Small Business and IUCRCs: Win-Win?

Goal:

Gain some insight into both the benefits and challenges of participating in SBIR/STTR Memberships in IUCRCs Supplement

Slide 1

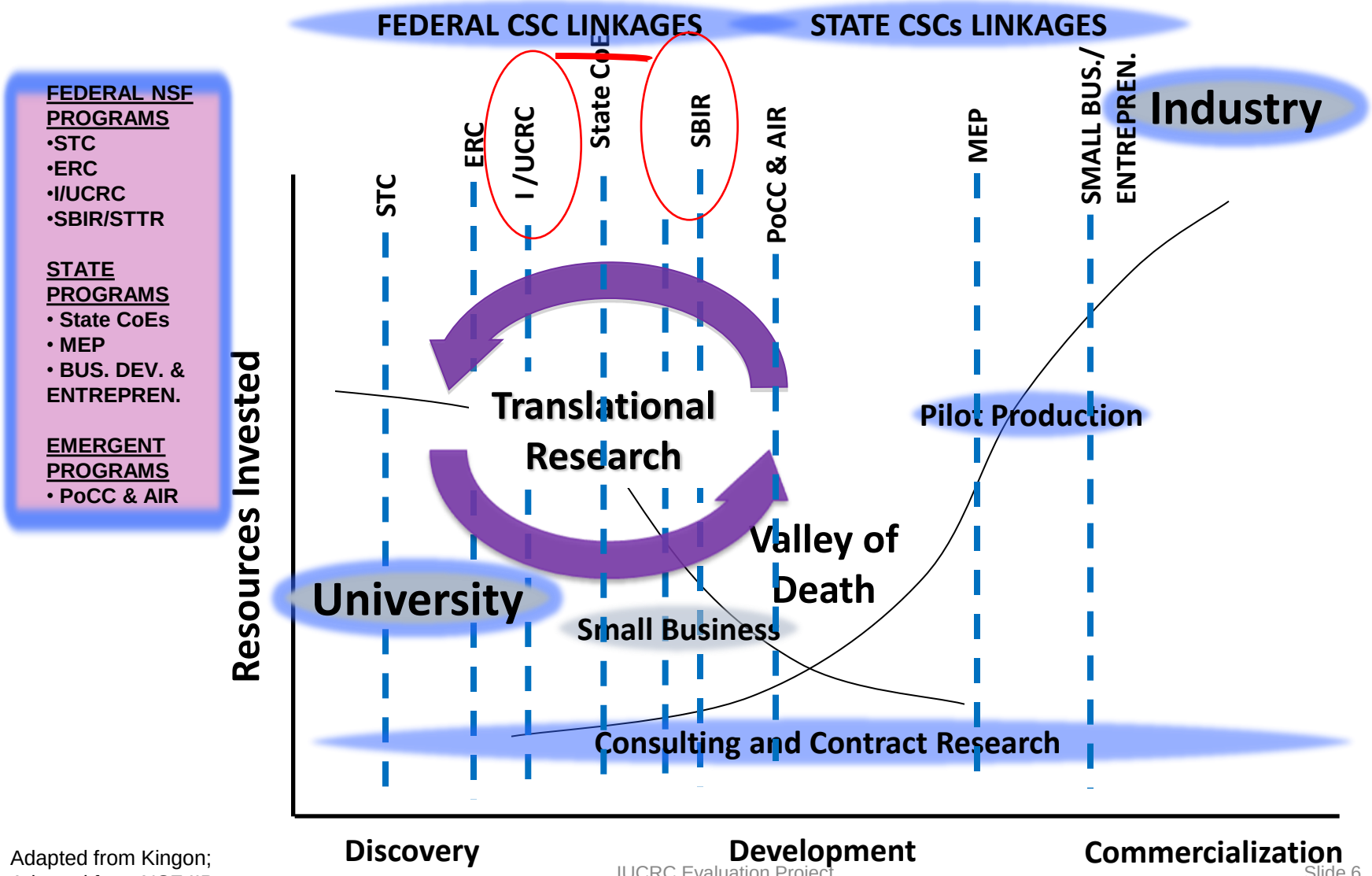
Overview

- *SBIR/STTR Membership in IUCRCs Evaluation Findings*
  - Denis Gray
- *Director's Perspective*
  - Diran Apelian, Center for Resource Recovery and Recycling (CR3), Worcester Polytechnic Institute
- *SBIR Participant Perspective*
  - Rober DeSaro, President, Energy Research Corporation (ERCo)
  - Brian Jurczyk - Panelists
    - President and CEO, Starfire Industries (Center for Lasers and Plasmas for Advanced Manufacturing (CLPAM)

