



XIV OCCUPATION and HEALTH  
Russian National Congress with International Participation  
September 26, 2017

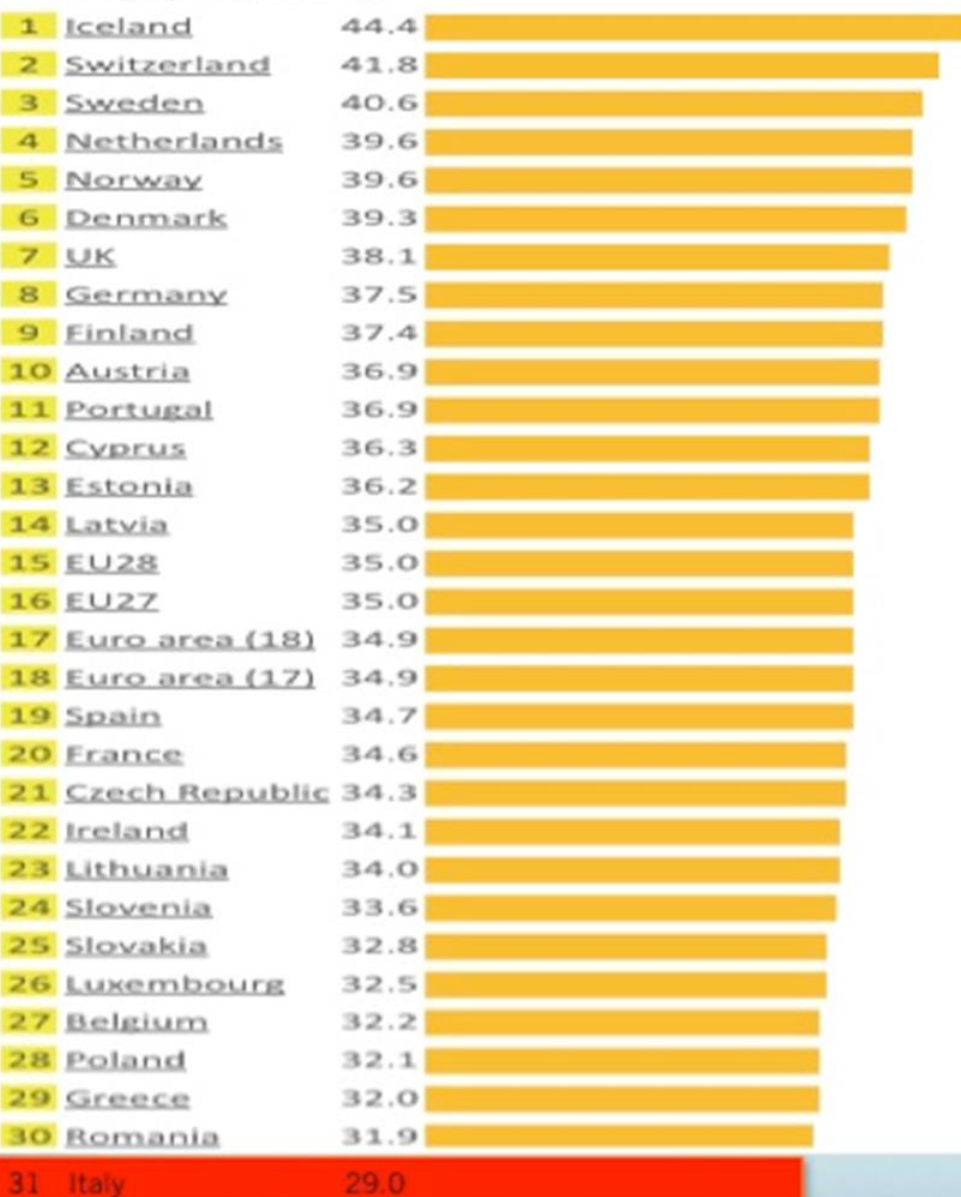


**"Modern aspects of the workers' health preservation in Finland"**

Prof Jorma Rantanen, MD, PhD, PhD Hon  
Director-General Emeritus, Finnish Institute of Occupational Health, and Visiting Scientist, University of Helsinki,  
Department of Public Health/Occupational Health, Finland  
Former President of ICOH

