

Fit for the Labour Market

SIEMENS

What companies need and how they can cooperate with universities to get it

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Siemens: Key characteristics and figures

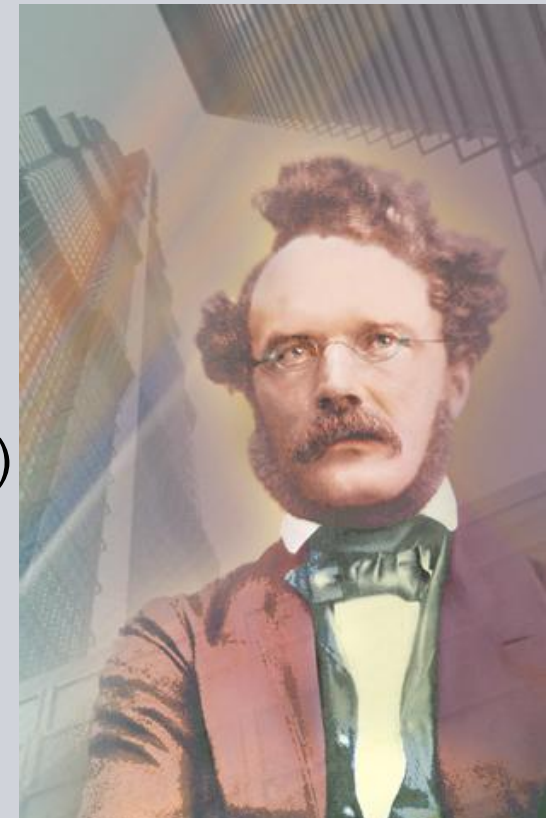
(Fiscal 2007, as of Jan. 1, 2008)

Since 1847

- International
- Innovative
- Focused on electrical engineering and infrastructure solutions
- Oriented toward sustainability
- Socially responsible

