

# Age Management as a Tool for the Demographic Decline in the 21<sup>st</sup> Century: An Overview of its Characteristics

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## Abstract

*This paper sets out to study recent developments in the relatively new area in management theory - Age Management. First the general labor and financial market conditions are specified which have led to the growing need of an age-oriented strategy for employment in the company. Next the concept of Age Management is defined, both from the macro, enterprise-level and individual perspectives. The next section studies the benefits derived from implementing Age Management for the company and its employees, followed by a section on specific Age Management tools and measures. The penultimate section explores the prerequisites for successful implementation. This paper finds that Age Management as a concept is gaining ground, predominantly in managing and retaining near-retirement-age workers. Concluding, we find that there is a significant need for more comprehensive Age Management and effective Age Management measures to maintain firms' and economies' competitiveness in the face of demographic decline.*

*Keywords: demographics, age management, employment, age-oriented strategy, working practices.*

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## Introduction

The predominant European social models and welfare-state arrangements work on the assumption of indefinite population expansion, largely conceived in the post-war period, however, the developed world is currently facing the prospect of insufficient fertility rates and ageing societies. The phenomenon of population ageing is a testimony to a society's success in achieving higher standards of living and, implicitly, increased longevity. Nevertheless, constant growth of older populations is a challenge both to policy makers, who need to reform the Ponzi scheme of pensions and welfare entitlements, as well as to companies looking for talented and efficient workers on the labour market. To take one example, according to the estimates of the European Commission, by 2030 the European Union will face a shortage of 20.8

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million working-age people, which will constitute 6.8% of the total workforce (Villosio, Di Pierro, Giordanengo, Pasqua and Richiardi, 2008). Indeed, population ageing and falling fertility rates have been treated as a threat in Western Europe for the last 20 years (Liwinski and Sztanderska, 2010). According to Walker, the two decades between 1995 and 2015 are seeing a significant fall in younger and middle-aged populations and a large increase in the older age groups (2005). The challenge of an ageing workforce seems to be characteristic of developed countries such as the UK, Germany or France. Nevertheless demographic statistics indicate that also developing countries, including Poland, will soon face the same problem.

The research aim of this paper is to analyse current trends in developed-world (predominantly European) labour markets and investigate the effectiveness of Age Management on a corporate level by reviewing current literature and qualitative analysis. This paper bases its analysis on the assumption that EU labour markets will continue to be highly protected and will suffer significant labour shortages as a result of demographic trends, thus raising the bargaining power of workers on the market.

### **Implications of demographic decline for welfare states, growth and modern financial markets**

The European welfare state was built on the assumption that, in the phase of modern economic growth, both labour productivity and the population will grow steadily and indefinitely, allowing welfare benefits (in particular retirement pensions) to be conferred upon contemporary retirement-age cohorts (Roberts, 2004). This consumption, according to the welfare-state paradigm, would be financed by the next generational cohort, assumed to be more populous and more productive than their parents and grandparents. According to Esping-Andersen, there are three types of welfare-state regimes: 'liberal', 'corporatist' and 'social democratic' (2007). While differences between them exist, all three models are based on the Ponzi rule of financing current consumption with expected future revenue from a larger and more productive base of participants. Although their costs vary – the 'liberal' regime is closest to sustainability, while the 'social democratic' welfare state is, by far, the dearest – nevertheless all three are impossible to sustain in the long term with a shrinking or stagnant population, as the labour productivity gains required to balance the books would have to reach unrealistic levels.

Demographic change is a very long term process and there seems to be no possibility of a prompt reversal of negative trends. The influence of demographic factors on growth has been confirmed by Bloom, Canning and Moore (2004). Most importantly, since decisions to participate in the labour market are affected by age, Bloom, Canning and Moore found that 'older' societies had smaller labour supply which, in turn, led to lower potential growth. Furthermore, the same study demonstrated a peak of aggregate savings in cohorts aged 40 to 70. Therefore, an older population will be less willing to save and more to consume. These phenomena are aggravated by a third factor – 'generational crowding' – which depresses real

wages relative to labour productivity in large working-age cohorts (Easterlin, 1980; Bloom, Freeman and Korenman, 1987; Korenman and Neumark, 2000). In other words, a smaller working-age population relative to its dependents will result in depressed productivity or inflated labour costs.