## Total, years

Working life expectancy



## GDP per capita (Y) and working life experience (X)

Euro per capita, years

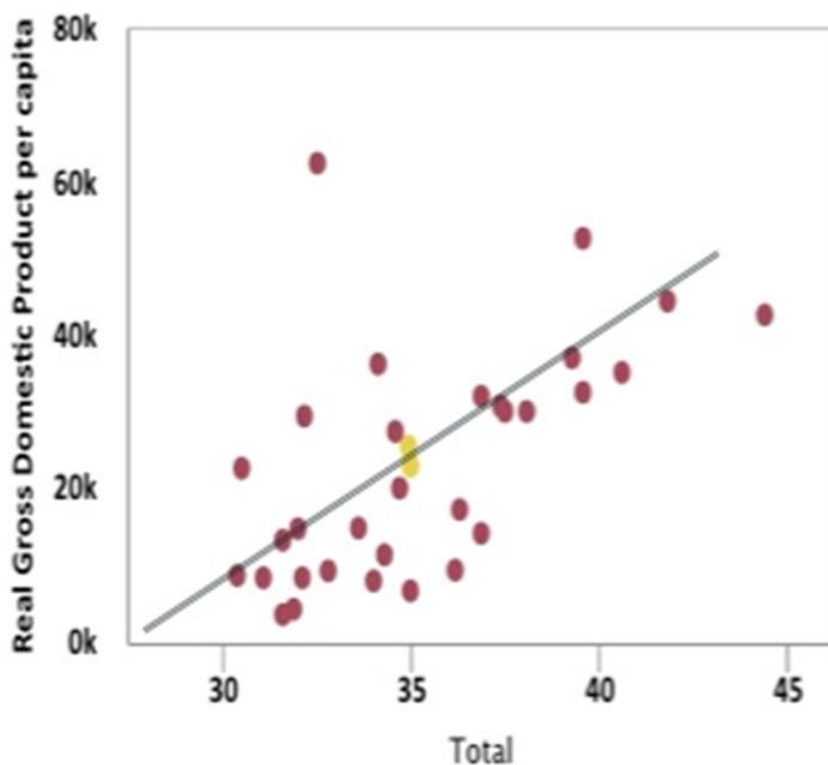
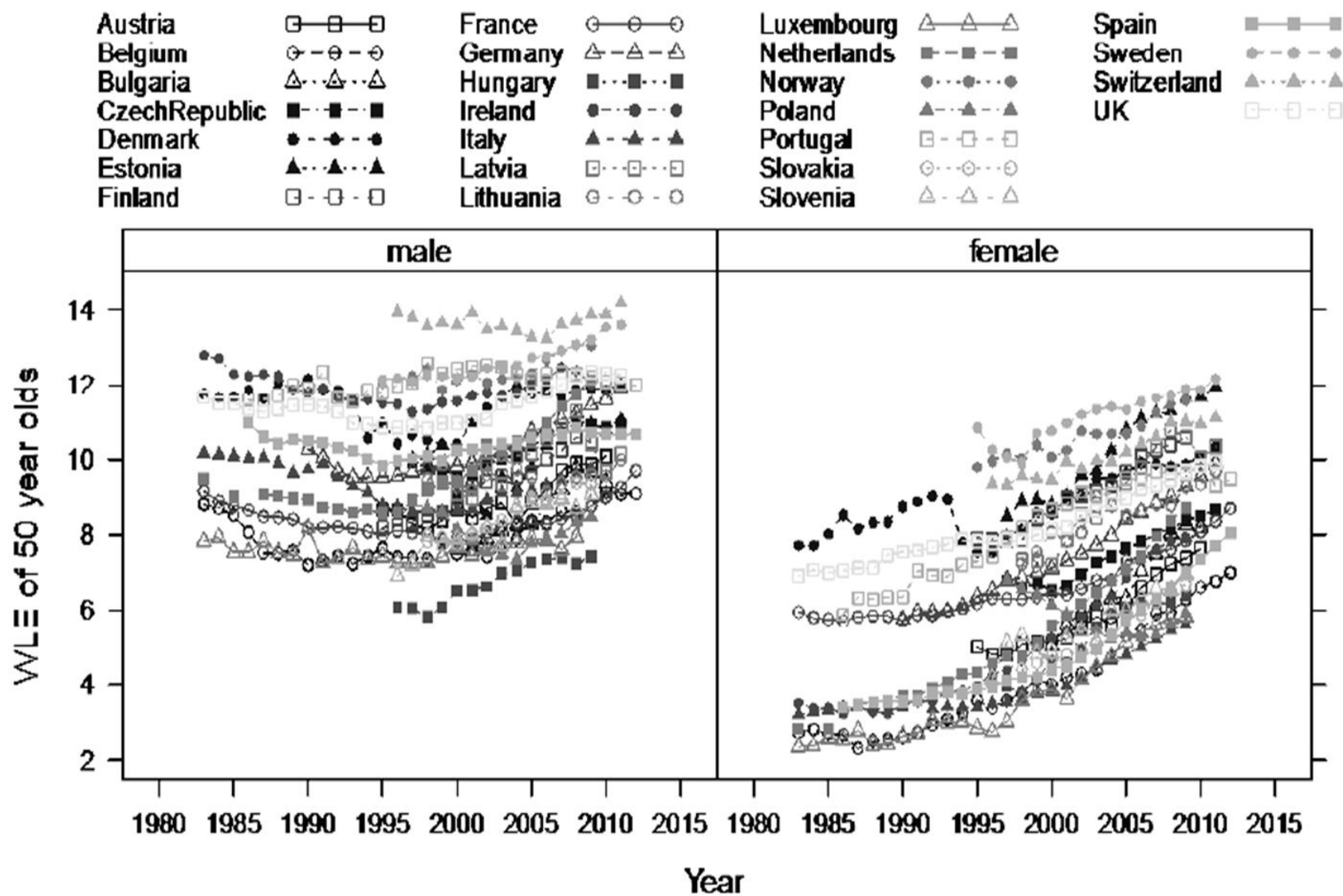


Figure 3. Working life expectancy at age 50 for 26 countries in Europe, by sex (source: own calculations).



