Context: Computing Research Association (CRA)

- CRA Mission Statement: CRA’s mission is to enhance innovation by joining with industry, government and academia to strengthen research and advanced education in computing.

- CRA Strategic Plan Framework (draft)
  - Theme B: Leverage the capacity of the CRA network
    - Initiative B2b: Influence systemic practices in industry and academia that affect the computing research community
  - Theme D: Expand partnerships and connections among the computing research community
    - Initiative D1a: Meaningfully engage industries that conduct computing research (utilizing a CRA-I Committee)
  - Theme E: Strengthen pathways and diversify the field of computing researchers
    - Initiative E1b: Support pathways between industry experience and academic computing research programs
Executive Summary (details in report)

- Survey sent to 221 computing department chairs (special thanks to Betsy!)
  - 105 responses --- indicates strong interest by CRA member organizations
  - Over 60% also said that they were open to engaging further on this topic
- Significant industry engagement is under way between faculty and industry, with an increasing trend
- Mix of positive and negative aspects of industry/academia engagements, with the positives outweighing the negatives
- Wealth of information from survey can help guide future CRA activities related to industry-academia engagements
- Overall: clear opportunity for CRA to add value to member institutions and industry partners by facilitating and strengthening their interactions
Types of current/recent faculty engagements with industry in department (Q1)

- Industry provided significant research funding
- Faculty sabbatical in industry
- Potential faculty hires went to industry
- Faculty hired into department from industry
- Faculty left department for industry
- Other form of engagement
- No current/recent engagement
Department chairs’ perception of impact of faculty engagements with industry on different constituencies in department (Q6)
Comments related to Negative Impacts

• “Negative impacts are usually industry hiring away PhD students (before they're done)”
• “Multi-year leaves are a drain on dept resources”
• “It leaves a heavy service load on those that remain. It has made hiring horrible.”
• “Looking for labor not true partnerships …”
• “Contracts are very time consuming and do not have much original research”
• “Industry engagement creates an uneven and unpredictable environment for assigning teaching tasks to faculty members”
• “My pet peeve is that companies have an unrealistic notion of how much they should be able to influence our curriculum”
Comments related to Positive Impacts

• “All positive. We have had success in engaging with research focused companies.”
• “Positive impacts have usually been access to data, funding to support research, collaboration on research, internships for PhD students, and job opportunities for PhD students.”
• “Bringing real-world problems into the academic environment helps students in the classroom and in research.”
• “enables transitioning of research contributions to practice resulting in higher impact.”
• “senior projects sponsored by companies”
• “No negative experiences -- benefits have included placement for students and project sponsorship for faculty”
• “All our our industry engagements have been VERY positive.”
Types of industry organizations involved in faculty engagements

- Large tech companies
- Tech startups
- Non-tech companies with tech needs
- Other
Recommendations

1. Conduct additional surveys to get a more complete picture of current opportunities and challenges related to industry-academia interactions.

2. Create a follow-on report on best practices for departments and companies in industry/academia engagements related to computing research.

3. Consider forming a new CRA-I programmatic committee focused on fostering, amplifying, and sustaining industry’s contributions to the broad landscape of computing research.