

# Securing the Future with Prevention

Strategies for a World of Work  
aligned to Demographic Change

Second memorandum





# Securing the Future with Prevention

Strategies for a World of Work  
aligned to Demographic Change

Second memorandum



## Contents

- 5 Status Assessment
- 7 Prospects for Work 2020
- 13 Prevention as a Key for the Future
- 25 Agenda 2020
- 29 Recommendations for Future Action
- 30 Outlook
- 31 Literature & Links



# Status Assessment

Demographic change is no longer a future scenario – it is here already. Industry, the state and society are now beginning to face the challenges of an ageing population. If all those concerned really make the necessary effort, it is possible to tackle most of the issues and problems involved. The questions in particular, that were raised at the start of the new millennium concerning the ability of German companies to remain competitive in the global market with so many older workers, have been met with a positive response. The German economy has survived the financial and economic crisis well, and in terms of growth and employment is doing better than many other EU member states. It is exporting a wide range of products throughout the world, due to the commitment of an above average age workforce.

The rapid and successful increase in company production so soon after the crisis was also due to a paradigm shift in industry and in politics. Just a few years ago many companies would probably have used the crisis as an excuse to make older workers redundant, forcing them into early retirement. Now instead, in an effort to retain their valuable experience, companies try to bring their employees through a crisis with short time working arrangements. Employers now clearly recognise and respect the value of older workers. This is a new development which is set to continue and is also reflected in the statistics. In Germany there are more older workers in employment today than ever before. In 2009, the employment rate of 55 to 64-year-olds was 56.2%, more than 10% above the European average. In comparison: in 2000, just 37.6% of older people in Germany were in employment.

INQA, the New Quality of Work Initiative, has played an important role in this very satisfactory and crucial development. In the memorandum ›Demographic Change and Employment‹, INQA stressed back in 2004, that discussions on the impact of demographic change and ageing should begin with a fundamental shift in attitude, with emphasis on skills rather than on shortcomings. Employers now recognise that growing older does not inevitably mean a decline in the ability to work and can also bring along other valuable qualities necessary in the modern world of work, such as problem solving skills based on experience, social skills, quality awareness and loyalty. Even back in 2004, the competency based model was by no means a new approach. In expert circles it was already well-known and undisputed but largely unknown in companies and the personnel departments. INQA set about to change this and has made considerable progress up to now. A large number of companies are participating and benefit from the wide range of INQA activities. The notable success is also due to the specific structure and working methods developed by INQA.

Established in 2002, together with the Government, the Federal States, social partners, social insurance funds and foundations, INQA is now an activating and very active network, integrating all the social forces. It provides solutions for creating a safe, healthy and competitive working environment and are made available to employers, human resource managers, workers' representatives, health experts, scientists and stakeholders in the public health and accident insurance institutions. INQA is a platform for developing, exchanging and transferring practical knowledge. The Initiative shows how

work design can be economically sustainable and accepted positively by workers of all age groups. INQA supports company-related projects dealing with many different issues and transfers the knowledge to the enterprises, while also providing support for the practical implementation. INQA has in this way become a source of sound knowledge and a disseminator of useful information for companies and organisations in the current and future process of change.

In this context, demography is an important issue for INQA with the work carried out and managed by a Thematic Action Group (TAG). Set up in 2004, the TAG ›30-40-50plus – Ageing in Employment‹, has developed into a network of experts which, in addition to generating knowledge, also initiates and organises pan-institutional dialogue in the field of demographic change. Thanks to the involvement of the initiators, partners and stakeholders at such an early stage, INQA is now able to provide companies with a large number of tools to support them with their workplace generation management. These include tools for knowledge transfer in companies, training programmes for mental fitness for older employees and sources of advice on demographic issues.

On the initiative and with the support of INQA, ›The Demography Network‹ (ddn) was also set up in 2006. This enterprise network is now successfully established and a large number of enterprises, institutions and private individuals have joined as members and disseminators. INQA supports the ddn with expert input, cooperating since 2006 in organising an annual Know-how congress which has become a nationwide forum on demography for experts and companies.

This is a brief and far from complete overview and shows that in the past few years we have made up for lost ground since the hopes we worded in the first INQA demography memorandum. Many companies have already made significant progress in dealing with demographic issues. Nevertheless there are also many still investing too little in their future sustainability. The challenge for INQA in the coming years will be to change this and to encourage even more companies and organisations to face up to these issues with concrete action.

This memorandum launches the second phase. It picks up the threads of the first memorandum and takes them a step further. In the INQA activities related to demography, age(ing)-related work design, workplace health promotion and lifelong learning, will continue to play a key role. However, in future they should be more closely integrated in a more comprehensive prevention strategy. A long term perspective should be built into the strategy, taking the entire career of an employee into consideration in terms of health and employability. The required outcome is an individual career scheme where the respective work requirements, incentives and strains are organised in a way which can enable an employee to remain at work and reach the statutory retirement age in good health. A healthy life in old age is then possible. Adopting this model, developing and implementing practicable solutions in companies, are undoubtedly ambitious objectives. But looking back at the successful activities in recent years, they are achievable.

# 1. Prospects for Work 2020

Expert predictions on demographic change can be summarised briefly: the numbers of young people are forecast to decline, while the number of older people will continue to grow. The population on average will be older than at present. Experts believe the following factors are responsible for this development:

- ▶ increasing life expectancy due to medical advancements and other factors
- ▶ significant increase in the number of over 65s by the year 2030 when the ›baby boom generation‹ will reach retirement age
- ▶ lower birth rate which has been stagnating for many years
- ▶ low immigration levels and high emigration rates.

These trends vary regionally. They will have an even greater impact in the new German Federal States due to a negative cross-border migration balance.

These factors mentioned will present huge challenges for social policy, e.g.:

- ▶ the heavier burden on the statutory old age pension systems
- ▶ the growing demand for health care services,
- ▶ the increase of the old-age dependency ratio – and a closely related aspect – securing the sustainability of the welfare systems.

The decision by policy makers to gradually increase the retirement age to 67 between 2012 to 2029 in an effort to secure the future financial viability of the social security systems, has introduced a new momentum into the discussion about the opportunities and risks presented by demographic change. Politicians and industry are faced with the task of developing and implementing strategies, both at social and company level, for maintaining and promoting the work ability and employability of people until they reach legal retirement age. A comprehensive strategy for prevention is essential as solid foundation for further developments in the world of work.

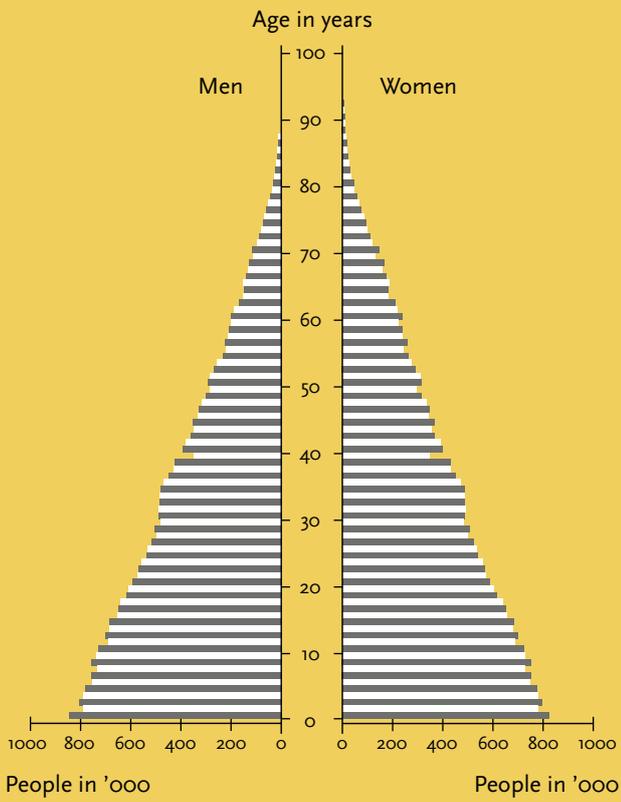
The comprehensive prevention strategy integrates the five fields of action set out in the ›Demographic Change and Employability‹ memorandum in 2004, and in an effort to overcome the unsatisfactory levels of implementation at company level up to now, the five fields are compressed into the core areas of health, work design and training. Although there appears to be adequate awareness on the part of those responsible for demographic issues in human resource departments in many (large) enterprises, it is lacking on the operative business level and in smaller enterprises. With this target group in mind, the challenges and the benefits of comprehensive prevention programmes are therefore now more clearly defined. In this memorandum, the TAG ›30, 40, 50plus – Ageing in Employment‹ outlines the main elements for establishing a prevention orientated corporate culture. Guidelines are provided for business owners, supervisors, line and store managers, departmental and team managers, staff and works councils, to help them develop measures tailored to their company and find a suitable strategy.