Background on the "SBIR Membership In IUCRCs Supplement"

- Supplemental funding opportunity first announced in 2007
- Objective stated as:
  - *The supplements* ***are intended to accelerate the innovation process*** *by partnering industry-relevant academic research with commercialization focused small business research.*
- Invited active Phase II (IIB) SBIR/STTR awardees to request a supplement they could use to join an I/UCRC (including graduated I/UCRCs)
  - NSF would pay all but $5k of membership for 2 years or 2 x 1 year
    - Intention was to allow 2 years via SBIR and 2 years via IUCRC? (Larsen)
- As of 2013 72 SBIR/STTRs have taken 124 membership years in 26 Centers
- Evaluation report completed 2014
  - https://www.ncsu.edu/iucrc/
    - Select "SBIR/STTR Membership in IUCRCs" under News and Updates on right column

STI Programs and U.S. Innovation Ecosystem

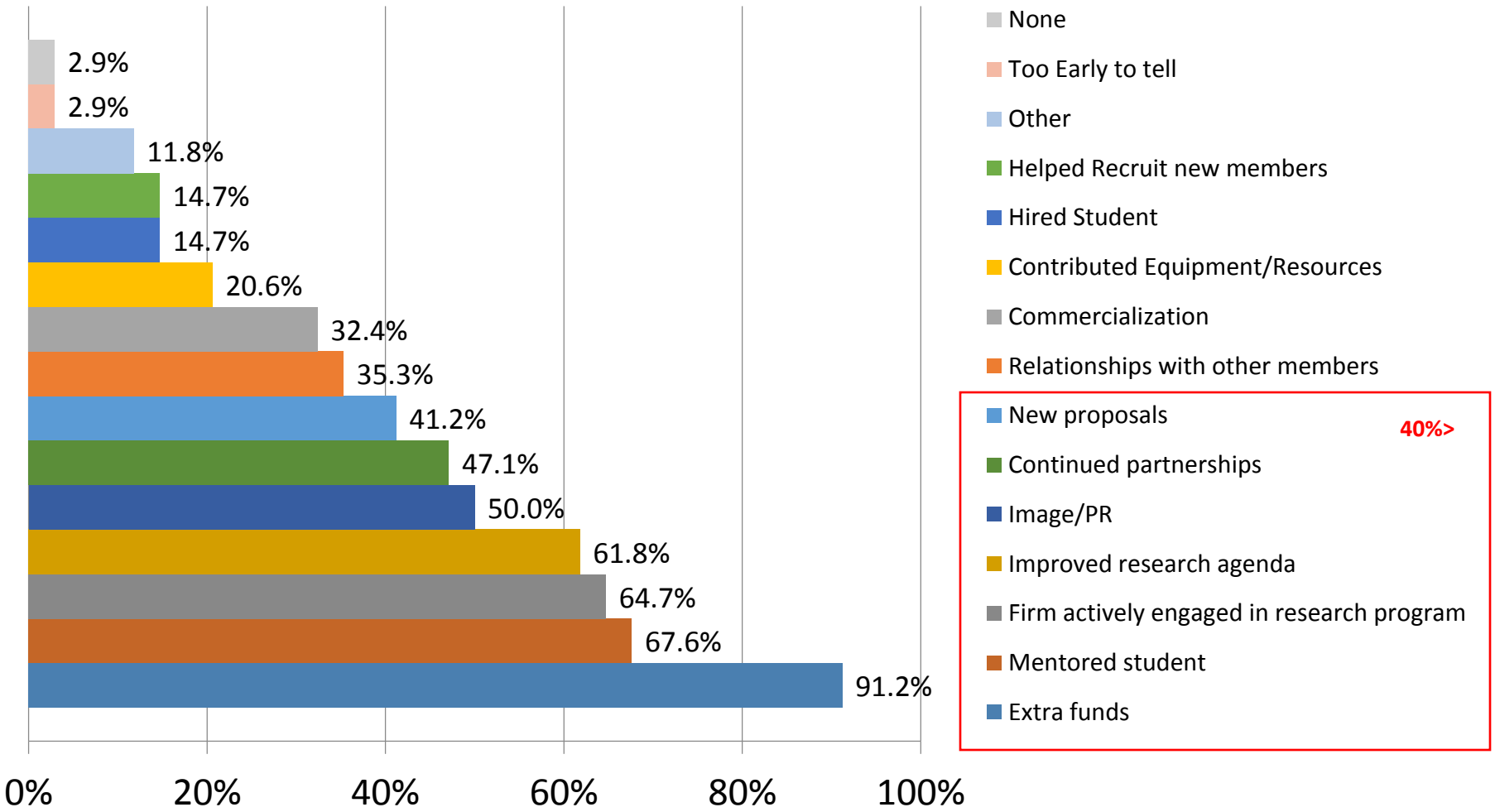


Adapted from Kingon;
Adapted from NSF IIP

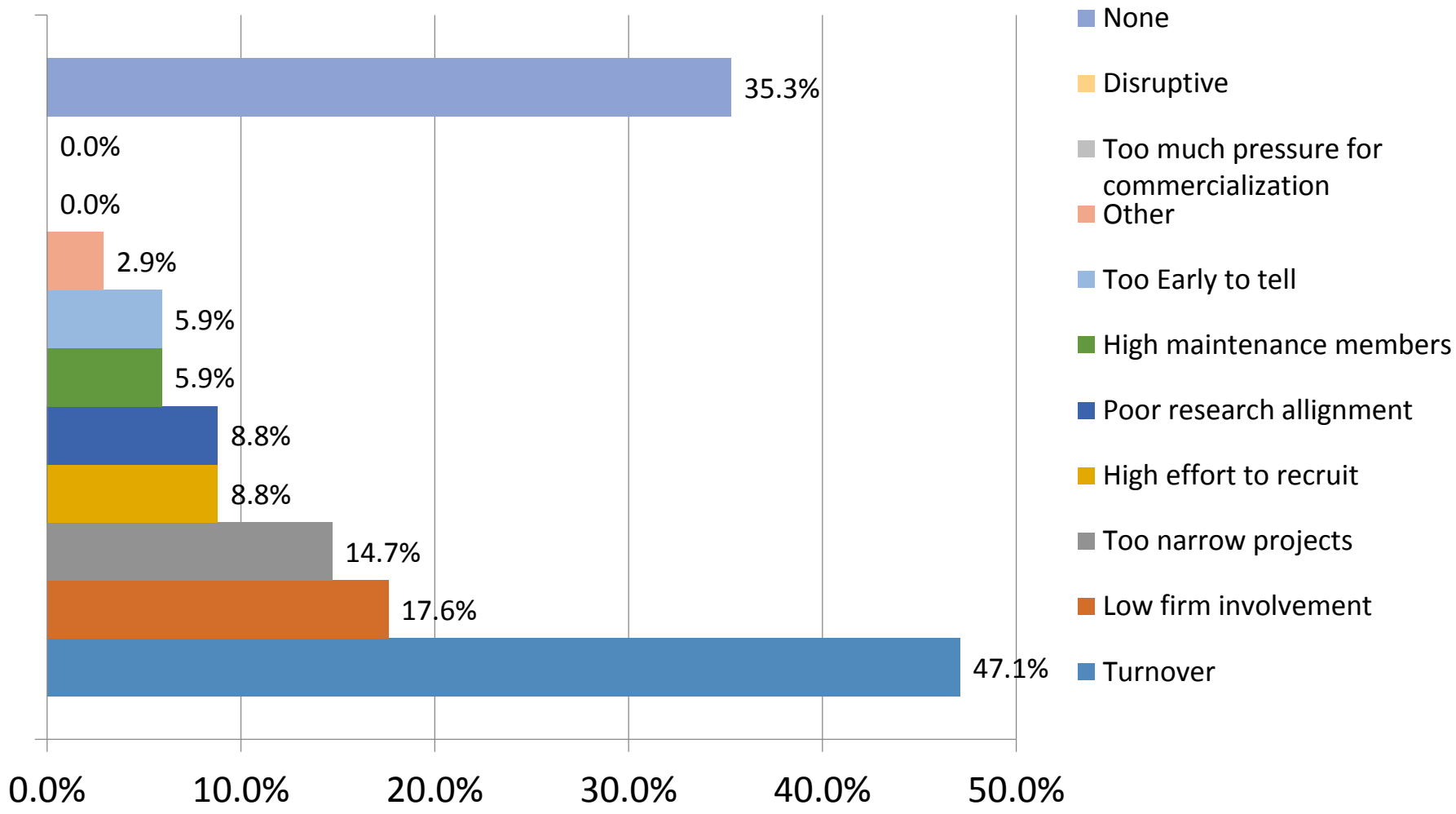
Major Findings

- Program-Level
  - Modest penetration for both SBIR/STTR and I/UCRC
    - IUCRCs: Many recruit; 33% succeed; 22% multiple members
    - SBIRs: ~14% of eligible firms use supplement
      - 85-95% would not have considered membership without subsidy
    - Caution: Program was an experiment funded by discretionary resources within the SBIR and IUCRC program
  - Added micro-enterprises/start ups to I/UCRC mix
    - SBIR members are significantly smaller (sales and employees) than typical IUCRC small firm memberships
- IUCRCs and SBIRs
  - Reported Benefits and Challenges