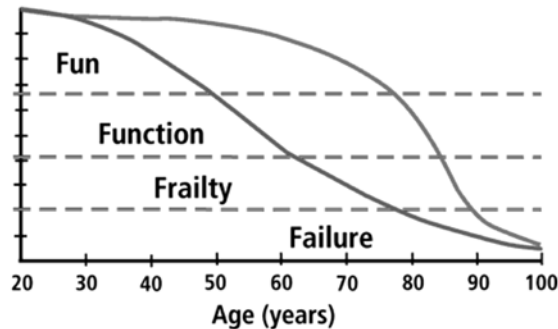
The future competitiveness of companies and whole economies will be to a large extent based on the performance and productivity of older workers, as well as on an effective use of their skills. Thus an ageing society causes drastic changes in human resources strategies and requires a new approach to Age Management in companies. A growing awareness of this issue is also changing the objectives of labour market policy. In many countries its main aim is to increase the labour participation among the older population, with Age Management considered as an important factor in achieving this goal (Auer and Fortunly, 2000). This paper will focus on the comparison of mean ages of workers in various continents and those in Europe, present the influence of the Age Management concept on population ageing from the individual, corporate and societal point of view; and indicate the main motives for implementing Age Management as well as the tools and methods used to measure the success of the implementation process.

### **Defining Age Management**

Age Management as a concept is relatively obscure in management theories. It directly relates to population ageing, active ageing, managing a diverse team and preventing discrimination. Age Management can be investigated and presented from the individual, corporate or macroeconomic labour market policy perspective.

From the individual perspective, Age Management allows a more efficient use of a person's capabilities. Age Management is an opportunity to remain on the labour market as long as possible and constantly adapt to its changing requirements by training and practice in old age. Age Management on the individual level refers not only to workers, but also to people with the potential of labour market (re)integration. Measuring work capabilities is possible by using the Work Ability Index, developed by a team of Finnish researchers (Tuomi, Ilmarinen, Jahkola, Katajarinne and Tulkki, 1998). The WAI is based on an employee questionnaire with questions covering current and future estimated work ability, health and absenteeism records, estimated sickness-related decreases in work performance and 'mental ability reserves' (Morschhäuser and Sochert, 2006). Results suggest that health issues and lower work ability may be reasons for early retirement, which is determined by burdensome aspects of a given job, as well as the health status and lifestyle of the worker. The model, illustrated in Figure 1, presents individual career Age Management, represented by the green-shaded line in the chart to the right, which is significantly different from a career path without Age Management. It is proactive rather than reactive. As illustrated by this chart, life-threatening health 'incidents' such as obesity, diabetes, even cancer and strokes, can be prevented with a proactive Age Management programme. Employees can deliberately lengthen the horizontal line of good health and prevent the long,

gradual decline by aggressively taking control of health risk factors, thus preventing sickness rather than expecting it as inevitable. This involves an individually designed programme of nutrition, supplements and exercise to increase vitality, cognitive functions and physical well-being.