**Work & work environment Determinants**

- Management
- Type of work
- Work organization
- Work climate

**Social & population Determinants**

- Labour market status
- Social group
- Social protection
- Migration, low income, poverty, etc..

**Individual Determinants**

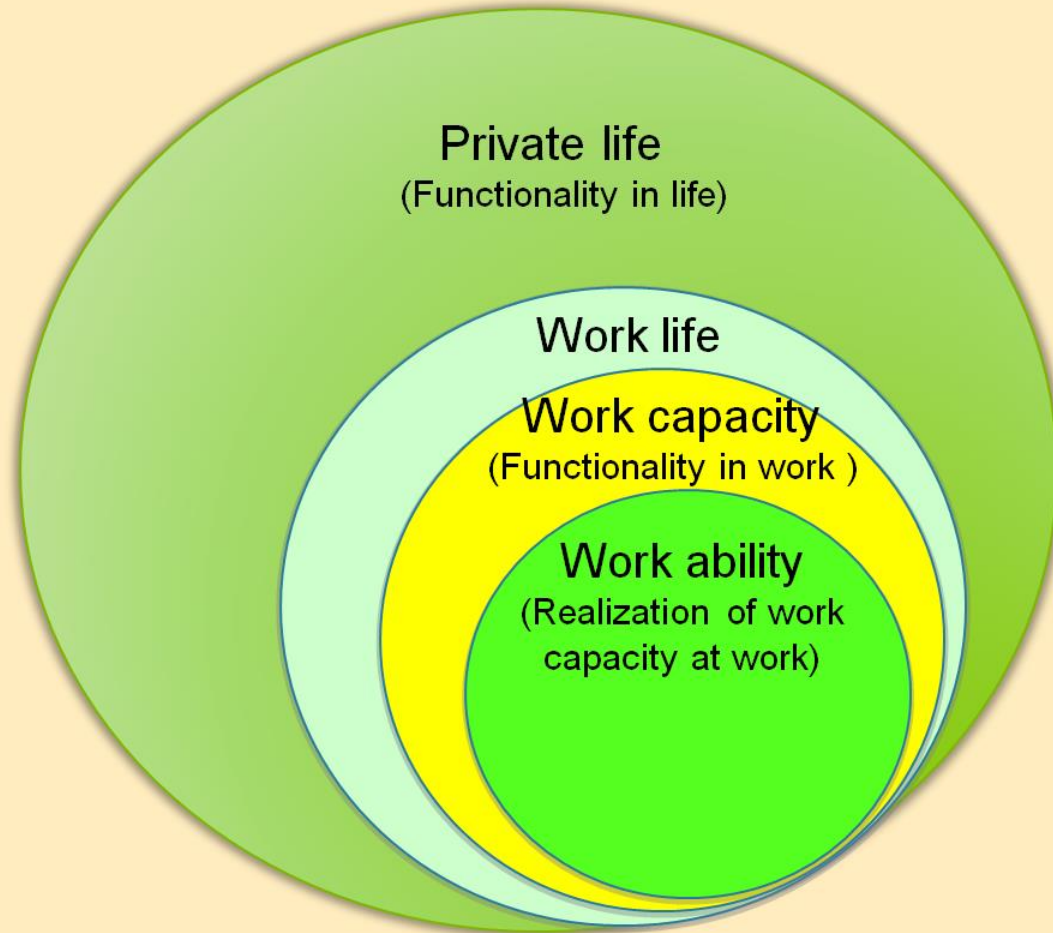
- General health
- Gender
- Age
- Education
- Skill
- Etc...

Occupational morbidity  
( ~ 150 diseases)

