Survey Questions for GOALI

ID #	Logic		Item	Freq.	Response Scale	Variable type/Data entry format	Question Item Source Material	Output or Outcome Addressed
1		Pre-populate from RPPR with Name and Role, plus option to add others that were not included in RPPR.	Your project team, including senior, stipend, for-credit, and volunteer personnel, will be contacted to collect information on demographics and career path decisions. Please list all project team members that have participated in the NSF-funded award.		A. Name B. Email C. Role in the laboratory/project: • Research Faculty • Post-doc • Graduate Student • Under graduate research assistant • Visiting researcher • Industrial Partner • National Laboratory Researcher • Other	Structured text box for name and email, multiple choice for role	GARDE Logic Model & Indicators[2]; I-Corps Indicators & Monitoring System[3]	Output: Workforce Development
2			How many students are still working/worked on this award?			Two numerical text boxes	NEW	Output: Workforce Development
3			How many students graduated/moved on from this project?			Numerical text box	NEW	Output: Workforce Development
4			How many postdocs are still working/worked on this award?			Two numerical text boxes	NEW	Output: Workforce Development
5			How many postdocs moved on from this project?			Numerical text box	NEW	Output: Workforce Development
6	STEM Workforce Developm		(FOR PIS) How many of your former students/trainees that participated in this		A. Academic research in a STEM field B. Private industry in a	Multiple answers with structured numerical text-box fill in for each	PFI:AIR Indicators & Logic Model	Output: Workforce Development

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	ent		award have gone on to careers in the following:		STEM field C. Government D. Research administration E. Teaching F. Communication G. Other			
7			(FOR STUDENTS/TRAINEES) What is the name of the PI on the NSF award in which you are participating?			Text box	GARDE Satisfaction Survey[1]	N/A (Demographics)
8			(FOR STUDENTS/TRAINEES) Are you still involved in this research project?		1. Yes 2. No	Binary – y/n	GARDE Satisfaction Survey[1]; I-Corps Indicators & Monitoring System[3]	N/A (Demographics)
9			(FOR STUDENTS/TRAINEES) Would you be willing for us to contact you with any follow up questions?		A. Yes B. No	Binary: y/n	NEW	N/A (Demographics)
10	Outputs: Commercialization		Do you believe that commercialization of the product/service/process is feasible?		A. Yes B. No C. I don't know	Multiple choice	PFI:BIC Logic Model & Indicators[6]	Outputs: Transfer of knowledge about industry practices and standards
11	Outputs: Licensing		How many of the following does [NAME BUSINESS/the NSF-funded project TEAM MEMBER/INSTITUTION] have? Enter zero if none.		• Inventions Disclosed • Licensing Agreements • Patent Applications • Patents Granted • Patents in Use • Inventions Producing Royalties • Software Copyrights	Numerical: open for each option	Kauffman Firm Survey[7]; I-Corps Indicators & Monitoring System[4]	Immediate Outcomes: Patent and License applications for developed technology

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					• Company Trademarks • Non-disclosure Agreements (NDA) Materials Transfer Agreements (MTA)			
12			Please indicate any outreach activities in FORMAL education settings that you have engaged in during, or as a result of, your work on the NSF-funded project.		A. Guest lecture B. Class instruction C. Webinar D. Massive Online Open Course (MOOC) E. Classroom/Laboratory Demonstration F. Other	Multiple Answer with text boxes to describe	GARDE Satisfaction Survey[1]; EFRI Indicators & Monitoring System[5]	Intermediate Outcomes: Improved industry knowledge of academic staff leading to improved curriculum and education
13			Please indicate any outreach activities in INFORMAL education settings that you have engaged in during, or as a result of, your work on NSF-funded project (during or after the life of the award).		A. Public Speaking B. Museum exhibit C. Science fair/competition D. Science writing E. Media dissemination (e.g., news or magazine article) F. Website/blog G. Game H. Other	Multiple Answer with text boxes to describe	GARDE Satisfaction Survey[1]; EFRI Indicators & Monitoring System[5]	Intermediate Outcomes: Improved industry knowledge of academic staff leading to improved curriculum and education
14			Please indicate any outreach activities to private industry, public agencies, or non-profits that you have engaged in during, or as a result of, your work on the NSF-funded project (during or after the life of the		A. Public Speaking B. Corporate Meetings C. Media dissemination (e.g., news or magazine article) D. Website/blog E. Other	Multiple Answer with text boxes to describe	NEW	Intermediate Outcomes: Improved industry knowledge of academic staff leading to improved curriculum and

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			award).					education
15		Only asked if member of the NSF-funded project team	To what extent has any of the following occurred as a result of your participation in the NSF-funded project/program? TEACHING • I taught new courses and/or course content related to the NSF-funded project • I developed new extracurricular or not-for-credit instructional activities • I incorporated new instructional methods related to those used in the NSF-funded project in my teaching RESEARCH AND LEADERSHIP • I changed the way I think about my research • I led a change effort in my department, institution, or organization (e.g., policy, curriculum) • I encouraged my students to talk to potential customers about their research or technologies CAREER		A. Yes B. Some C. No D. Not applicable	Matrix/Array	EEC Impact Interview Protocol[4]; I-Corps Indicators & Monitoring System[3]	Intermediate Outcomes: Researchers and/or students use industry knowledge in other contexts

