



# Lessons Learned Building Productive Academic Industry Relationships

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*“Essential tips for establishing a successful collaboration”*

**Carnegie Mellon University**

Rebecca W. Doerge

Glen de Vries Dean of the Mellon College of Science

Department of Statistics and Data Science

Department of Biology

## Introduce RWD

Academic research

Industry work vs  
research

Challenges

An example:  
successful  
relationship  
between industry  
and academics

What to think about  
before, during and  
after...

# RWD

- Interdisciplinary research program and career
  - Statistics, genetics, humans, plants, etc.
  - Industry collaboration with ag, pharma, tech, start-ups
- All of academic education and experience in large public institutions
- 21 years at Purdue University
  - Large federally funded research group
  - Consulted with industry
  - Received gift money from industry
  - Contracted privately with industry
  - Collaborated with industry
  - As HoD negotiated consulting with industry for Purdue Statistics
- 3.5 years Dean of Science, Carnegie Mellon University
  - Funding from donors, industry, foundations, federal agencies
  - Negotiate on behalf of College and University

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## Motivation for research/work in academics

- Self motivated
- Self directed
- No immediate deadline, timeline or urgency for deliverables
- Academics work on what they want... when they want...
  
- Federally funded?
  - No real accountability whether proposed work is done
  - Impact of work not significant nor tied to profits
  - Deliverables not always required
  
- Academics are able to pick and choose who they work with, when and on what research
- Discuss research, results and plans freely without worry about confidentiality of trade secrets.

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## Motivation for research/work in industry

- Work is typically team/group oriented
- Real expectations on work/results/deliverables
- Results/solutions are tied to profit margins and products
- The speed of work and results matter
  - The rest of the company depends on results
  - Industry typically doesn't have time to wait for a novel solution/method/etc.
- There may be an expectation for individual research, but typically a very low percentage of total time, and not at the expense of the work.
- High level of professionalism and communication as representatives/employees of the company.

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## Challenges

- Finding corporate/industry partners with whom to work
- Expectations
  - Financial
  - Terms of work
  - Is a legal memorandum of agreement (MOA) needed?
  - Who does the work? Faculty and/or students?
  - Who owns the work? Who owns the discovery? First rights of refusal
  - Where is the work done, on what instruments/computers/etc.?
  - Publishing?
- Differences in work culture, speed of work, and work vs. research

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## An example

- Purdue Statistics and a large local pharma company
- HoD met HoA (Head of Analytics)
  - company had problems that were related/involved statistics
    - they asked for help
  - HoD and HoA decided to set up a meeting between industry/academics
- Structure, mechanics, follow-up to meetings.
- Permission to meet and talk, confidentiality agreements
- Problems/subject for work determined by company
- Mechanics of introducing the problems and people
- Memorandum of Agreement (MOA)
- Work orders (i.e., money)
- Timeline
- Deliverables

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## What to think about ... from the academic side

- Does the department/unit want to work with industry?
  - Do they understand what this means wrt timeline, results, deliverables, payment?
- Does the department/unit have faculty who work in areas of industrial need?
- Short term projects or long term collaborations?
- Are students involved? And how will they be protected/paid?
- Money flow... money goes to university
  - Does university/college/department take a cut?
  - How can the faculty use the funds?

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## Closing thoughts...

- Successful collaborations between academics and industry are very different than academic collaborations.
- They can be productive, and a source of funding, but not at the expense of an academic career (tenure).
- I am sure there are things I have forgotten to mention, so please ask questions!
- Thank you!