



Teknikföretagen

What kind of engineers do the companies need?

2012-09-18



What kind of engineers do the companies need?

- Interviews with HR and/or R&D at larger companies
- Focus on recruitment of recently graduated engineers
- Two main goals
 - influence on engineering educations
 - a foundation for dialogues in Swedish regions with SME (and others)

The Study

Eleven companies

- ABB
- Atlas Copco
- Epsilon
- Ericsson
- SAAB
- Scania
- Semcon
- SKF
- Volvo Aero
- Volvo Cars
- Volvo Trucks

Three universities

- Chalmers, Gothenburg
- Lund
- Skövde

Numbers of
people
interviewed: 24



Questions

- How do the companies act when recruiting recently graduated engineers?
- Are there any geographical preferences?
- Do companies located in smaller cities have more problems to recruit and what role do the regional universities have?
- How do the companies cooperate with universities in order to influence the educations?
- How does the increasing use of technical consultants influence the education?
- Can the companies see any differences in quality etc between different universities?
- What kind of role in recruitment does the master thesis have?
- What do the companies think of other parts in the curriculum of the engineering education than the technical ones? I.e. language, economy etc.
- Differences between B.Sc and M.Sc?

General conclusions

- Great demand for engineers
 - greater demand than supply
 - especially short supply of experienced engineers

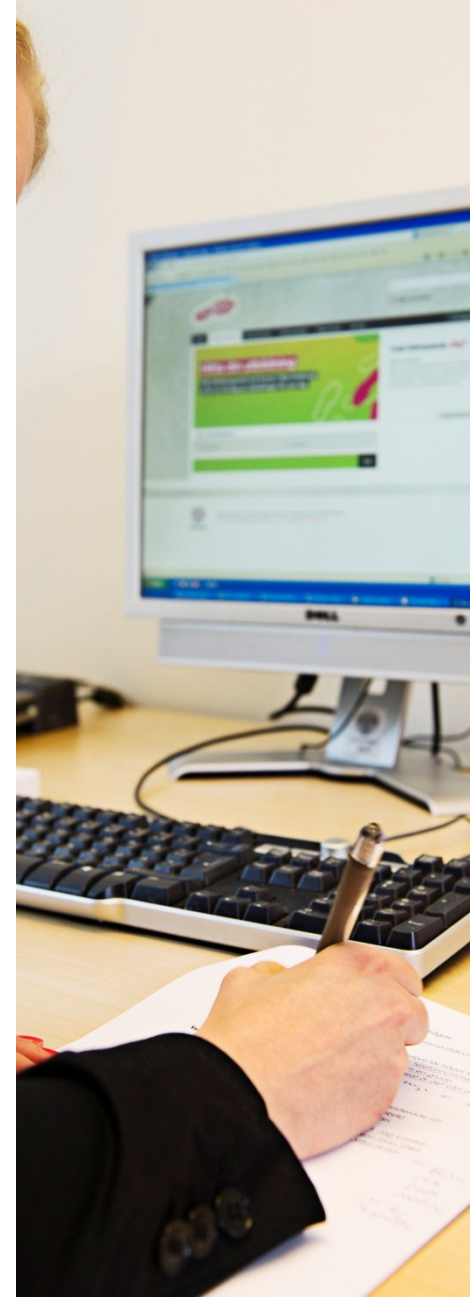


Conclusions - demands

- The demand of B.Sc vs M.Sc varies between companies
- Many companies have strategies to increase the numbers of M.Sc through new recruitments. Some of the motives are:
 - More advanced products demands a higher skilled staff
 - M.Sc have more generic skills that can be transformed to new business/technical areas
 - M.Sc tends to work better in changing organisations

Conclusions - recruitment

- Employer branding towards students more important
- Young employees tends to move more often than before



Conclusions – cooperation/influence

- Many companies have formal cooperation with universities
- Many companies think that the cooperation can and must be further developed

