	3	3	3
Night	4	4	5	5	6	6	6
week 5							
Morning	1	1	6	1	3	1	3
A-Midday	4	2	2	2	2	6	6
Night	3	3	4	4	5	5	5
week 6							
Morning	3	1	1	1	1	2	6
A-Midday	2	2	5	2	6	5	5
Night	4	4	5	5	6	6	6
week 7							
Morning	1	1	4	1	5	1	5
A-Midday	6	2	2	2	2	4	4
Night	5	5	6	6	3	3	3
week 8							
Morning	5	1	1	1	1	2	4
A-Midday	2	2	3	2	4	3	3
Night	4	4	5	5	6	6	6

Source: Lallement/Lefèvre report

**Table 1: Employment structures in the companies investigated in the German food retailing**

Company	Full-time	Part-time	Including: Minor employment
D-A-1	35%	65%	25%
D-A-2	46%	54%	15%
D-B-1	8%	92%	65%
D-B-2	7%	93%	67%
D-C-1	8%	92%	60%
D-C-2	20%	80%	40%
D-C-3	17%	83%	40%
D-D-1	39%	61%	8%
D-D-2	35%	65%	5%
D-E-1 (current)	42%	58%	16%
D-E-1 (target)	20%	80%	k.A.

Source: Report by Kirsch/Klein/Lehndorff/Voss-Dahm

**Fig. 4: Personnel deployment schedule for two employees at a German supermarket**

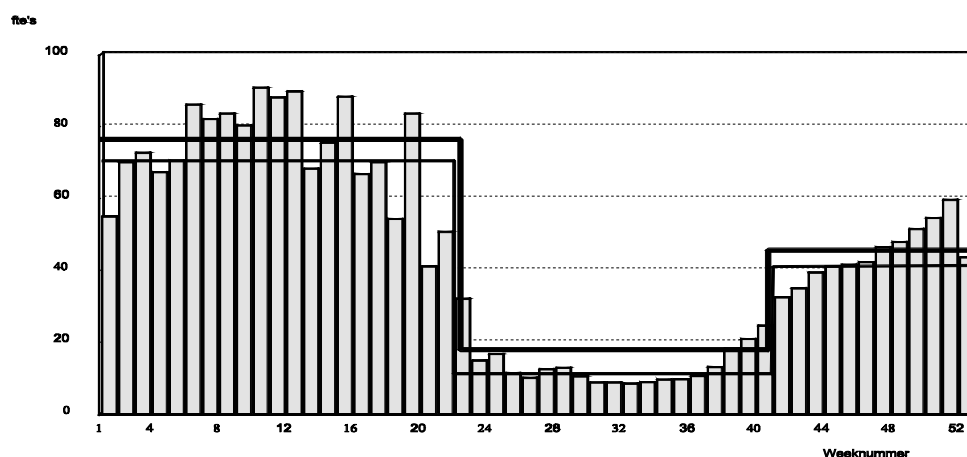
Person	Week	MON	TUES	WED	THURS	FRI	SAT
<b>A</b>	1 <sup>st</sup> week	8-14	14-18	8-17	14.30-20	8-14.30	8-16
	2 <sup>nd</sup> week	14-18.30	14.50-20	10-16.30	14.30-20	12-17.30	9.30-16
	3 <sup>rd</sup> week	12.30-18.30	8-14	8-17	9.30-15	15-20	8-13.30
	4 <sup>th</sup> week	8-14	8-14	9-17.30	8-14	13-18.30	10.30-16
<b>B</b>	1 <sup>st</sup> week	11.35-16.35	15.30-20	10-15.30	15.30-20	8-13.30	11-16
	2 <sup>nd</sup> week	12.30-16.30	12.30-16.30	16.20-20	11-15	12.30-17.30	11-16
	3 <sup>rd</sup> week	16.20-20	12-16	16.20-20	8-12.30	15.20-20	11-16
	4 <sup>th</sup> week		12-20	9-13.30	14-18	15.20-20	11-16

Source: Report by Kirsch/Klein/Lehndorff/Voss-Dahm

**Fig. 5: Working times for an employee at a German consumer market**

	Mon	Tues	Wed	Thurs	Fri	Sat	Working hours worked
<b>Planned working time</b>	free	free	13-17 hours	free	13-17 hours	free	6 ( 9 contractual)
<b>Actual working time</b>	free	11-14 hours	free	12-16 hours	17-20 hours	free	10