Work-related morbidity

General morbidity  
MSDs  
CVDs  
Cancer  
MHDs  
RDs etc

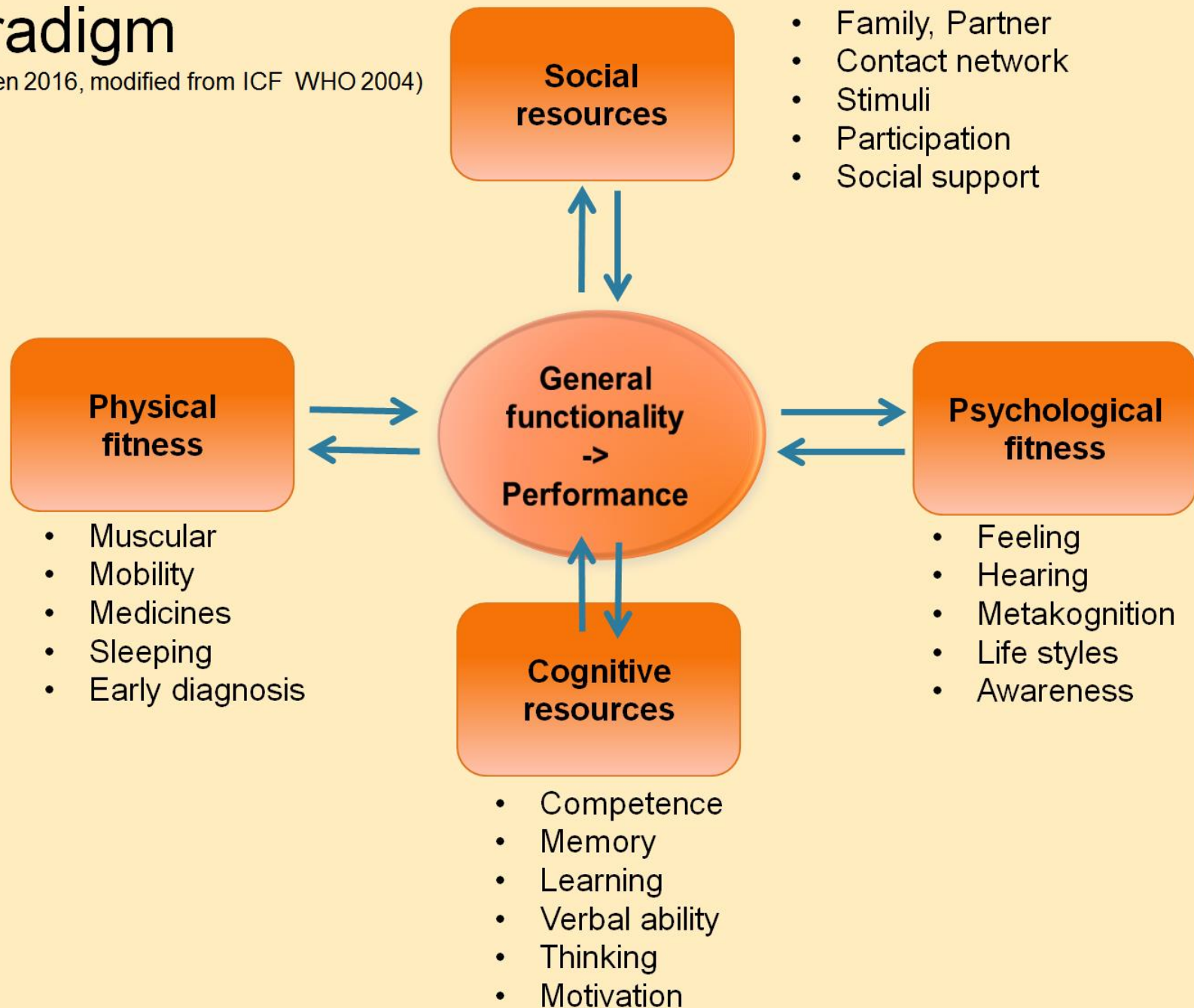
## Worker's total life



Most often  $\text{Work capacity} > \text{Work ability}$ . In optimal conditions (= Decent Work) the  $\text{Work ability} = \text{Work capacity}$ .

# Paradigm

(Rantanen 2016, modified from ICF WHO 2004)



# Work Ability Index, WAI (Ilmarinen 2006)

<http://www.ageingatwork.eu/resources/health-work-in-an-ageing-europe-enwhp-3.pdf>

## Is your work physically or psychologically demanding or both?

1. What is your work ability in relation to job demands?
2. What is your work ability compared to your personal best?
3. Do you suffer any of the listed 14 diseases, on your own conclusion, or diagnosed by doctor?
4. If yes, how much impairment those diseases cause at work?
5. What is your expected work ability 2 years from now?
6. Have you been ill during the past 12 months?
7. Have you enjoyed your activities –been active and energetic during past 3 months

Scoring and Work ability action:

2 – 27 “poor” Reinstate work ability; 28 – 36 “medium” Improve work ability  
37 – 43 “good” Support work ability; 44 – 49 “very good” Maintain work ability

# Work ability vs. mortality: 28 yr follow-up

(Bondsorf M et al CMAJ, March 8, 2011, 183(4))