Conclusions – cooperation/influence

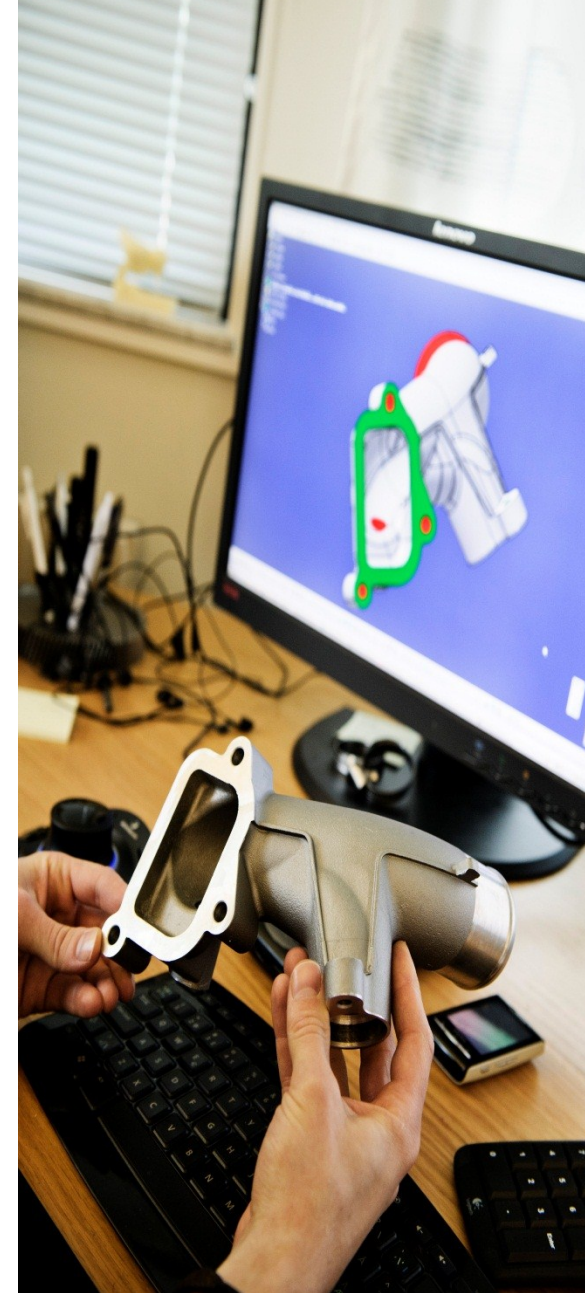
- The universities want to market themselves as a partner to the companies
- There's a discussion at many universities how to increase the contacts with companies in engineering educations

The challenges of engineering education

- Quantity vs quality
- Technology development vs development of the curriculum of engineering education
- Increase the attractiveness to work as an engineer and attract more women

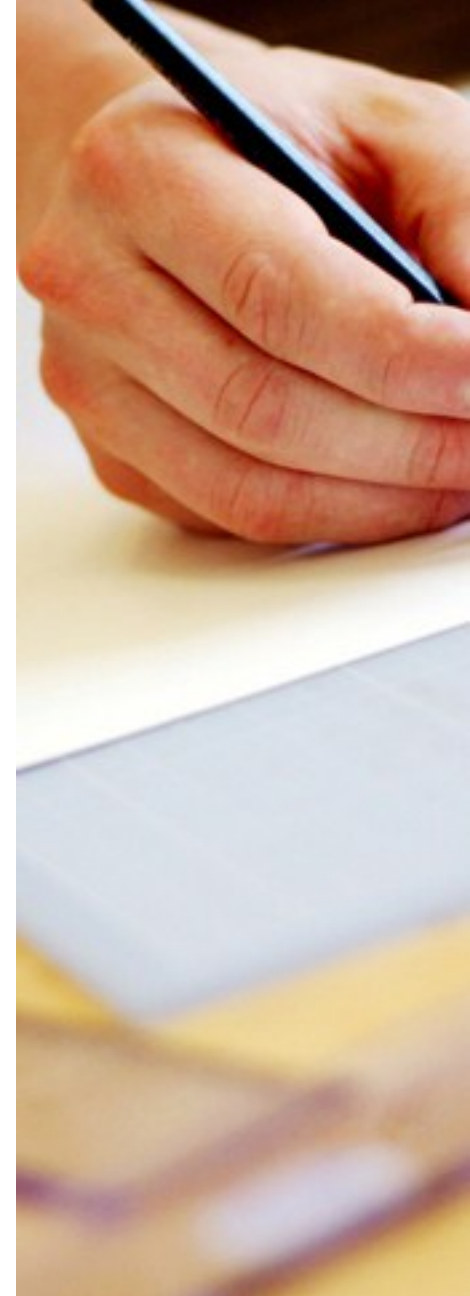
Relevance of the educations

- All companies are pleased with the recently graduated engineers but at the same time they can point out weaknesses
- Broad or narrow?
- The companies cooperation with the universities are key to communicating their needs