IUCRC Benefits of having an SBIR member

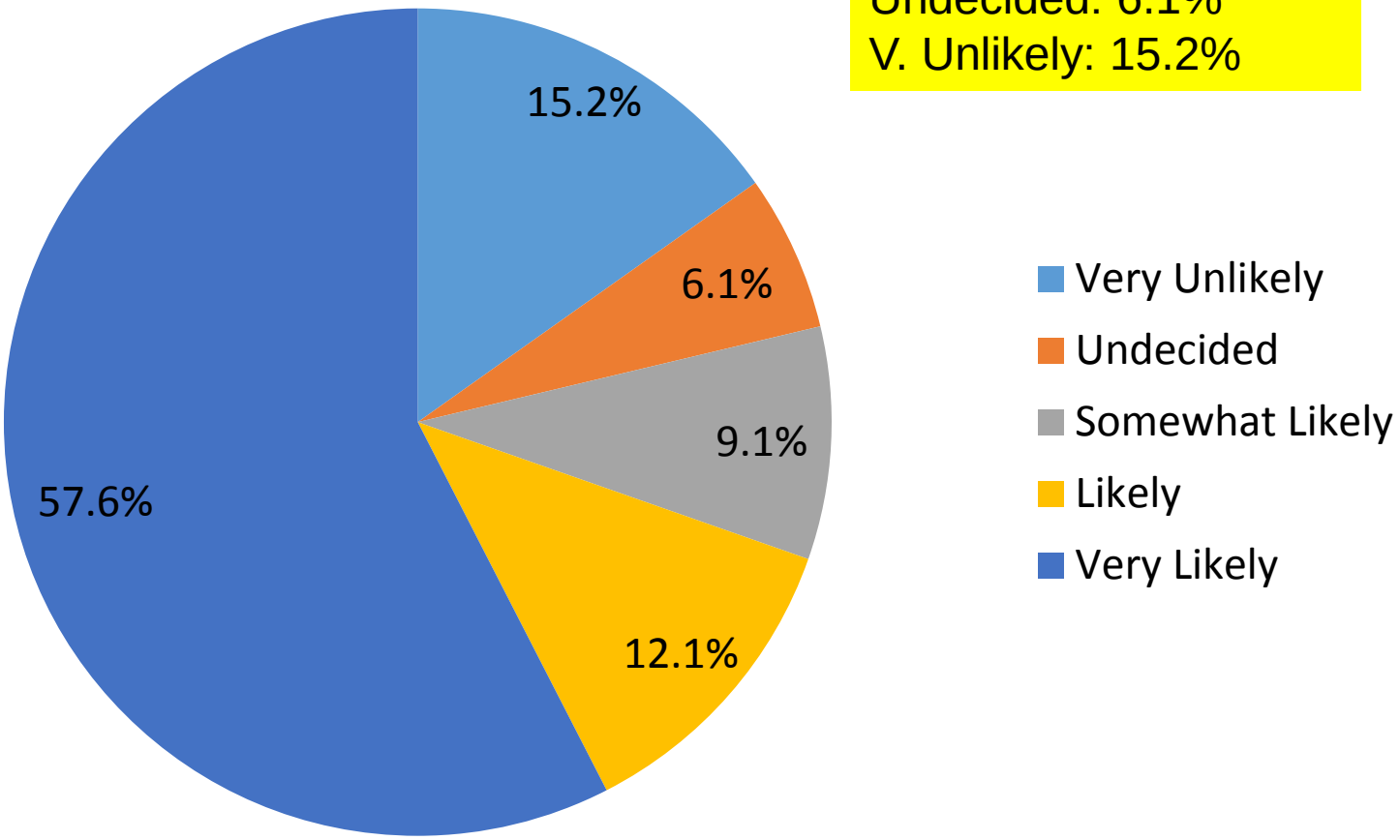