The key elements of this strategy are:

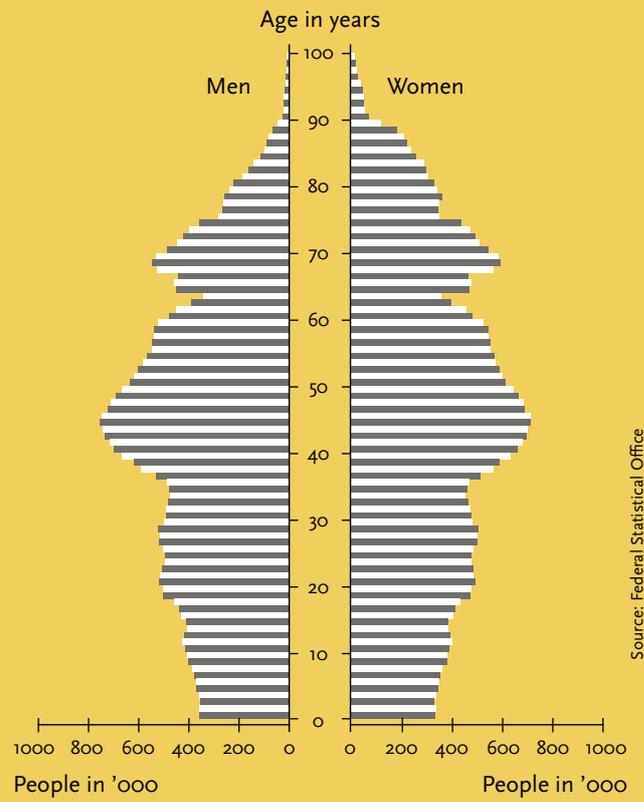
- ▶ wide scale implementation of a healthy and health-promoting work design and work organisation
- ▶ preserving and promoting the workers' health as an important corporate target
- ▶ influencing work ability positively by leading a healthy lifestyle
- ▶ lifelong learning throughout working life as something taken for granted by both employees and companies and as a crucial factor for work ability and employability
- ▶ job rotation during the course of employment to maintain employability.

### Age profile of the population in Germany

On 31 Dec. 1910



On 31 Dec. 2008



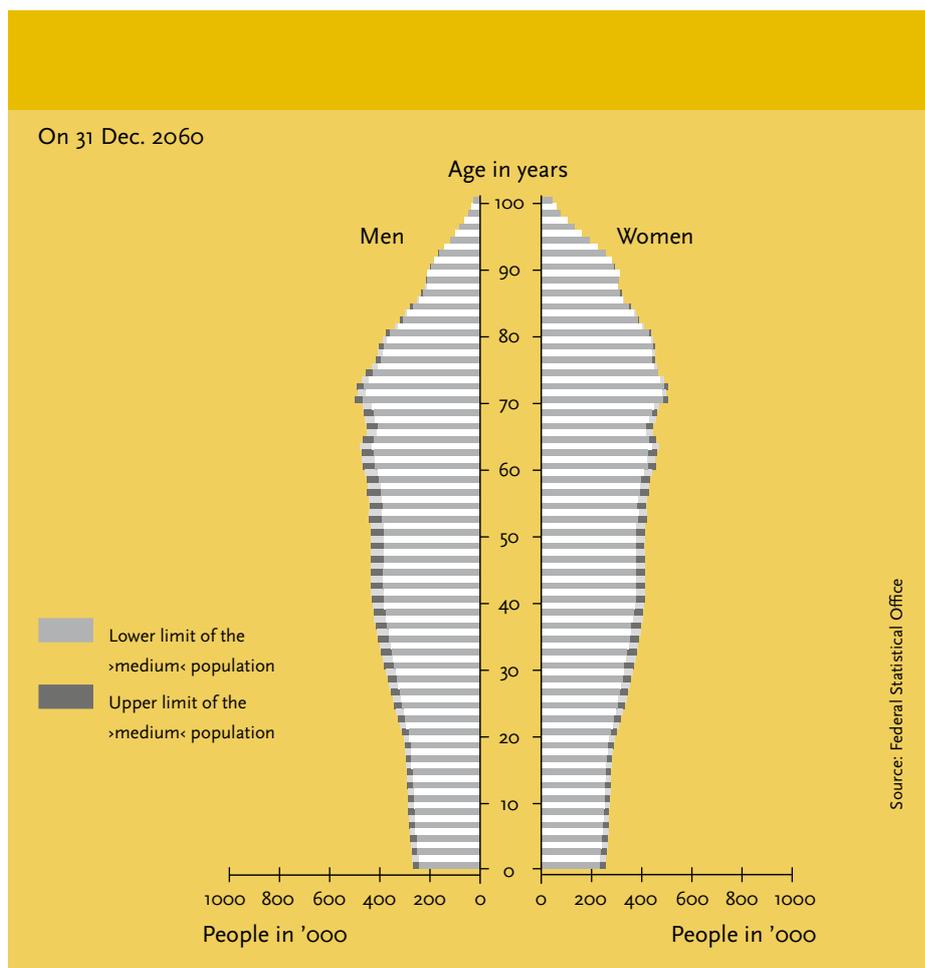
Source: Federal Statistical Office

However, there will always be occupations and jobs where even age(ing)-appropriate work design reaches its limits. In these areas, it will remain unlikely that people will be able to work until retirement age. Against this background, career planning will not just be a task for the individual companies but for all branches of industry and the social partners. Society in general and politicians need to be encouraged to create the necessary framework conditions – especially in the education system.

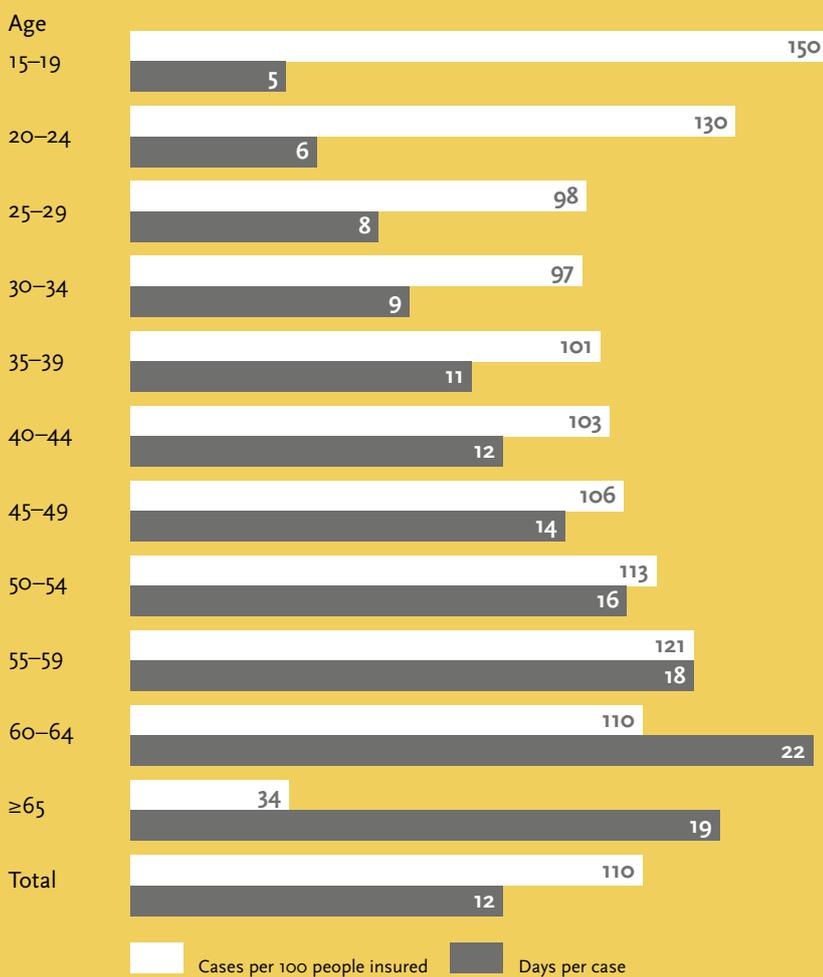
One of the main targets set in the European Commission communication, ›Europe 2020. A strategy for smart, sustainable and inclusive growth‹, was to have 75% of the population aged between 20 and 60 in employment.

To reach such a high level of employment in all these age groups, it will be necessary both in society and in companies, to create a culture of prevention so that work in future is seen not only as source of income but also as a source of health, well-being and satisfaction.

