COPSOQ: The German situation

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COPSOQ: The German situation

From the COPSOQ validation study to a database with profession specific reference values for psychosocial factors

I. Background

II. Adaptation and translation into German

III. Validation study: psychometric qualities of questionnaire and scales

IV. Formation of database in cooperation science-enterprises/organisations

V. Use of database with profession specific reference values

I. Background

Background

- Sick leave due to psychosocial factors ++
  - i.e.: DAK 2005: + 70 % from 1997 und 2004 (total sick leave -,=)
- Costs raising
- D: Obligation to risk assessment („Gefährdungsanalyse“, §5ff, ArbSchG)
- How? Which instruments? (lack of qualified instruments)

Background / starting point

- Need of (valid and reliable) measurement tools
- Measurement of psychosocial factors difficult (as compared to safety-checklists)
- Lot of different models, theories (DCSM, ERI,…). And: theories are determining the instruments! (and the results)
- Different assessment techniques (observation, expert ratings, experimental techniques, self administered questionnaires)

ISO for measuring psychosocial factors

- ISO 10075-3: 3 levels
  - Orienting measurement (level 1)
  - Screening measurement (level 2)
  - Exact measurement (level 3)

- ISO: depending on level: different psychometric requirements

II. COPSOQ: Adaptation and translation into German

COPSOQ validation study 2003-2005

„Methods for the assessment of mental work load – testing of a measuring procedure (COPSOQ)“

baua: Bundesanstalt für Arbeitsschutz und Arbeitsmedizin

- Funding: Federal Institute for Occupational Safety and Health (BAuA /FIOSH)

FFAS Freiburger Forschungsstelle Arbeits- und Sozialmedizin

- Project team:
  - FFAS Freiburg (M. Nübling, M. Michaelis)
  - Univ. Freiburg, Medical Sociology (U. Stößel)
  - Univ. Wuppertal, Occupational Medicine (H.-M. Hasselhorn, F. Hofmann)

ami arbejdsmiljøinstituttet

- External partners
  - Univ. Freiburg, Psychology (M. Wirtz)
  - ami (National Institute of Occ. Health), Copenhagen (T. Kristensen)

COPSOQ- the original

COPSOQ = COpenhagen PsychoSOcial Questionnaire
Autoren: TS Kistensen, V Borg, ami, Kopenhagen 2000
N=1858.
„Based on theory but not on one specific theory“. (Broad)

3 Versions:

- Long: „Research Quest.“: 30 Scales, 141 Items (-> with some modifications = starting point of German study)
- Middle: „Quest. for work environment professionals“: 26 Scales, 95 Items
- Short: „Quest. for workplaces“: 8 Scales, 44 Items

COPSOQ-study: steps (1)

- 1. Translation and adaptation of COPSOQ (2003)
  - translation – retranslation: English - German - English
  - translation – retranslation: Danish - German – Danish
  - semantic adaptation
  - additional items and scales
  - Expert- decision on final wording (TSK, HMH, MN)
- 2. Pilot study (2003, N= 352), final modifications
- 3. Main study (2003/04, N = 2.561), heterogeneous (not representative as in DK) spectrum of jobs, cooperation with enterprises / organisations (“survey for free”)

German COPSOQ- main study,long version

Demands (5)
- Quantitative demands
- Cognitive demands
- Emotional demands
- Demands for hiding emotions
- Sensorial demands

Influence and Development (5)
- Influence at work
- Degree of freedom at work
- Possibilities of development
- Meaning of work
- Workplace commitment

Further parameters (1+5)
- *Work - privacy conflict*
- *Procedural justice*
- *Relational justice*
- Job insecurity
- *Mobbing*
- *Intention to leave*

Interpersonal relations and leadership (8)
- Predictability
- Role clarity
- Role conflicts
- Quality of leadership
- Social support
- Feedback
- Social relations
- Sense of community

Strain (effects, outcomes)
- Job satisfaction
- *Work ability*
- *General health*
- *Burnout*
- Behavioral stress
- Cognitive stress
- *Satisfaction with life*

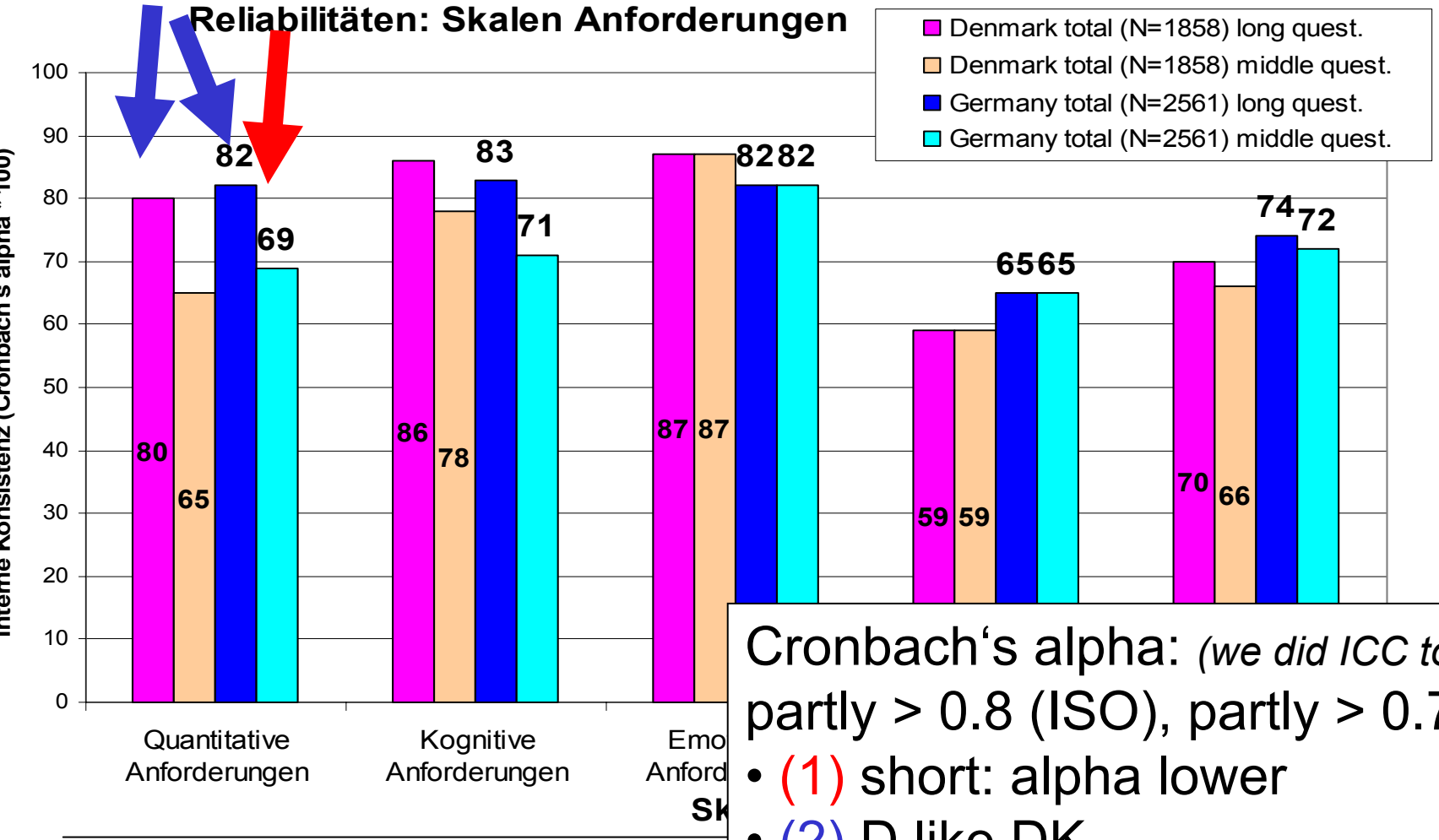
COPSOQ-study: steps (2)

