New Faculty Forum
Collaboration

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Academic Collaboration - Upsides

Why Collaborate?

• Lever resources
• Access more specialized equipment, expertise
• Multiply impact, productivity
• More stimulating intellectually
• Enable interdisciplinary projects
• Richer training environment for HQP
Academic Collaboration - Downsides

Potential Downsides

• Muddy contribution (esp. former supervisors)
• Dependent upon others
• Funding can become more complicated
• Must work at establishing and sustaining relationships
# Collaboration and Publication

<table>
<thead>
<tr>
<th>Half Year</th>
<th>Papers</th>
<th>%Collab.</th>
<th>Collab Cites</th>
<th>Solo Cites</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 to June 30</td>
<td>439</td>
<td>64.2%</td>
<td>0.83 each</td>
<td>0.79 each</td>
</tr>
<tr>
<td>2007 to June 30</td>
<td>387</td>
<td>60.5%</td>
<td>14.03 each</td>
<td>10.63 each</td>
</tr>
<tr>
<td>2002 to June 30</td>
<td>200</td>
<td>50.5%</td>
<td>20.50 each</td>
<td>17.36 each</td>
</tr>
</tbody>
</table>

Data from Web of Science for UofA Engineering, effective Feb. 25, 2013

Univ. of Alberta Engineering
Collaboration by Country

Distribution of International Collaborative Publications by Country (2006-2012)*

*Includes top 20 only

Univ. of Alberta Engineering
Collaboration by Institution

Distribution of International Collaborative Publications by Organization (2006-2012)

- Polish Acad. of Sciences
- NINT
- U of British Columbia
- U of Calgary
- U of Toronto
- NRC
- U of Saskatchewan
- Harbin Inst of Technology
- Indian Inst of Technology
- U of Waterloo
- TRLabs
- Queen's U
- U of Suwon
- U of Michigan
- Tsinghua U
- Cross Cancer Institute
- Imperial College
- Syncrude
- Kings College London
- McGill U
- U of Maryland

*Includes top 20 only
Developing Academic Collaborations

How to establish collaborations

• Personal contact important
  – Conferences, visits, talks, HQP, extended network

• Institutional engagement

• Cold calls
  – Exposure through literature, web site
Industrial Collaboration - Upsides

Why Collaborate?
- Secure funding
- Access to industrial equipment, settings, data
- Reinforce relevance of research
- Improved technology transfer
- Richer training environment for HQP
- Placement of HQP
Industrial Collaboration - Downsides

Potential Downsides

- Takes time to build relationship
- Agreements often difficult, cause delays
- IP may get tied up
- Confidentiality may restrict ability to publish
- Mismatch of expectations (especially timelines)
- Risks of deploying students
  - Greater potential to breach confidentiality agreement
  - May be constrained in publishing thesis
  - Conflicts between industry and student IP rights
Programs to Support Industry Collaboration

**NSERC**
- Interaction ($5K, 3 months, new contact)
- Engage ($25K, 6 months, some in-kind needed)
- Collaborative R&D (CRD)
  - 2:1:1 matching, high success rate, <3 years
- Industrial Research Chair (IRC)
  - 1:1 matching, large programs ($200K+), 5 years
Impact on NSERC Funding

NSERC Engineering Funds 2007 to 2012

- Discovery Grants (886)
- Collaborative Research and Development Grants (199)
- Industrial Research Chairs (63)
- Strategic Projects - Group (65)
- Research Tools and Instruments (72)
- Other (154)

Total value of funding: $77.5 M
Corporate Collaborator Profile

In 2009, approximately 1,500 companies were working with NSERC. Today, NSERC works with over 2,400 companies.

http://www.nsercpartnerships.ca/Strategy-Strategie/Index-eng.asp

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Developing Industry Collaborations

How to establish collaborations

• Personal contact important
  – Conferences, visits, talks, HQP, extended network

• Know their business and the value proposition you present for them
  – From their perspective, you’re there to help them, not vice versa

• Understand their sensitivities (eg. IP, confidentiality, competitors, time to market)

• Industry is often more interested in your HQP than your technology
Questions…?