

WANTED: SUPER(WO)MAN

Professional roles for future engineers, defined by professional competences



SOFIE CRAPS

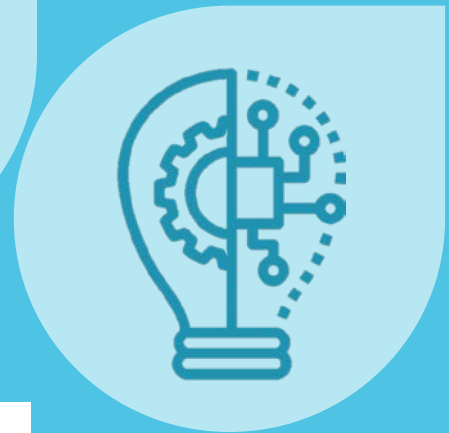
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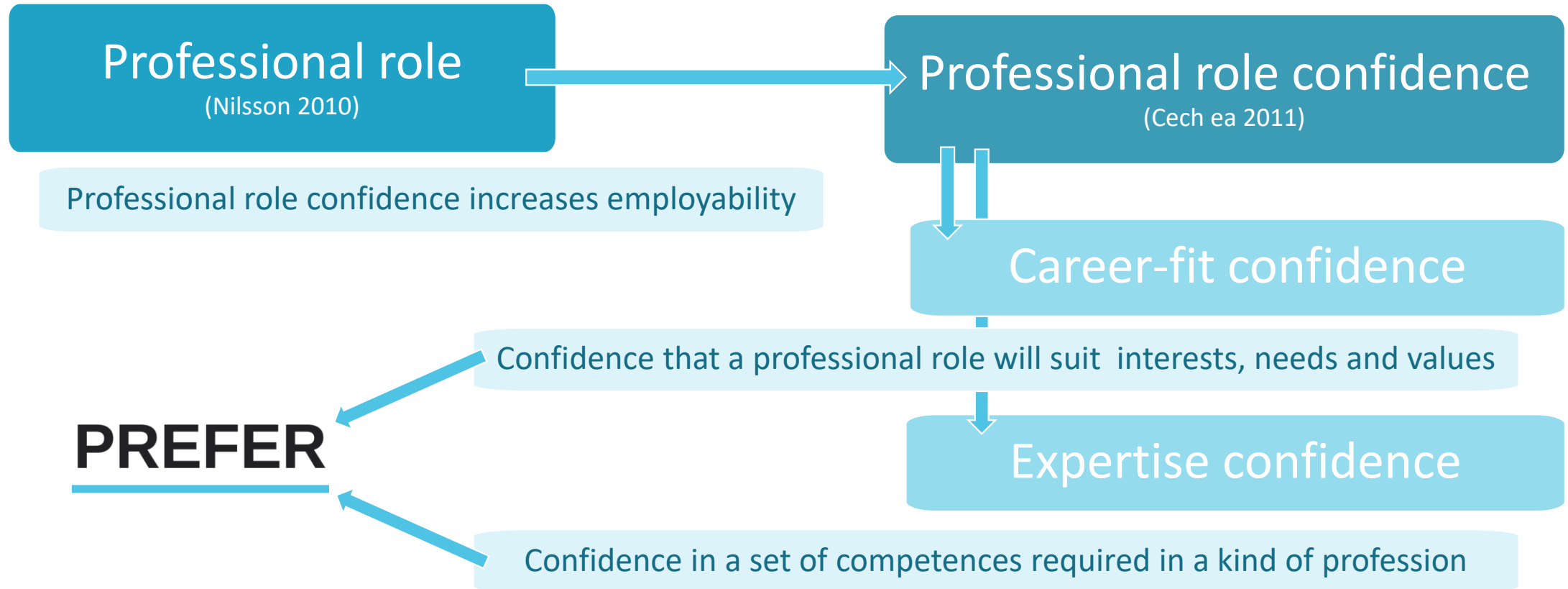


Looking for
young engineer
with excellence in ...





Different jobs, different demands





Professional Roles Framework



Research question

Which professional competences

do young engineering professionals need to possess

in order to be

successful in one of the professional roles?

Method | Delphi technique



- › A method to seek expert opinion in an iterative structured manner
- › Modified method:
 - › Different panels from different sectors
 - › Not anonymous
 - › Immediate feedback