- 4. Reanalysis of the measurement properties (2004)
  - Objectivity (measurement, evaluation)
  - Sensitivity
  - Validity (content, construct, criterion)
  - Reliability
  - Diagnostic power
  - Generalisability
  - Suitability in terms of the ISO 10075-3
- 5. Proposal of a shortened measuring instrument
- 6. Final report (May 2005)

COPSOQ: The German situation

III. Validation study: psychometric qualities of questionnaire and scales – some examples

ex: Reliability scales (internal consistency)

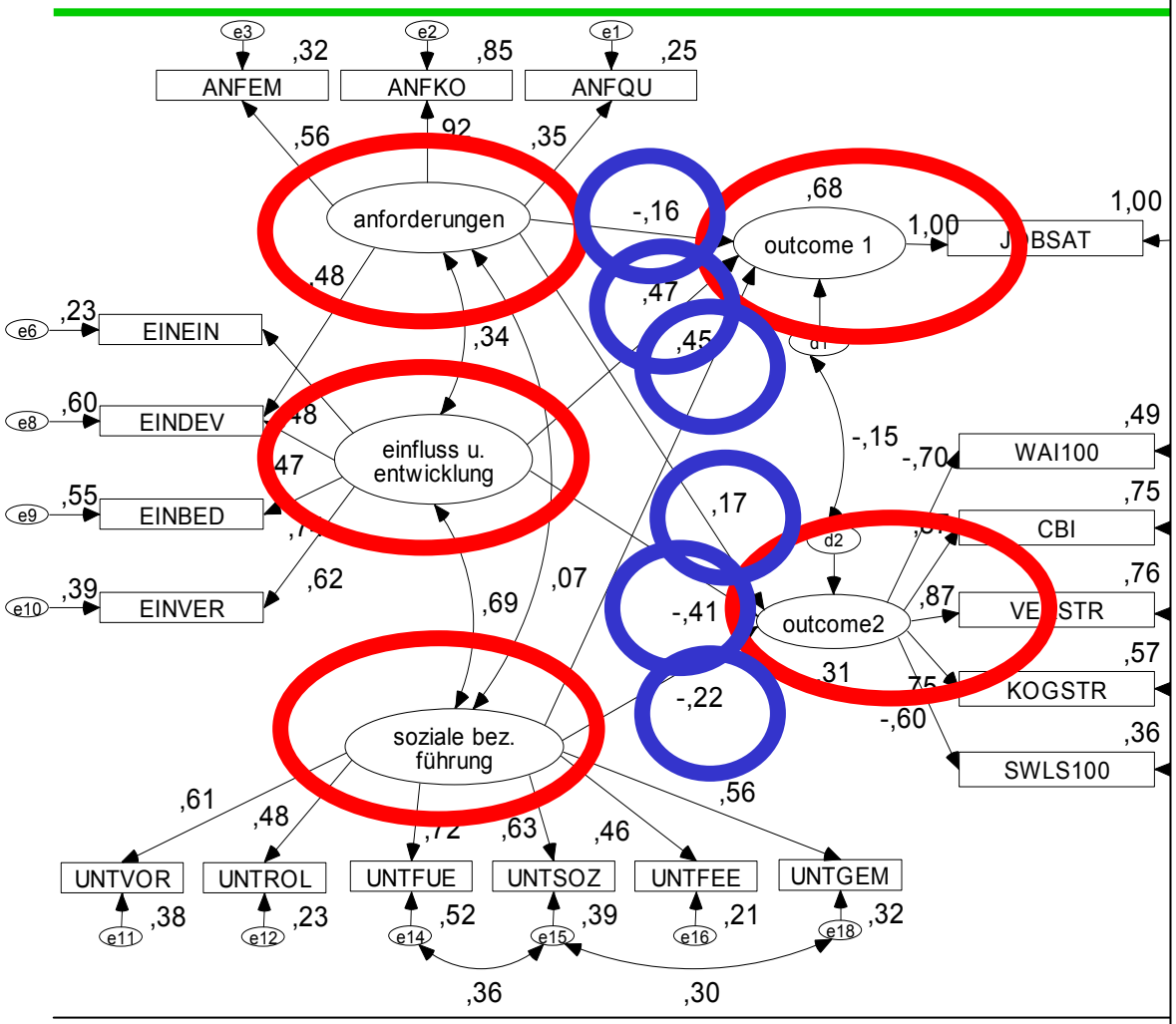


Cronbach's alpha: *(we did ICC too)*

partly > 0.8 (ISO), partly > 0.7

- (1) short: alpha lower
- (2) D like DK

ex: Validity

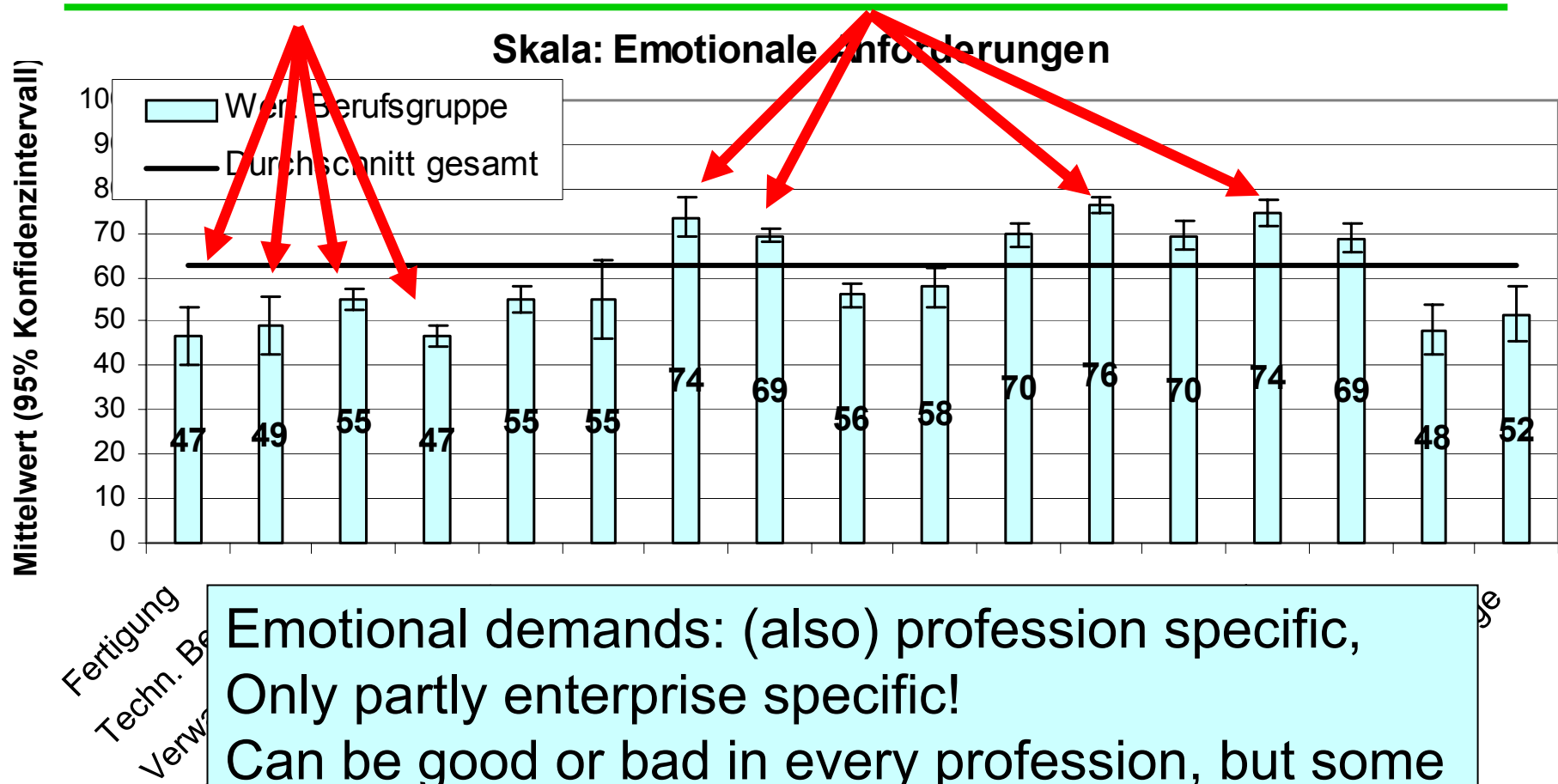


Content validity: questionnaire very comprehensive (broad).