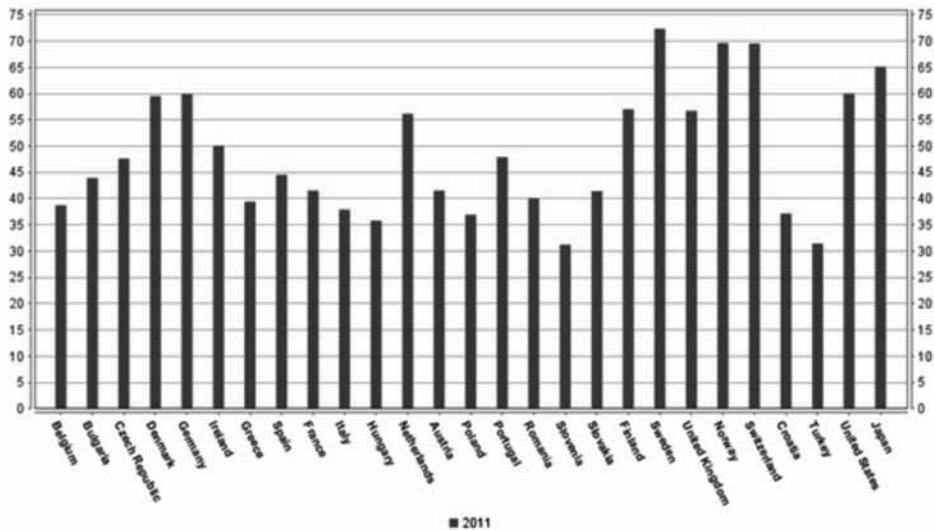
**Figure 1.** Functional ability of male worker vs. age (careless life vs. individual Age Management)

Source: Authors' calculation. Data and Work Ability Assessments were based on the Work Ability Index developed by Tuomi et al (1998).

The issue of Age Management can also be analysed from the company's perspective, i.e. managing human resources. The interest of directors in Age Management usually appears when situations of restructuring, organisational change, technological progress or loss of experienced and highly-skilled workers arise. However, sometimes Age Management may also be considered because of cost management considerations, due to clients' expectations, or in order to retain qualified employees. Age Management measures adopted by companies include raising awareness among management and other workers, implementing best practices in the company by adopting Age Management strategies in recruiting, training, development and promotion of workers' age optimisation, implementing lifelong learning programmes, health and safety programmes or finally flexible forms of employment.

Age Management, owing to demographic change, has also become a macroeconomic issue in labour market policy. As a result European policymakers and companies in particular have increasingly taken to Age Management to facilitate a greater share of employees over 50 in the workforce. Age Management can mean many things, so it is necessary to specify its definition for the purposes of this paper. Walker (1997, p.685) defines it as '... the various dimensions by which human resources are managed within organisations with an explicit focus on ageing and, also, more generally, to the overall management of the workforce ageing via public policy or collective bargaining.' Implementation of these policies on both the government and corporate level varies greatly by country even in Europe, perceived as leader in this field – while Sweden's employment rate in 2009 for the 55-64 age group was above

70%, it only amounted to 31.6% in Poland (European Commission, 2009). See also Figure 2 for a comparison of data for chosen EU and some non-EU countries in 2011.



**Figure 2.** Employment rate of old workers  
Source: Eurostat (2011). Note: Older workers are those from the 55-64 age bracket

Yet implementation also highly depends on culturally-motivated perceptions of when a person is too old to work. Here perceptions, as in the case of actual employment of older workers, also vary greatly. Moreover, these perceptions or social norms may be more rigid and difficult to change. Granted, as argued by Sweet (2009), the perceptions of the adequate age for retirement have changed over time, yet they take quite a long time to do so by adjusting to new conditions and differ from country to country. The same holds true for perceptions of achieving adulthood (and starting work), which in combination with social retirement rigidities is an obstacle to broadening employment among the young and old. Implicitly, successful Age Management practices will have to tackle these social rigidities and provide incentives for both young and old.

### Reasons for implementing Age Management

This paper has already touched on the macro trends which are causing Age Management to become necessary from a policy point of view. This perspective can be supplemented by one very important macroeconomic and social factor – age discrimination in the workplace. According to a study conducted on EU workers, 6% of workers from the 15-24 age group and just under 5% from the 55+ age group were exposed to age discrimination at the workplace, constituting the two most vulnerable age groups (Villosio *et al.*, 2008). It is noteworthy that these are the two groups which

companies should treat best, as their respective labour participation is low and they have the most potential to provide extra talent to the corporate world, which in some countries is already feeling the talent squeeze.