About different engineering educations

- Knowledge about the system of education differs a lot
 - Positive about international harmonization of educations
- Knowledge about the contents of engineering educations differs a lot



Students sense of reality

- Many companies wish that the students could see more of the companies reality during their education. But there is no longer a stipulated internship. What can be done instead?



Conclusions

- Overall, the engineering educations are good
- Great demand for engineers and short supply
- Employer branding more important
- Focus on M.Sc
- Cooperation the key to influence
- Better sense of reality without internship?

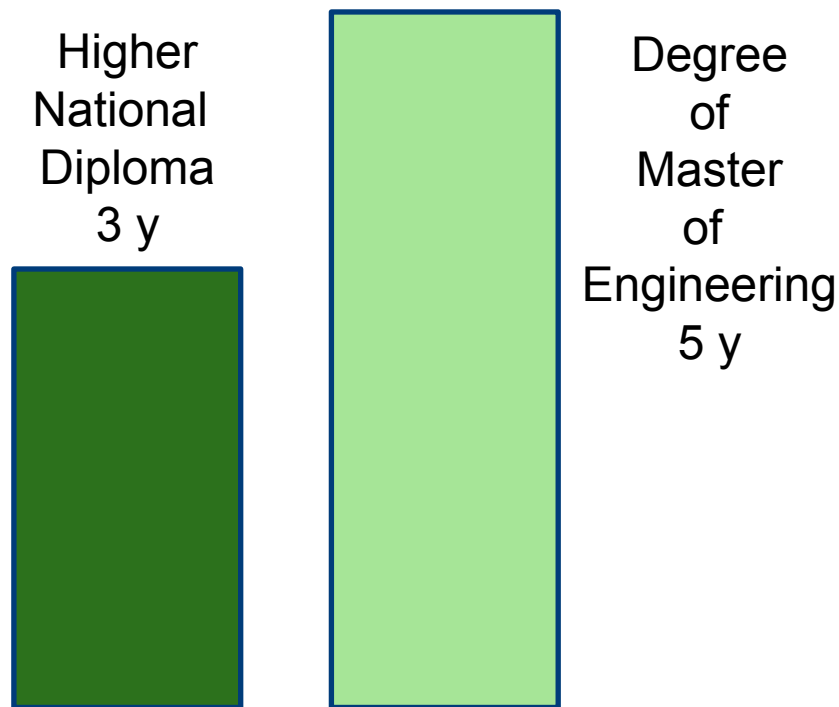


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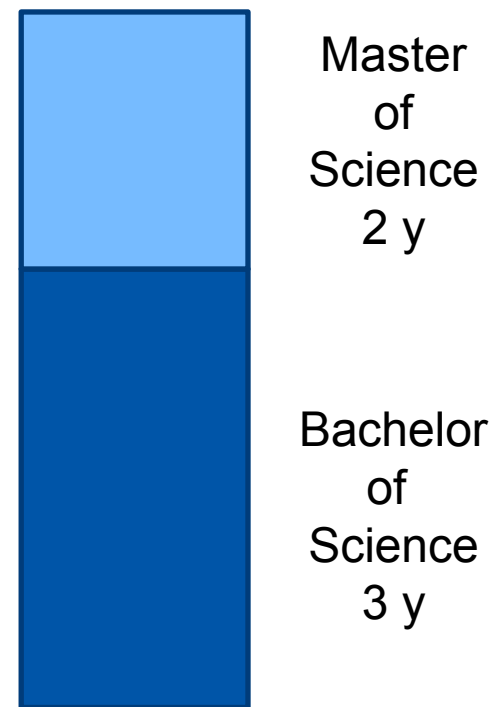
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"Diploma" system



Bologna system



Engineers in Sweden

- Not a regulated or licensed profession
- "Anyone" can call himself/herself an engineer

