Confessions of an entrepreneurial scientist: motivation, careers and rewards in university-industry knowledge transfer

Anthony Finkelstein
Computer Science

Who am I and what do I do?

Software Systems Engineering
What is it and who cares?

What is my experience …

– Research Council collaborations, Uncles, EngDs, TCS/KTP, DTI, EU, Charity+Industry, Sponsored Students, Directly Funded Research, Consultancy, Spinout, Licensing, Board Membership, Donation, Faculty Partnerships, Faraday Centres, Hosted Research Centres, Industry Clubs, Journeyman, Staff Transfers, Lab Liaison, Strategic Partnerships, Tech Transfer Networks, Funded Chairs, Business Fellows, Business Managers …

Motivation …

intrinsic

extrinsic

Two 'small' case studies

SYSTEMWIRE & messageAUTOMATION

Microsoft

A 'balanced' appraisal

Some lessons for industry

On how to get it wrong …

Over specify your project

Under specify your project

Choose the wrong funding modality

Choose the wrong researcher

- By reason of … expertise
- By reason of … availability
- By reason of … interest

Demand unrealistic timescales

- To get the project up and running (includes proposal writing and staffing)
- To achieve the goals of the project

Over project manage

Under engage

Be a bad researcher rather than a good customer

Fail to get operational buy-in within your own organisation

Invest in expensive research projects but don't go to the main technical conferences in the area

Pay for studentships and

- Ignore the students
- Suddenly withdraw from supervision the moment an urgent problem crops up
- Change your mind about what you want half-way through
- Commit to making technical resources available but don't do so

Fail to build a long-term relationship, scatter projects about

Churn staff on projects and at the University interface

Change your research strategy every 6 months (or less), don't engage your University partners with this

Demand all the IPR and then leave the discussion to ill trained in-house lawyers

Restrict scientific publication and exchange of ideas

Prevent access to key data, people and meetings for 'confidentiality' reasons

Enter into larger collaborative projects without understanding the commercial relationship with other collaborators

- Protest at paying reasonable overheads
- Pay for expensive research but don't have a pipeline for using the results
- Cost unrealistically, fail to cost your own time
- Try to recycle funding

Some lessons for academics

On how to get it wrong …

→ Take on research you don't care about just for the money

→ Assign weak staff to a collaborative project

→ Fail to acquaint yourself with the domain and the 'industry environment'

Sell a focused project to meet a strategic requirement

Produce the wrong sort of 'deliverables'

Fail to support your 'champion'

Be unprepared to change direction

Concentrate on providing a solution when you don't know what the *problem* is

A Happy Ending Is Possible

but it needs openness, commitment and experience

we need to make sure the political pressure does not get in the way of a frank discussion of how we can improve matters

A Personal Note ...

I am not an academic who happens to be a Software Engineer, I am a Software Engineer who happens to be an academic