Construct validity (SEM): dimensions (mostly) good to separate / distinguish

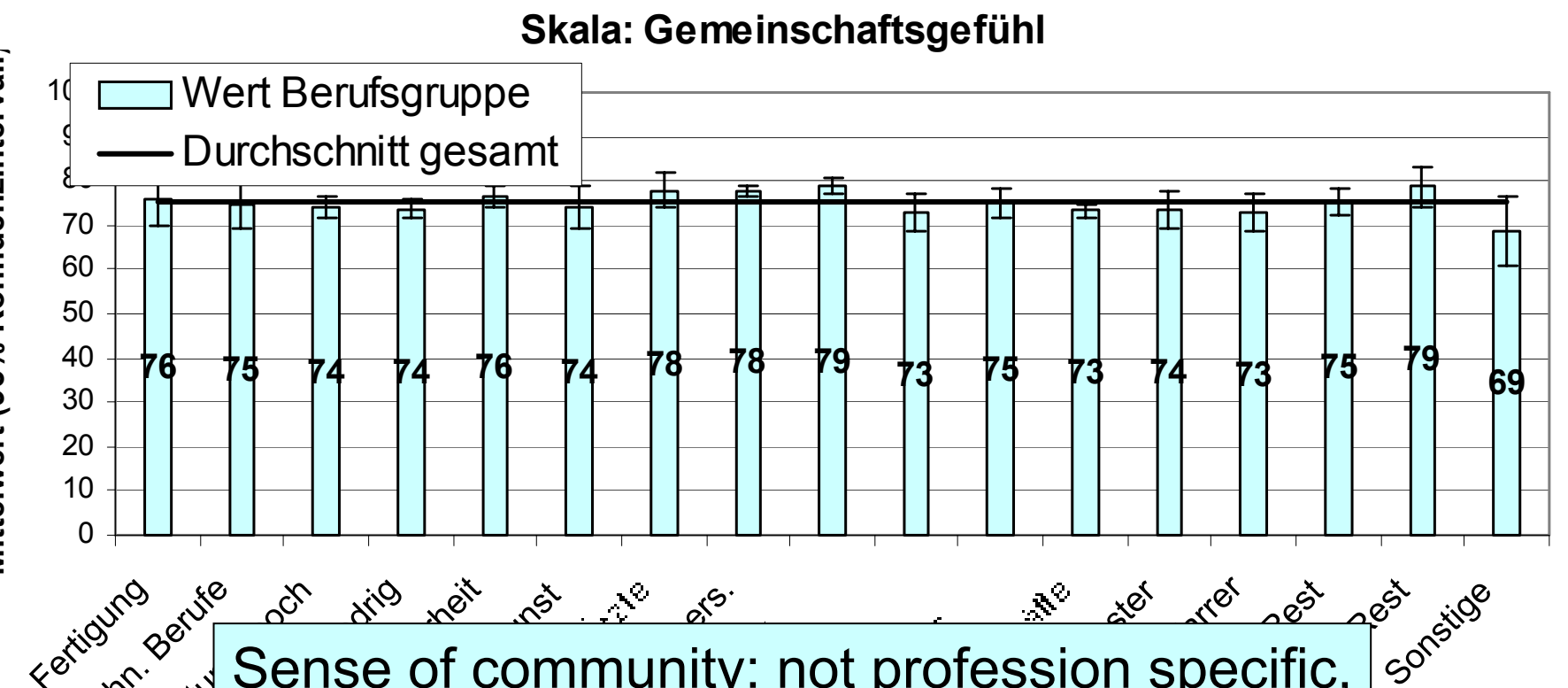
Criterion validity: relations to outcomes as postulated (some scales omittable)

We (COPSOQ) find the differences, that are expected /known.
Some parameters are profession specific, some not.
(Scales measure at least something similar to what they should)



Emotional demands: (also) profession specific,
Only partly enterprise specific!
Can be good or bad in every profession, but some profs have a systematic advantage /disadvantage.

ex: comparision of professions (sensitivity, Diag. power)



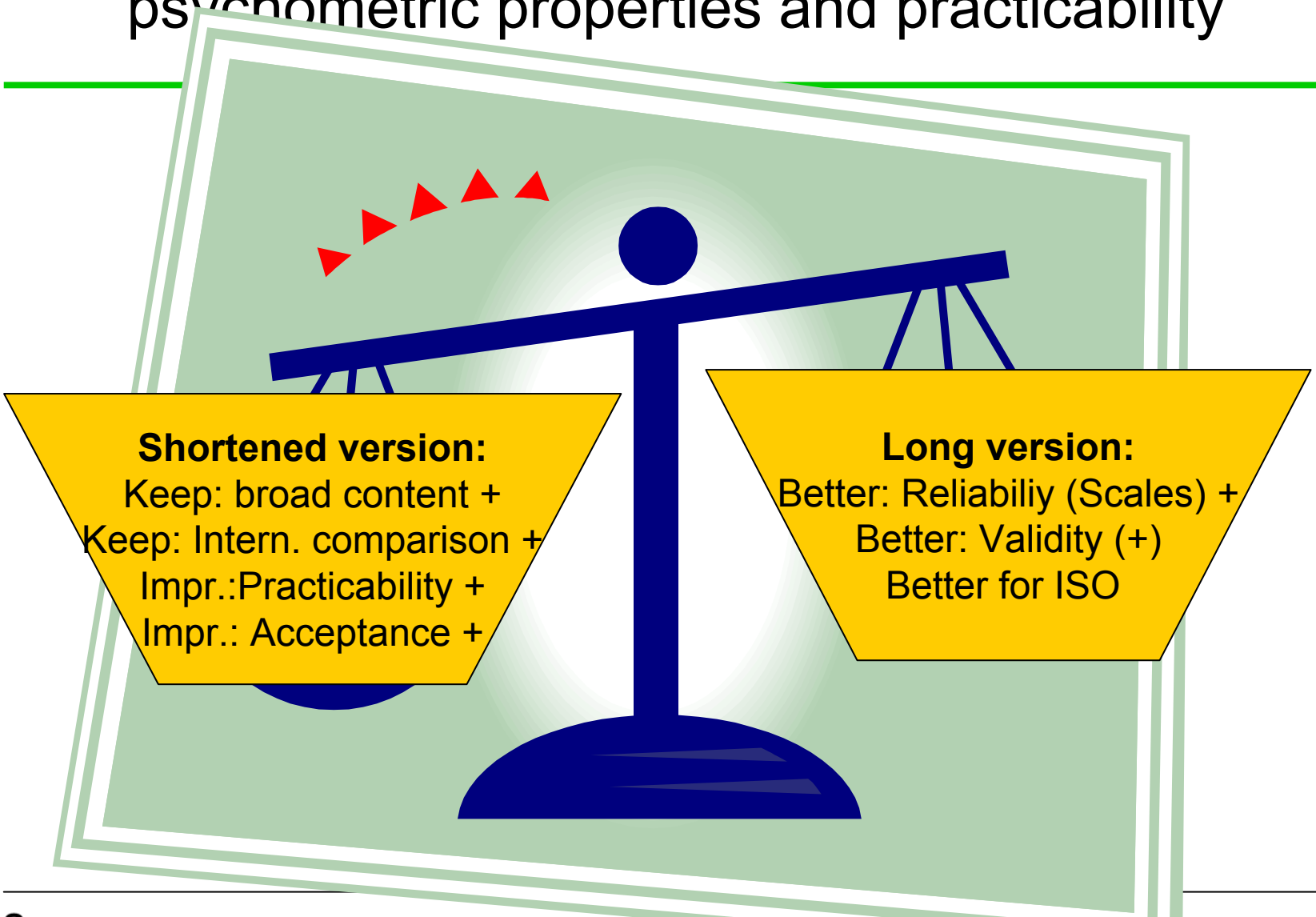
Sense of community: not profession specific, but enterprise specific!
Can be good or bad in every profession, depending on the enterprise