Source: Report by Kirsch/Klein/Lehndorff/Voss-Dahm

**Fig. 6: Manpower requirement during the year in the import department of a Dutch flower auction house**

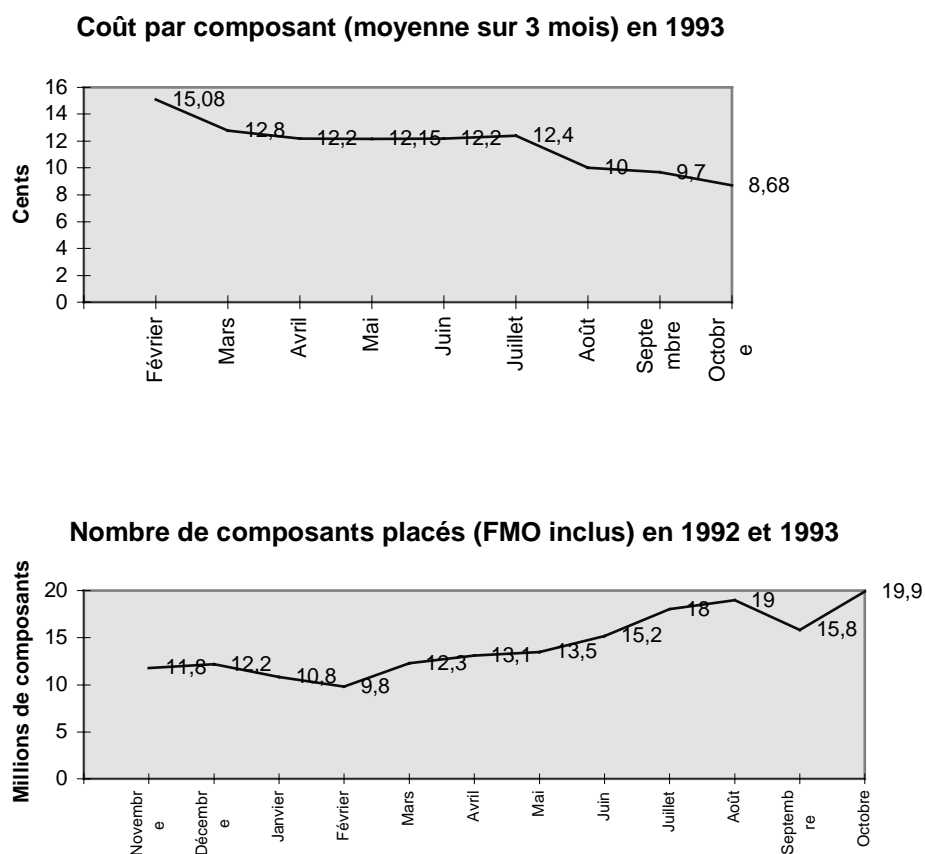
Source: ATOS/ Vos report

**Fig. 7: MALMÖ HOSPITAL: The weightings of the time bank system**

Activity	Weight
Stand by	0,5
Non patient related activities (meetings, training etc)	1,0
Patient spells on weekdays	1,75
Patient spells on weekends	2,0
Patient spells on public holidays	2,5

Source: Anxo/Lundström report

**Fig. 8: Unit cost trends at HP-SCI after introduction of the new shift system**



Source: Report by Lallement/Lefèvre

**Fig. 9: Tasks of the " autonomous time management group"**

- Division of person working times as well as breaks in group-internal consultation according to presence, or ideally target results
- Autonomous holiday planning within the context of company presence, or ideally target results
- Autonomous response to fluctuations in capacity requirement within the context of of "limits of reasonableness" agreed within the company
- Integration of various personal and contractual durations of working time
- Request for assistance or similar when respective target employment level is undershot despite adherence to the agreed manning ground rules; accordingly, however, als a duty to "lend" group members to other areas in the event of overmanning