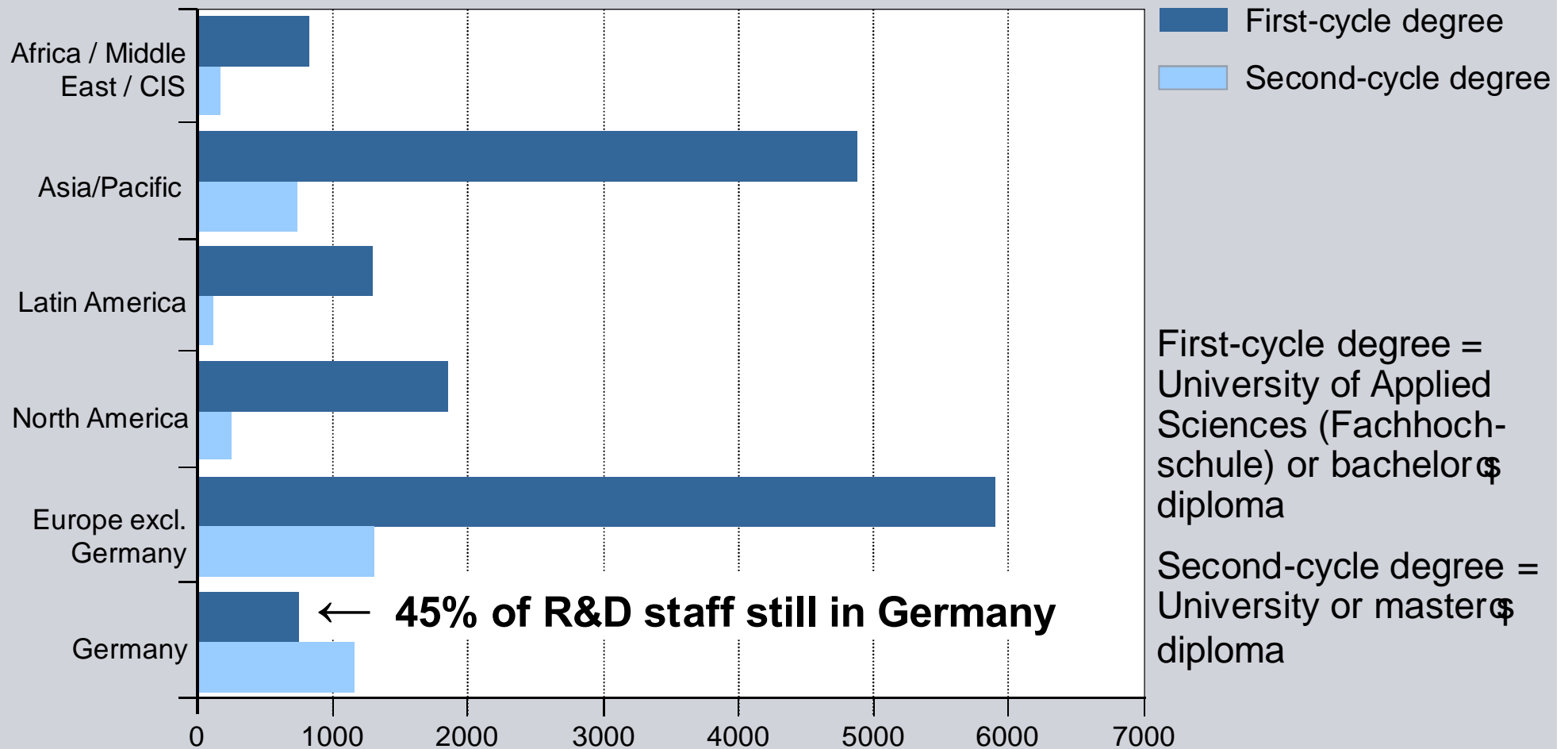
In fiscal 2007

- 398,000 employees in 190 countries (68% outside Germany)
- Sales of " 72.4 billion (83% outside Germany)
- Active in three business areas; " 3.4 billion for R&D
- 37% of worldwide employees have a university degree
- 87% of the 22,400 new employees with a university degree hired outside Germany



Every hour, Siemens receives orders worth €10 million.

International recruiting at Siemens – Graduates with bachelor's degrees in technical fields dominate (Survey in fiscal 2005)



Task of the personnel department: finding the right employees for every job

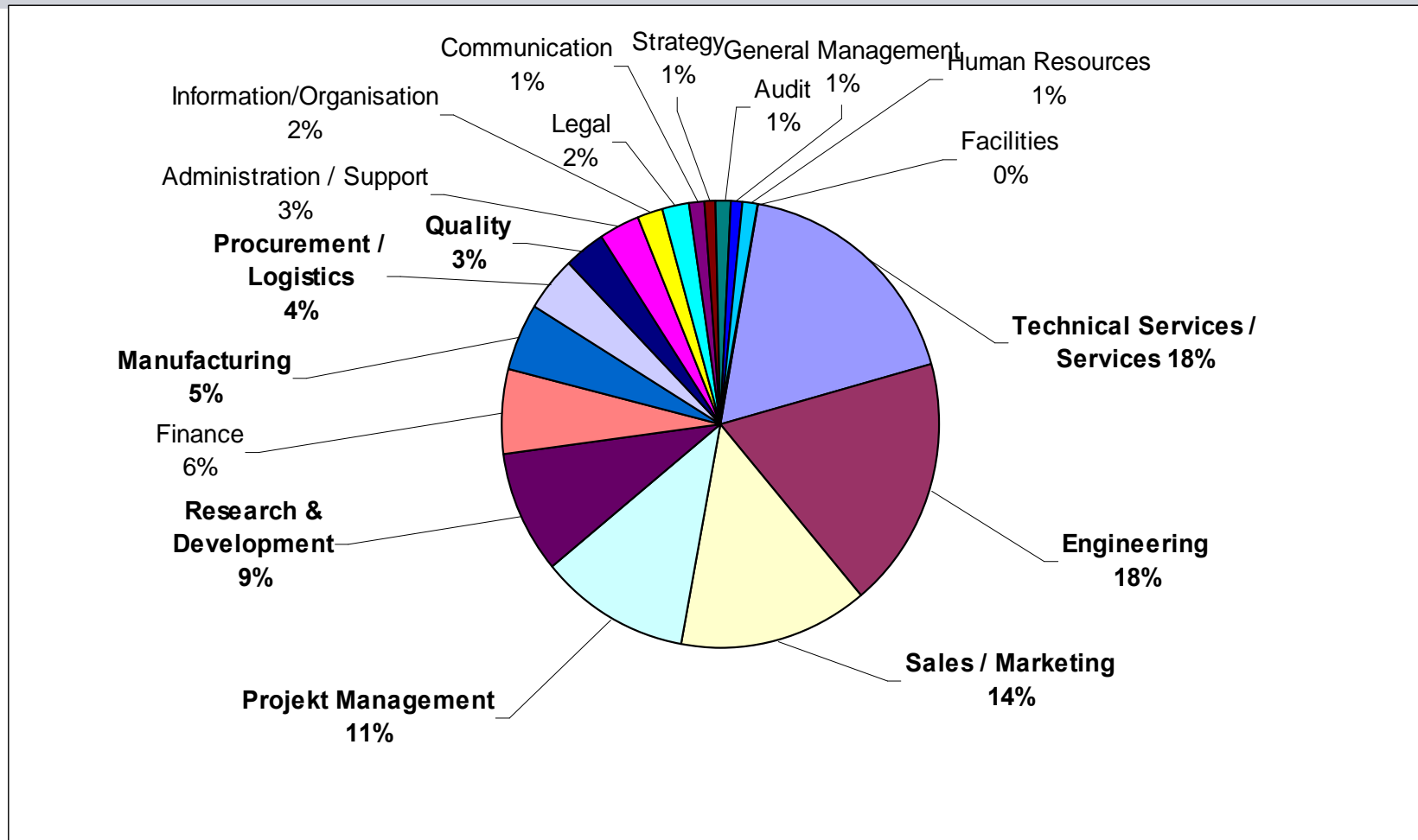
- Neither inadequate qualification (task exceeds ability) nor over-qualification (employee discontented and too expensive) are desirable
- At the beginning the technical task is of prime importance, but additional abilities are crucial for further development