Summary measurement qualities

- Objectivity: ok
- Practicability: (enterprises and probands) ok; shorter is better!
- Acceptance: ok; shorter is better! Anonymity
- Sensitivity: ok
- Validity (content, construct, criterion): mostly ok
- Reliability: depending on coeff. (Cronbach or ICC) and level (0.7, 0.8) and Scale length
- Generalisability: age, sex, ok; occupation: differences but not systematic
- Diagnostical power: ok, plausible results

- *More in project report (German), English article and: www.copsoq.de*

Conflict of interests: psychometric properties and practicability



German C ortened standard

Standard: 87 Items
ca. 15-20 Min
Max 100 Items
ca. 20 Min

Demands
- Quantitative demands
- Emotional demands
- Demands for hiding emotions
- *Work - privacy conflict*

Influence and development
- Influence at work
- Degree of freedom at work
- Possibilities of development
- Meaning of work
- Workplace commitment

Further parameters
- Job insecurity

Supplementary scales
- conflicts with clients
- shift work
- teacher items
-…

Interpersonal relations and leadership
- Predictability
- Role clarity
- Role conflicts
- Quality of leadership
- Social support
- Feedback
- Social relations
- Sense of community
-*Mobbing*

Strain (effects, outcomes)
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- *Intention to leave*
- *General health*
- *Burnout*
- Cognitive stress
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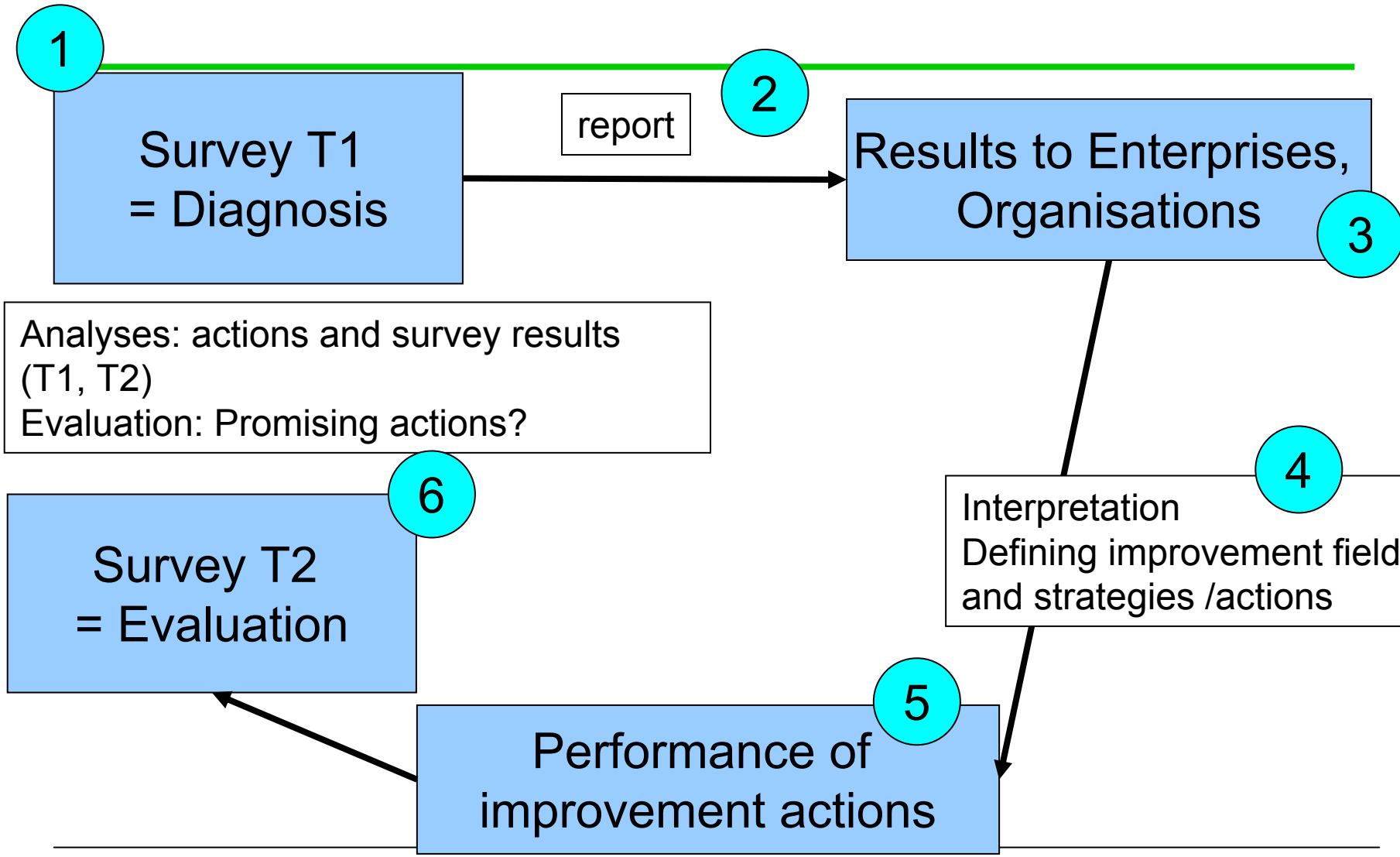
Use of COPSOQ