The ways in which older workers are discriminated against include: exclusion from promotion, training, benefits or even an explicit maximum age specified in a job announcement. There are also numerous more subtle manifestations, such as: limiting job responsibilities and duties of older workers, encouraging older workers to retire early in face of job redundancies and reducing incentives for people choosing to work beyond the retirement age (Villosio *et al.*, 2008). Age discrimination in this form affects negatively the older workers and companies alike – companies' age bias deprives them of many very experienced and highly-skilled workers. In the case of young workers, they are most likely to be discriminated against by 'reverse ageism', i.e. being denied access to job opportunities or being allocated in an inadequate job which is below their qualifications (Villosio *et al.*, 2008). Introducing Age Management and eradicating age discrimination in this context seems to be a win-win situation.

The reasons for adopting Age Management don't stop there. By improving their policies companies can benefit from their worker's age diversity by having a better adjustment to various client groups (broken down by age, affluence, sex etc.) (Liwński and Sztanderska, 2010). Furthermore, the accumulation of human capital, as defined by Schuller (2001), in individuals is potentially a lifelong process. Yet an age gap persists in people's access to education and training (Organisation for Economic Co-operation and Development, 2006; Tergeist and Woosiek, 2003; Bassanini *et al.*, 2005.) which creates a vicious circle – the very workers who have accumulated a great deal of human capital during their lives (older workers) upon reaching a certain age are not provided with additional training that could potentially bring the highest rewards to them and their employer. Successful Age Management policy both on the corporate and state level would be to provide equal opportunities for training and skills development to all age groups, raising productivity, improving work quality and creating companies better adaptable to change.

The need for greater participation of older workers goes beyond equal training opportunities. The growth of accumulated human capital during a worker's lifetime isn't linear and ever more companies realise that the social and professional abilities acquired by older workers are exclusive to their age group – it isn't just a question of more, it's a question of uniqueness (Liwński and Sztanderska, 2010). Therefore making older workers prematurely redundant is a major blow to the company's human capital and its transmission to younger workers. Moreover, this paper argues that the other vulnerable age group – younger workers – is also a unique asset of this kind, as it is young people who generate most innovations and new thinking. And as the demographic bust deepens, younger workers will become a kind of 'scarce good', in time reversing the trend and making them a much sought-after age group. If a company wants to stay relevant and innovative in the business of tomorrow, it should implement

Age Management for both older and younger workers today, staying ahead of the curve and acquiring young workers and introducing young-worker-friendly policies at a fraction of future costs.

The very same shortage of young workers will also increase the demand for older ones, provided that Age Management is widely used in an industry/economy. If not, this will lead to a labour market failure, as the demand for older workers and supply of such labour will not meet at equilibrium owing to completely avoidable factors, such as the workplace not being adjusted to the needs of older employees. This adjustment is not merely a requirement of the future, it is already a very important factor as, inevitably, the number of older workers is increasing in organisations. In the absence of better healthcare, a more ergonomic workplace and age-specific training and motivating tools the company runs the risk of higher costs or lower output due to a greater amount of absenteeism among its employees (Liwinski and Sztanderska, 2010).

Other motives for introducing Age Management into an organisation's strategy of talent management may be the following (Naegele and Walker, 2006):

- Synergy effects of employing both young, motivated, creative workers and older, experienced, loyal older workers
- Improved corporate image as an equal-opportunities employer
- Better motivation for younger workers who observe their older peers benefitting from their long-term input to the company
- Greater horizontal and vertical mobility of better-trained older workers
- Preventing the professional burnout syndrome in older workers by offering them continuing career planning
- Reserve pool of readily-available temporary workers consisting of semi-retired experienced former employees with company-specific knowledge and skills

Finally, organisations should consider Age Management now to stay ahead of changing legislation regarding retirement age thresholds, collective labour bargaining and other administrative measures which seem to be in the pipeline in many developed countries and in a host of developing nations. Taken together, all the above are a powerful argument for comprehensive and active Age Management.