At Siemens: operational competence as a criterion!

- Even new engineers are required to have a broad spectrum of abilities, and subsequently work in various areas of the company
- Siemens Germany 2007: new hires are 50% university graduates (Second Cycle) and 50% university of applied science graduates (First Cycle), worldwide about 25% SC and 75% FC
- Both are required: FC directly applicable knowledge + company practice; SC: in-depth knowledge or qualification in a combination of subjects

Siemens Germany – Job openings

Broad range of capabilities and skills required



**Total 2610,
81% for
university-
graduates.**

As of Oct. 2008; not including work/study positions, internships, openings for graduate/doctorate students. **Bold:** Potential jobs for engineers

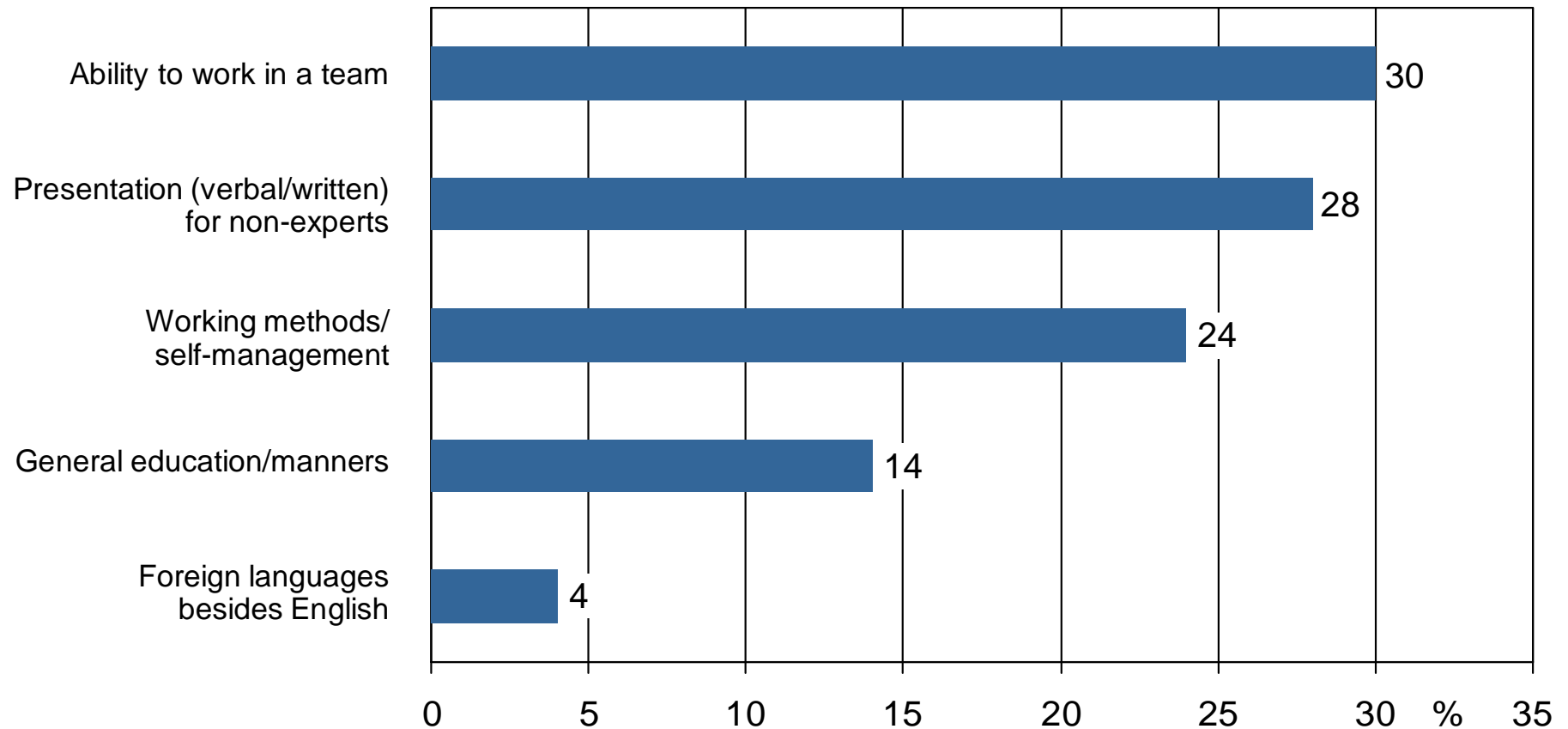
Professional competence – Vital skills for today's employees

- Thorough knowledge of one's subject as the prerequisite for employment
- Ability to judge analytically, structure one's work, make "plausibility checks," carry out research, evaluate information and identify problems
- Ability to look beyond one's own area of competence and take other factors (such as costs) into account
- Independence, initiative, independent learning, work techniques, discipline, frustration tolerance, ability to set priorities
- Interpersonal skills: communication, feedback, a feeling for situations, capacity for teamwork, fluent English

Some skills can best be learned at the university, while others can also be acquired at work or in one's private life!

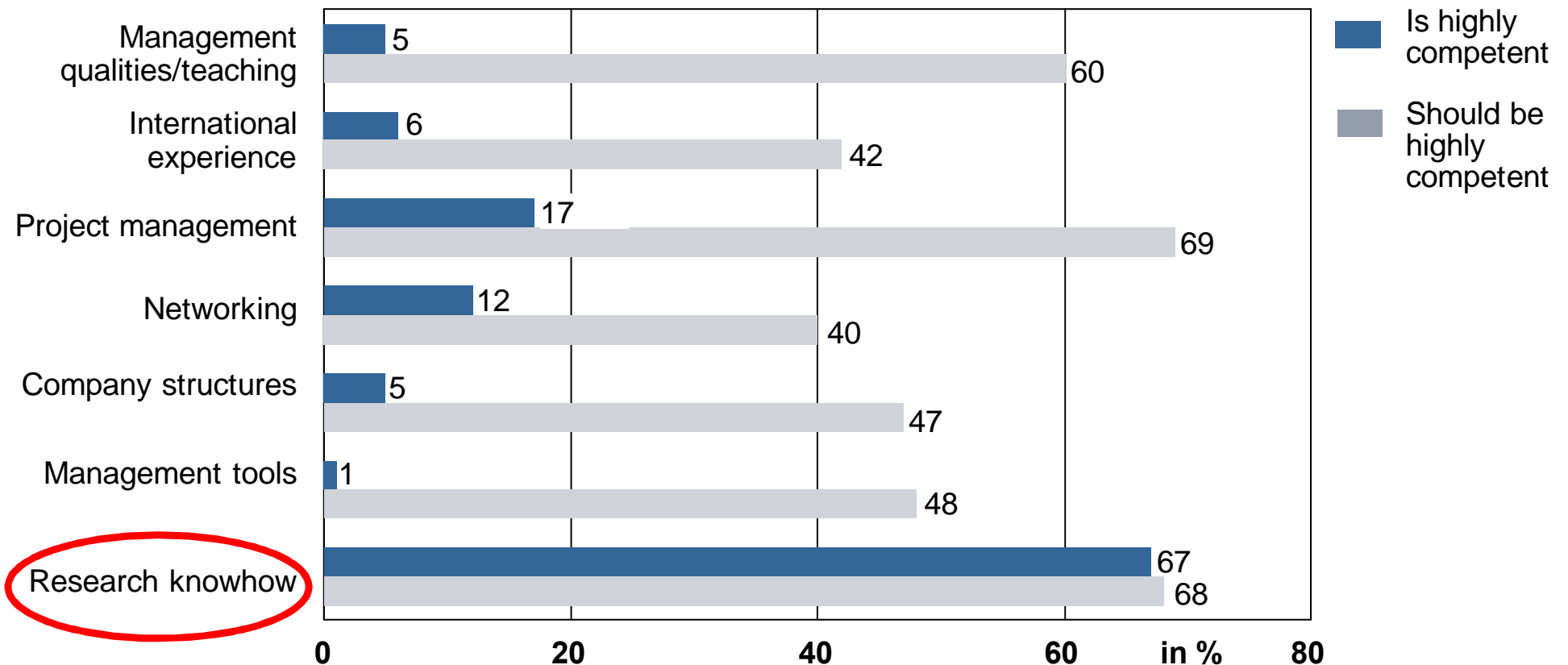
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Electrical industry's priorities: General skills expected



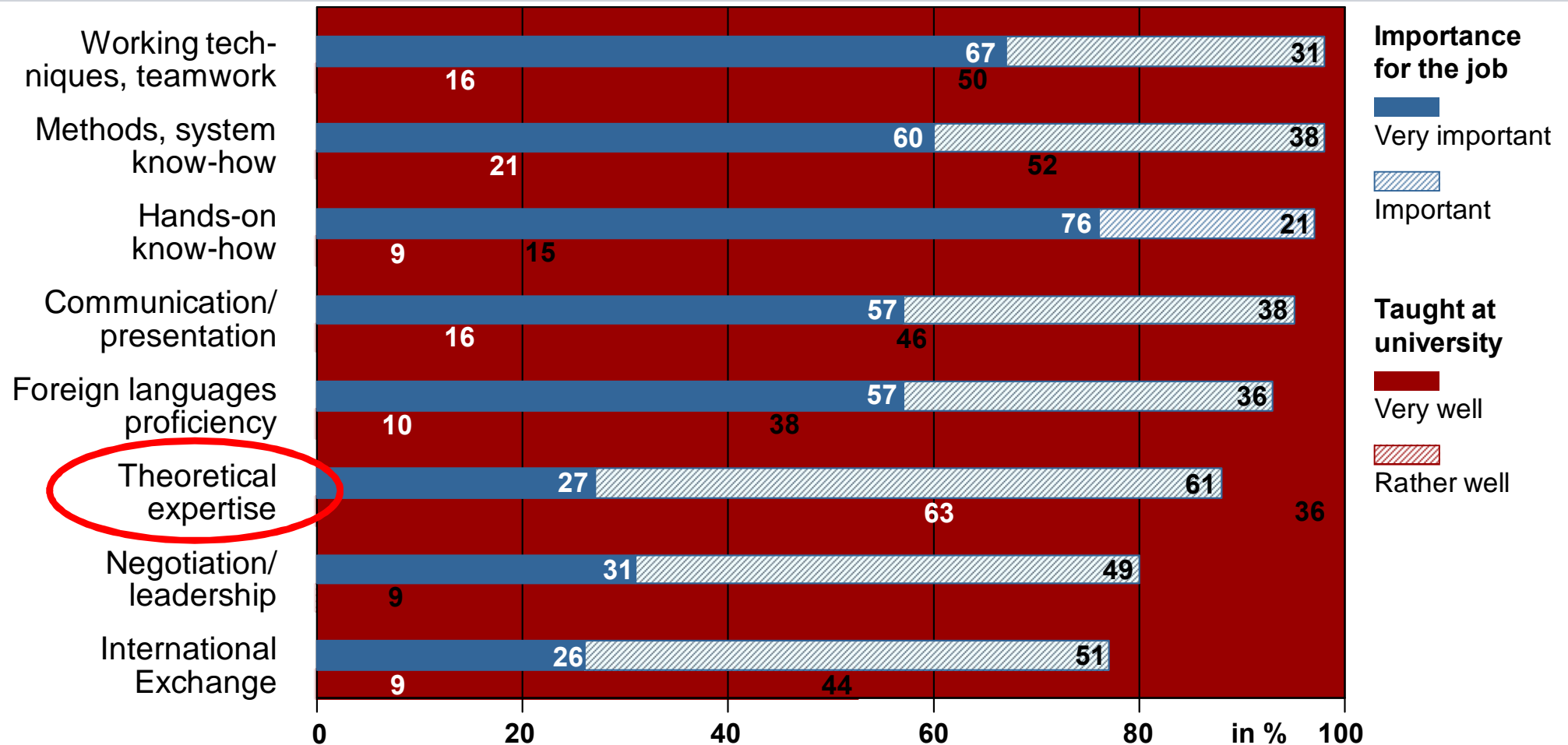
Source: ZVEI Survey 2006

Evaluation of findings by mechanical engineering companies: Large discrepancy between the target and actual performance of PhD graduates



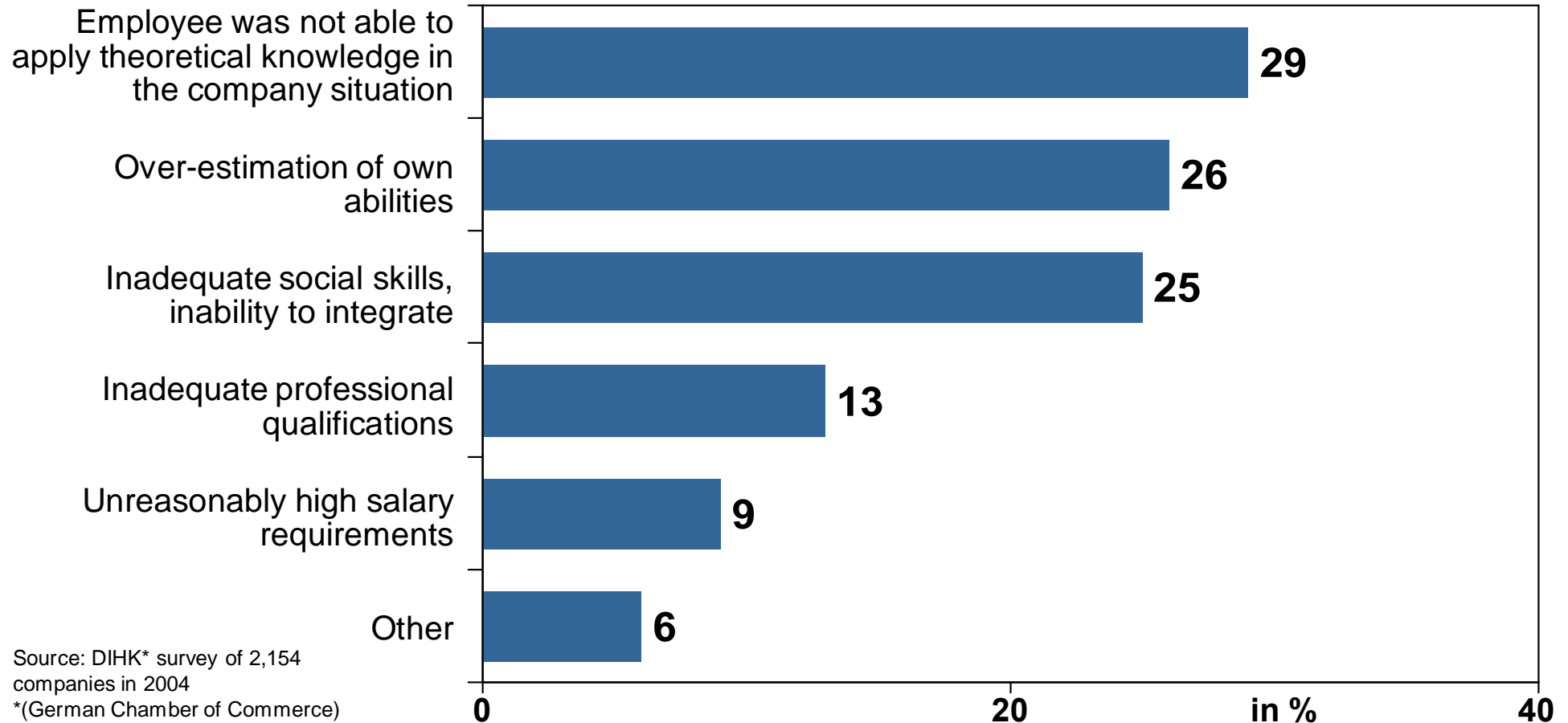
Source: Impuls/VDMA Survey „Anforderungen an die Promotion im MB und der Verfahrenstechnik“ 2007

Experience of young Electr. Eng. professionals – Importance of skills for the job and how well-taught these skills are at universities



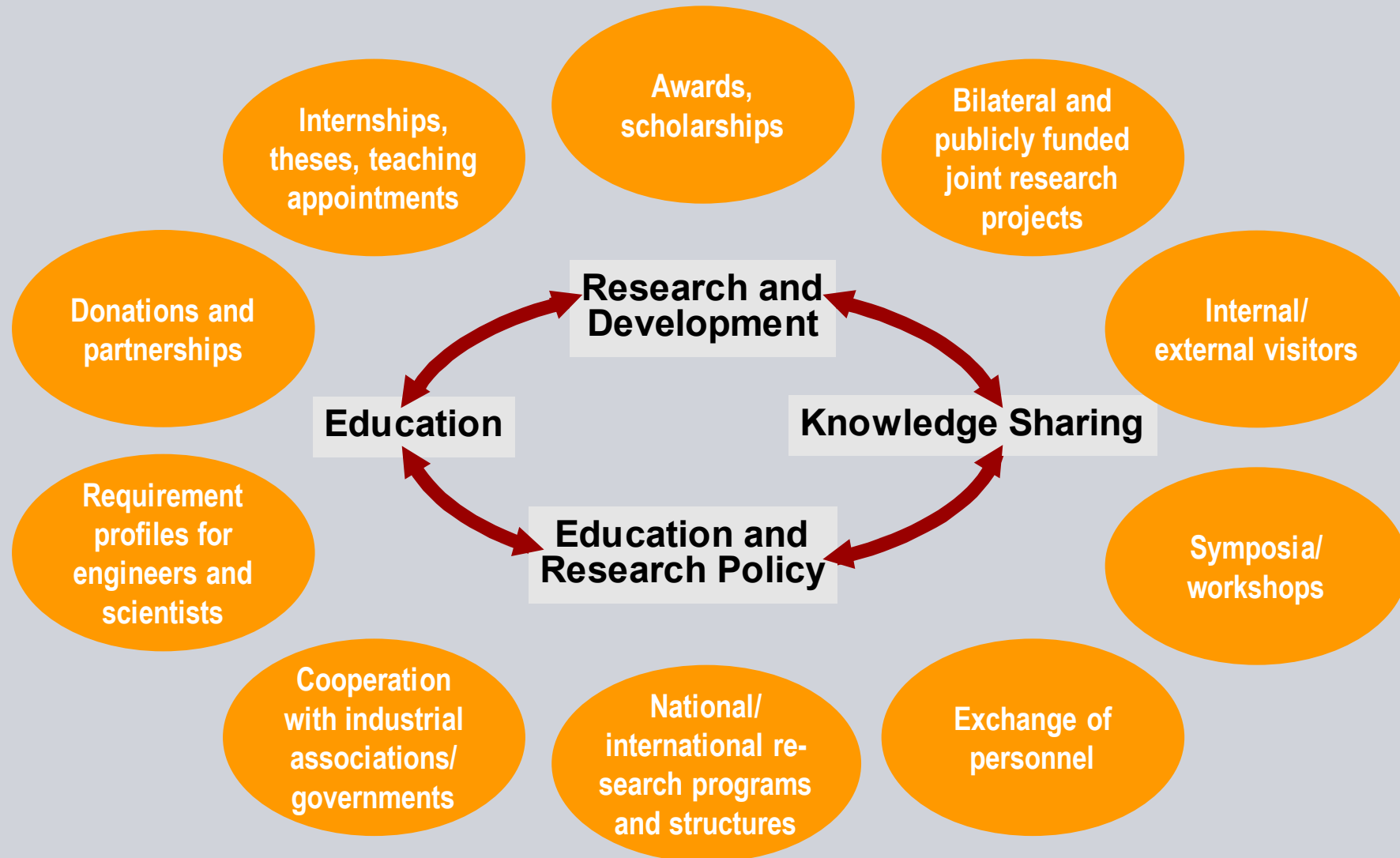
Source: VDE survey "Young Professionals 2007"

Reasons given by companies for letting newly hired graduates go



Siemens closely interacts with universities and public research institutions

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Generation21 Universities: Program principles and activities

Generation21 aims to convey our know-how to universities and to cooperate with them in education. It is based on the Siemens core competences, but does not cover activities relating to recruiting or research cooperation. Main programs are:



- Yolante: Mentoring program for girls studying technical majors (D)
- W. v. Siemens Excellence award for an outstanding technical thesis
- International Masters and E. v. S. PhD scholarships for technical majors
- Sponsored student meetings with Nobel prize winners in Lindau
- Siemens teaching delegates (Lehrbeauftragte), 200 in Germany and Austria
- Cooperation in curricula reform (e.g. European Higher Education Area)

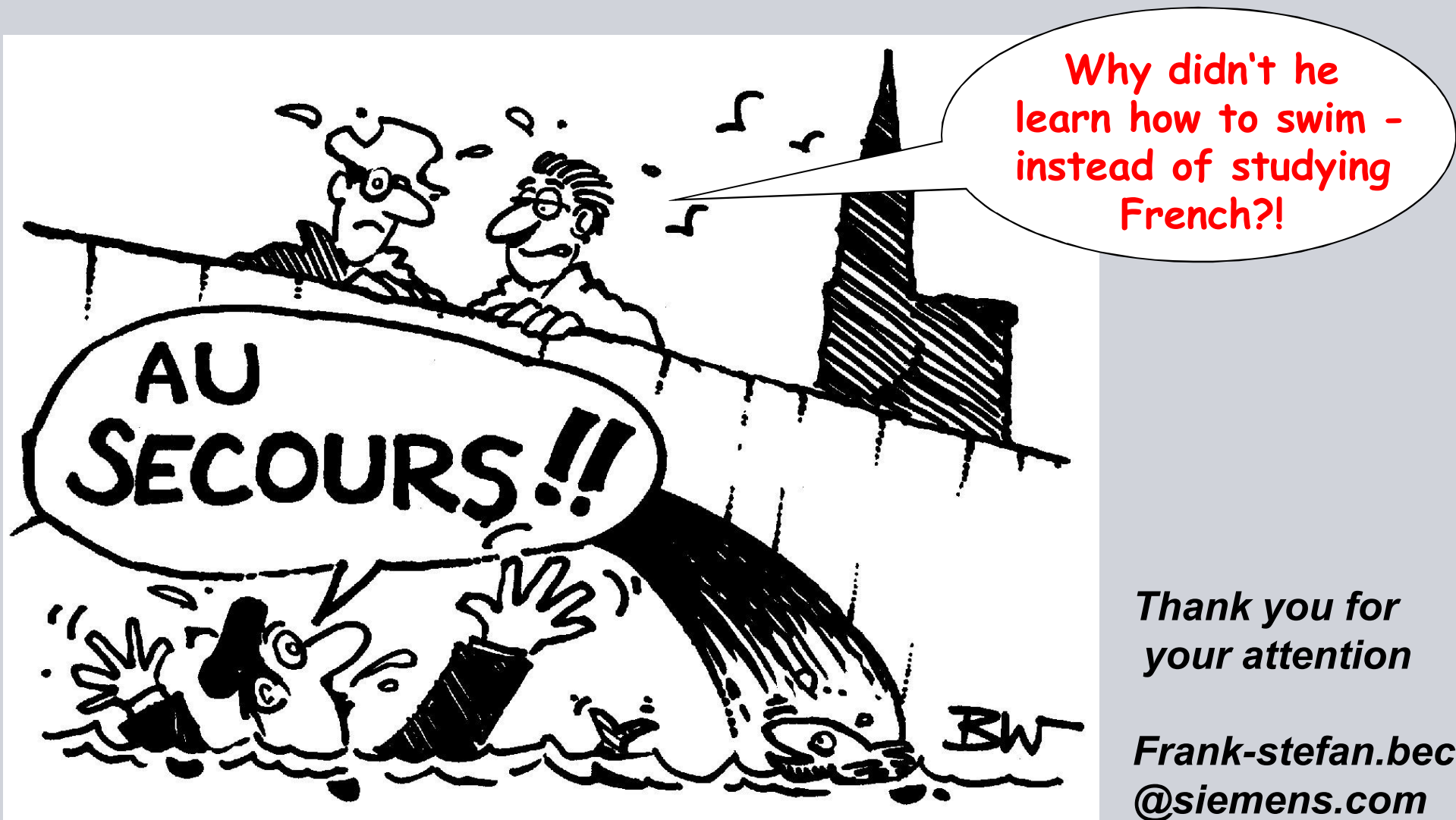
Quality assurance in an international labour market: Recommendations to universities



- Recruiting is local: in the country, for the country. But later international teams, delegation to a different country or just cooperations in virtual teams require an **international spirit**
- New curricula should be developed in close cooperation with industry or professional associations, taking into account the requirements of the labour markets
- A constant monitoring of the teaching success using student and alumni feedback should be established
- Programs should be accredited, accreditation organizations should closely cooperate to agree on standards and procedures (NQF)
- Universities should make use of the Bologna Process to reform curricula (Credit Points, output-orientation), and to provide employers with a meaningful Diploma Supplement
- Bachelor degrees have to be entry-tickets to the labour market: 25% BA hiring at SMEs in Germany *DIHK survey, "Die Studienreform zum Erfolg machen" 2008*

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To sum it up:
Knowledge has to match the practical requirements!



*Thank you for
your attention*

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