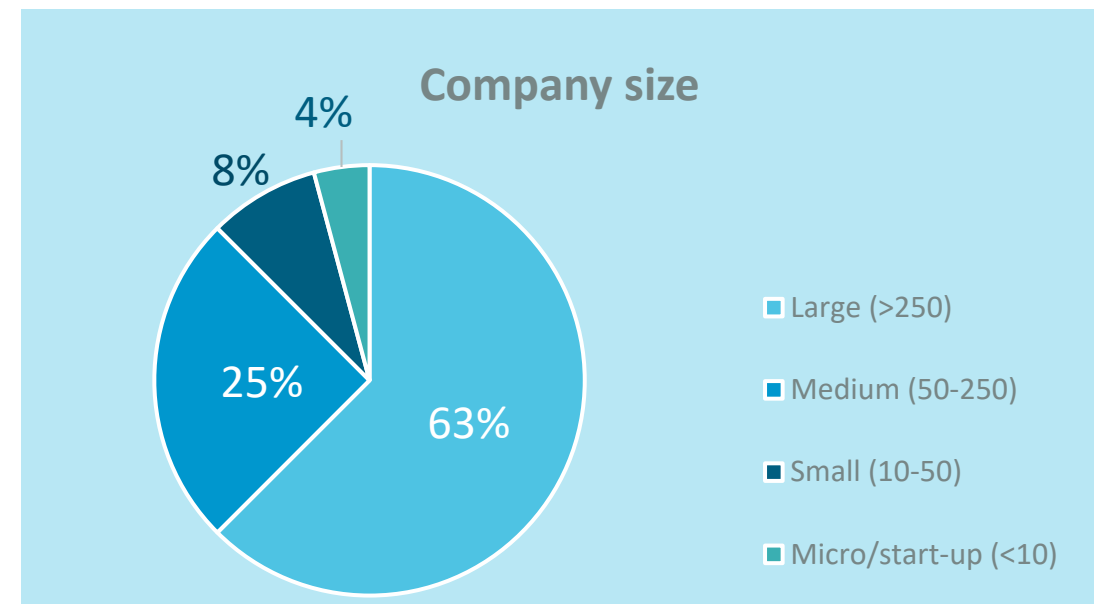
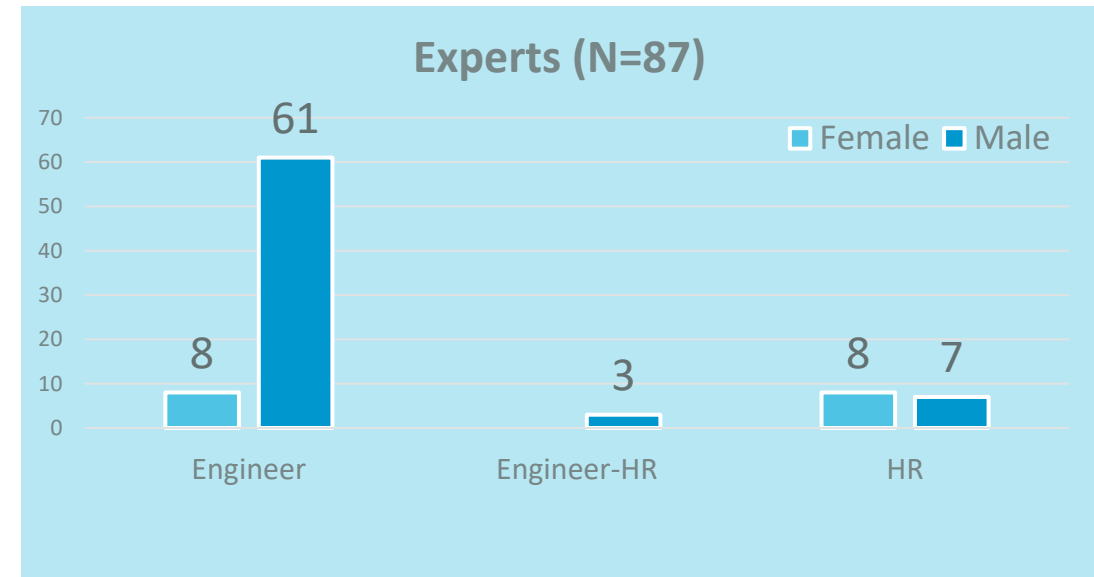
Method | expert panels

› Expert

= engineer or HR manager with expertise in hiring engineers

› Panel

- 6 to 10 experts
- engineers from different roles
- male and female



Method | panel structure



Results

AFTER 12 PANELS



Results | 12 panels



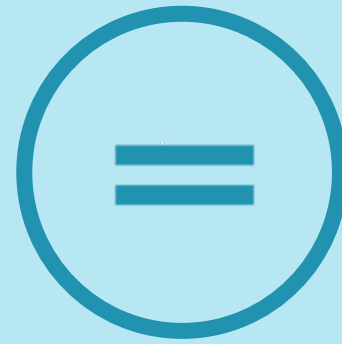
All panels reached **CONSENSUS** on the competency profiles



8 COMPETENCES to describe a role



OE role is most difficult to construct. **NO EXTRA ROLE!**



2 SIMILAR COMPETENCES

- › Networking & building relations
- › Stress tolerance & stress resistance



ASSOCIATED COMPETENCES

OE : 29
PL: 28
CI: 22



Results | 12 panels



**15 OVERLAPPING
COMPETENCES**

1. Clear communication
2. Client focus
3. Coping with criticism
4. Creativity
5. Focus on results
6. Initiative
7. Negotiation
8. Networking & building relations
9. Perseverance
10. Persuasiveness
11. Planning & organisation
12. Realism
13. Solution-oriented
14. Stress resistance
15. Team spirit / team player