### **Age Management areas and tools**

If so, which actions are required to boost older workers' productivity and thus improve their chances for employment and remaining at their current workplace for a longer time? These actions cover a host of employment phases, from recruitment to ending employment and refer to both the well-being of the worker himself as well as to his work environment. In recent years many classifications of areas relevant to Age Management have been created (See Eurolink Age, 2000; European Foundation for the Improvement of Living and Working Conditions, 1997). One of the most widespread methodologies to identify key areas has been developed by Naegele and Walker (2006), who propose the following list:

- Job recruitment
- Learning, training and lifelong learning
- Career development
- Flexible working time practices
- Health protection and promotion, and workplace design
- Redeployment
- Employment exit and the transition to retirement
- Comprehensive approaches

All these areas taken apart may not be particularly effective, but taken into a comprehensive approach, as proposed by Naegele and Walker, form the effective system of Age Management. In the area of recruitment, principal measures include banishing maximum age limits, employing specially-trained personnel for job interviews, using available public support programmes (such as wage subsidies or settling-in grants), advertisement campaigns aimed specifically at older unemployed, at-risk or early-retired applicants (Naegele and Walker, 2006). As with recruitment, also corporate training can benefit from no age requirements, tailor-made motivational and evaluation systems for older workers, or from setting up channels of knowledge and know-how transmission from older to younger workers.

As for flexible work, a number of measures can be adopted, among them: adjusting shift schedules, special measures of reducing daily or weekly working hours, partial retirement, specific models of job provision and no overtime for older workers (Naegele and Walker, 2006). These flexible measures allow using corporate resources in an optimal way, both using the human capital accumulated by older workers and not overworking them, which could lead to a substantial drop in productivity. For that matter, this measure is equally applicable to young workers, whose time availability may be limited due to ongoing studies or, increasingly in recent years, lifestyle considerations.

Returning to older-worker-specific tools, prior research provides a good overview of the importance of a healthy senior workforce: 'Good practice in health protection, health promotion and workplace design means optimising work processes and the organisation of work to enable employees to perform well and to ensure their health and capacity to work' (Naegele and Walker, 2000). The specific measures employed mainly include studying health risks specific to the workplace, employee surveys and education, regular monitoring of workers' health and finally preventive redeployment, which can be classified both in the health and redeployment areas.

Finally, the area of making older workers redundant or transitioning them to retirement is a key area in comprehensive Age Management. The case of retirement is especially delicate in its nature, as this area is most prone to labour market failures. While the ageing of societies dictates a greater need for older workers, many still find themselves in the limbo of a transitional period between the age they stop working and the age when they become eligible for pension benefits (Walker, 2005). This, we must



stress, will become more acute a problem as European countries raise their official retirement age. The answer is prolonging workers' working life and a more gradual transition into retirement, which suits both the workers and, as mentioned in this paper, organisations, which benefit from expert human capital in a more flexible way without overusing it. The main tools of both employment exit and retirement transition are the following: gradual preparatory measures for retirement at the corporate level, counselling facilities available for former employees, providing assistance in finding a new job, opportunities for retirees to maintain contact with colleagues, flexible forms of retirement and retirement transition (Naegele and Walker, 2006).

All the above measures work to their optimal effect only when taken together and the implementation of one or several particular tools should only be understood as a trial run for comprehensive Age Management (Walker, 1997). The important features of a truly transversal and comprehensive system are:

- Concentrating on prevention of older workers' redundancies
- Applying Age Management tools to workers of all ages
- Employing all areas of Age Management tools
- Flexible support to older workers affected by health issues and lacking in skills

The effectiveness of comprehensive Age Management has been proven in the literature by numerous case studies (See Liwiński and Sztanderska, 2010; Rappaport and Stevenson, 2004; Morschhäuser and Sochert, 2006; Naegele and Walker, 2006). However, there is no extensive research on Age Management for young workers, who are currently the most vulnerable age group in the workforce. The persisting high unemployment rates among even highly-skilled young people coupled with the demographic transition suggest a massive market failure. Although the argument that in several countries equilibrium can't be reached due to excessive supply of university graduates cannot be dismissed, part of the problem is most certainly on the demand side. Companies are, as suggested by the literature, starting to wake up to Age Management of older workers, but the real dearth of research on young-worker Age Management suggests that they are still unaware of the risks associated with a passive stance and the ways in which they stand to benefit from the efficient use of young human capital and, quite possibly, the best-educated generation in human history.