In view of the demographic developments, the world of work is facing many challenges in a number of respects. The higher average age of the workforce and the higher proportion of workers in the 50-plus age group will bring a greater demand for good work design and work organisation strategies, workplace health promotion and prevention. These developments will also affect recruitment practices in companies, their HR policies and also their further training strategies.



### Absenteeism rates according to age groups



The good news is: great as they may be, these challenges can be overcome. Research shows that in principle, biological ageing does not inevitably involve a reduction in work performance. Although, the health insurance funds statistics show a connection between age and ill health, older workers are not absent more often than younger workers. They do tend however to be off for longer periods when they are ill. This is not solely attributable

to age. There are a number of negative factors in the working environment that can have influenced their health during the course of a long working life. In addition to the accumulation of excessive strain, there are other constitutional and lifestyle-induced factors which also play a role in determining the physical and mental state of an older person.

This explains why sickness related absenteeism is higher among low skilled workers, those who perform heavy physical work and those who have lower levels of autonomy. In many cases, the risk of work-related illness in this group of workers can result in a premature reduction in work capacity or the complete loss of ability to work at all.

In contrast, in branches of industry and professions which require higher qualifications and where workers have more freedom to organise their own work early retirement due to disability plays a much smaller role. In 2004, some 97% of medical doctors, 92% of university lecturers, 93% of legal consultants and 91% of engineers, were continuing to work up to the statutory retirement age. On the other hand, 86% of miners, 27% of masons, 32% of welders and 36% of pipefitters, took early retirement for health reasons. The type of employment and level of activity required clearly play an important role in determining the chances of reaching retirement age in good health.

### Prevalence of corporate health management (CHM)

In the IGA Report 20 ›Motive und Hemmnisse für Betriebliches Gesundheitsmanagement‹ (Motives and barriers for corporate health management), 500 companies of different size categories were asked whether they currently have a health management system, whether they have completed it as a project or are planning to introduce one within the next 12 months. In reply to this question, more than one company in three said they have a health management system at present (36%).

	50–99 workers	100–199 workers	200–499 workers	All companies
CHM activity	35 %	30 %	47 %	36 %
No CHM activity	64 %	69 %	49 %	63 %
Project already completed	0 %	1 %	3 %	1 %

All the studies show too, that a healthy work environment and health related changes to personal lifestyle have a positive influence on health and work ability. The latest studies show that 36% of medium-sized enterprises have a corporate health management system and in large enterprises the proportion is probably around 50%.

Vocational and on-going training are the other factors important for keeping workers in employment up to the legal retirement age. More than 60% of highly qualified workers between 55 and 64 are still working. In contrast, the quota for lower qualified workers lies below 38% (IAQ 2010). Furthermore, older and lower qualified workers participate far less frequently in further training courses than other groups of workers. In view of the impending shortage of skilled workers, companies and workers need to attach far more importance to advanced training.

Whether it will be possible in future to keep ageing workers in employment will also depend on social trends, values and sociocultural attitudes. Age discrimination is still a problem in many companies and older workers are at a disadvantage when applying for a job, applying for training opportunities or seeking promotion. This is often due to prejudice and a systematic underestimation of the value of older workers' experience. Campaigns are needed to make research findings on ageing known, so that industry and society can rid themselves of their negative prejudices and replace them with knowledge-based facts.

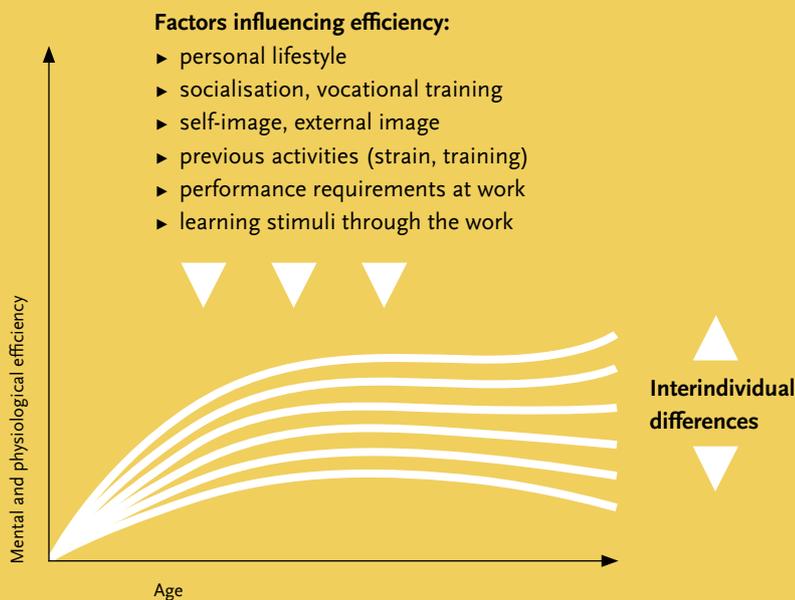
Just these few aspects show: within the context of the demographic change, the world of work is facing challenges which are complex, cross-generational and clearly differ from region to region. It calls for concerted action on all levels. Companies will have to reconsider their corporate strategies by using the very numerous tools and methods already available, and labour

market and social policies will be needed in order to develop solutions for a new work culture sensitive to demographic factors and to integrate them permanently in company practice.



## 2. Prevention as the Key to the Future

### Increase in interindividual efficiency differences with increasing age



### Work design

Older workers do not in principle work less efficiently than their younger colleagues. Although levels of physical stamina and mobility, for example, decline with increasing age, older workers generally have acquired extensive experience and tend to have a stronger sense of responsibility. Scientific research also shows that inter-individual differences in work performance become greater with increasing age. Age alone therefore initially says little about a person's efficiency – there are older people who can cope better with physical and mental challenges than their younger colleagues, and others who have deteriorated physically and mentally as a result of adverse working conditions.

To turn demographic change into an opportunity on company level, a comprehensive prevention strategy is crucial. This follows a long term perspective and includes measures encompassing work design, health and training. It is a broader approach altogether than workplace health promotion and integrates measures for lifelong learning for maintaining employability throughout working life. Lifelong learning opportunities are therefore essential for employees, giving them the mental flexibility to enable them take on new activities with different workloads throughout working life. Flexible staff can open up new opportunities for the companies and also for the workers themselves who are spared the monotony and strain of a one-sided and unhealthy work load.

Company projects carried out in recent years on demography issues have shown that there is no single solution for dealing with demographic change. Each company will need to find its own way of adapting to the changes in the potential of the labour force. Models of good practice can be referred to for ideas and orientation. It is already generally accepted that demographic developments will require a far greater degree of flexibility regarding human resource policies, from both employers and employees. Social insurance institutions, social partners and politicians as well, are called up here to create the framework conditions to support prevention strategies and provide and necessary flexibility.

Occupational scientists also agree that extreme environmental factors pose a challenge to both young and old, but more so for older workers – e.g.: heat, cold or high air humidity, heavy physical activity and forced posture, tasks involving differentiated sight and hearing ability, higher time and work pressure or a pace of work dictated externally as well as work which allows insufficient time for recovery. Many of these stress factors however, can be reduced by applying simple ergonomic measures (e.g. lifting aids, climate optimisation). Both young and old benefit from these measures – the difference is: they make work easier for younger workers, but make it possible or possible again for older workers.

### Recommendations for action regarding night and shift work

1. The number of successive night shifts should be as small as possible.
2. A phase of night shifts should be followed by as long a break as possible. Under no circumstances should it be less than 24 hours.
3. Weekend free time en bloc is better than single free days at the weekend.
4. Shift workers should, if possible, have more free days a year than other workers.
5. Unfavourable shift sequences should be avoided, i.e. always rotating forward.
6. The early shift should not begin too early.
7. The night shift should end as early as possible.
8. Rigid starting times should be avoided in favour of individual preferences.
9. The concentration of work days or working hours on one day should be limited.
10. Shift plans should be predictable and straightforward.

**Complying with all the recommendations at the same time is not always possible. It is important to avoid a concentration of workload through working hours and too many night shifts in succession and to organise adequately long breaks for effective recovery between shifts.**

Source: BAuA

In their efforts to maintain and promote work ability among employees of every age, companies need to implement measures that focus specifically on work design and work organisation. Building systematic changes into workloads and providing incentives for learning at work, are the key factors in promoting the physical and mental ability of employees throughout their working life. This can be made possible by considering the principle of differential work design (Ulich, 1978, 2001). This is understood in ergonomic science as a range of different work systems available at one time from which the worker can choose, thereby ensuring optimal potential of personal development with consideration to inter-individual differences. For example, one individual may prefer working in semi-autonomous work groups to produce products or goods with other colleagues, whereas another may prefer an individual workplace to carry out the entire assembly process alone. The methods of work available differ in their complexity and duration of the cycle, making it possible for workers to individually synchronise their production capacity while still performing the tasks required of them. It is important too that workers are able to correct their choices when they feel under or over taxed.

Following this principle, the practical application means turning away from a search for the ›one correct approach‹ to work activities and work processes. It means a considerable increase in autonomy for workers with more control over their own working conditions. It is therefore an important approach in creating a world of work suitable for older workers.

Organisation of working time is another importance element of age(ing)-friendly working conditions. Shift and night work and highly flexible, demand-oriented working time patterns, are forms of working time arrangements that all lead to increased levels of stress in the long term. Schemes for the organisation of age friendly working hours can help to a certain degree in reducing physical and psychosocial strains, whereby the positioning and distribution of working hours play a major role. Ergonomic experts developed practical advice on how to create good and age-friendly working hour models, e.g. by

taking into account the knowledge already available on the ergonomic organisation of night and shift work, shortening work shifts and introducing short breaks etc.

### Action areas for ageing appropriate work design

Job activities where the demands make it difficult in the long term to grow old and remain healthy and efficient



- ▶ uniform work processes
- ▶ sustained attention
- ▶ forced posture
- ▶ night shifts
- ▶ physically demanding work
- ▶ cycle-related work
- ▶ heat, noise, dust
- ▶ high time pressure

Areas for action



- ▶ ergonomic workplace design
- ▶ promotion of healthy work processes
- ▶ introducing variation in the work activity or job rotation
- ▶ reduction in time pressure
- ▶ reduction in duration

#### Objective:

To maintain and promote health, motivation and qualification over a working life

Source: Fraunhofer Institute for Industrial Engineering (IAO), based on chart set from [www.demotrans.de](http://www.demotrans.de)

In view of the shrinking workforce, it is becoming increasingly important to provide more employment opportunities for those groups of people such as women, who up to now have been inadequately represented in the workforce. This can be achieved by providing flexible working time models to suit the needs of the employees. Some companies have already shown that it is possible to organise more flexible working time arrangements that allow for a better balance between both occupational and private needs.

A general principle applies to all the organisational and work design measures. They must all withstand the practical needs of the company and the employees which obviously vary according to the prevailing circumstances. The practical implementation should be closely linked to awareness raising and advisory activities. Successful organisational measures call first of all for a careful situation analysis, using a holistic risk assessment based on age structures and ensuring the early integration of scientific research findings during the early planning stages of workplaces or plants. The measures should be designed to prevent employees of all ages suffering from premature physical wear and tear and to maintain and promote work ability. To provide equal employment opportunities for both men and women it is also necessary to recognise the specific living and working requirements and to give them adequate consideration in the work organisation design (geared to the different phases of life).

### **Organisation of Working Time at tedrive Steering GmbH**

When tedrive Steering began actively in 2005 to plan the future of the company, they had healthy order books, new orders, a fluctuating order volume, cost pressures and a workforce whose average age was steadily rising due to the demographic situation. The objective was to organise the working hours according to the latest ergonomic findings to maintain company competitiveness in the light of demographic change. At the same time, the new shift plan was to be organised to make longer machine operating times possible where necessary, to help avoid overtime and to take into consideration the workers' health and social needs in general.

To meet their objectives the employees, the management, the works council and an advisory institute, developed a model for a new ergonomic shift plan. To meet the needs of the workers, short shifts of maximum three days, blocks of free time also during the week and as many free Sundays as possible were included in the plan, whereas so called make up shifts and active shift handovers for example, were included to safeguard improved productivity in the company.

The new working time model has proved very satisfactory. Acceptance has been good by everyone involved, with the necessary flexibility for adapting to fluctuations in production and the time available for education/training is used intensively. Moreover, both productivity and the plant cost structure

have improved. For the employees, the balance between work and family life is better and health problems linked to shift work have decreased.

## Qualification

A society with a diminishing and ageing working population urgently needs to develop its available human resources at all levels of the education and employment system, and to do so as sustainably as possible. Education and lifelong learning in particular play a key role in this context. This is a task relevant to all age and skill groups.

A culture of on-going learning is relevant to every educational sector. At all levels of the education system it is essential to create the conditions where people are able to develop their existing talents in the best way possible, regardless of their social background, income, age, ethnic background or gender. Given the declining numbers of school-leavers and the increasing number of pensioners, this is both a social and economic necessity.

### Sinking numbers of school-leavers and graduates

	2009	Transfer rate	2020	Change in %
School-leavers from general education schools	902,560		780,750	-13.50 %
of these:				
with lower secondary school certificate	199,200		160,600	-19.40 %
with higher education qualification	267,500		251,980	-5.80 %
Graduates of vocational training schools	1,140,350		948,570	-16.80 %
University graduates (incl. universities of applied sciences and vocational academies)	306,131	with 75% transfer	277,300	-9.40 %
		with 85% transfer	307,500	0.40 %

Source: Standing Conference of the Ministers of Education and Cultural Affairs, Science Council

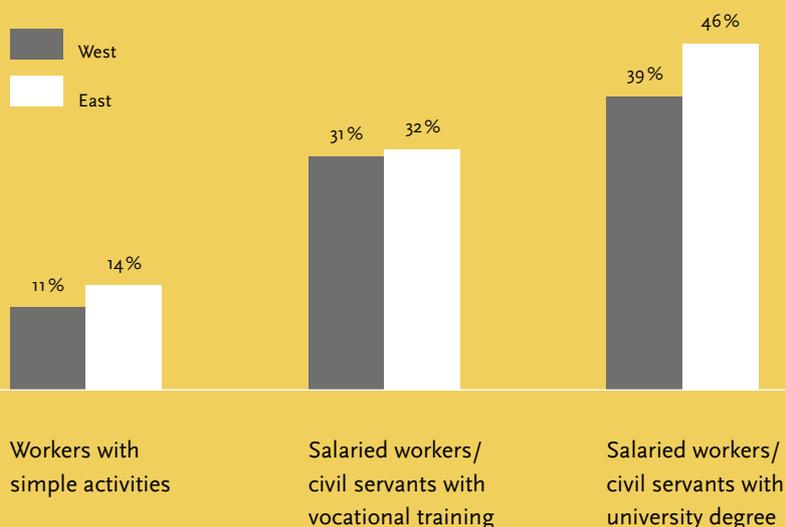
Learning to cope with the demands of working life needs to begin already during early childhood education and to continue throughout school education and training, in vocational training and university studies. Foundations are laid here for acquiring knowledge, skills and behavioural standards. Above all, this is the period where the ability to learn independently develops, providing incentives for on-going learning in the later phases of life. School-leaving qualifications are therefore critical for every child's later educational path. It should be possible for everyone to reach as high a level as possible. School education and a good quality initial vocational training are the best basis for later learning. The importance of learning at an early age and at school cannot be overestimated and there needs to be continuous improvements to the framework conditions. This affects all children and young people, and specifically includes the promotion of specially gifted children and support for disadvantaged groups such as children from ethnic backgrounds or those from socially deprived families. It is essential in these areas to link the social and labour market policy aspects. Poorly qualified young people today will have few opportunities open to them on the labour market in the future.

In the knowledge based society, learning does not end with a school-leaving certificate, vocational training or with university studies. On-going learning is vital for being able to cope with the rapidly changing requirements of working life. Lifelong learning is one of the major political and social challenges in Germany. Participating in lifelong learning programmes is crucial for individual development, for the success of industry and the future of society as a whole. Meeting this challenge successfully is a priority for educational policy.

The 2009 vocational training report shows that in 2007 a good 22 % of workers were taking part in further training activities. The distinction between qualified workers and workers performing simple activities confirms a pattern also repeated in other contexts, where already advantaged groups continue to be advantaged. For example, the data of the IAB Establishment Panel (Institute for Employment Research) illustrate, that it is mainly qualified workers who profit from the company educational activities. Furthermore, there are many occupations in which participation in further training activities wanes significantly with age. Under the circumstances of demographic change, this is just as problematic as leaving school without any qualifications. Participation in further training measures by all the professional branches and age groups will need to gradually increase to compensate for the

declining numbers of young, well educated people entering the labour market with those people already in employment.