<http://www.cmaj.ca/content/183/4/E235.full.pdf+html>

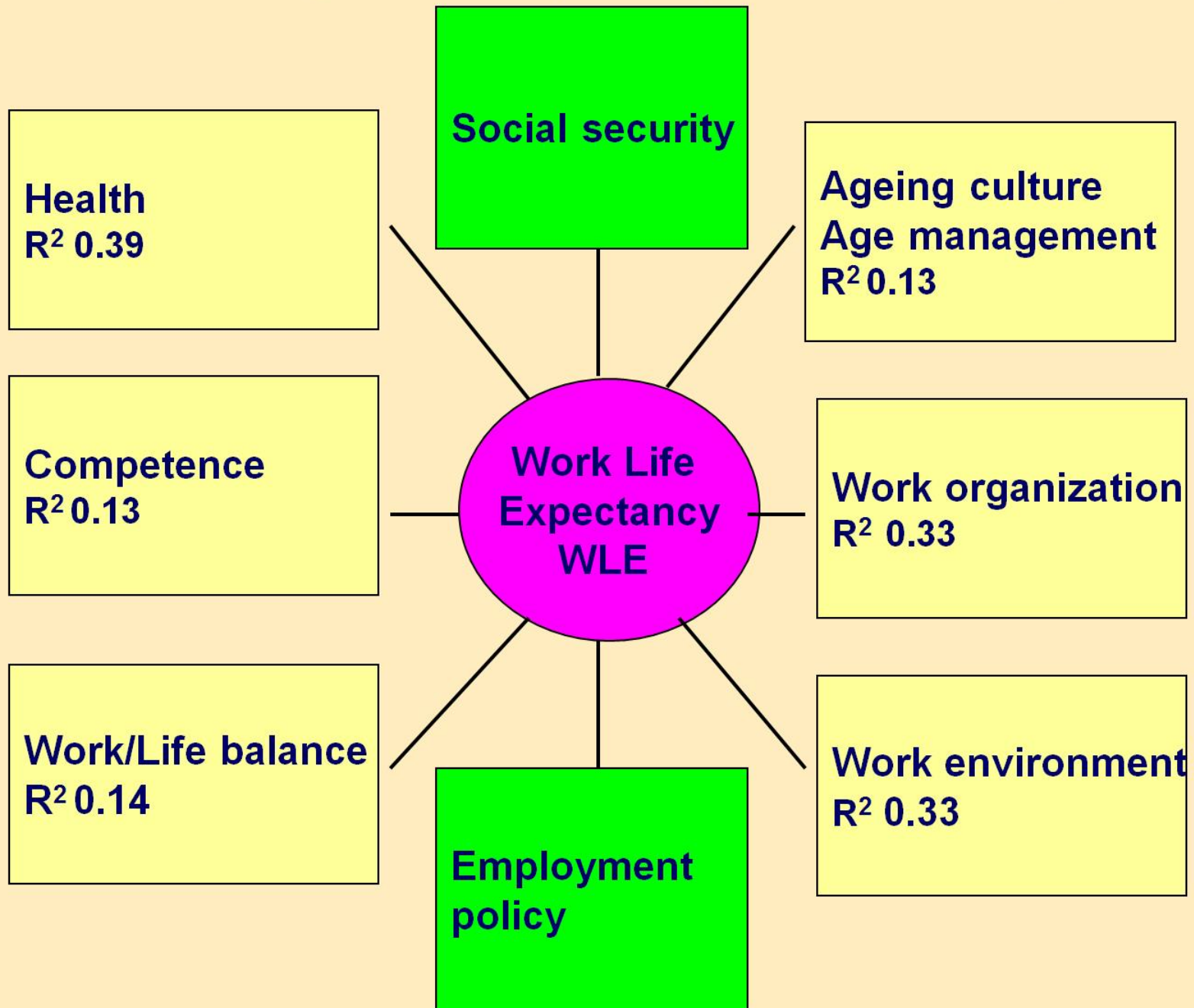
Work ability index 28 yr before	White collars M Mortality/1000	Blue collars M Mortality/1000
Excellent	7.7	15.5
Moderate	14.7	20.2
Poor	23.5	25.3

**Conclusion: WAI is a strong long-term predictor of WLE**

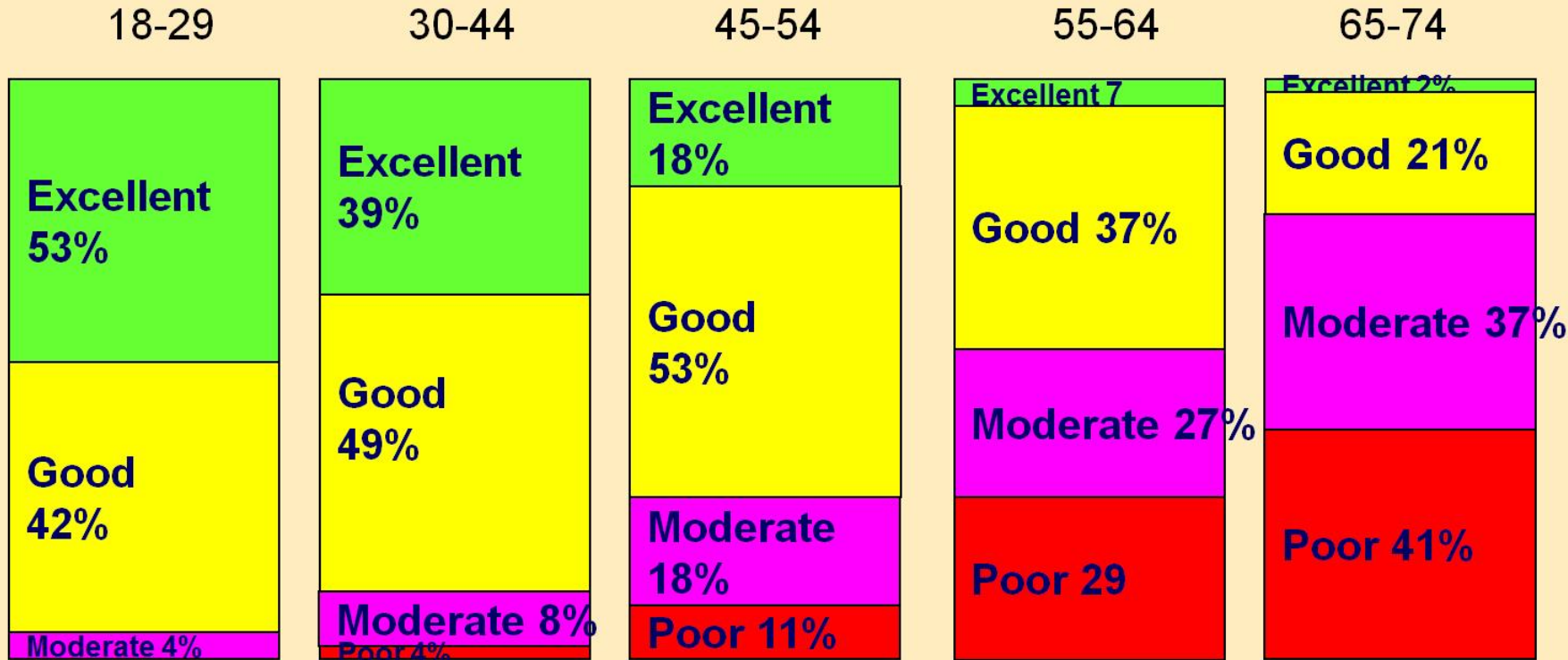
## Risk of work disability pension by job or worker characteristics

