

Industry/Academia Ad Hoc Committee Report

(Report prepared May 29, 2020)

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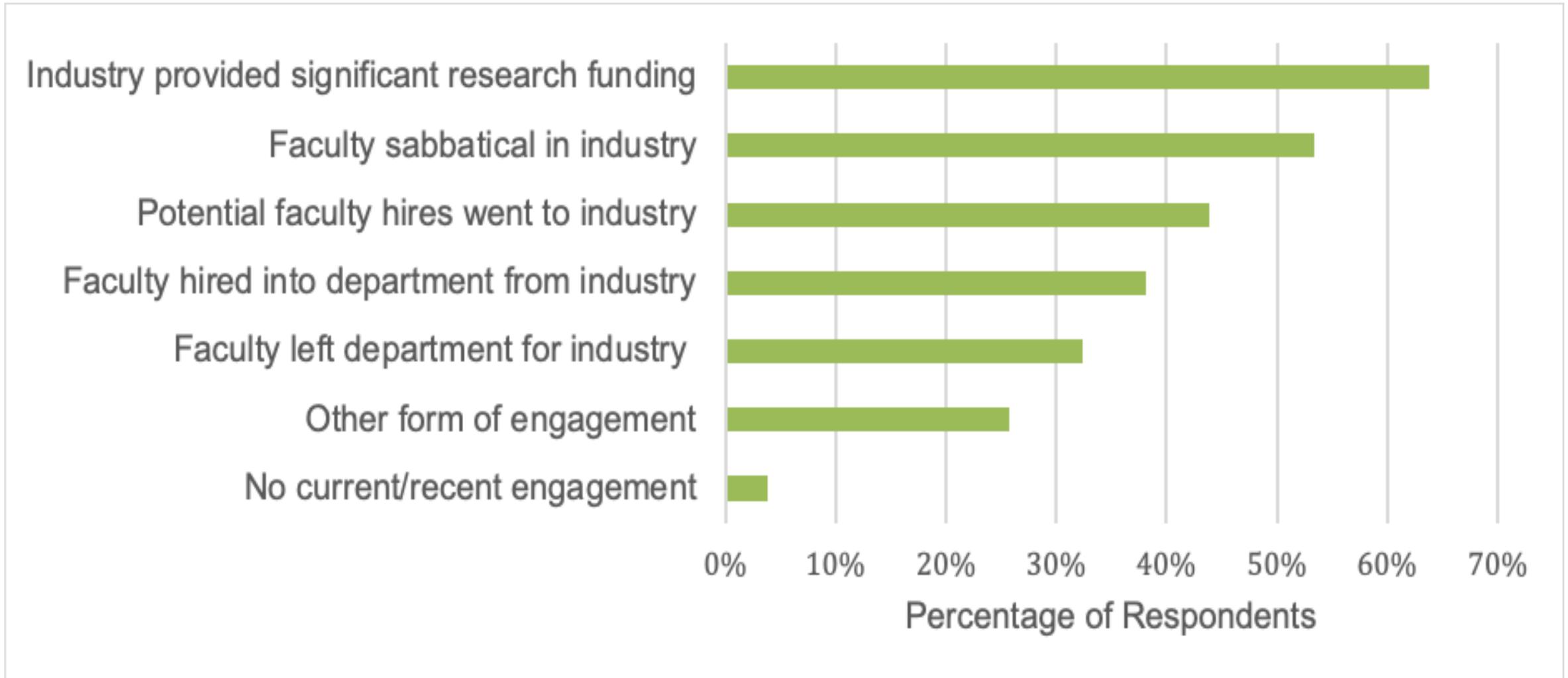
Context: Computing Research Association (CRA)