Costs of having and SBIR member

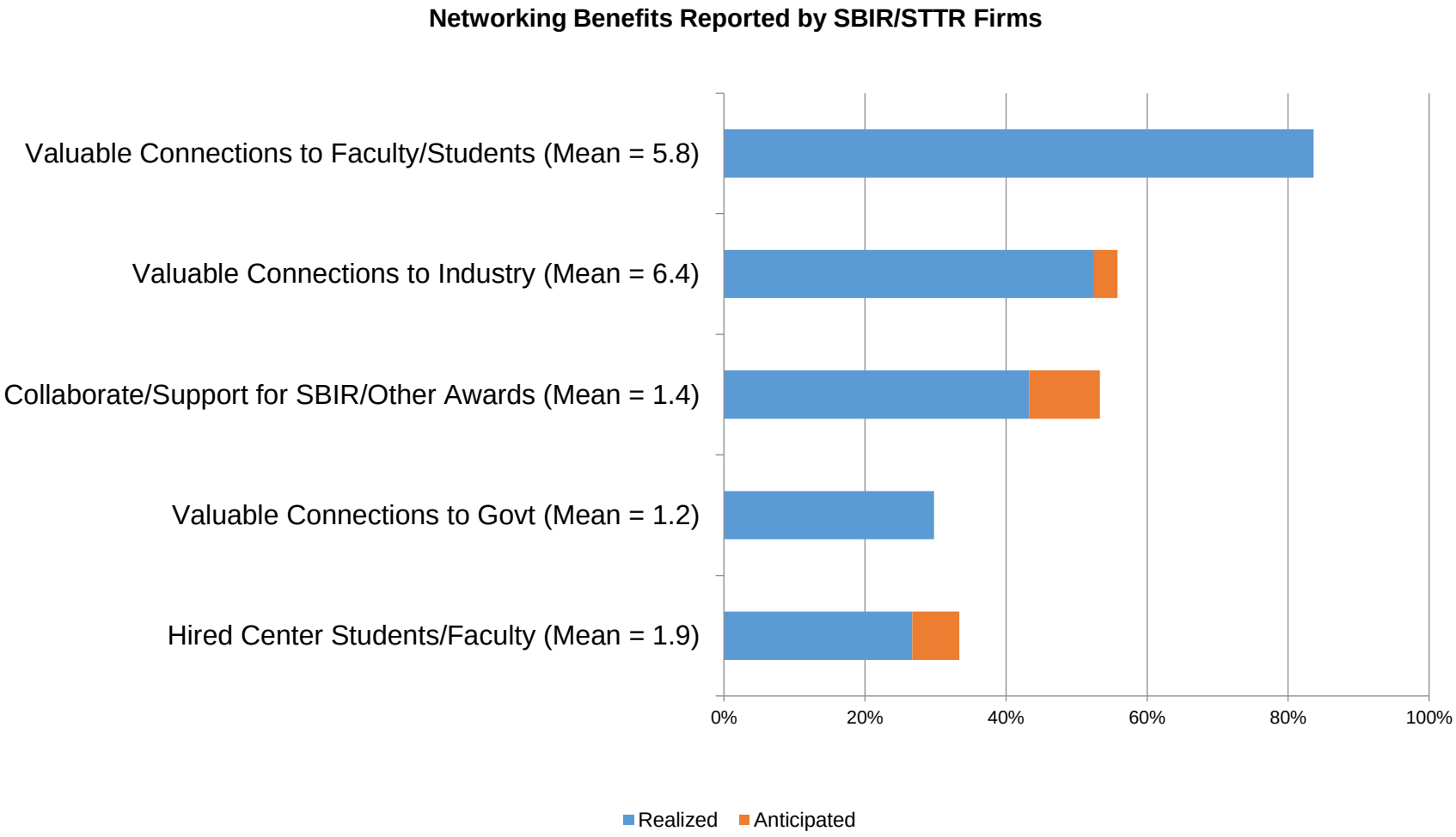


Likely to recruit SBIR/STTR again?