Job /worker characteristics	Risk of disability pension
<b>Polvinen, Finnish Centre for Pension 2009, 7-year follow-up, n= 3600</b>	
Age 50-55/30-39	7x
Education level basic/high	3.4x
Income €/year 10000/ >20000	1.7x
CHD+ /CHD -	5x
Physical fitness good/poor	4.2x
Psychological exhaustion yes/no	3.8x
Cynicism	2.6x
Job satisfaction poor/good	2.62x
<b>Sterud: Scand J Work Environ Health 2013;39(5):468-476), n= 18679, 3-year follow-up</b>	
Monotonous work	30.37-19.29
Standing	29.93-21.28
Awkward lifting	15.04
Low level of supportive leadership	9.57- 6.55
Bullying/harassment	7.55

# Factors affecting work life expectancy (Gould et al 2009)

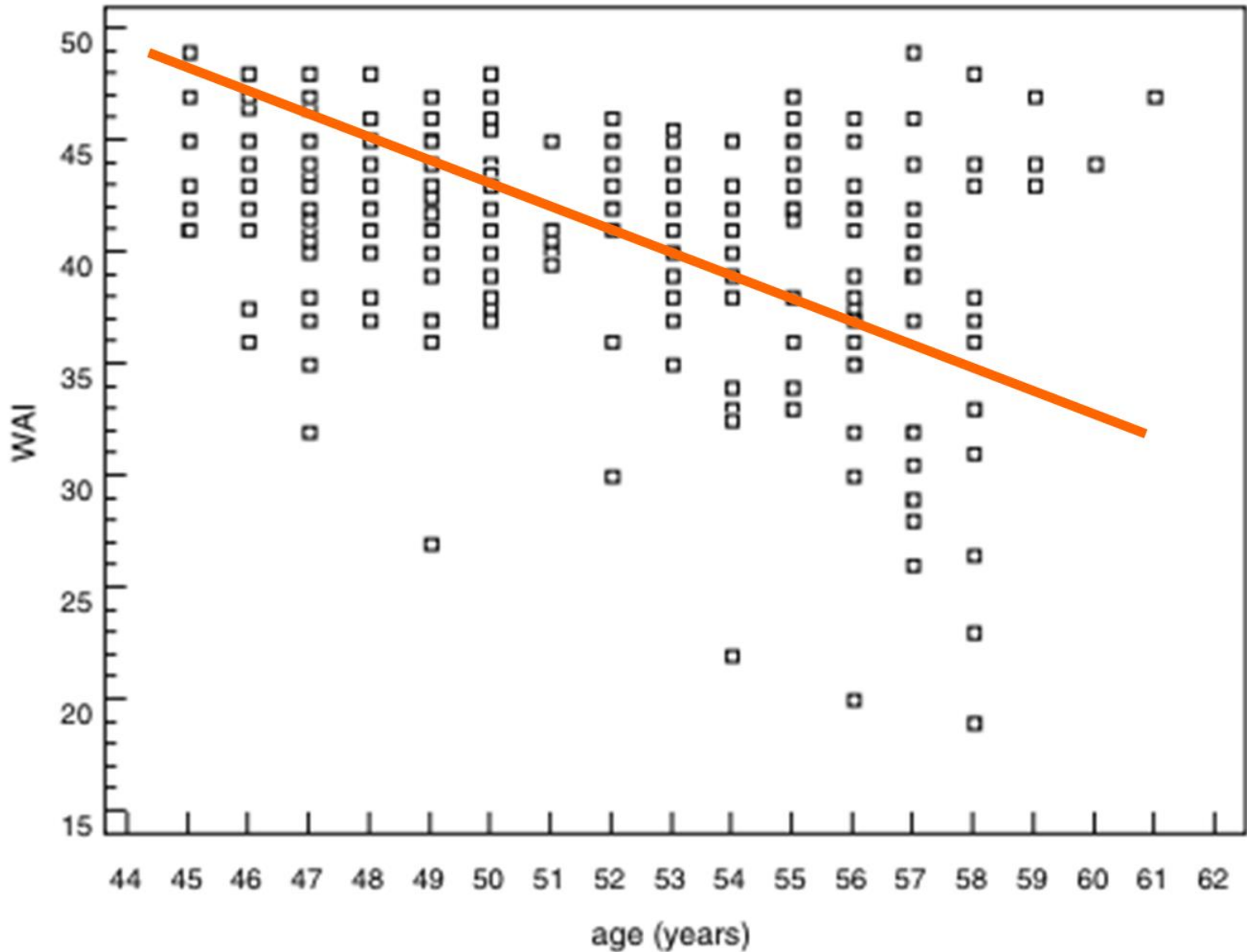


Impact of age on work ability among Finnish workers (Source: Gould et al. 2008)