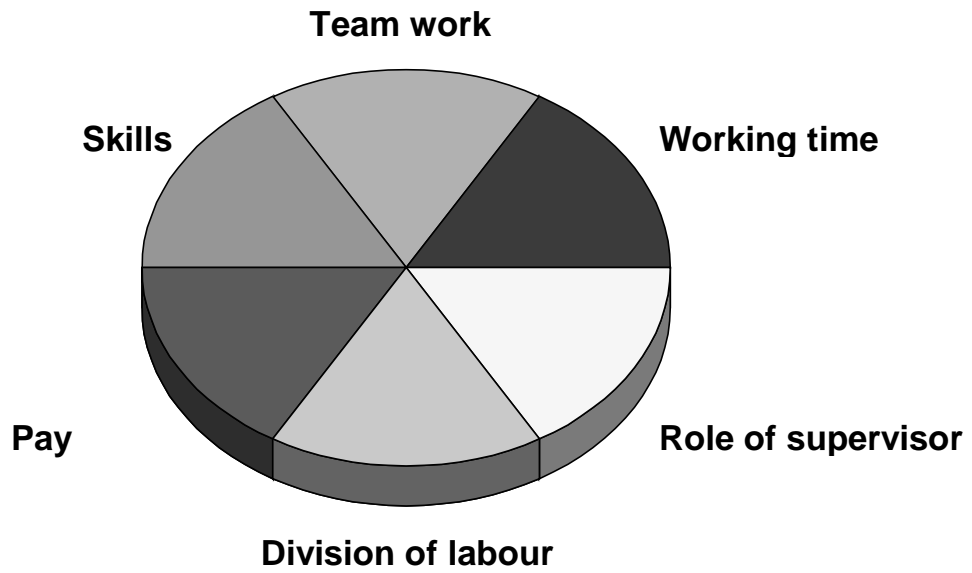
Source: Weidinger (1995: 775)

**Fig. 10: Working time, work organisation, employment**

	Group competences	Working time empowerment of employees	Working time account bandwidth (hours)*	Measures when the limit is reached	Working time account and personnel allocation	Works council rights
CAR MANUFACTURER	Division of work Holiday planning	informal consultation	+/-200	Talk with employee	when plus hours reduced to a limited extent: new jobs	Right to see working time account
MEDICAL EQUIPMENT MANUFACTURER	Planning Control Quality management	autonomous organisation; agreement in groups	+/-150	when 120 hours is reached: discussion between work council, management and employee	when 2/3 of cost centre capacity: consultation as to personnel measures	Right to see working time account
PRINTING MACHINE MANUFACTURER	-	Flexitime (personal) has priority over bandwidth model (collective) Working time regulated by employee	Flexitime: +/- 40 h  Bandwidth model: +/- 100 h in addition	Plus lapses, Minus is deducted (Theory; Practice but plus is paid for)	when limit is reached (140 h): Discussion about personnel-matching measures	Right to view red and yellow accounts are reported automatically
MANUFACTURER OF EDUCATIONAL AIDS	Job handling Storekeeping Quality Delivery dates	variable working times control teams	unlimited	Plus hours lapse, minus hours deducted from pay	Application for assistance Works council initiative	Right to see working time account Discussion about level in account
INSURANCE	Job processing	variable working time Target: Service time Teams control	„Traffic light model“; red: > +/- 25 only by way of exception and temporarily	s. traffic light model	when red zone: Consultation as to measures for work organisation and personnel planning	Right to see working time accounts. automatic information when system in „red zone“
AUTOMOBILE SUB-SUPPLIER	Work preparation Planning Quality development Qualification Working time and holiday	Groups control working time variable working time	+ / - 50 hours not more than 20 hours per month	Plus lapses, minus hours must be worked	New jobs as soon as more than 6 months more than collectively-agreed working time accrue	Right to see

Source: Lindecke report

**Fig. 11: Working time and work organisation**



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Source: Bosch (1998)

**Fig. 12: Starting points for the design of variable working time models**

<b>Working time accounts, working time control and employment - Starting points for the design of variable working time models -</b>
<b>1. Transparency of working time accounts</b>
To the extent that the organisation of working time is transferred to the level of individual negotiation processes, it will be more difficult for the company partners to retain transparency and the options for exerting influence which are required for an in-company employment policy.
<b>2. Amount of maximum permissible plus balances in the working time accounts</b>
The higher the limit, the greater the risk that employees will build up credit balances over long periods of time, before the overshooting of contractual working times is perceived as a problem within the company.
<b>3. Measures in the event of overshooting maximum time credit balances</b>
All flexible working time models are prone to the semantics game. As regards form overtime is indeed rendered surplus by working time accounts, although it is possible that effective working time is in no way reduced in practice. What was called overtime is simply re-named as time credit. An extensive overtime practice could then be continued under another name, although with the difference that overtime is not paid.
<b>4. Relationship between working time and personnel allocation</b>
In Germany the most specific and most binding regulations for this are found in several so-called "traffic light models". In a "green" zone employees can build up time credits at their own responsibility; for defined "yellow" and "red" time zones responsibility and methods for reducing the overdrawn time accounts are specified, e.g. in conjunction with negotiations about new jobs.



