

# Technology Transfer from Universities to Industry - A Personal View -

## Evolutionary Computing in Practice GECCO 2006



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# Introduction

- ▲ A Difficult Topic
- ▲ Necessarily a Personal View
- ▲ At Least 4 Main Factors (Country – Specific)
  - ▲ Economic Growth Rates
  - ▲ Governmental Policies
  - ▲ History & Culture of University – Industry Interactions
  - ▲ IP Issues
- ▲ Other Factors
  - ▲ Active Role of the Researcher / University
  - ▲ Sales & Marketing
  - ▲ The Human Factor („Professor Factor“)

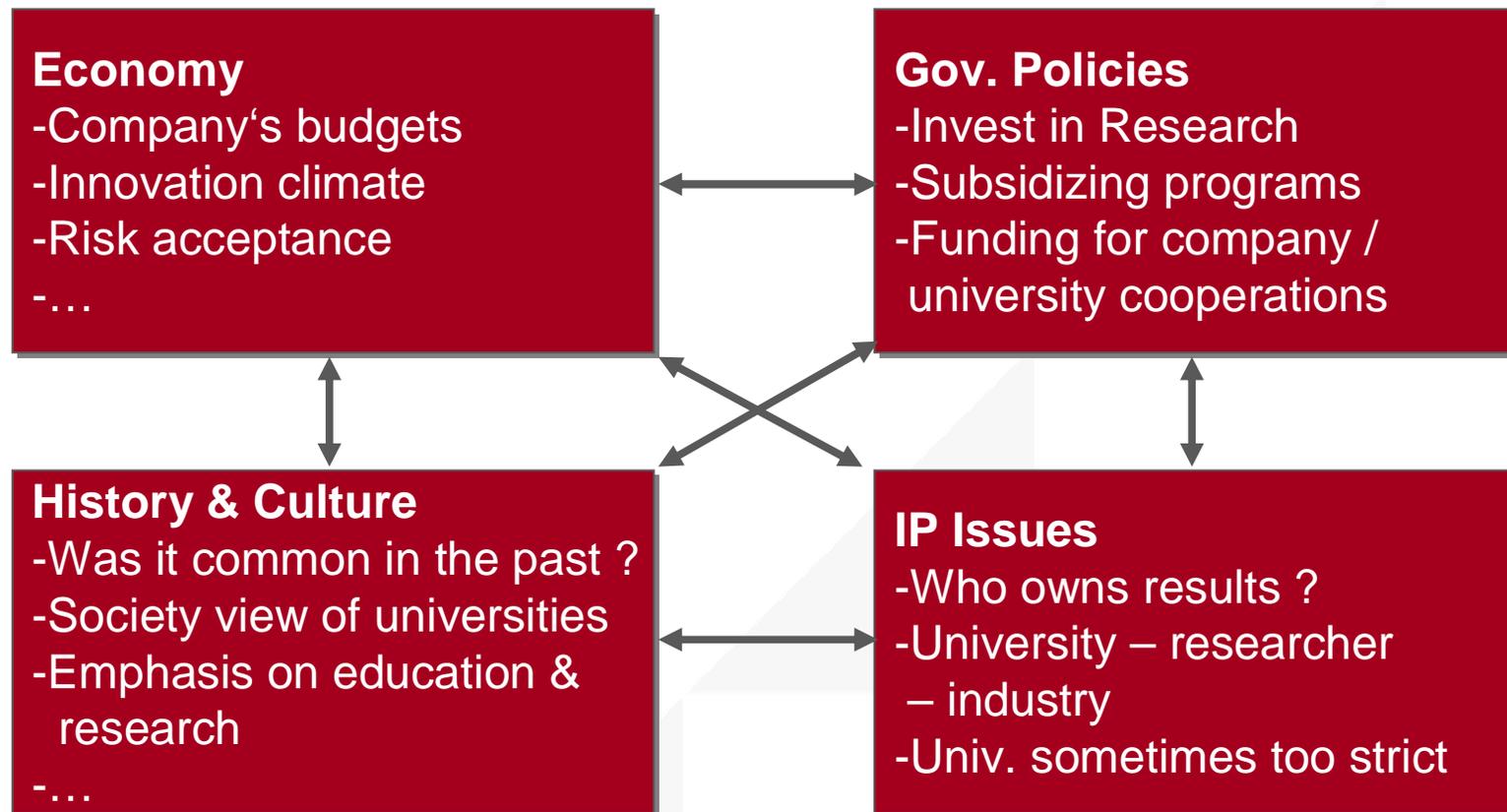
# My Personal Background

- ▲ Dortmund University, 1990 – 1994
  - ▲ No Industry Interaction
  - ▲ No University Attempts / Support in Doing so
- ▲ Informatik Centrum Dortmund, 1994 – 1999
  - ▲ Research Projects with Industry
  - ▲ Governmental Funding (also for Industry !)
    - ▲ Makes it Easy for Industry to Accept Participation ...
- ▲ Leiden University, since 1996
- ▲ NuTech Solutions, since 2000
  - ▲ Understand where the Market is ! What it wants !

MORE  
INDUSTRY

# 4 Components

Many more Aspects play a Role !



# Other Factors

- ▲ The Researcher / Professor
  - ▲ Avoid Thinking of University Research being more Advanced than Company's Research ...
  - ▲ Try to Listen & Understand the Company's Needs.
  - ▲ Be Active – University Normally does not do it ...
- ▲ Sales & Marketing
  - ▲ Somehow, Industry must learn about you.
  - ▲ Some Universities Really Support This
    - ▲ Seminars for Industry
    - ▲ Industry on Advisory Board on University
    - ▲ Alumni Networks
    - ▲ Support of startup companies (also gov't programs)

# Gov't Programs

- ▲ Germany / EU / US ...
- ▲ Often Huge Effort (Proposal Writing ...)
- ▲ Typically want Industry Participation
- ▲ Industry sometimes happy about „subsidies“ ...
- ▲ Real Tech. Transfer Sometimes Happens
- ▲ Start Industry Cooperation Based on This

# Observations

- ▲ Can it fit with a PhD study ? Yes!
- ▲ Good programming standards & high quality delivered.
- ▲ „We pay taxes anyway“ – why pay for it ?
- ▲ Need for outside money at universities implies growing activities
- ▲ Interesting to observe: Univ. needs to sell.
- ▲ Huge companies: Own research departments.
- ▲ Small companies: Can't afford, don't think about it.

# Advices I

- ▲ R & D Departments of Big Industry
  - ▲ Good for „small money“
  - ▲ Often pretty open for collaboration
  - ▲ Typically try to just finance / co-finance a PhD student
  - ▲ Are not used to the idea to pay a University
  - ▲ Typically well aware of technology and algorithms

# Advices II

- ▲ Production Departments of Big Industry
  - ▲ A better target !
  - ▲ You need to talk their language, not yours !
  - ▲ Try to understand their needs
- ▲ Advice:
  - ▲ Listen
  - ▲ Listen
  - ▲ Listen
  - ▲ Do not talk about your algorithms on a technical level

# Advices III

- ▲ Don't be shy asking for money !