# WAI of Dutch firefighters by age.

(The arbitrary line added by J.Rantanen) (Kis et al. 2002)



# Occupational Health Service actions for PMWA

## Individual & Group approach

- Basic check
- Age groups >45
- WHP
- LLL, HE
- PMWA

- Basic check
- Age groups >45
- WHP, HE
- LLL
- PMWA

- Early DG
- WRDs
- WRD Prevention
- Early intervention
- Good care
- PMW RTW

- Good care
- 2nd & 3rd Prevention
- Early rehab.
- PMWA



**For All: Resource generating  
age management**

## Actions to Work community, work & work environment

“Conducive” management  
and work culture

- Regular risk monitoring & assessment
- Structural prevention
- Primary prevention

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- Job placement
- Job adjustment
- Work practices

- Job and work environment adjustment
- Lightened work
- Part time work

# The Finnish Model for Integrating to work of workers with lowered work ability

(MoSAH Finland 2015)



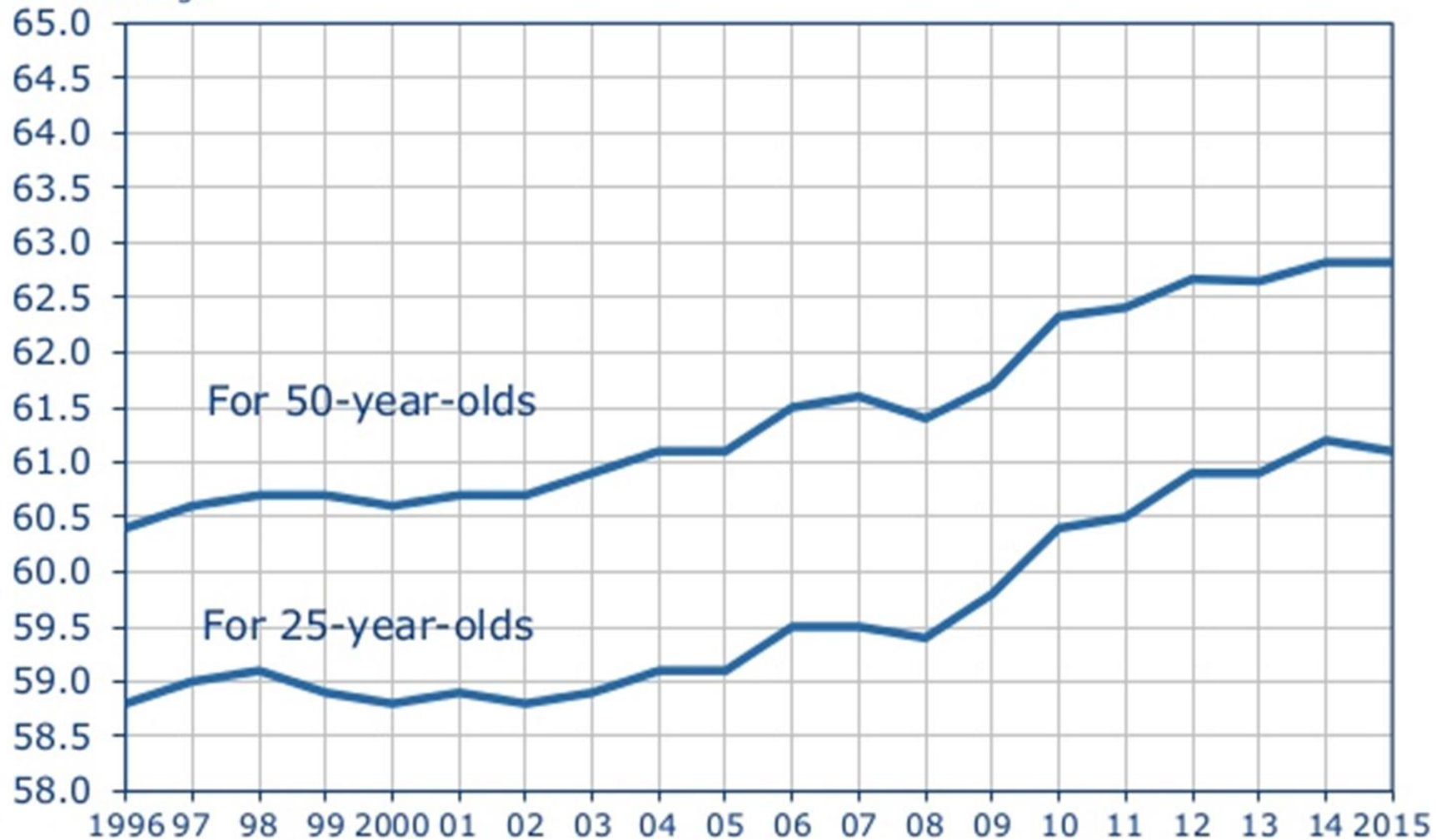
■ **Responsible:** employer or employment office