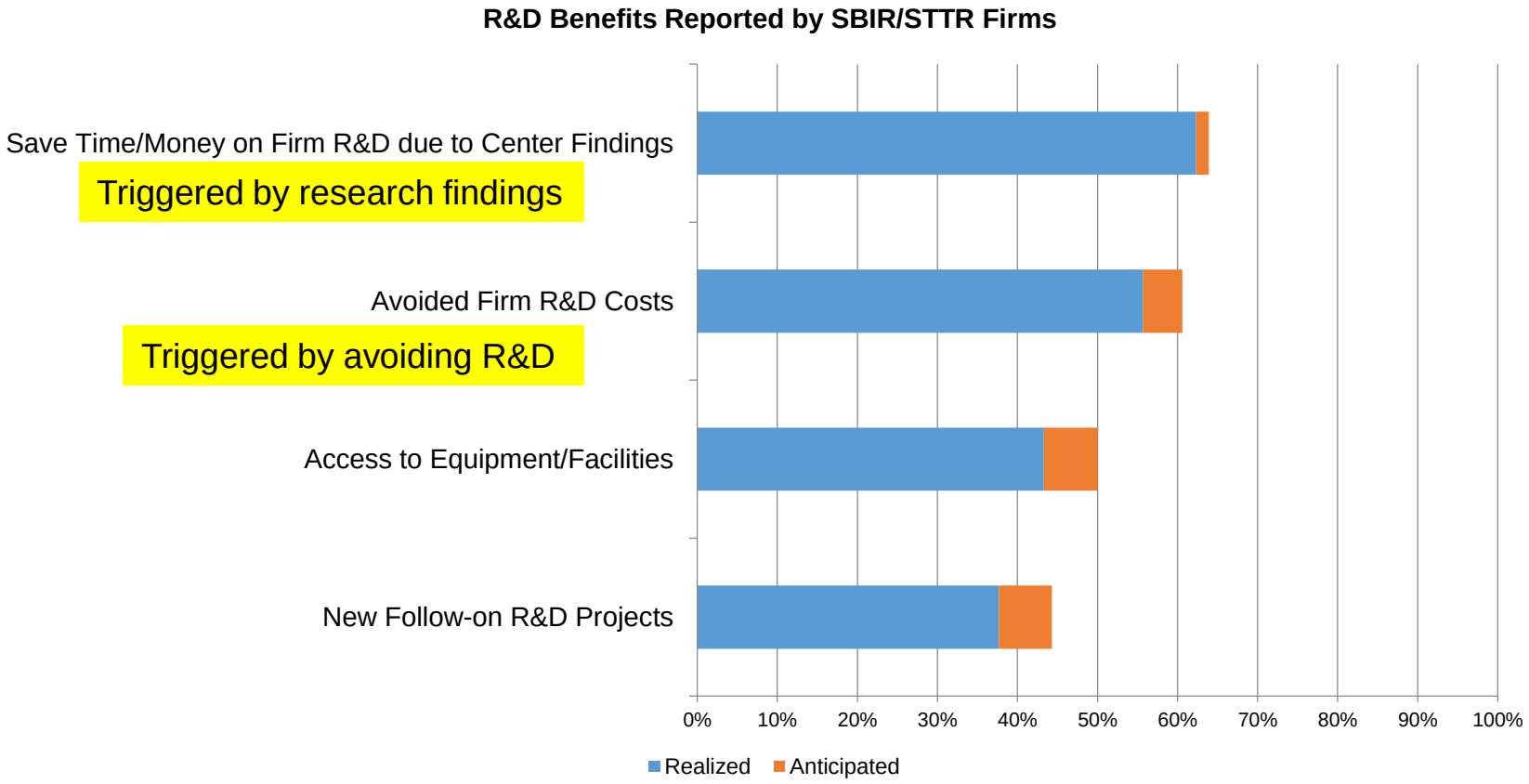
Likely: 79.8%
Undecided: 6.1%
V. Unlikely: 15.2%