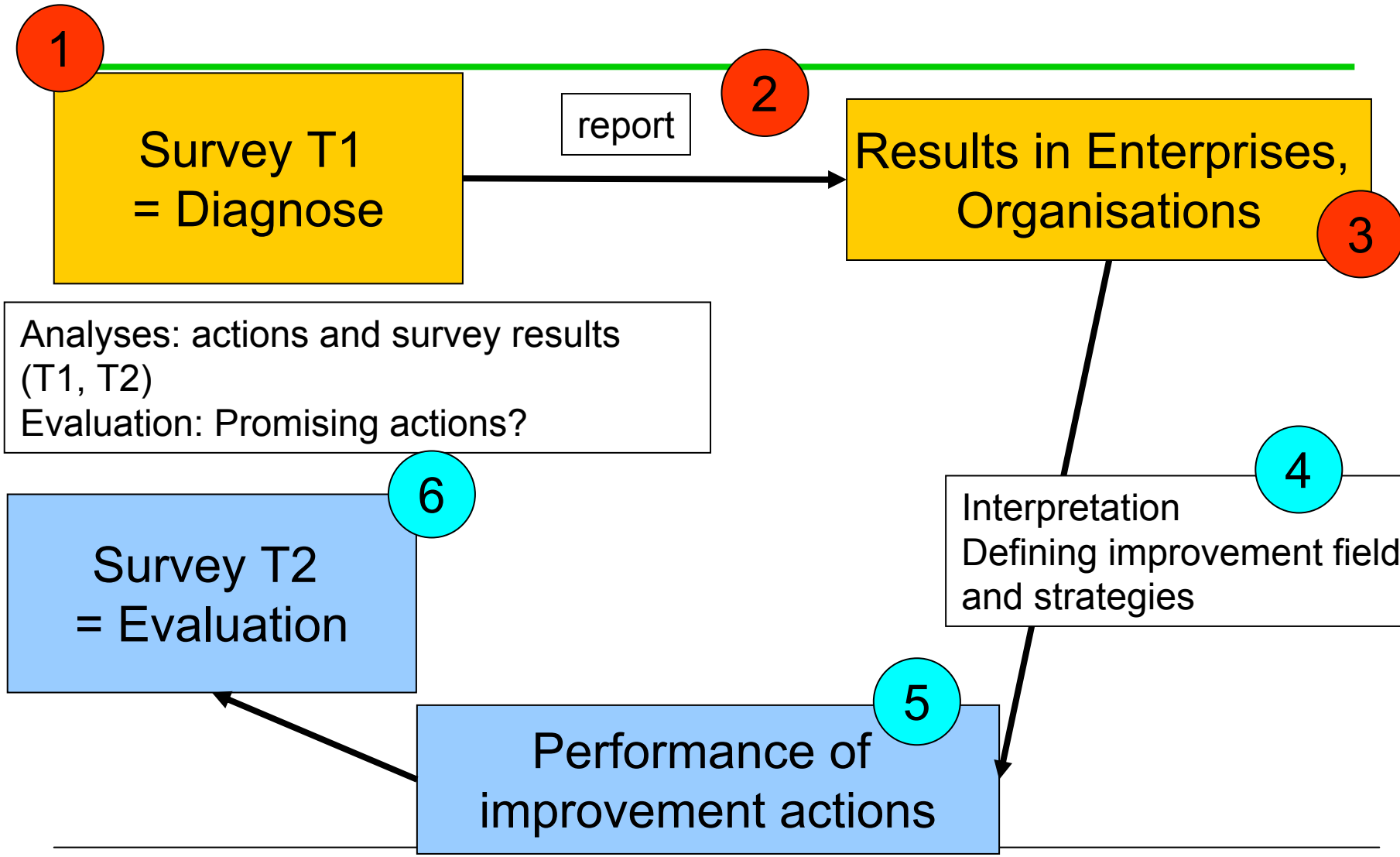
Screening tool (ISO 10075-3, level 2, not „holy“)

- **Measurement** as starting point for discussion process in organisations („Diagnosis“)
- **Interpretation and defining priorities for improvement actions** (evtl. with external support) on base of solid data (incl. profession-specific reference data)
- **Actions and documentation** („Intervention“)
- **Evaluation** (2. Measurement)

Process – risk assessment



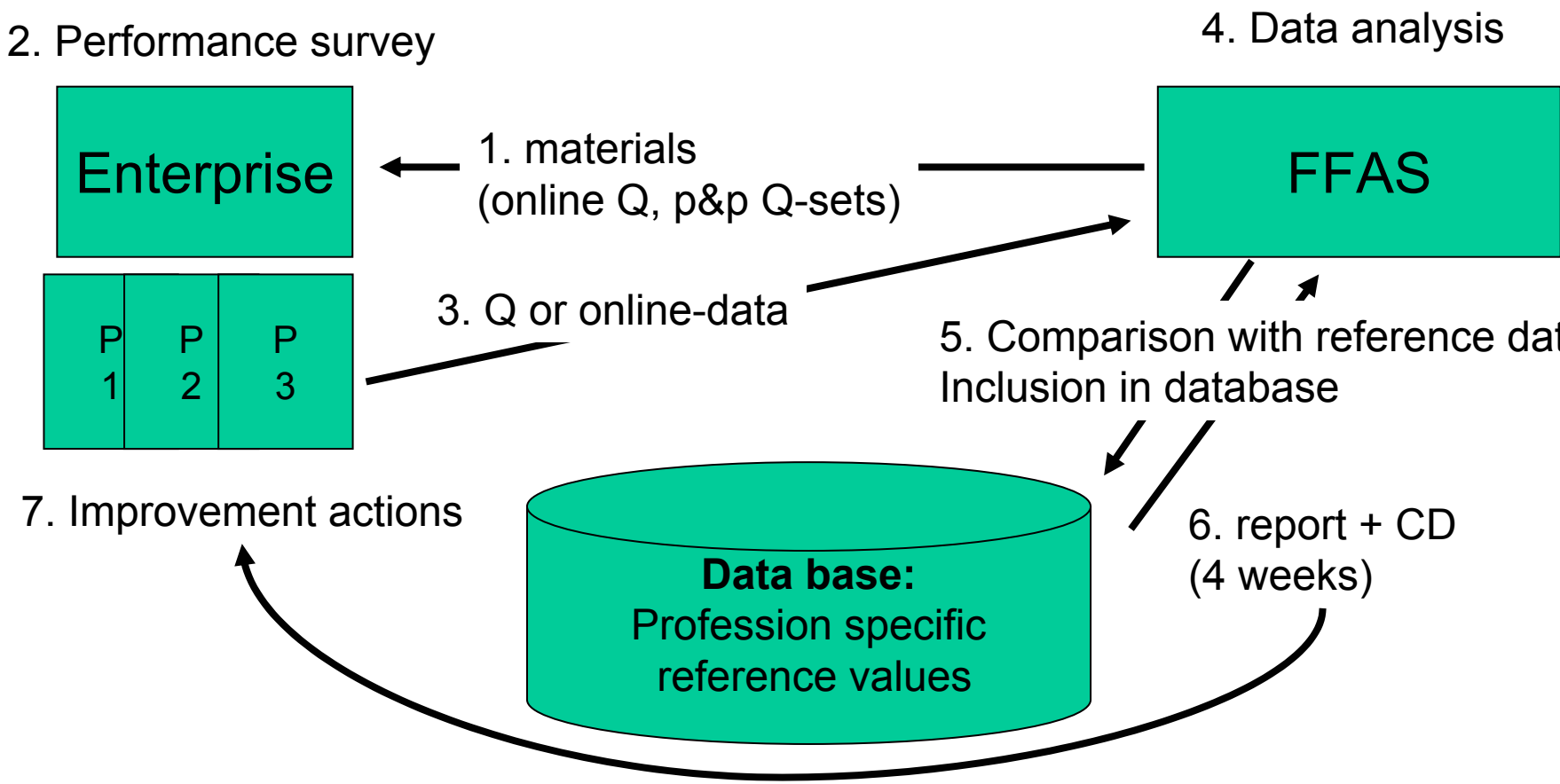
Process – risk assessment



IV. Formation of database in cooperation

science - enterprises/organisations

Cooperation model: science - enterprises/organisations



benefits

- Single employee
  - Direct feedback: my job situation vs average (open to everybody)
  - Improvement working situation after survey (hope)
- enterprise
  - Solid basic data to psychosocial factors
  - External benchmark (with similar occupations / enterprises)
  - Internal benchmarks (0f sub-units)
- science
  - growing database on profession specific psychoscocial factors at work (advantage against self-service CD etc)