- 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

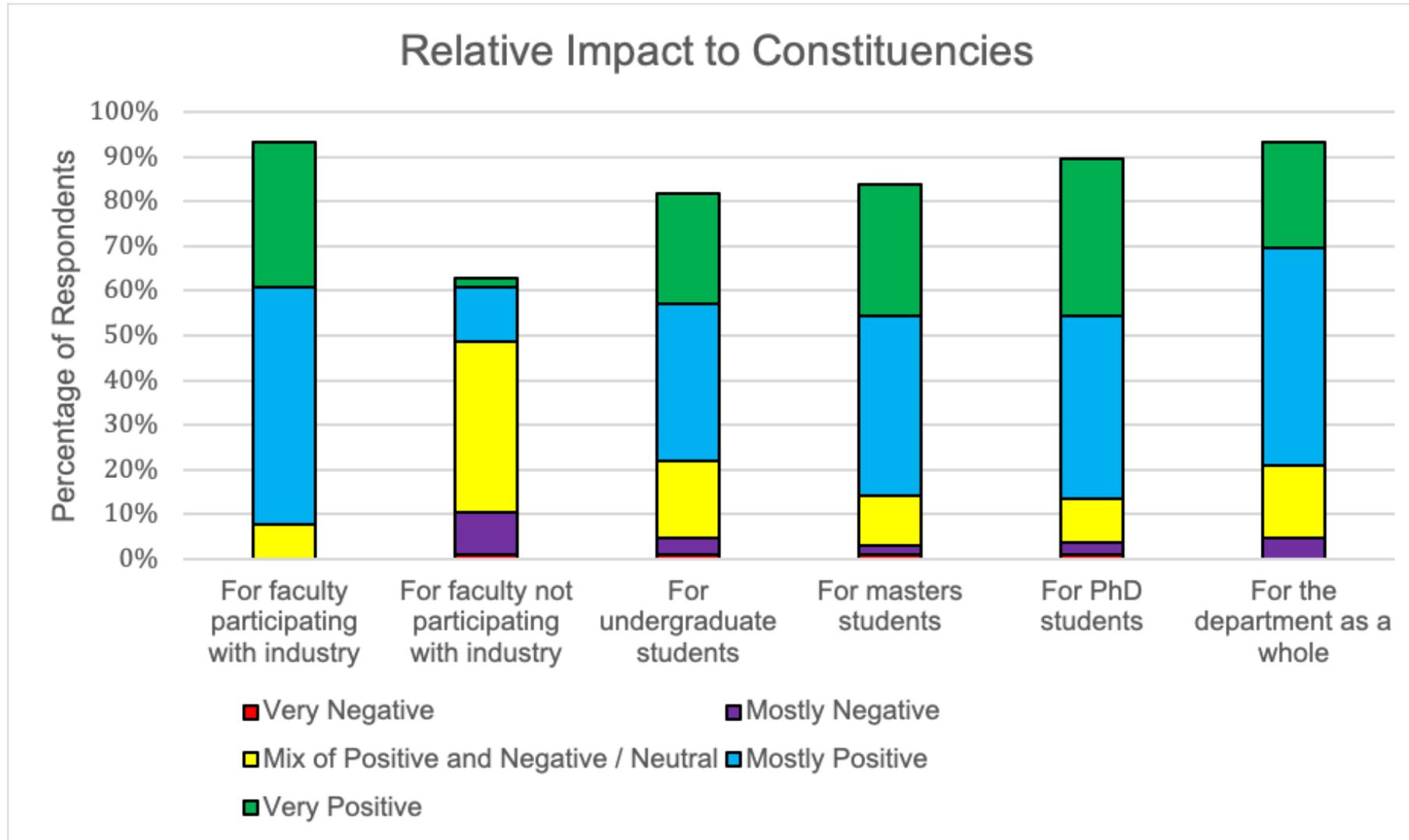
Executive Summary (details in report)

- 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)



Department chairs' perception of impact of faculty engagements with industry on different constituencies in department (Q6)