Data confirm this – according to the Bureau of Labor Statistics, an average American household from the under-25 age group earns nearly three times less income than the 45-54 age group, which constitutes the highest earners in intergenerational analysis. Meanwhile, the 65+ age group earns a mere 25% less (mainly thanks to pensions). These data measure only income – it is in household wealth where one expects the differences to be staggering, although estimates vary widely as wealth is more difficult to measure than income. Furthermore, the Gallup Underemployment Index stands at 19%, mostly owing to the large skill misallocation of the youngest generation of workers on the labour market. The grim prospects of young workers today and their long-term rising value as the demographic transition deepens combine into a powerful

incentive for companies to invest in Young Age Management – but the first step has to be more research on this least-studied area of Age Management. Some new methodologies which start to include a few tools designed for younger workers have recently been presented, a principal example being the research by Ball (2007), yet even these include very little focus on measures which could benefit specifically the youngest workers.

**Table 1.** Classification of Interventions, from ‘Removing Age Barriers’ Research

1. Job Recruitment	1.1 increasing maximum age limit
	1.2 elimination/absence of particular age barrier
	1.3 positive discrimination
	1.4 support of self-help group to promote their own employment
	1.5 training programmes to promote recruitment policies
	1.6 employment exchange/job centre for older workers
	1.7 other
2. Training, Development and Promotion	2.1 development of training and educational programmes, in particular for older/ageing workers
	2.2 in particular for older/ageing workers
	2.3 existing training and educational programmes opened to older/ageing workers
	2.4 creation of learning environment and workplace mentorship for older workers
	2.5 career development
	2.6 evaluation of performance
	2.7 promotion of age-specific policy in work organisations
	2.8 other
3. Flexible Working Practice	3.1 job rotation
	3.2 promotion of age-specific policy in work organisations
	3.3 flexible working hours/age related working time
	3.4 age related leave
	3.5 demotion (without change in wage level)
	3.6 part-time jobs
	3.7 flexible retirement/early exit scheme
	3.8 gradual retirement scheme/part-time “early exit”
	3.9 self regulation of pace
	3.10 other
4. Ergonomics, Job Design and Prevention	4.1 ergonomic measures/improvement work conditions/ workload
	4.2 organisation of tasks
	4.3 mix of young and older workers
	4.4 age related health and/or wealth control
	4.5 older workers excluded from shift labour
	4.6 other
5. Changing Attitudes within Organisations	5.1 research related to ageing and performance
	5.2 programmes to change attitudes and opinions towards older workers
	5.3 other

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6. Changes in Exit Policy	6.1 elevation of minimum age of early exit
	6.2 abolition of early exit programmes
	6.3 elevation of normal retirement age
	6.4 other
7. Other Policies	7.1 general age related policy; seniority programmes
	7.2 sectoral age related policy as result of Collective Agreements
	7.3 future plans
	7.4 recognition of caring responsibilities
	7.5 other

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Source: Ball C. (2007), Defining Age Management: Information and Discussion Paper, TAEN - The Age and Employment Network, p.7.

### Success factors in implementing Age Management

The first question arising from a discussion on Age Management implementation is how to measure success (or failure). One way is to simply record the make-up of the company's workforce by age group. This measure, however, may not be enough, even when benchmarked against other companies' performance – the changes in an organisation's age structure may well be exogenous, caused by macro trends on which the company had no influence. A more promising way of measuring Age Management implementation has been proposed by Tuomi *et al.* (2006), in the aforementioned Work Ability Index (WAI). This indicator's main objective is to identify the risk of employees leaving the company, especially for early retirement. The index can help identify both individuals and groups which are at risk of leaving the organisation prematurely and, implicitly, which areas of Age Management are failing at the company.