Example online FB (open for eb)

Copsoq Studie 2003 / 2004 - Beispiele -Netscape

COPSOQ: verkürzte deutsche Version

B) Angaben zur Arbeit und Tätigkeit

B.1: Die folgenden Fragen betreffen die Anforderungen bei Ihrer Arbeit.
(Bitte je eine Angabe pro Zeile)

	immer	oft	manchmal	selten	nie / fast nie
1. Müssen Sie sehr schnell arbeiten?	100				
2. Ist Ihre Arbeit ungleich verteilt, so dass sie sich auftürmt?		75			
3. Wie oft kommt es vor, dass Sie nicht genügend Zeit haben, alle Ihre Aufgaben zu erledigen?		75			
4. Müssen Sie Überstunden machen?				25	
5. Bringt Ihre Arbeit Sie in emotional					

Quantitative Demands =B1_1 – B1_4 = (100 + 75 + 75 + 25) / 4 = 69

B.1: Anforderungen bei der Arbeit (Teil 2).

online FB: Individual Feedback (pers. result)

Copsoq - Ergebnisse -Netscape

Datei Bearbeiten Anzeigen Gehe Lesezeichen Extras Fenster Hilfe

Ihre Daten wurden erfolgreich gespeichert! Vielen Dank für Ihre Teilnahme!

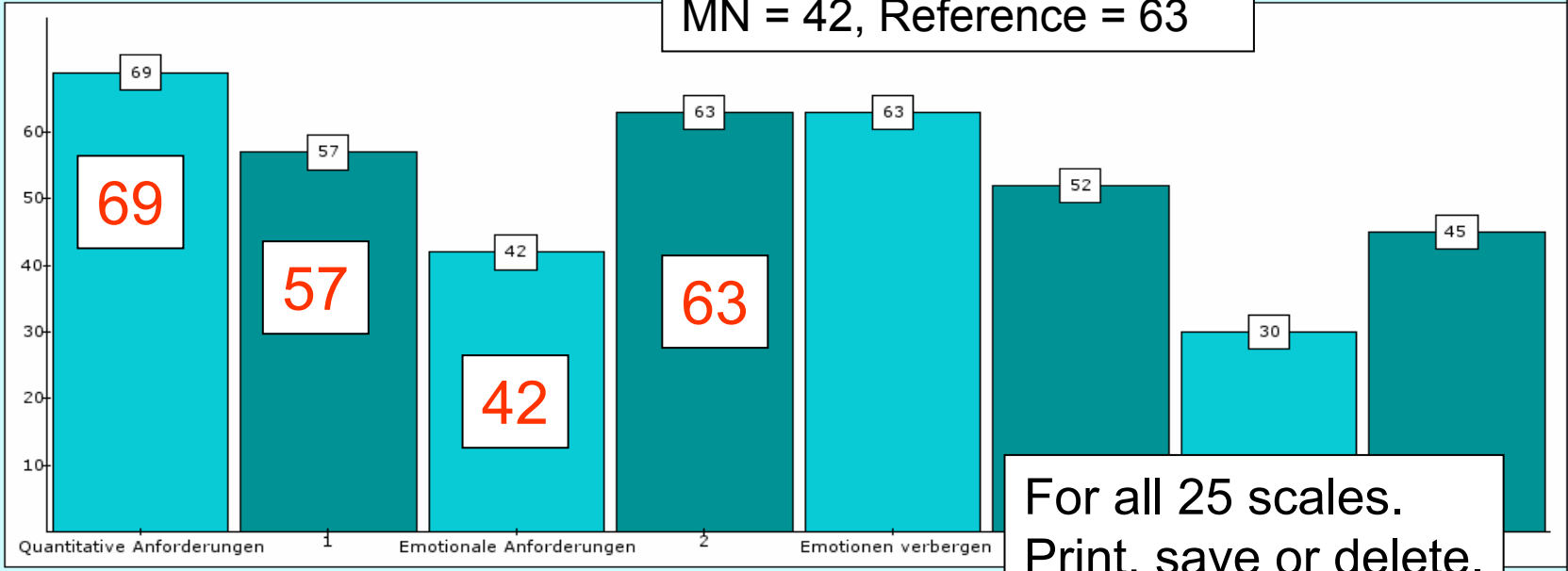
Name des Unternehmens: FFAS
Geschlecht: männlich
Geburtsjahr: 1963

Hier können Sie Ihre Angaben mit der COPSOQ Studie vergleiche

Ihre Werte
Durchschnittswert COPSOQ gesamt (N ca. 3000)

Anforderungen

Quantitative demands
MN = 69, Reference = 57
Emotional demands
MN = 42, Reference = 63



For all 25 scales.
Print, save or delete.

Einfluss und Entwicklungsmöglichkeiten

Start E:\cops... screen... Copsoq... Copso... 16:56

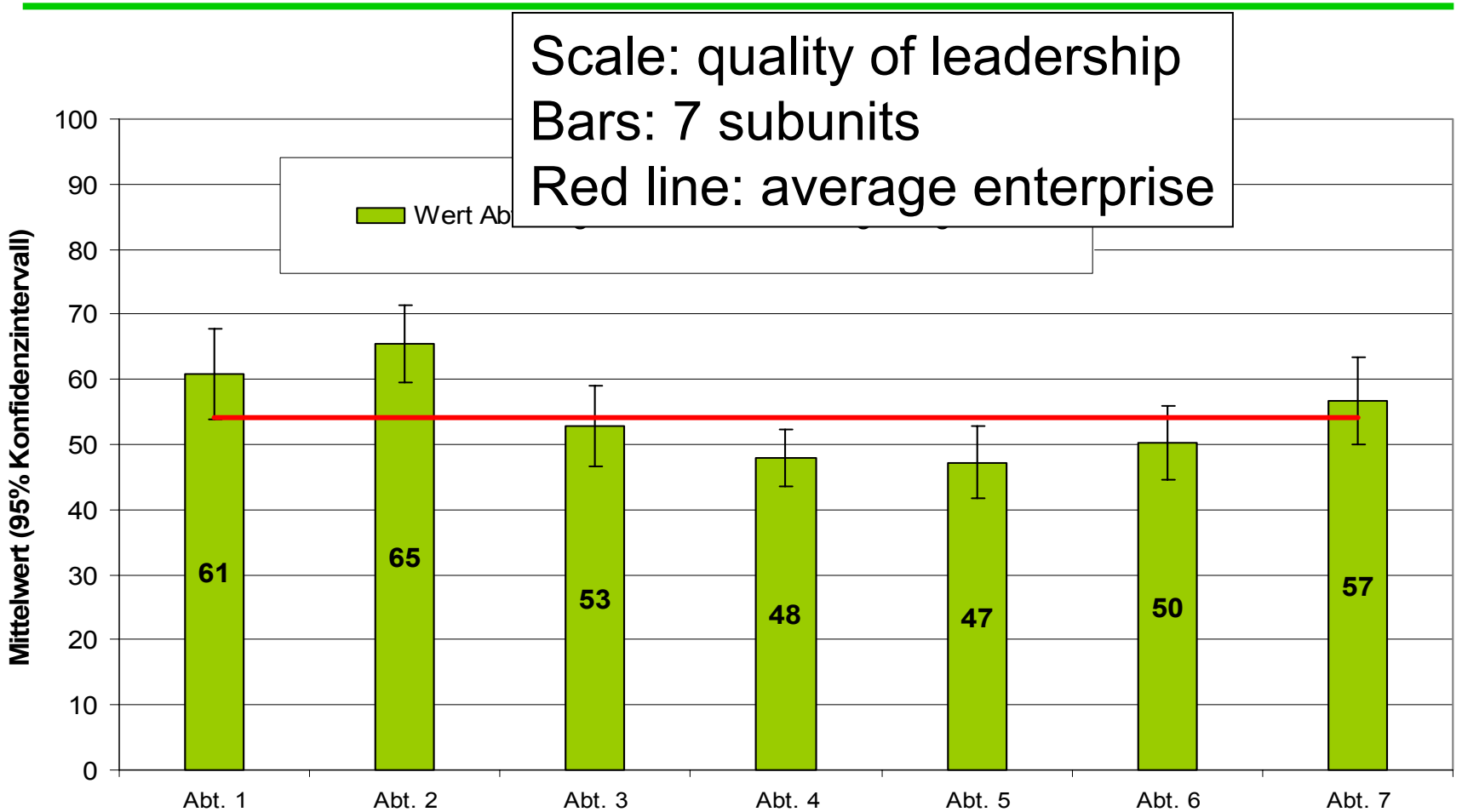
Report enterprises (4 Weeks after survey)