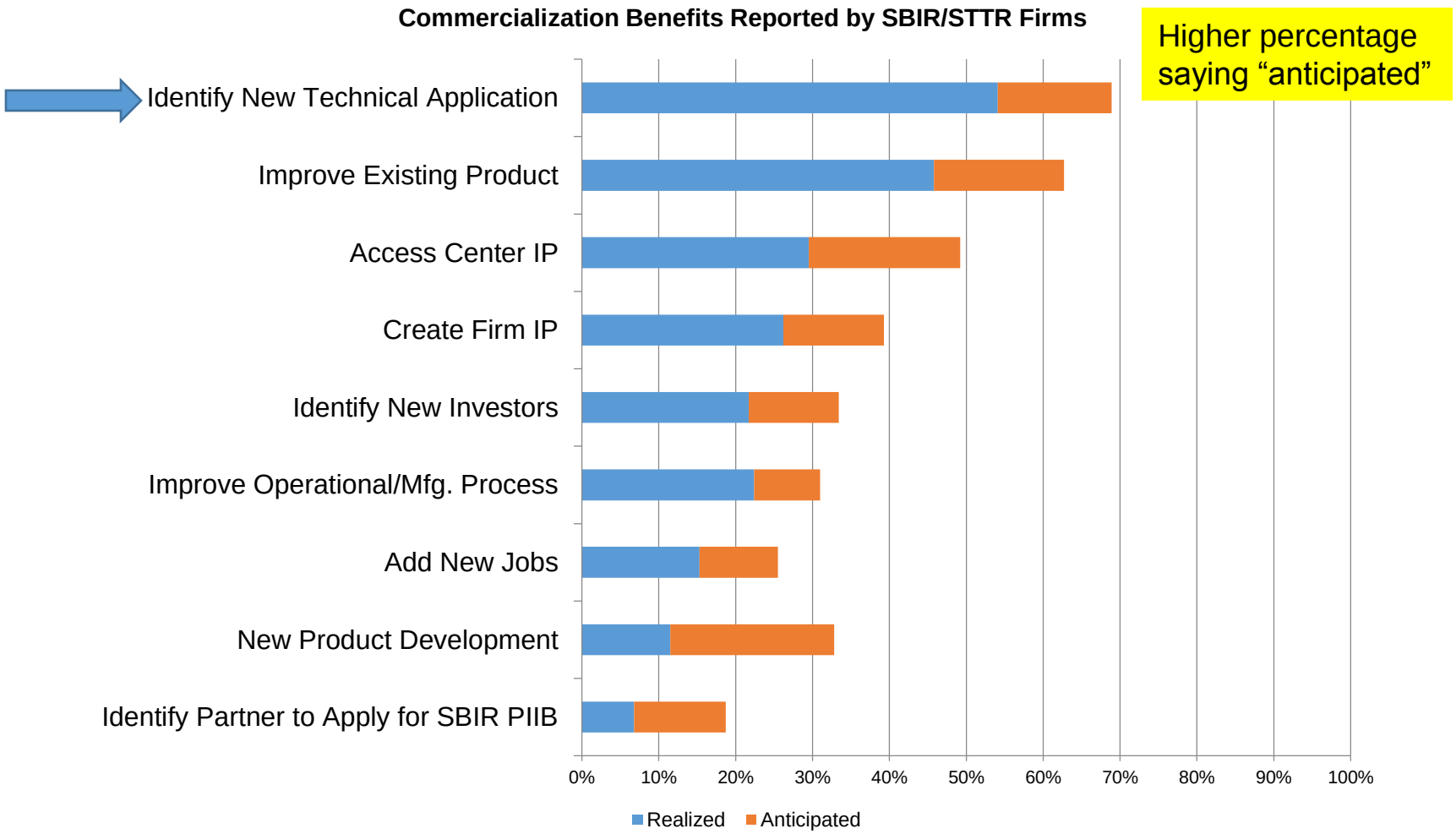
SBIR Reported Benefits—Social Networking and Human Capital



Reported Benefits – R&D



Reported Benefits -- Commercialization



SBIR Challenges

- No problems: 41%
- Operational Issues: 28%
  - Agreements/Promises not fulfilled; poor communication; agreement/IP; little project selection influence
- Supplement Shortcomings; 19%
  - Time frame or funding too short; misinformation about supplement
- Research: 17%
  - Quality/relevance; slow or unpredictable progress

