

### MAX-PLANCK-INSTITUT MAX PLAN FÜR DEMOGRAFISCHE FORSCHUNG RESEARCH

### MAX PLANCK INSTITUTE FOR DEMOGRAPHIC RESEARCH





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### Developing demographic literacy – a future organizational key competence

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Learning later in life – Uncovering the potential of investing in an ageing workforce International Seminar of the European Centre for the

Development of Vocational Training

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- Changing demographics
- Emerging organizational uncertainties
- Developing demographic literacy
- Open questions

# Changing demographics



## Life expectancy



## Fertility



## Migration

## **Enormous increase in life expectancy**



### Female life expectancy in selected countries, 1990-



## Declining fertility rates in Germany, 1952-2006

#### Development of fertility rates in East and West Germany, 1952-2006





#### Development of emigration, immigration and net migration in Germany, 1965-2007



# **The Population "Pyramid"**

Age profile of the German population in 2006, 2030 und 2050, in 1000 population



**Office Germany** 





Aging workforces and declining productivity?



Labor or skills shortages?



Loss of knowledge and know-how?





Development of the age profile of the German labor force, 1990-2050

Fuchs, J.; Söhnlein, D. & Weber, B. (2011): Projektion des Arbeitskräfteangebots bis 2050: Rückgang und Alterung sind nicht mehr aufzuhalten. IAB-Kurzbericht 16/2011.





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Aging is not a problem per se but an aging workforce could become a problem for an organization if age related declines in the employees' capacity negatively affect their work performance and productivity.



Development of the labor force potential in Germany, 1990-2050



Fuchs, J.; Söhnlein, D. & Weber, B. (2011): Projektion des Arbeitskräfteangebots bis 2050: Rückgang und Alterung sind nicht mehr aufzuhalten. IAB-Kurzbericht 16/2011.

## Towards a higher qualified workforce



Development of the skills needs in Germany, 2003-2020

Bonin, H.; Schneider, M.; Quinke, H. & Arens, T. (2007): Zukunft von Bildung und Arbeit. Perspektiven von Arbeitskräftebedarf und angebot bis 2020. IZA Research Report No. 9,1 Bonn.

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Assumption I: Aging is not a problem per se but an aging workforce could become a problem for an organization if age related declines in the employees' capacity negatively affects their work performance and productivity.

> Shrinking labor markets and an increased demand for skilled and highly qualified employees may lead to skills and labor shortages. This may especially be a concern for organizations located in economically weak and less developed regions characterized by a weak infrastructure.

# Loss of knowledge and know-how



- In the next few years the large cohorts of the baby-boomer generation are expected to approach retirement age and consequently leave the labor market.
- This could potentially lead to an uncontrolled loss of experienced based knowledge and know-how these retirees possess.
- Potential consequences could be a reduced capacity to innovate, reduced efficiancy, a lower quality of products and services and more (severe) errors (DeLong 2002).

# Assumption III

### **Assumption I**

Aging is not a problem per se but an aging workforce could become a problem for an organization if age related declines in the employees' capacity negatively affects their work performance and productivity.

### **Assumption II**

Shrinking labor markets and an increased demand for skilled and highly qualified employees may lead to skills and labor shortages. This may especially be a concern for economically and less developed regions characterized by a weak infrastructure.

> The retirement wave of the huge baby-boomer generation may lead to an uncontrolled loss of invaluable experience based knowledge and know-how.









Research has shown that companies and organizations are affected (if at all) very differently by direct or indirect consequences of changing demographics and react to those consequences with a wide variety of single measures and specific policies.



Thus, it is much more important to understand to what extent a specific organization will be affected—directly or indirectly—by changing demographics and act accordingly. This refers especially to the three mentioned uncertainties that might emerge from changing demographics.

Organizations should develop demographic literacy enabling them to assess their specific individual risks.



## **Definig demographic literacy**

# Following the literacy definition of the UNESCO (2005), demographic literacy should be defined as the ability of organizations

to generate or identify information and data about internal (workforce) and external (labor market) demographic developments,

to analyze these data and information and—if necessary link them with further data and information,

to interpret, understand and assess the outcomes, and

to develop and introduce respective measures and policies.



"Data! data! data!" [. . . ] "I can't make bricks without clay."

SHERLOCK HOLMES in THE ADVENTURE OF THE COPPER BEECHES

## Demographic literacy—conceptual framework



# Approaches and strategies

- Developing demographic literacy is a process of organizational learning and will be of vital importance concerning the future development and implementation of organizational strategies in order to stay competitive.
- Especially small and medium sized companies need support in this process.
- Potential supporters could be
  - Social partners (e.g. via collective agreements),
  - Labor administration,
  - Chamber of commerce and industry,
  - Employer associations,
  - Organizations of health insurance and pension funds,

- ...



- (At least) two good reasons not to tackle the issue of demographics changing:
  - The crises (always a good reason to leave something undone);
  - The "virtuality" of demographic change (there is no due date)



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## Thank you for your attention!

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# **Back up**





**Figure 2** | **The emergence of the extremely old.** The numbers of females aged 100+ in Sweden from 1861 to 2008 and aged 105+ in Japan from 1947 to 2007. Very old people were rare until roughly half a century ago. Since then, the number of Swedish centenarians has risen rapidly, and since 1975 the number of Japanese women 105 or older has climbed almost vertically. (Data from the Kannisto–Thatcher Database on Old Age Mortality (http://www.demogr.mpg.de) supplemented with data from Statistics Sweden and the Japanese Ministry of Health.)

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Vaupel, JW (2010) Biodemography of Human Aging, *Nature*, 464:7288, 536-542.

Every second child born today will reach 100 years of age!

# Age specific contribution to the increase in record life expectancy in women from 1850 to 2007

	1850-1900	1900-25	1925-50	1950-75	1975-90	1990-2007
0–14 years	62.13%	54.75%	30.99%	29.72%	11.20%	5.93%
15–49 years	29.09%	31.55%	37.64%	17.70%	6.47%	4.67%
50–64 years	5.34%	9.32%	18.67%	16.27%	24.29%	10.67%
65–79 years	3.17%	4.44%	12.72%	28.24%	40.57%	37.22%
>80 years	0.27%	-0.06%	-0.03%	8.07%	17.47%	41·51%

Data derived from reference 12 and the Human Mortality Database.

Table 2: Age-specific contributions to the increase in record life expectancy in women from 1850 to 2007

Christensen, Doblhammer, Rau, Vaupel (2009): Aging populations: the challenges ahead, The Lancelot, Vol 374, Oct 3, 2009





Jeanne Calment 122 Years † 1997



Chris Mortensen 115 Years † 1998







Total fertility rates in countries that have experienced lowest-low fertility and in selected other developed countries, 1989–2008

Goldstein, J.R. et al. (2009): The End of "Lowest-Low-Fertility"?, *Population and Development Review 35 (4*): 663-699.

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## Share of people aged 65+, EU-27 in 2008 and 2060



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## Population growth/decline in the EU-27, 2008-2060



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