- 1. Text:
  - background, aims, performance survey
  - Interpretation of most important results of enterprise
- 2. Doku Questionnaire COPSOQ
- 3. Doku text in open questions

Report enterprises (4 Weeks after survey)

- 4. Graphs (each scale: set à 25 Graphs)
  - External benchmark: comparison with other professions and profession specific reference data
- 5. Graphs (each scale, set à 25 Graphs)
  - Internal benchmark: comparison of sub-units (defined by enterprise before)

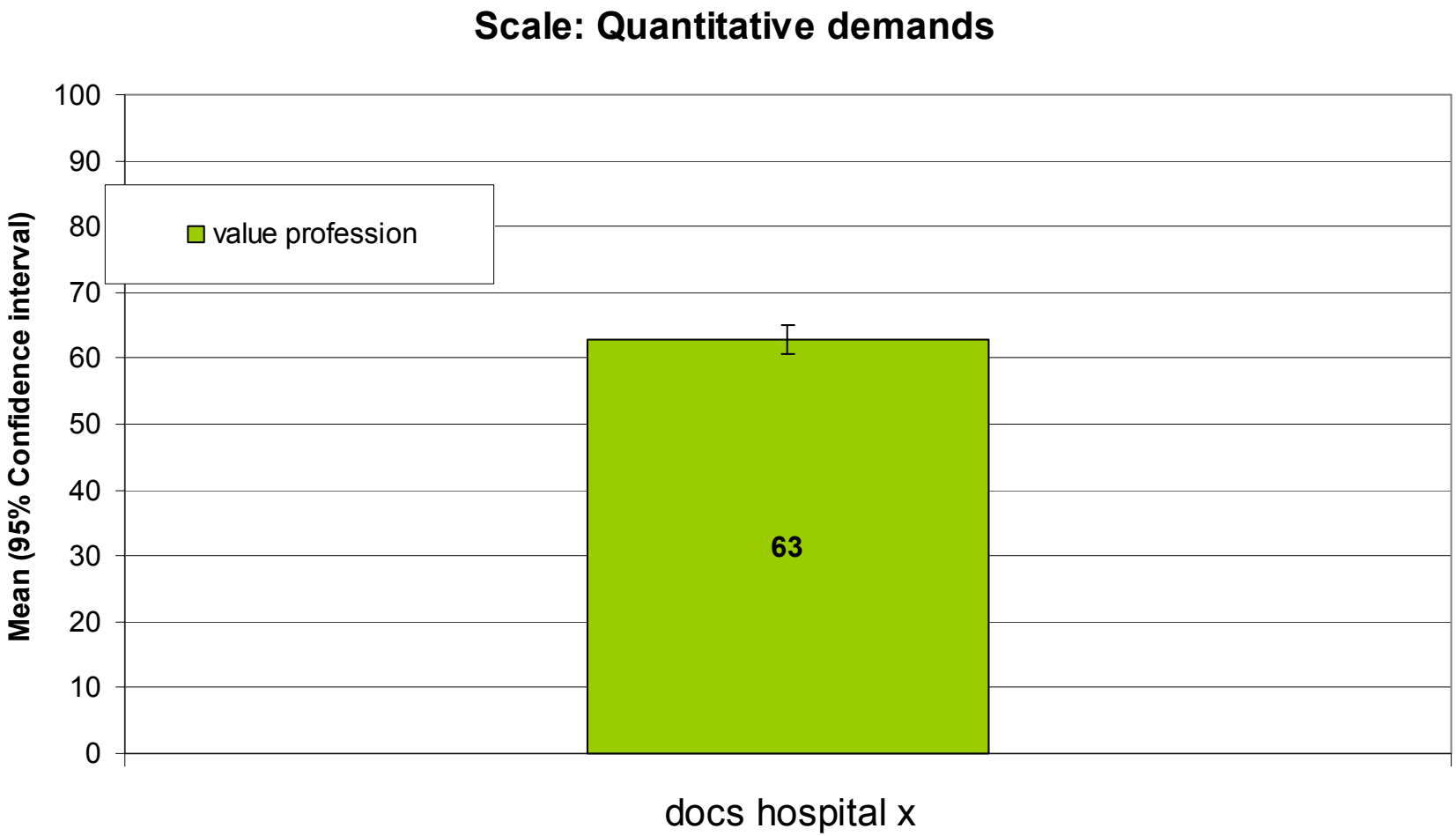
Example internal comparison



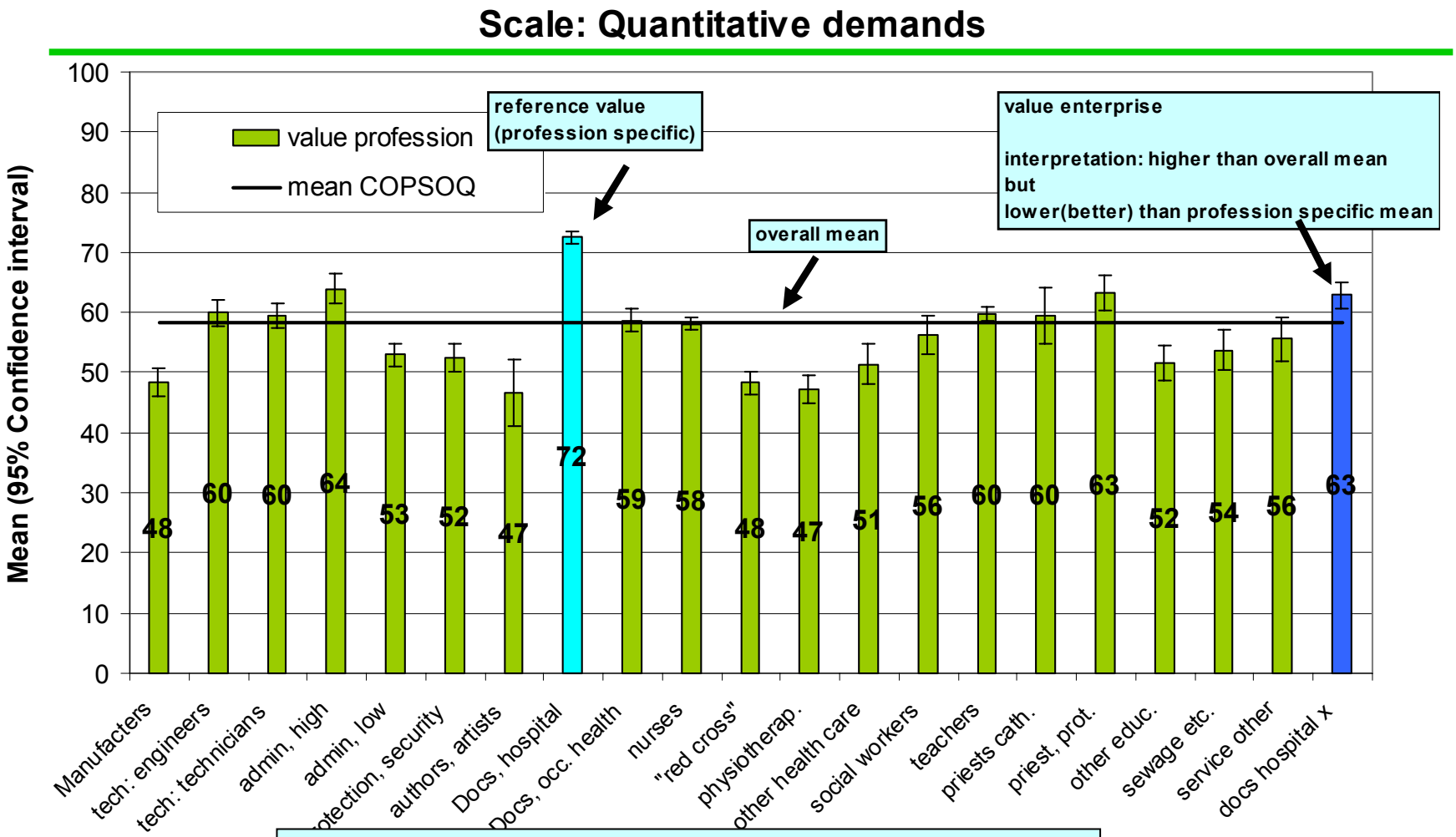
For each of the 25 scales

Exa

What can we do with a single mean value?
Internal comparison ok, but else?
We have no objective cutoff or „Fixed point in the universe“.
We use comparisons as „our best chance available“

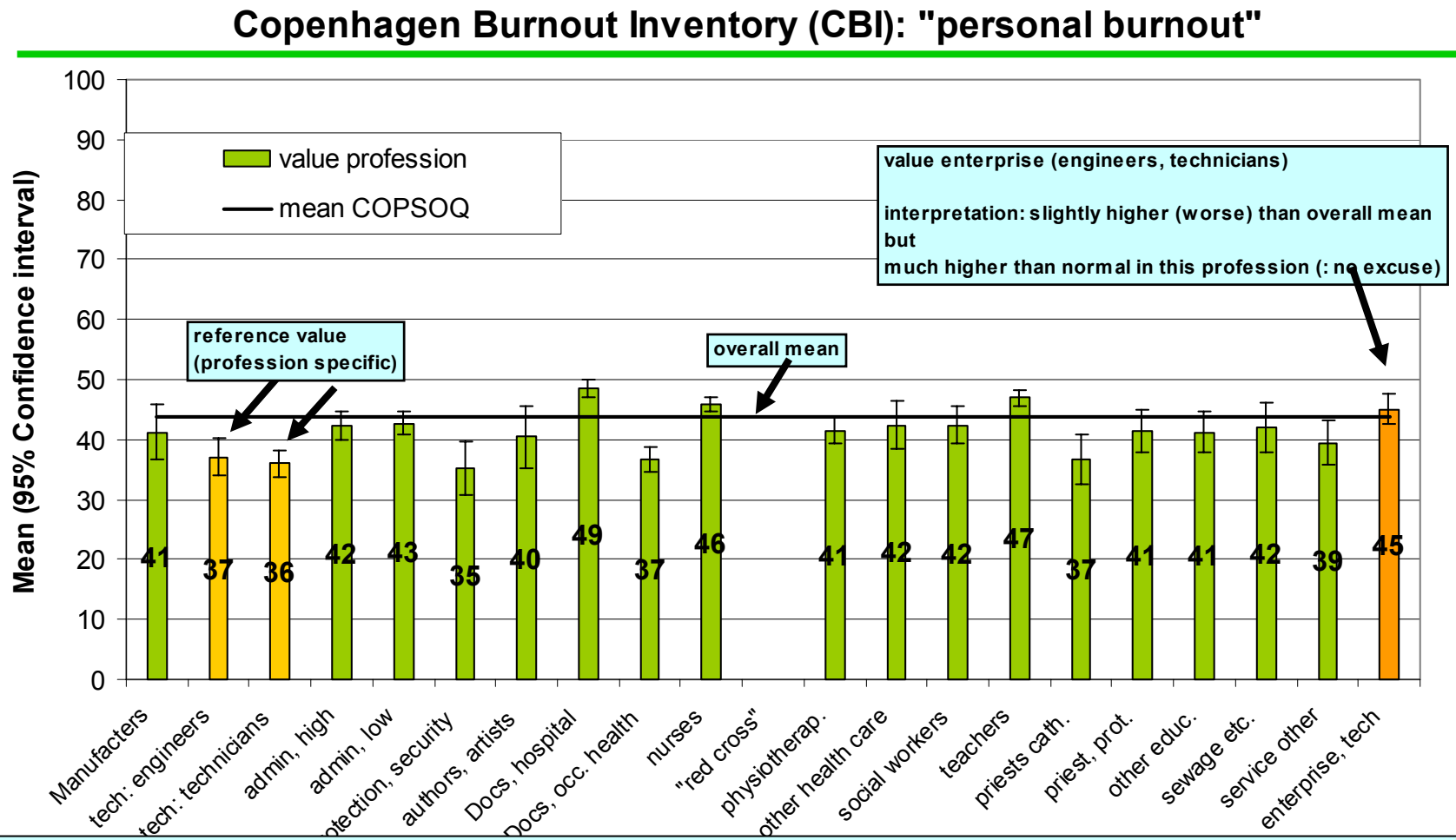


Example enternal comparison, reference values



But: normative power of facts!
Do we want to accept reality as normal?

Example enternal comparison, reference values



Reference values as interpretation helpers

Expecially necessary when aspects are structurally „profession- dependent“

V. Actual situation and future

Present and future

- FFAS: Work like a „survey service agency“, less like a researcher
- Anyway: data base growing, 5.500 actual, ca. 8000 end of year -> analyses possibilities are growing
- Big project with teachers/schools in BW coming (probably biggest teacher study ever?! N=110.000 teachers, 4300 schools)

Present and future

- When projects with scientific funding:
  - International comparison (EU?!)
  - 2nd round with enterprises from main study 2004
  - Inclusion of more „blue collar“ data and up to now „blind fields“ in database, „sponsoring“ of specific enterprises (for free surveys)
  - Comparison COPSOQ - ERI – FIT (convergent validity)
  - More analyses with existing data

Thanks for your attention!

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(nearly) everthing to the German COPSOQ:
www.copsoq.de