Worth Time and Money Invested

87%

	N	%	Illustrative Comments
Definitely Yes	42	68.9	**"I would tell almost any small business to do it. This center is great. A small business would be foolish not to take advantage";** "Have received some very tangible benefits. They developed connections that they would not be able to achieve…The nature of the center and meetings, people were sharing the research." It definitely shortened the time to connect and have opportunities to interact. The density of networking opportunities was a big benefit."
Probably Yes	11	18.0	"we haven't gotten the results yet, **but it looks like it's going to work out"**
Probably Not	4	6.6	**"they dropped the ball on us";** "I do see potential value in the I/UCRC program; this particular case just did not work out well"
Definitely Not	4	6.6	**"Lost money from membership and traveling associated with it";** "The faculty members don't like to log time and don't like to be restricted by deliverables and time."

Continued Membership

Membership status	N	%
SB member	7	14.3
Not a member	38	75.5
NA: No longer in business	4	12.2

Response Category	N	%	Illustrative Comment
Firm could not afford the fee	22	56.4	"Entirely financial. If company was awarded a Phase II under the NASA award they would likely have used the supplement to join the center again." "[We] would definitely continue their membership if supplement was available; however, without the supplement [we] do not have the funds."
Firm continues to interact with the center	12	30.8	"The money is too much. But once we get some technology going and get more money we want to rejoin. Informally, we are still in communication." "[We] do still interact informally. We still meet with faculty, discuss their projects, get together on commercial proposals to customers collaborating with the univ. We have submitted a few proposals since then."
ROI was not apparent	13	33.3	"Eventually we saw the idea did not lead to a commercializeable product. It was not quite ready so we couldn't invest anymore because it was a dead end. But we do still interact informally." "The company felt they were investing too much with too little in return."
Other reasons	6	15.4	"While the company could afford the membership fee now, it's not a top priority for them. They still interact and maintain contact but do not collaborate currently." "While the company could afford the membership fee now, it's not a top priority for them."

Estimate >80% continue interaction

Conclusions

- Is the SBIR/STTR Membership in IUCRCs a “win-win” experiment?
  - Most but not all IUCRCs and SBIRs appear to benefit from the partnership in a variety of ways
  - Both sides experienced challenges that might be mitigated
- Let‘s hear from some first hand experiences

Problems and Negatives

Response Category	N	% of Firms	Illustrative Comments
No problems	28	41.0	"No, everything was fine"; [did not provide an answer]
Operational Issues	13	28.3	
Agreements/ Promises Not Fulfilled	5	10.9	"…they promised to have the equipment ready…they didn't have it and had to borrow it…very frustrating…They overpromised…"; "two people who overpromised in terms of connections with faculty and other members – turns out they had fairly weak links and were not able to connect us to anyone…"
Poor Communications/ Meetings	4	8.7	"Some of early meetings were less organized than later meetings. Level of organization was important to getting benefits from the meeting."; "most small companies were spin offs of that center and treated "special"… we felt like outsiders"
Agreement/IP	2	4.3	"standard member agreement has IP language that was overly restrictive for a small company--limited the value that company would gain from being a member";
Little Project Selection Influence	2	4.3	"Told they would be able to suggest projects. Suggested 4-5 projects. None were presented for voting on…They chose to funnel money into an old project that had no relevance to him"
Supplement Shortcomings	9	19.6	
Time Frame/ Funding 1 yr.	7	15.2	"it's still very challenging to go to the meetings in terms of time and money to get there"; "problem maintaining my membership because the supplement is over. Just hanging in by a thread - paying monthly"; "Was approached by another center and promised a student on a specific project but the funding wasn't available. "
Misinformation	2	4.3	"Person who told us not to submit from NSF… wanted technology to be on market, to have investments from businesses"
Research Issues	8	17.4	
Quality/ Relevance	5	10.9	"The engineers brought in to represent the center was quite a lot of language barrier and knowledge barrier - we were not impressed at all"; "direction of center research. It is a good team, but it is just little off course. We are too narrow for them [center]."
Progress Slow or Unpredictable	3	6.5	"post doc never showed up…so there was a long start up time… for a small firm, this is detrimental…a small firm doesn't have the resources to hang around like that";
Total		106.3	