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			• I applied what I learned from the NSF-funded project in other projects or career endeavors • I advised/mentored teams that are interested in commercializing their research or starting a venture related to their research • I pursued new career opportunities related to research commercialization and / or venture development ORGANIZATIONAL BENEFITS • Saved department/institution organization money • Increased productivity of department/institution/organization • Participated in outreach efforts beyond the university setting					
16			Please indicate your agreement with the following statements: A. Participation in the NSF-funded GOALI project continues to influence my approach to mentoring.	Annual	1. Agree 2. I have no opinion 3. Disagree 4. Not applicable	A. Likert scale including Not Applicable B. Likert scale including Not Applicable	EEC Impact Interview Protocol[4]; I-Corps Indicators & Monitoring System[3]	Intermediate Outcomes: Researchers and/or students use industry knowledge in other contexts

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			B. Participation in the NSF-funded GOALI project continues to influence my approach to teaching.					
17	Translation of research findings		Did your industrial partner incorporate any of your research findings in to their practices/manufacturing/business model?		A. Yes B. No	Binary: y/n	SBIR Common Questions	Intermediate Outcomes: Increased efficiency due to fresh perspectives and insight from academic partners
18	Technology Development		Are there any products, services, or processes in the market, market ready, or awaiting regulatory approval whose commercialization you can attribute (to some degree) to your participation in the NSF-funded project?	Annual		Binary: Y/N	SBIR Common Questions; PFI:BIC Logic Model & Indicators[6]; PFI:AIR Logic Model & Indicators; I-Corps Indicators & Monitoring System[3]	Intermediate Outcomes: Technology Development
19	Outputs: Career Development		The NSF GOALI award has helped me advance towards achieving my long-term career goals.		A. Agree B. Somewhat C. Disagree	3 point Likert Scale	NEW	Intermediate Outcomes: Career Development and Training in Industry Concepts
20	Outputs: Career Development		Have your goals have changed as a result of receiving the NSF GOALI award? If Yes, please describe.		A. Yes B. No	Binary: y/n Text box if Yes.	NEW	Intermediate Outcomes: Career Development and Training in Industry Concepts
21	STEM Workforce Developm		(FOR STUDENTS/TRAINEES) How interested were you in the following career options		A. Academic Faculty - primarily research position in science or	3 point Likert scale (Not at all interested – interested – Very	GARDE Satisfaction Survey[1]	Intermediate Outcomes: Workforce

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	ent		[BEFORE/DURING/AFTER] you began your involvement with NSF-funded project?		engineering B. Academic Faculty - primarily teaching position in science or engineering C. Academic Faculty - other D. Professional engineer or research scientist in private industry E. Professional engineer or research scientist in government lab F. Entrepreneurship G. Non-technical or research related position in science or engineering (for example, regulatory, writing, editing, administration, or sales) H. Career unrelated to science or engineering	interested "this is/was my primary career goal")		Development
22	Outputs: Publications		Please list your accepted publications occurring AFTER the funding period that resulted from this award.			Structured text-box: list of publications	EFRI Indicators & Monitoring System[5]; PFI:AIR Indicators & Logic Model (w/o interdisciplinary qualification)	Intermediate Outcomes: Advance of the field

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23	Outputs: Collaborations		Are you still collaborating with any of your collaborators on the award?		A. Yes B. No	Binary: y/n	PFI:BIC Logic Model & Indicators[6]; PFI:AIR Logic Model & Indicators	Long Term Outcomes: Continued partnerships
24	Outputs: Commercialization		Please list any additional companies that have demonstrated interest in partnership activities related to your NSF-funded research. What is the nature of the interest?		A. Continued Conversations B. Monetary Commitment C. Contractual Agreement D. Other (please describe)	Structured text box , with multiple answer matrix for nature of interest	SBIR Common Questions	Long Term Outcomes: Continued support for partnership activities
25	Outputs: Capacity and Capabilities		Did/do you APPLY FOR additional or follow-on funding from other agencies after receiving this NSF award?		A. Yes B. No C. If yes, which agency and what amount?	Binary: Y/N with text box fill in for Y	EFRI Indicators & Monitoring System[5]; I-Corps Indicators & Monitoring System[3]	Long Term Outcomes: Continued innovation and technology focus
26	Outputs: Capacity and Capabilities		Did you RECEIVE additional or follow-on funding from other agencies after receiving this award?		A. Yes B. No C. If yes, which agency and what amount?	Binary: Y/N with text box fill in for Y	EFRI Indicators & Monitoring System[5]; I-Corps Indicators & Monitoring System[3]	Long Term Outcomes: Continued innovation and technology focus
27			Do/did you feel that this NSF award influenced your ability to obtain other funding (from industry, granting agencies or other sources)?		A. Yes B. No	Binary: y/n	EEC Impact Interview Protocol[4]	Long Term Outcomes: Continued cycle of innovation

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[1] NSF Engineering, “GARDE Satisfaction Survey.” 31-Jul-2013. OMB Control No: 3145-0157

[2] NSF Engineering, “GARDE Logic Model.” 11-Oct-2012.

[3] NCIIA, “I-Corps Indicators & Monitoring System.” 23-Oct-2013.

[4] NSF Engineering, “EEC Impact interview Protocol.” 02-Aug-2013.

[5] NSF Engineering, “EFRI Pilot Clearance.” 20-Mar-2014.

[6] NSF Engineering, “PFI:BIC Logic Model & Indicators.” 26-Jul-2013.

[7] “Kauffman Firm Survey - Annotated Questionnaire.” Ewing Marion Kauffman Foundation.