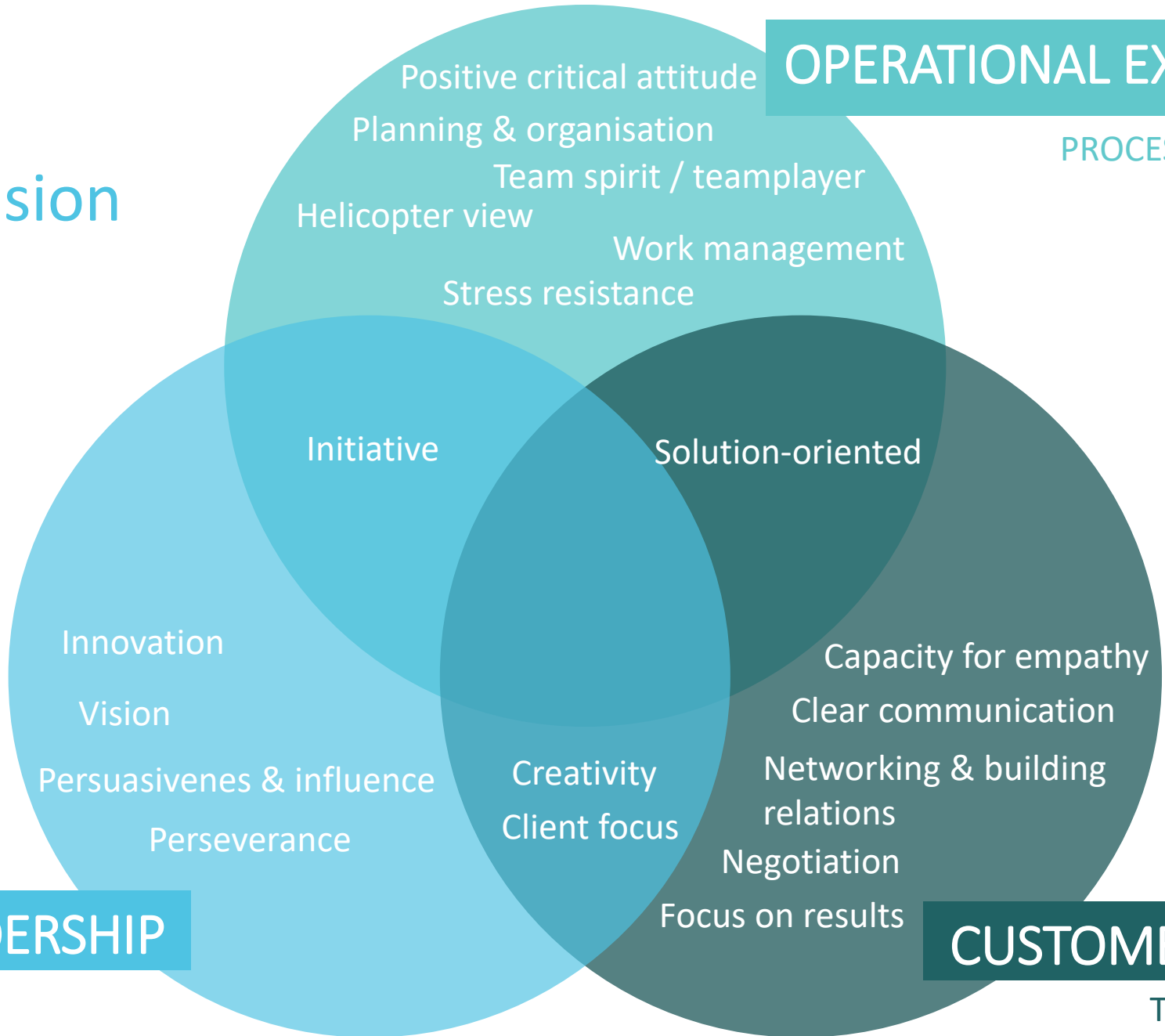
Conclusion & further research



Conclusion

PRODUCT LEADERSHIP

RADICAL INNOVATION



Positive critical attitude
 Planning & organisation
 Team spirit / teamplayer
 Helicopter view
 Work management
 Stress resistance

Innovation
 Vision
 Persuasiveness & influence
 Perseverance

Creativity
 Client focus
 Focus on results

Capacity for empathy
 Clear communication
 Networking & building relations
 Negotiation

CUSTOMER INTIMACY

TAILORED SOLUTIONS



Further research

Curriculum: diverse programmes > diverse engineers (Male ea 2011)

- › Existing curriculum, e.g. activities with industry
- › Extracurricular activities, e.g. career guidance
- › Tool for students to reflect on strengths and weaknesses >> [Workshop S01](#)
- › New curriculum elements to develop specific competences >> [Presentation](#)

 Increase students' awareness and align expectations with the work field

- › **Company's recruitment policy**

Thank you for your attention!

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Thanks to the experts:

