# IT is not what it used to be. It is far better.
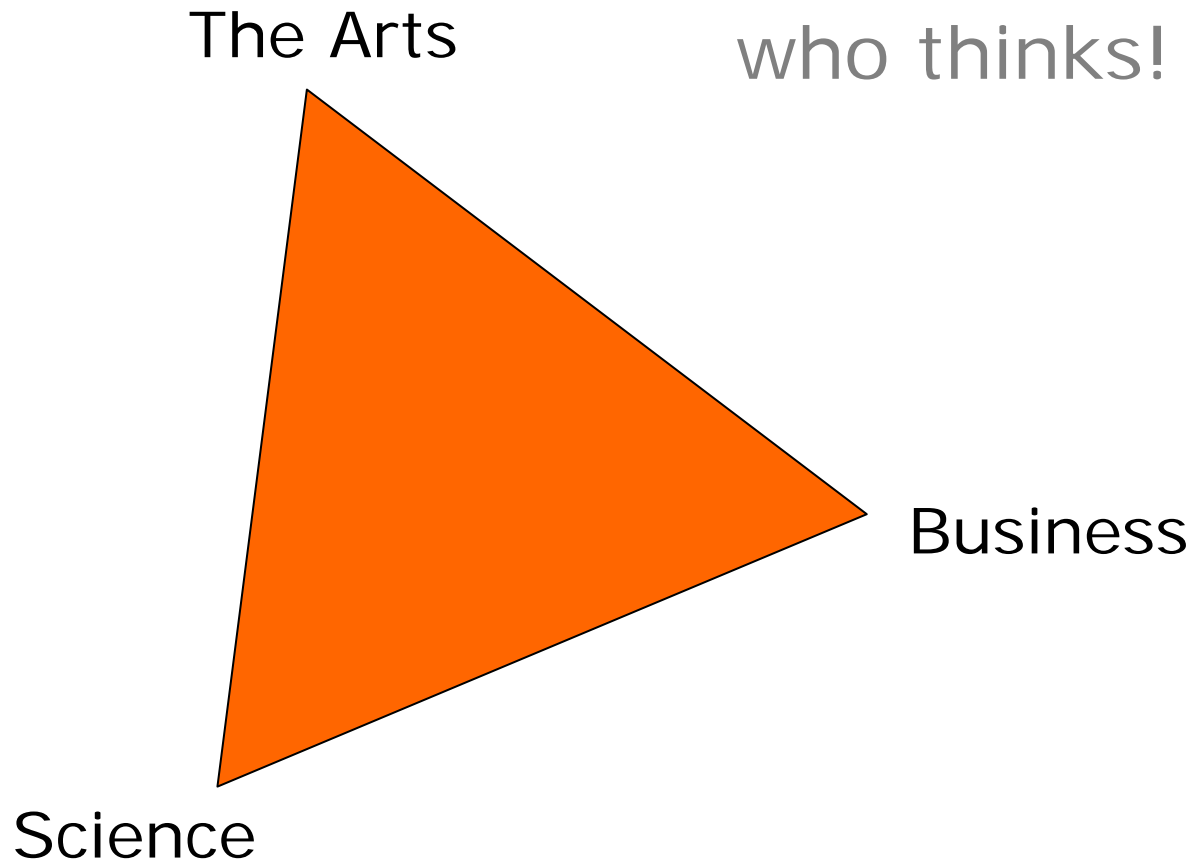
**Mads Tofte, October 16, 2006**

# Teaching: The ITU triangle of IT
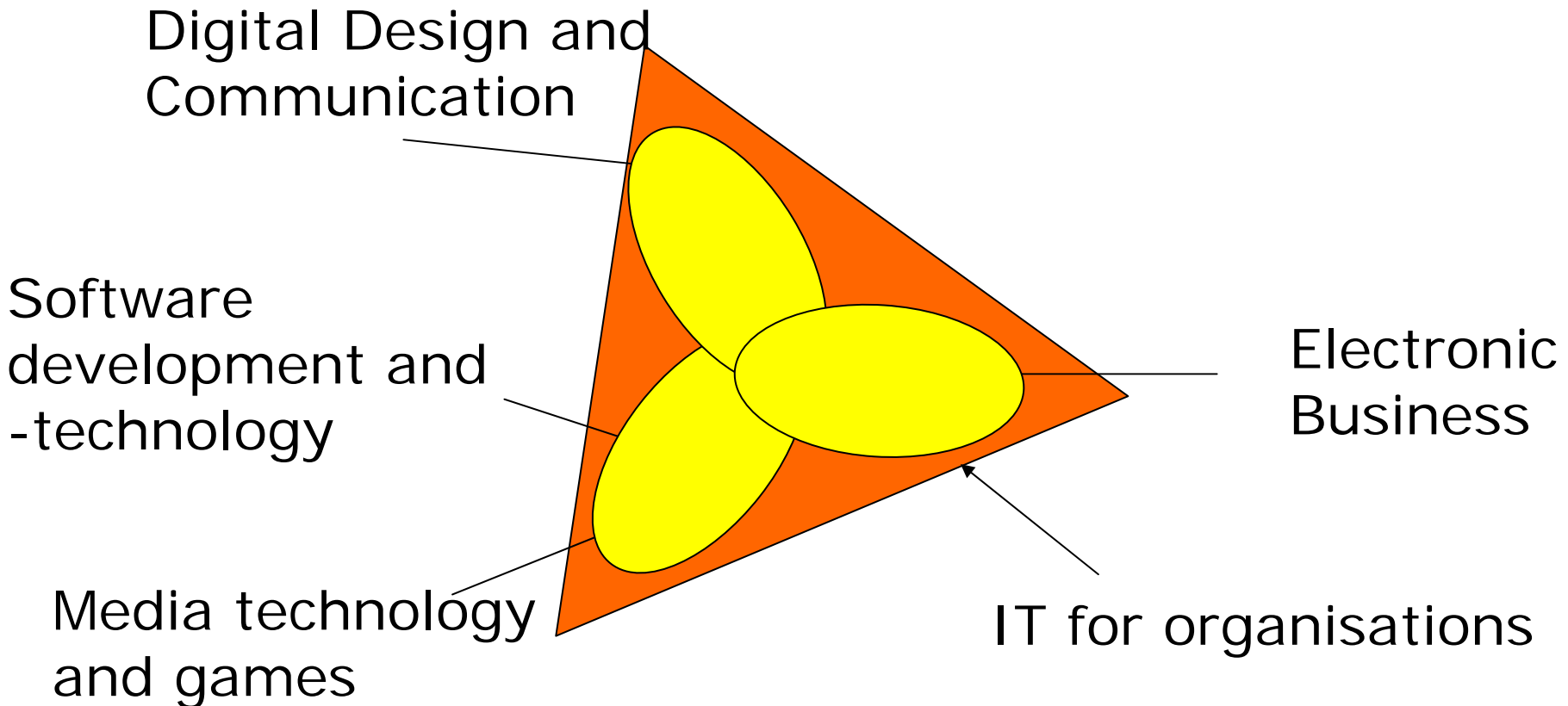
The Arts

Business

Science

IT is for everyone who thinks!

# Master of Science in IT *(cand. it.)*

**Five study programmes:**



Digital Design and Communication

Software development and -technology

Media technology and games

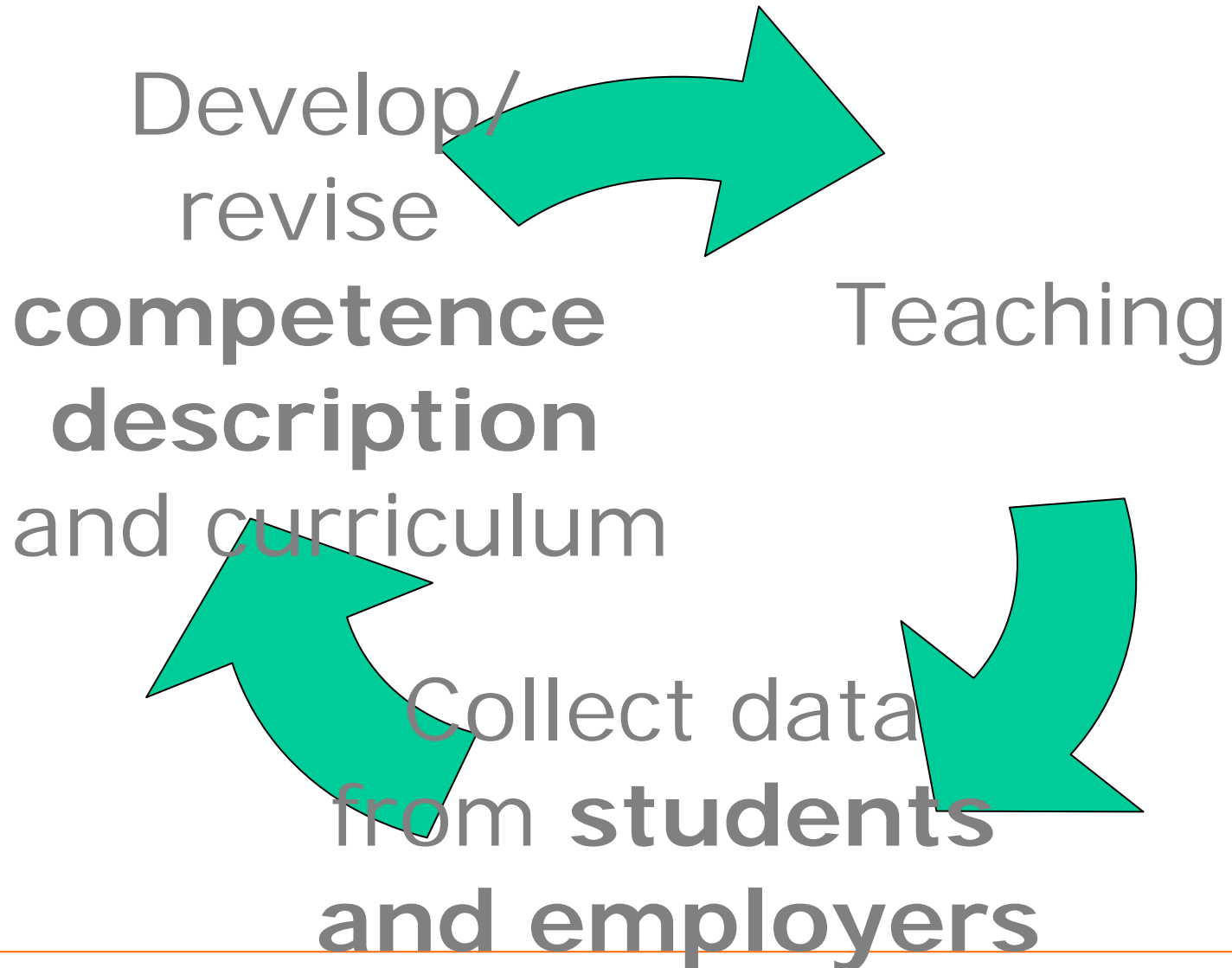Electronic Business

IT for organisations

# M.Sc. Graduates (accum.)
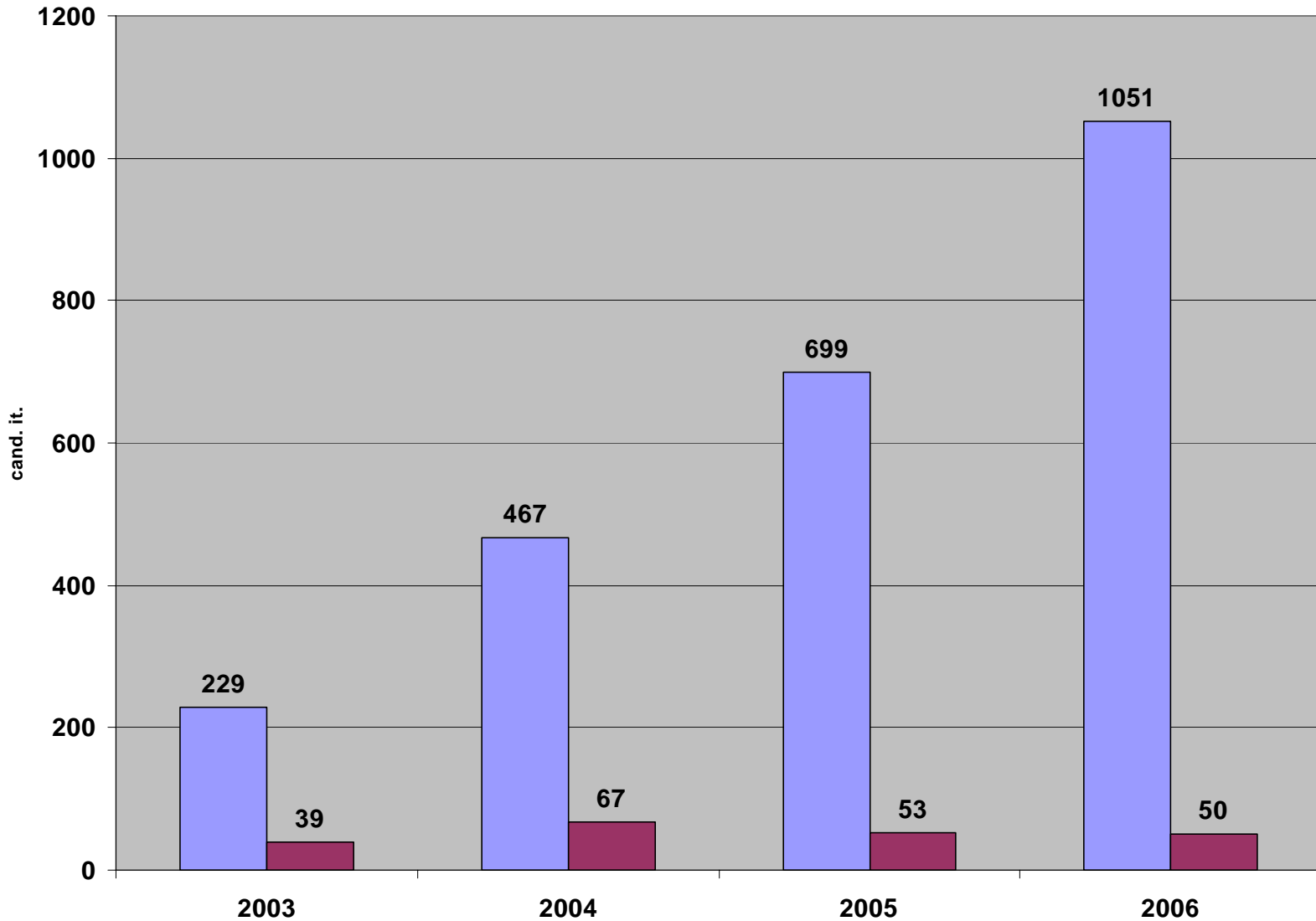
# A few numbers (2005)

- Number of M.Sc. graduates: 265
- 40 % of our graduates are women
- 95 % employment
- Around 100 bachelor degrees represented among our students
- Enrolled M.Sc. Students (two enrollments a year): 381 for the year
- Additional guest students: 174

# The Life-cycle of ITU Study Programmes

Develop/ revise **competence description** and curriculum

Teaching

Collect data from **students and employers**

# Research at ITU

**The IT University aspires towards Pasteur's quadrant (Stokes 1997):**

**Consideration of use?**

**Quest for fundamental understanding?**

|  | no | yes |
|---|---|---|
| **yes** | Bohr | Pasteur |
| **no** |  | Edison |
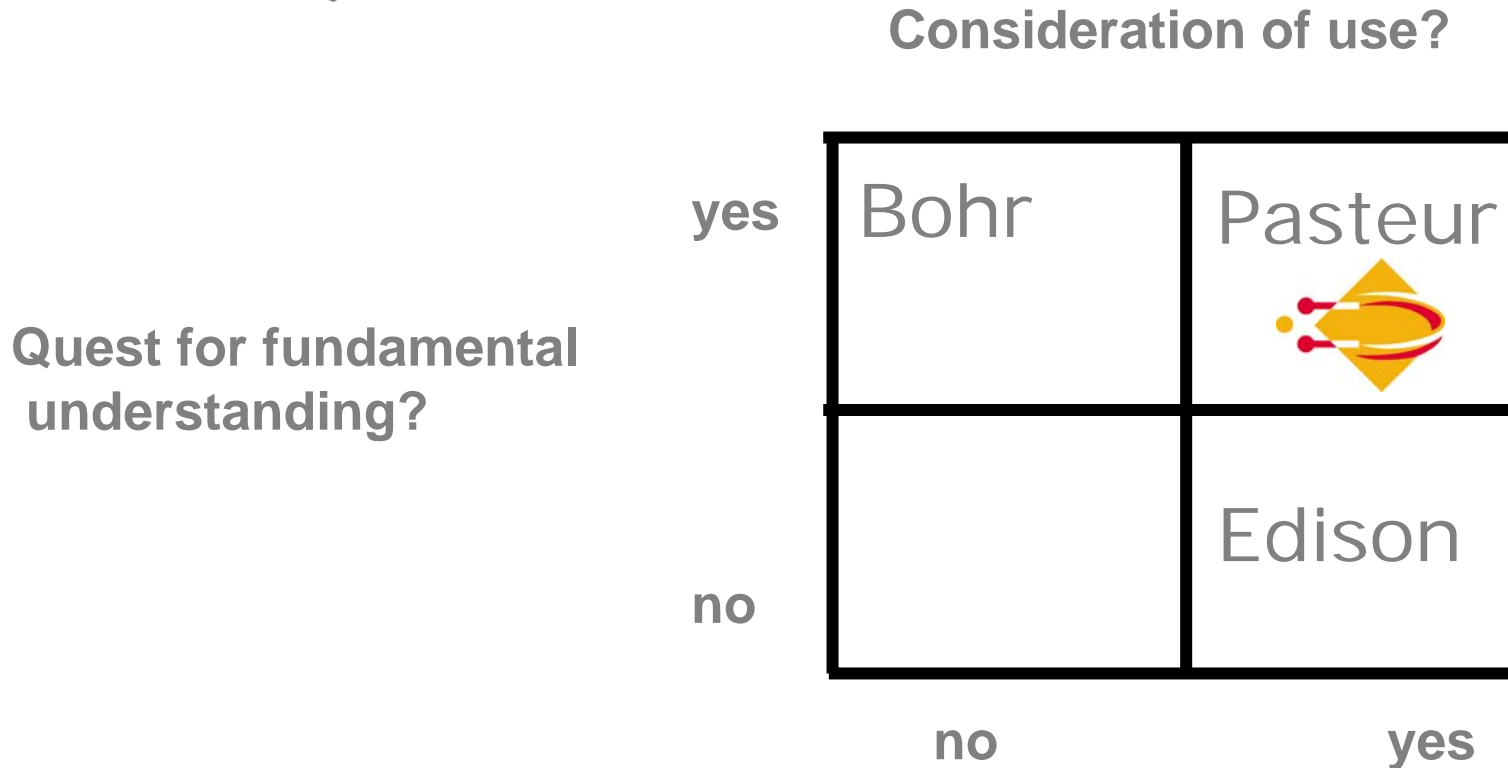
# Implications for hiring and promotions

- Influential research contributions
- Strong academic record (as judged by peer communities)
- Ph.D. supervision
- Teaching and curriculum development
- Obtaining external funding and
- Cooperation with external partners in particular industrial partners or institutions

# ITU's seven research groups

- **<u>The Image Group</u>**
  *headed by* <u>Mads Nielsen</u>

- **<u>Programming, Logic and Semantics</u>**
  *headed by* <u>Lars Birkedal</u>

- **<u>Software Development Group</u>**
  *headed by* <u>Peter Sestoft</u>

- **<u>Computational Logic and Algorithms</u>**
  *headed by* <u>Henrik Reif Andersen</u>

- **<u>Center for Computer Games Research</u>**
  *headed by* <u>Espen Aarseth</u>

- **<u>Design of Organizational IT</u>**
  *headed by* <u>Finn Kensing</u>

- **<u>Innovative Communication</u>**
  *headed by* <u>John Paulin Hansen</u>

# Research in all parts of the triangle



The arts

Science

Business

# Facts about ITU (2005)

- Independent university, created in 1999
- Income: 20 million euro
- Expenditure: 19 million euro
- Full-time faculty: 45 FTE
- Ph.D. students: 38 FTE
- Part-time teachers: 14 FTE
- Total number of staff: 166 FTE
- Only one faculty, only one research department

# Experiences gained

- Students (of both sexes and in considerable numbers) generally like the idea of IT being a very rich field, even though they can only specialize in a tiny part of it.
- Essential to bring together staff from different subjects (computer science is only one of them!)
- The ideas that require the most leadership (and management) are (in order of difficulty, most difficult first):
  - Pasteur's quadrant
  - The life-cycle of ITU study programmes
  - The ITU triangle
- Still, we believe we are on to a good thing. ☺

# Next steps for ITU

- Establish collaboration with non-Danish universities about teaching
- Establish collaboration with non-Danish universities about measuring quality and impact of IT research (as distinguished from CS research)