### Further training quotas in East and West Germany according to groups of activity (first six months 2009)



The opportunities provided for lifelong learning need to be improved and made more attractive to raise the number of participants in further training, along with new incentives and fewer obstacles:

- ▶ Each person should be encouraged to accept learning as a permanent challenge and as an opportunity for personal development.
- ▶ School-leaving qualifications should always be followed up with opportunities for advanced education and additional qualifications.
- ▶ Companies and administrations need to orientate their human resource development more strongly on lifelong learning and qualification as and when required throughout working life.
- ▶ This also means delivering a more demand led training system according to individual needs.
- ▶ Particularly in the context of public further training services, affordable and effective services should be made available which also provide educationally disadvantaged groups with easy access to further training.
- ▶ Educational advice and appropriate learning opportunities based work and life biographies are of particular importance. This involves the systematic inclusion of the diverse informal learning processes available outside educational institutions. Working processes also need to be more demanding to provide better opportunities for learning at the workplace.
- ▶ The recognition, certification and quality assurance of the new forms of adult self-learning methods need to be of a higher standard. This is a task not only for educational institutions and companies but for all (state) authorities

involved in planning and financing further education.

- ▶ Lifelong learning for and with companies should be developed further. Special attention should be paid to small and medium-sized enterprises.
- ▶ In addition to company specific approaches for promoting further training, increasing priority is also being given to regional approaches such as those carried out in the ›Learning Regions‹ (programme of the Federal Ministry of Education and Research). In the global competition between the regions, human resources are becoming a decisive factor for every region. Regional stakeholders should therefore be coordinating their activities and developing them more effectively.

The promotion of learning and qualification processes within the comprehensive prevention strategy plays a key role for company and employees.

### Lifelong learning at SMA Solar Technology AG

Operating in the field of renewable energy technologies, this company has already received several awards for its unique nationwide training programme. They offer a comprehensive range of seminars and further training programmes and they carry out regular qualification requirement surveys. The constructive culture that prevails in dealing with errors provides the company with high innovation potential and creative employees. The company regards the knowledge of its employees as a key resource and asset. Employees may take part in training courses on five paid working days, choosing from over 60 internal courses and more than 40 external events. Individual training initiatives and financial support for education measures up to university level are also provided for all the employees. These are based on the qualification requirement analysis which is conducted twice annually.

The staff development programmes focus on three key areas: for unskilled workers, additional qualification measures are available along with systematic orientation plans for new apprentices. Engineers, after taking part in an orientation seminar, can determine the direction of their own personal development, either in personnel management, project management or as a technical expert. A noteworthy feature of the SMA Solar Technology AG, is the open minded approach in dealing with errors: It is acceptable to make mistakes – they are analysed but not

punished and deemed useful for the learning process. The best arguments are given priority over those of superiors. A culture of constructive and open debate exists across all hierarchical levels. The results are very encouraging: the employees are highly motivated, and over 90% of all managerial positions are filled internally. Moreover, the company has a high growth dynamic with an extremely low staff turnover rate (less than 0.5%).

### Knowledge transfer at Entertainment Distribution Company GmbH

In general, the young generation have a great deal of experience using computers. With this in mind, the Entertainment Distributions Company GmbH (EDC), with 950 employees, examined the possibility of organising a project to transfer knowledge from ›young‹ to ›old‹. The essence of the project was to promote cooperation and knowledge transfer in the context of demographic change. The primary question was how to specifically encourage good communication between old and young and how to prepare the company for demographic change with the transfer of knowledge?

Practical PC applications were included on the agenda for the IT qualification programme. The employees in the personnel department were to be trained in writing serial letters, to create electronic forms and perform other basic spread sheet functions. Other employees received a basic PC training.

The challenge for the apprentices lay in preparing the material systematically and didactically structured. The aim during the implementation was to exchange the role of the learner with the role of the teacher.

At the end, both sides were thought to have benefited enormously. The older participants learned among other things that in spite of their age and disadvantages, they found the learning experience very stimulating and that learning from younger people can be a rewarding experience. They were able as well to work out solutions for themselves through action-oriented tasks. By experiencing a role change, the younger people gained a new perspective on learning and became familiar with methods that enable the participants to learn independently. They also discovered that the presentation of new subject matter can be a positive experience when there is empathy with those learning.

## Health

A paradigm shift away from early retirement, to policy reversals promoting a longer working life requires a complementary paradigm shift in health culture from curative to preventive health. To enable employees to age healthily in gainful employment, more systematic and quality-assured prevention programmes at company level will be necessary. In their own interests, companies must also face the challenge of establishing and maintaining an efficient corporate health management (CHM) system. They do not have to face this task alone – there is support available from both the social insurance funds and from the increasingly growing market of private providers.

If they are to be successful in the long term, measures should be taken at an early stage. Preventive health management projects should focus not only on older workers and their working conditions but on the entire workforce. In the age of demographic change, workplace health promotion is health promotion for everyone. In many cases, work reorganisation can help create working conditions where it is realistic for many workers to reach the higher retirement age in good health – especially those in workplaces with a high exposure to risk.

Occupational health management integrates occupational safety and health, workplace health promotion and age management. Moreover, it addresses managerial staff, the corporate culture and the working climate. It is regarded as a very suitable tool for maintaining and promoting work ability and employability throughout working life. In corporate health management, the employees' health

is a strategic factor in the company vision and culture and in the organisational structures and processes. Consequently, CHM is a managerial task.

In addition to health promotion and prevention, integration management is another important element in occupational health management. Based on section § 84(2) of the German Social Code IX (SGB IX), employers are legally required to provide an integration management system for an employee who within a period of one year has been unable to work for a period of six weeks or has been repeatedly unable to work. The aim of this regulation is to eliminate or reduce adverse working conditions that cause illnesses, to support these members of staff in recovering and preventing a recurrence.

The Federation of German Trade Unions (DGB) is convinced that good integration management can substantially reduce the estimated number of 500,000 sickness related employment terminations per year.

### Workplace health promotion at InfraLeuna GmbH

The need to reduce sickness rates at InfraLeuna GmbH was only one of several reasons for approaching the subject of health more intensively. For both the company management and the works council it was also important to make the company more attractive and competitive in general. InfraLeuna believes that employees are more committed to the company when they feel that the company takes an interest in their personal concerns.

For this reason, the company management and works council defined a framework for a preventative health care programme in a company agreement, whereby ›preventative health care‹ at InfraLeuna is a broadly defined term. It stands for better ergonomic workplace design and workplace health promotion, medical health check-ups and prevention, e.g. back exercises, company sports such as football, volleyball and swimming. The results of the programme speak for themselves. The sickness rate in 2002 of 5.7% fell to 3.5% in 2007. The employees are motivated and they identify with the programme. 10% of the employees already take part in company sports and the number of participants in sports activities and prophylactic health activities is increasing steadily.

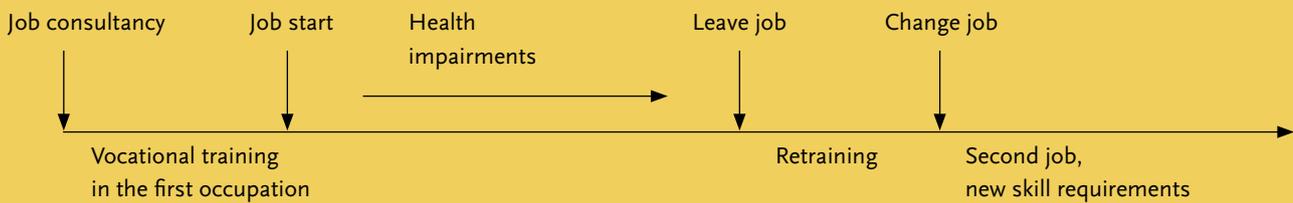
### Work design, qualification and health: key elements for a successful working life

Although there are a large number of approaches and possibilities already available, it is not possible to design every workplace to suit ageing employees and promote their health. Workplaces will still exist in future where the working conditions and workload structure are suitable – if at all – only for limited periods of work activity. It is not possible to grow old at these workplaces in good health.

For people working in these particular sectors, more focus than ever should be placed on career planning and organisation. First of all this requires a shift in attitude by all those involved. The existing career structures in Germany make change difficult. Switching to a new training course midway through working life is often problematic financially and up to now has been uncommon practice. Moving into a different sector to start a completely new career is deemed as a break rather than as further development in a career biography. A new understanding of career planning is required, with a comprehensive scheme that addresses the individual needs of the personnel over the different phases of their working life. This takes account for example, of individual requirements, incentives and the respective workloads throughout working life and enables employees to remain working right up to the legal retirement age – even when it is possible to carry out certain types of work only for short periods of time. The aim is to remain productive for as long as possible, ideally by simultaneously reducing the workload, taking part in further training, acquiring new qualifications and skills and experiencing positive variations in work activity.

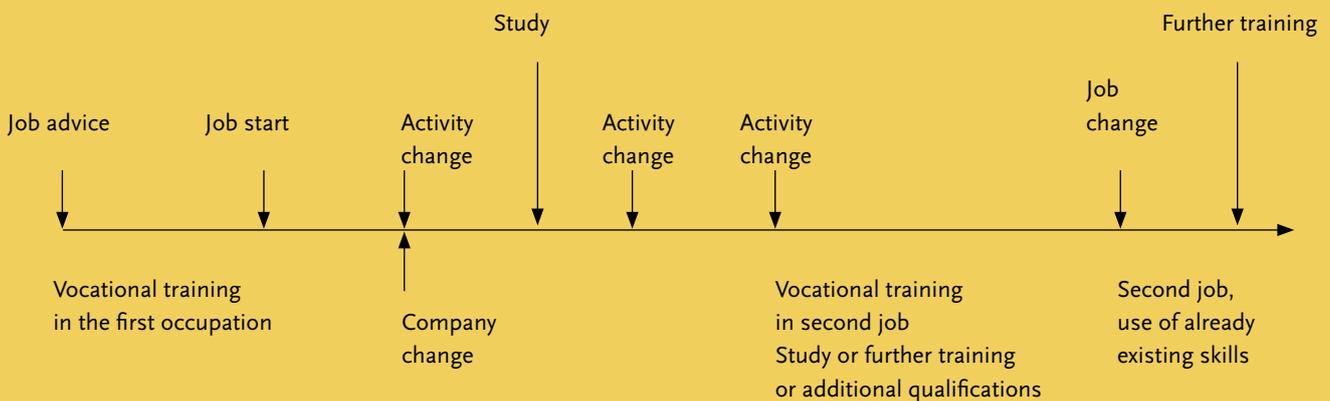
### Typical career path

... after a change of job for health reasons



Source: IGA Report 17

### .. job change on own initiative



Source: IGA Report 17

Career planning in companies is therefore a staff development task where the working requirements can be tailored to the specific abilities and needs of the respective age groups. In other words: both in-company careers and individual professional careers can be organised to correspond with the changes in age-related work performance. During the later phases of working life, jobs processes should be available that are particularly suited to older workers who possess the necessary qualifications and experience.

The success of such a career planning strategy depends of course on the existence of a long term company personnel planning scheme, which in Germany is quite unusual. Increasing awareness and motivating companies in this respect is therefore important. Personnel managers, works and staff councils alike are called upon here to take action. So far, there are very few suitable model projects in existence that include career planning.

Apart from in-company career planning, structures must also be created which enable people to switch more easily to other job sectors. Provisions for further training and financial support for example could make this possible.

### **Career design at Karl-Heinz Efke Karl-Heinz Efke Sanitary and Heating Installations GmbH**

Karl-Heinz Efke Sanitary and Heating Installations GmbH was founded in 1926, is located in Duisburg and employs roughly 30 workers. Although the company has a long tradition, it is by no means old-fashioned. On the contrary, a modern career path planning model has evolved here which takes into account the respective skills and experience of the workers and sets an example for other craft enterprises. Younger workers for example (newly qualified and apprentices) are mainly employed on installation work in new buildings, which requires comparatively little work experience. Somewhat more experienced personnel are assigned to jobs in older buildings (e.g. for conversion or new installation). Qualified personnel with work experience are deployed here since the specifications for installation are much less straightforward and more complicated than in new buildings. The third stage of the career model is customer service. Only older employees with plenty of experience work here because the standards of skills required are high and the physical activity is relatively low. Furthermore, high levels of social competency are required from service staff owing to the close contact to customers. Unlike older employees, the younger ones are often unable to meet these particular requirements. For the company this is an indispensable success factor where the older employees with experience are able to remain in the enterprise until retirement age.

This scheme is supported where necessary by internal workshops and training courses to keep them up to date with the latest technologies. The training courses enhance their flexibility and self-confidence when dealing with customers.

### **Corporate health management at A. Frauenrath Construction Company GmbH**

The medium-sized construction enterprise, Frauenrath, on the Lower Rhine was under increasing pressure due to the high level of standards required and the competitive situation in the construction and an increase in staff turnover. Facing a shortage of polishers and skilled workers, they drew up a training plan to increase efficiency and to motivate the employees as their success factor for the future. As part of the company occupational safety and health programme, Frauenrath offers its employees professional support with the involvement of external specialists. An analysis of the work organisation and working conditions was carried out before selecting the appropriate modules. Systematic, consecutive methods were applied, including staff surveys, risk assessments and ergonomic reports. Safety briefings and weekly exchanges on safety issues were introduced on the building sites. Analysis workshops were organised and moderator training and support was available to help in dealing with anxiety, sleeping disorders, stress, depression, psycho-

somatic complaints, problems with partners and families, alcohol, medication and eating problems. All the activities together were carried out in an effort to achieve a continuous improvement process in the company and to improve the framework conditions.

The initiative paid off for everyone involved: individual shortcomings were compensated and the workers were brought up to date with the latest technology. Moreover, everyone felt more highly motivated and more committed to the company than ever before. There is an additional bonus: Frauenrath has improved its image in the eyes of the customers, bringing additional economic benefits.

### **Career design at Wiener Krankenanstaltenverbund (Viennese Hospital Association)**

The results of an internal analysis carried out in the Viennese Hospital Association (KAV) were alarming: the growing demand for health care professionals could no longer be met with recruitment from the external labour market. The problem would have to be solved by health care staff remaining longer in their jobs. The problem: owing to health impairments and lack of prospects, nursing staff often drop out of their job prematurely or change to other sectors or branches of work. To prevent this happening in future, measures were put in place by KAV to offer better prospects to the health care

staff with career development strategies, taking account of age, the respective skills and experience of the health care staff.

With the cooperation of the employees and during a series of expert workshops, a career development concept was developed, encompassing the various skill levels, from beginners to health care experts. A skilled nurse reaches the highest level after several years of work experience and after acquiring practical know-how and social skills. In the nursing team she takes responsibility for training issues and matters concerning health care.

The new career development concept has given the nursing staff better prospects for the future and they are now far more highly motivated. The skilled nurses in particular feel more highly valued through their status and are respected for their skills and abilities, raising the chances that they will stay longer in the profession.

### **Generation management at SICK AG**

In many companies, an analysis of the age structure shows similar results: most workers belong to the middle age group of 36 to 50-year-olds. Young workers lie well below, while men and women over 50 form the smallest group in the company. Under these circumstances, the 50-plus age group will predominate in only a very few years.

A number of years back, the South Baden sensor technology manufacturer, SICK AG, already started preparing for the future situation. Based on a corporate culture which encourages interaction between employees of different age groups, operational measures are in place to provide additional support. These include age(ing) appropriate corporate health management, working time models geared to the respective life phases and training opportunities in the company for every age group. Generation management is particularly important at SICK. In mixed age teams, the company is making an effort to unite the different talents and skills of the generations. This can combine the innovative power and the up-to-date knowledge of the young workers with the expertise of the middle generation, and the company specific experience of the 50-plus generation. Working in mixed age teams has broadened the horizons of the employees and enhanced their prospects. The combination of innovative knowledge, professional expertise and experience with operational know-how, is of enormous added value for the company as well.

## 3. Agenda 2020

To deal successfully with the challenges of demographic change, all the relevant stakeholders in industry, politics and society and also each individual company and employee will have a role to play. An integrated long term strategy on demography is necessary, where the key elements can serve as a basis for all the relevant decisions taken in politics, industry and companies, and with clear objectives: to maintain, secure and increase workability and employability of as many people of working age as possible for as long a period as possible – ideally up to the legal retirement age. This will involve a host of tasks for companies and workers but also for the collective bargaining partners and the social insurance funds.

### The tasks for enterprises ...

Enterprises in future will have to face up to the economic challenges on globalised markets with an older workforce. The task that lies ahead is to secure and increase productivity and the quality and speed of innovation while at the same time maintaining the physical and mental work ability of the workforce. Every possible effort should be made to maintain and systematically increase employees' physical and mental health which is as equally important to a company as qualifications. This is the only way to ensure that workers will remain longer in the companies and in good state of health. The following principles should be adopted in meeting this objective:

- ▶ Company activities should focus on prevention and not on curative measures.
- ▶ They need to address the needs of their entire workforce and their working lives as a whole, and not only those of older workers.
- ▶ In the short term further training activities should be provided for older workers who were unable to complete a technical training or who are suffering from health impairments due to their work.

To assess their effectiveness and also to enable the company to target the investments in human resources effectively, regular assessments of the age management strategies and initiatives should be carried out as a matter of course.

Many enterprises should think not only about their corporate generation management but also about their strategic approaches in similar problem areas. Companies are still very reluctant to share their experiences with others or to seriously consider it at all. Particularly where complex issues such as confronting demographic change are at stake, this is detrimental to companies and to the workers and for the national economy as a whole. It is in their own and in the overriding interest, that companies should make use of the existing information available in company networks - or others such as INQA. Thematic networks for example, which have been established as platforms for experts, can be helpful. A large number of companies have joined the ddn Demography Network (Demographie Netzwerk e. V.), the German Network for Workplace Health Promotion (DNBGF) and the Enterprise for Health Network (Unternehmen für Gesundheit e.V) to confront the challenges

of demographic change together. The advantages of networking are obvious: e.g. sharing relevant information and knowledge, pooling staff and financial resources and hierarchy-free, constructive cooperation between larger and smaller enterprises. Companies should make their own decisions about which form of network is appropriate for them. One thing is certain: whether collaborating with different stakeholders in one region, in a national company network or in an expert network – problems can be solved far more easily when working together.

### The company network ddn

The Demography Network ddn helps enterprises to overcome problems relating to demographic change at company level. It was established in 2006 on the initiative of INQA and is supported by some 200 member companies. As a non-profit association of enterprises for enterprises, companies of all sizes and branches of industry have joined here to share information with representatives of the scientific and political community and social groups. Together with INQA, ddn organises annual know-how conferences and provides an information website and an Intranet which serves the members as a knowledge portal.

Outside the networks, there are a wide range of high-quality services in Germany offering assistance in dealing with demographic change issues. The health insurance funds and institutions for statutory accident insurance and prevention, as well as private service providers, all offer a host of services with support for companies. The companies themselves must decide how they want to use the external services. Sometimes they just need assistance with the initial start-up or support during the analysis and planning stages.

### The 10 golden rules of the ddn

1. We believe that corporate culture is a management task and enables the different groups of employees and generations to work together productively with respect for each other and with support from the management.
2. We stand for non-discriminatory personnel selection, recruitment and personnel development processes regardless of age, sex and origin.
3. We pursue a forward-looking human resources planning policy that takes account of demographic developments and seeks to establish a diverse and balanced age structure within our workforce.
4. In our company we aim to ensure an appropriate representation also for the 50-plus generation.
5. By creating good working conditions we ensure that all the employees in the company can grow older in good health. We also try to ensure that they can remain working at least up to the legal retirement age.
6. With consistent corporate health management, we support all our employees in developing and maintaining personal resources and encourage individual responsibility for living and working healthily.
7. We develop working time and remuneration models, suitable for the employment of different generations and employee groups.
8. We organise mixed-age teams to encourage the transfer of knowledge between the generations. In our companies we make full use of empirical knowledge and latest expertise, innovative ideas and social skills.
9. We are convinced that lifelong learning at work plays a major role in maintaining our employees' employability and performance. We provide learning and further development opportunities for all the employees in our companies. We rely on our employees to bear responsibility for developing their own careers by taking advantage of the learning opportunities available, and we develop the necessary methodologies together.
10. We show ways in which a professional career can continue for many years in keeping with the ageing process. We aim in this way to open up new career prospects, also for older employees. In our company we aim to find solutions for a flexible transfer from work to retirement and develop viable alternatives to compulsory and voluntary early retirement schemes.

## ... and workers as well!

Employees themselves should also be responsible for their own good health and for participating in qualification strategies. These efforts should help them in maintaining or even improving their own work ability and employability right up to the legal retirement age. This can be possible if responsibility for personal health is taken seriously, particularly in regard to nutrition, exercise and handling stress and physical strain.

The fact remains that individual employability is largely determined by elements such as health, qualification, motivation, working environment and private life, but also on collective company agreements and national framework conditions. In this respect, individuals can only act with autonomy when the surrounding structures enable them to do so – also at the workplace. In the context of demographic change, it is essentially a task for the national social and social insurance policy makers to create structures for the implementation of comprehensive prevention programmes parallel to those for prolonging working life.

The works council can play a supportive role here: in many companies it is the works councils who already initiate activities and work together with the company to create healthy working conditions.

## Tasks for the collective bargaining partners

The collective bargaining parties can play a crucial role in supporting companies and workers in dealing with the demographic change. With the appropriate agreements, they are responsible for preparing companies for the legal framework conditions, to provide for sector-specific regulations while at the same time maintaining the balance between international competitiveness and ensuring comparable terms of competition in Germany.

Positive steps to address this issue have been taken very recently, notably: the ›Collective agreement on skills training for the metalworking and electrical industries in Baden-Württemberg‹, which was negotiated back in 2001, the ›Collective agreement on skills training‹ in the chemical industry, the collective agreement ›Working life and demography‹ (2008) as well as the ›Collective agreement for planning demographic change‹ for the steel industry in North Rhine Westphalia (2008). These agreements differ fundamentally from the customary agreements. Instead of comprehensive regulation they provide company stakeholders with a framework for action enabling them to implement their own interests. Furthermore, the collective bargaining partners can create structures which enable them to support the companies in fulfilling the contractual agreements. It would be desirable if more industrial sectors would recognise the potential of collective agreements and use them for dealing with demographic change at company level.

### Wage agreement – ›Working life and demography‹

With the hitherto unique collective agreement ›Working life and demography‹, an entire sector of industry prepared to actively confront demographic change in the chemical industry.

Elements of the agreement included a demographic structure analysis, ageing and health-appropriate work design and lifelong learning. The problem was the number of small and medium size enterprises dominating the chemical industry which are unable to deal with the looming shortage of skill workers shortages or find the information they need. The INQA project ›Demographics and Personnel Policy in the Chemical Industry‹ (deci) sought to address these problems. In cooperation with company stakeholders, practical solutions were developed for personnel departments on how to design work aligned to demographic change.  
[www.deci-net.de](http://www.deci-net.de)

## Tasks for the social insurance funds

To secure their economic capacity to act, the social insurance funds, financed by contributions, now have to face supporting policies reversals that have shifted from early retirement to promoting a longer working life. The workplace health promotion activities carried out by the health insurance funds need to be more closely interlinked with those of the accident, pension and unemployment insurances. In principle, all the social insurance institutions will need to support companies in

improving the work ability and employability of their employees.

The individual branches of social insurances have already set their priorities for this purpose in the past. Health insurances attach importance to workplace health promotion. Accident insurances provide financial support for the prevention of work-related health hazards. Pension insurances place special emphasis on rehabilitation, and more recently on ›preventive rehabilitation‹ projects which aim to preserve existing capacities and social relations right into old age. At institutional level, the statutory accident and health insurance funds associations collaborate successfully in the Initiative for Healthy Work (Initiative Gesunde Arbeit, IGA). However it would be appropriate to integrate the activities of the unemployment, pension, health and accident insurance funds more closely. In concrete terms, advisory projects such as GeniAL or the ›Demography Pilots‹ show that the programmes provided by the social insurance institutions or INQA Initiatives, can enable companies to carry out projects which would not otherwise be possible without external expert support – especially in small and medium-sized enterprises.

### **GeniAL – Generation Management in Working Life**

The approach taken by INQA in the project GeniAL is as simple as it is ingenious. At the beginning of the project launched in 2006 by the German Pension Insurance (DRV), the question was why the national DRV consulting resources should not be used effectively to deal with demographic change in companies? The consultants who are already engaged in pension and rehabilitation advice can show managers and works councils what demographic change means for their business. The impact of the regional population developments on businesses is addressed along with advice for concrete action. The advisors also act as guides and networkers in the regions and can provide information about funding possibilities and relevant support centres.

[www.genial-drv.de](http://www.genial-drv.de)

### **›Demography Pilots‹**

A lack of knowledge about demographic issues may soon become a real problem for many companies. The workforce is ageing, there is a shortage of young people, the transfer of knowledge from young to old is not well organised – something needs to happen now. The project initiated by INQA ›Demographic Knowledge in Brief: Training as a Demography Pilot‹ could be helpful here. The name says it all: consultants are trained in short and practice orientated seminars to raise awareness among company management and works councils on the issues at stake and to suggest design solutions. They act as 'pilots' for the company to guide them through the complex range of available concepts and help them find tailor-made solutions. At the end of the project, training by Demografie-Experten e.V. continues. [www.demografie-experten.de](http://www.demografie-experten.de)

# Recommendations for Future Action

According to the information gathered so far, we conclude by recommending the following:

1. A more comprehensive understanding of prevention is necessary, integrating work design, corporate health management and lifelong learning. This is good for companies and employees and the implementation should be high up on the agenda.