There are many important aspects of successfully implemented Age Management that a company needs to cover in order to enhance its WAI score. Naegele and Walker (2006) identify 7 areas of necessary measures for success. Firstly, age awareness should be introduced throughout the company by extensive training, starting with HR managers and key decision-makers and going all the way down to junior employees. Secondly, careful planning and implementation is a must, taking into account all global and organisation-specific risks and opportunities, strengths and weaknesses, to avoid major mistakes. In the third stage, after having received age-awareness training workers should immediately see improvements and age-specific adjustments of their workplace, so that they can put their new knowledge and know-how into practice. Throughout the whole process of implementation, all concerned parties (management, various organisational units, trade unions, etc.) should be brought into the discussion and convinced of the benefits of this new approach – if a strong interest group within the organisation objects, the most likely outcome will be failure of the process.

In order for everyone to be in agreement continuous communication of the goals and achievements of Age Management should be established. This, in most successful cases, is coupled with internal and external monitoring – creating a HR policy with age awareness requires organisational data on the age structure, personnel qualifications and development needs, workers' health status and work capacity etc. Finally,

Naegele and Walker (2006) identify constant evaluation during the process to search for potential weaknesses and a final assessment of the results of the implementation as the last and one of the more crucial areas in achieving an age-aware and non-discriminatory organisation. Other research suggests similar stages of successful implementation (Liwinski and Sztanderska, 2010). Table 2 demonstrates some of the benefits derived on each level from implementing Age Management.

**Table 2.** Age Management results for individual persons, companies, societies

<b>Individual</b>	Preventing premature ageing More successful, healthy life
<b>Enterprise</b>	Age-adjusted workplace More efficient employees with more customised management
<b>Society</b>	Preventing age discrimination Counteracting demographic collapse

The central point of this paper is that for Age Management to be truly successful in any given organisation, it must encompass all age groups, providing age-specific support and incentives. This will cause higher productivity in middle-aged workers, a larger share for the company of a growing labour participation of older employees and a competitive edge in the competition for ever-scarcer young talent. In the case of older workers there is a growing body of research, which identifies wage conditions, rigidity in workplace organisation, an inadequate skills and competencies match, as well as poor health as reasons for early retirement (Villosio *et al.*, 2008).

## Conclusions

Age is a crucial and primary feature of any given employee which determines risk factors at the workplace, job satisfaction, access to job opportunities, workplace autonomy, work intensity, probability of vertical and horizontal mobility and even a worker's loyalty to his current organisation. Age Management in its current intellectual mainstream is primarily focused on older workers who are at or near retirement age. The argument is the following: our societies are ageing and therefore we need to provide incentives for older workers to stay on or return from retirement, thus increasing their age group's labour participation. While this is a valid line of thought endorsed completely by this paper, it unnecessarily narrows down the debate to just one age group out of many (if not all) which should be included into comprehensive Age Management. As the demographic structure shifts to one dominated by older generations, young workers will become scarce and thus more valuable to employers. In fact, even middle-aged employees should be included into a company's age-specific strategy, as they need to be gradually and fluently transitioned into the next, less-lucrative and more uncertain stage of their career. It is also important to note that comprehensive Age Management means not only a focus on all employees' age groups, but also on three levels of its applicability: individual, enterprise-level and macroeconomic.

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### **Abstract (in Polish)**

Artykuł przedstawia nowy trend w teoriach zarządzania - zarządzanie wiekiem. Celem artykułu jest zdefiniowanie pojęcia zarządzania wiekiem oraz przedstawienie go w perspektywie makroekonomicznej, w perspektywie jednostki oraz w perspektywie firmy. Artykuł wymienia zalety wdrożenia strategii zarządzania wiekiem zarówno dla firm, jak i dla poszczególnych pracowników oraz przybliża narzędzia i sposoby mierzenia efektywności implementacji strategii. Zdaniem autorów, zarządzanie wiekiem jest sposobem na zwiększenie konkurencyjności przedsiębiorstw, jak i całych gospodarek w obliczu kryzysu demograficznego.

Słowa kluczowe: demografia, zarządzanie wiekiem, zatrudnienie, strategia, metody pracy.