■ **Plans the methods to be used:** work ability coordinator

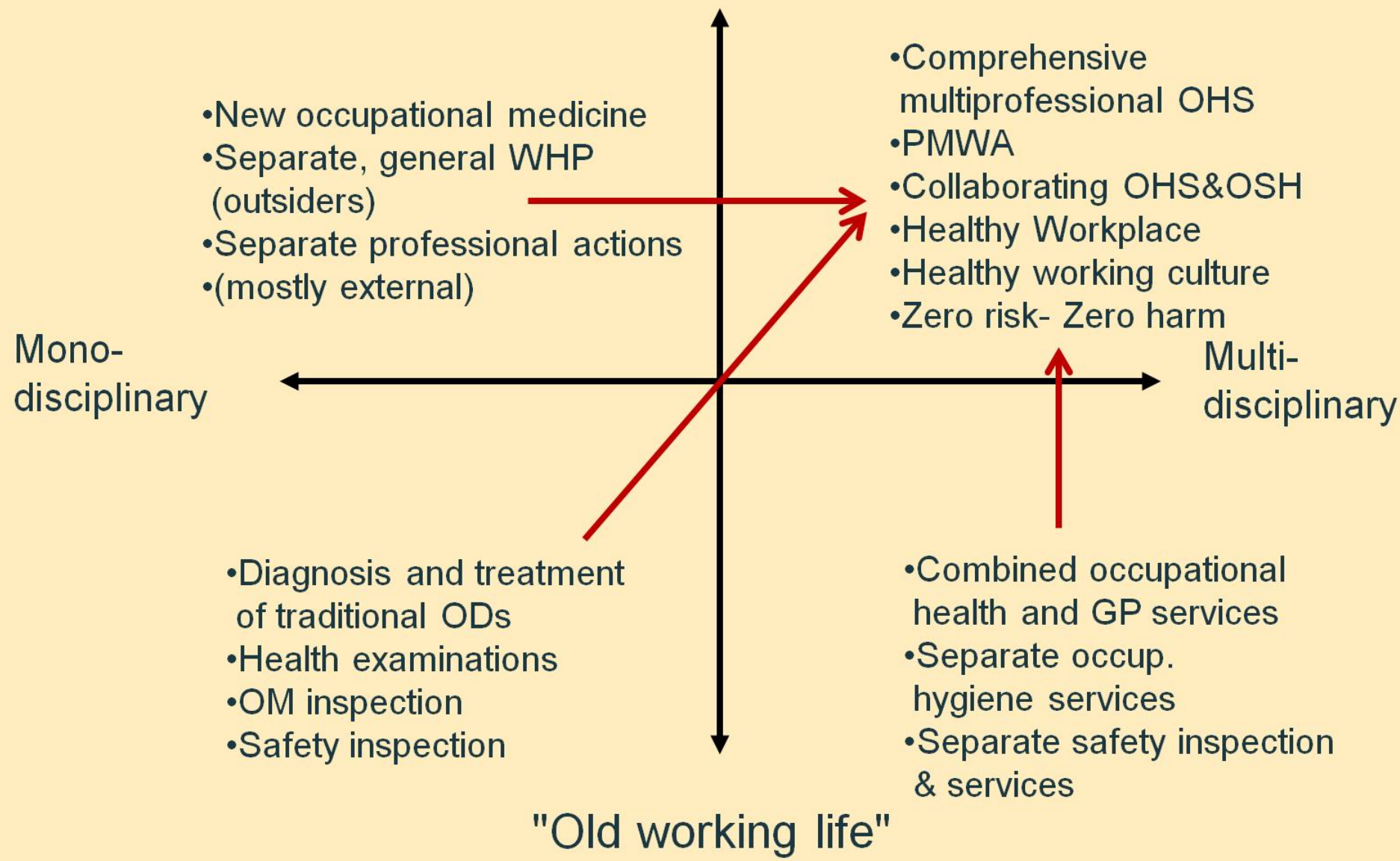
■ **Up-to-date information on the various means, services and benefits:** open web service

# Expected effective retirement age, all new retirees on an earnings-related pension

Expected effective retirement age



# "New working life"



# Summary: What to do to promote and maintain work ability

- **Physical work ability:**
  - ✓ Regular exercise, low intensity aerobic, muscular strength
  - ✓ Weight control, healthy life styles, no tobacco, no alcohol
  - ✓ Good health care: promotion, prevention, care, rehabilitation
- **Psychological work ability:**
  - ✓ Continual stimuli, memory exercises, memory tools
  - ✓ Physical exercise
  - ✓ Social networking
  - ✓ Positive approach, respect, trust, zero tolerance for age discrimination
  - ✓ Cultural activities
- **Cognitive work ability:**
  - ✓ Continuous learning
  - ✓ Ensuring physical health
  - ✓ Collecting new experiences
  - ✓ Strengthening metacognition
  - ✓ Good sleep
- **Social work ability:**
  - ✓ Prevention of isolation (inclusive labour market);
  - ✓ Maintaining and development of social networks; hobbies, near-networks,
  - ✓ Active participation
- **Develop conducive working conditions and Decent Work**

Spasiba!

Thank you!

Kiitos!