2. A healthy, ergonomic work design and organisation places emphasis on employee skills and opens up scope for action. Rewarding and healthy working conditions enable employees to continue working up to the legal retirement age.

3. Investments in health and training are investments for the future, both companies and workers are responsible for preserving these resources.

4. Companies, employees, social partners and social insurance institutions are all responsible for developing solutions for workers in demanding jobs where it was previously impossible to work up to retirement age. For these employees, horizontal career planning is necessary across the entire working life.

5. With a higher proportion of older workers and women and increasing numbers of people in employment from migrant backgrounds, the world of work will be more diverse and far more colourful future. A modern and sustainable world of work, must respond by respecting the needs of all workers.

6. The social and economic circumstances of peoples' lives are closely related to life expectancy and state of health. Education is a key to improving personal opportunities. Using the slogan: ›Qualifications and Training for Health‹, investments in education early on in life, bring good health prospects in the long term.

7. The shortage of skilled workers needs to be addressed with lifelong learning. Improvements to vocational training measures, reintegration of the unemployed and recognition of qualifications acquired abroad are important steps that can be taken here to alleviate this shortage.

8. Work ability and employability can only be maintained on the long term with lifelong learning and lifelong health promotion measures.

9. To secure the economic position of Germany and the welfare of its citizens, concerted action by industry, the state and society must be taken to organise the world of work that is fit to meet the challenge of demographic change.

# Outlook

In the face of the demographic developments, older workers will be indispensable in future. There are a number of things to be done to make this possible. The comprehensive understanding of prevention promoted in this memorandum is essential, including the core elements of work design, health promotion and training. Companies need incentives to take action now to design workplaces in keeping with the needs of ageing workers, to provide development and training opportunities and to plan individual career paths with employees so that they are motivated, productive and remain healthy until they reach the statutory retirement age. At the same time, the state, the social partners, the social insurance funds and not least, the workers themselves should all play their part in working towards fulfilling the Agenda 2020 formulated in the memorandum.

The experiences gained over recent years have shown that the demographic change not only brings along risks but also provides great opportunities for a modern and innovative world of work where people can be given adequate encouragement and support throughout their working lives. The chances are good despite the shortcomings, and not as unrealistic as many people think. In an important departure from the past, the calls for healthy working conditions and the careful handling of human resources are now based on economic rather than social factors. Sooner or later, companies that refuse to see that age(ing)-appropriate working conditions are a crucial factor for their competitiveness and economic success will no longer be able to participate in market developments – they will simply have no workers. To ensure this does not happen, INQA will continue to campaign for a modern, competitive world of work able to face the practical consequences of demographic change.

# Literature & Links

- Badura, Ritter, Scherf: Betriebliches Gesundheitsmanagement – ein Leitfaden für die Praxis, Berlin 1999
- Bechmann, Jäckle, Lück, Herdegen: Motive und Hemmnisse für Betriebliches Gesundheitsmanagement (BGM), IGA Report 20, 2010
- Beermann, Beate: Leitfaden zur Einführung und Gestaltung von Nacht- und Schichtarbeit, Bremerhaven, 2004
- BMBF: Berufsbildungsbericht 2010, Bonn/Berlin 2010
- Brussig, Martin: Erwerbstätigkeit im Alter hängt vom Beruf ab. Düsseldorf und Duisburg, Altersübergangs-Report, No. 2010-05
- Bundesanstalt für Arbeitsschutz und Arbeitsmedizin: Sicherheit und Gesundheit bei der Arbeit 2008 – Unfallverhütungsbericht Arbeit, Dortmund 2010.
- European Commission: EUROPA 2020. Eine Strategie für intelligentes, nachhaltiges und integratives Wachstum, Mitteilung der Kommission, Brussels 2010
- Initiative Neue Qualität der Arbeit (Ed.): Demographischer Wandel und Beschäftigung. Plädoyer für neue Unternehmensstrategien – Memorandum, Dortmund 2004
- Initiative Neue Qualität der Arbeit (Ed.): Aller guten Dinge sind drei! Altersstrukturanalyse, Qualifikationsbedarfsanalyse, alter(n)sgerechte Gefährdungsbeurteilung – drei Werkzeuge für ein demographiefestes Unternehmen, Berlin 2010
- Initiative Neue Qualität der Arbeit (Ed.): Demografit mit INQA. Angebote für Unternehmen im demographischen Wandel, Berlin 2009
- Institut für Arbeitsmarkt- und Berufsforschung: IAB-Betriebspanel, [betriebspanel.iab.de](http://betriebspanel.iab.de)
- Institut für gesundheitliche Prävention (IFGP): Führen im demografischen Wandel, Online-Training im Rahmen des dreijährigen Modellprojektes ›Menschen in altersgerechter Arbeitskultur – arbeiten dürfen, können und wollen‹ (MiaA). [www.miaa.de](http://www.miaa.de)
- Jahn, Ulbricht: ›Mein nächster Beruf‹ – Personalentwicklung für Berufe mit begrenzter Tätigkeitsdauer. Part 1: Modellprojekt in der stationären Krankenpflege, IGA Report 17, 2008
- Kistler, Ebert, Guggemos, Lehner, Buck, Schletz: Altersgerechte Arbeitsbedingungen. Machbarkeitsstudie (Sachverständigen Gutachten), 1st edition, Dortmund 2006
- Kultusministerkonferenz: Prognose der Studienanfänger, Studierenden und Hochschulabsolventen bis 2020, Statistische Veröffentlichungen der KMK, Dokumentation 176/2005
- Kultusministerkonferenz: Vorausberechnung der Schüler- und Absolventenzahlen 2005 bis 2020, Statistische Veröffentlichungen der KMK, Dokumentation 182/2007
- Lenze, Opitz, Riechel, Institut für gesundheitliche Prävention (IFGP): Handlungsleitfaden ›Menschen in altersgerechter Arbeitskultur – Menschen in altersgerechter Arbeitskultur Arbeiten dürfen können und wollen! Unternehmen und Führungskräfte für die Gestaltung des demografischen Wandels motivieren. Münster 2009
- Matthäi, Morschhäuser: Handlungsleitfaden ›Länger arbeiten in gesunden Organisationen‹ – Praxishilfe zur altersgerechten Arbeitsgestaltung in Industrie, Handel und Öffentlichem Dienst, Institut für Sozialforschung und Sozialwirtschaft e.V. 2009
- Federal Statistical Office: Bevölkerung Deutschlands bis 2060. 12. koordinierte Bevölkerungsvorausberechnung, Wiesbaden 2009
- Ulich, Eberhard: Arbeitspsychologie, Stuttgart 2001  
Wissenschaftsrat: Basisdaten Hochschulen/ Forschungseinrichtungen in Deutschland, [www.wissenschaftsrat.de](http://www.wissenschaftsrat.de), As at: 14.10.2010
- All practical examples originate from the INQA database Good practice: <http://gutepraxis.inqa.de>
- Additional literature

## Imprint

Securing the Future with Prevention  
Strategies for a World of Work aligned to Demographic Change  
– Second Memorandum –

Published by:  
Federal Institute for Occupational Safety and Health  
Friedrich-Henkel-Weg 1–25  
44149 Dortmund

INQA Office  
c/o Bundesanstalt für Arbeitsschutz und  
Arbeitsmedizin  
Nöldnerstraße 40–42  
10317 Berlin  
Telefon +49(0) 30 51548-4000

Specialist adviser:  
TAG >30-40-50plus – Älterwerden in Beschäftigung  
(30-40-50plus – Ageing in Employment)

Text: Silke Bode (BAuA/INQA), Prof. Dr. Karl Kuhn (BAuA/INQA),  
Dr. Götz Richter (BAuA/INQA),  
Dr. Alfons Schröer (BKK Bundesverband)

Editing: KONTEXT Oster & Fiedler, Hattingen  
Translation: Heyden-Rynsch International  
Vivien Peters  
Editor: Ute Gräske (BAuA/INQA)

Graphics: eckedesign, Berlin  
Photo: Fotoagentur FOX, Lindlar/Cologne  
Production: Bonifatius Druckerei, Paderborn

ISBN 978-3-88261-708-5



Geschäftsstelle  
der Initiative Neue Qualität der Arbeit  
c/o Bundesanstalt für Arbeitsschutz und Arbeitsmedizin  
Nöldnerstraße 40-42  
10317 Berlin

Telefon +49 (0)30 51548-4000  
Fax +49 (0)30 51548-4743  
E-Mail [inqa@buaa.bund.de](mailto:inqa@buaa.bund.de)  
Internet [www.inqa.de](http://www.inqa.de)