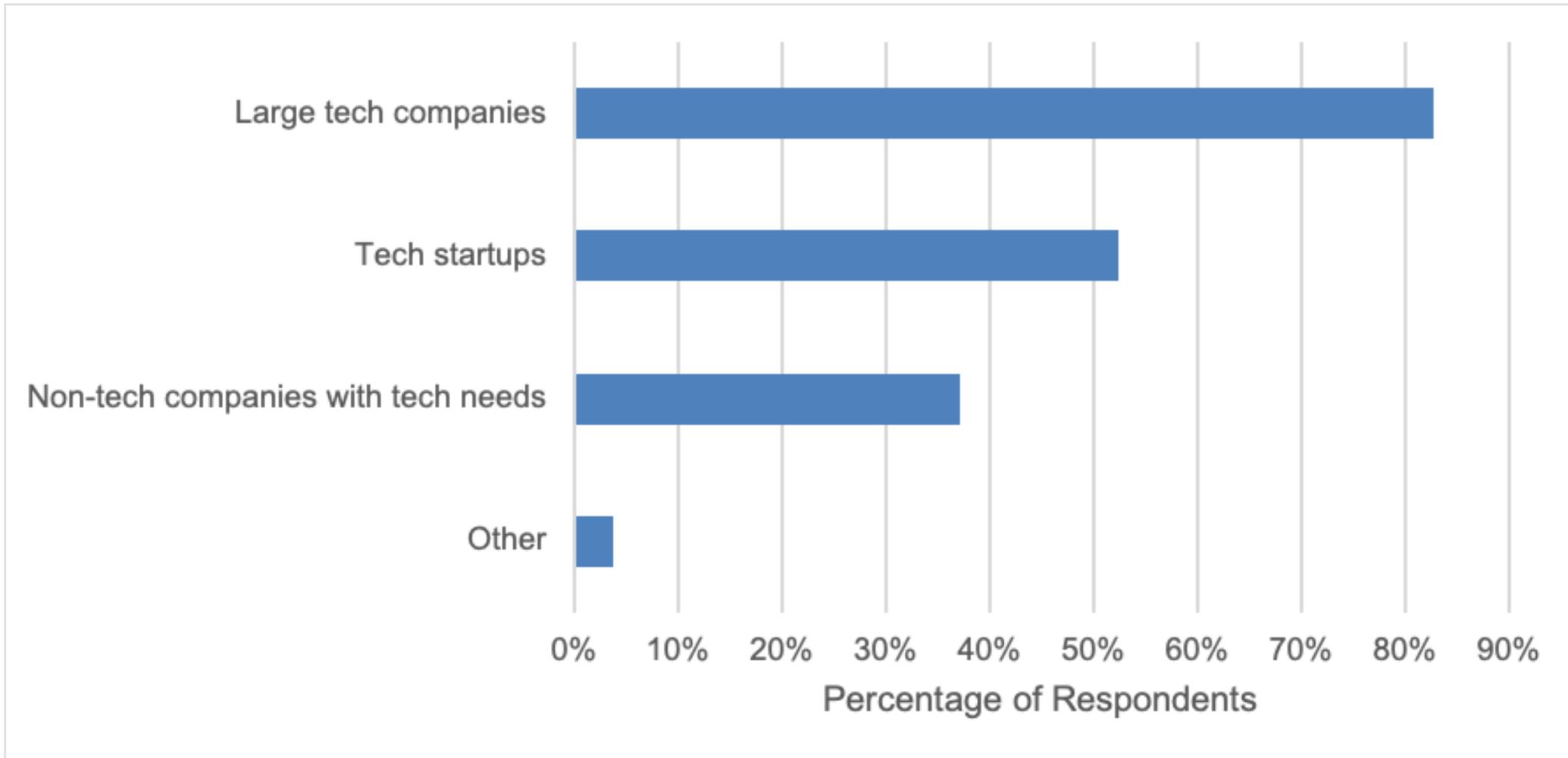
Comments related to Negative Impacts

- "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



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.