

# GOALI PROGRAM OBJECTIVES

- Leverage NSF research award investments to increase collaboration between academic research labs and industry.
  - GOALI: Collaborative Research Projects (Most awards)
    - Detailed plan for collaboration with strong industry commitment of time and resources to enhance academic research capabilities
  - GOALI: Faculty and Students in Industry (Approximately ~ 5% of awards)
    - Faculty and Students gain hands-on experience in industry facility
  - GOALI: Industry Personnel in Academe (Very low percentage of awards)
    - Industry personnel interact with academe providing a new perspective for curriculum development and research objectives while also serving as a mentor for those interested in careers in industry.
- Enhance education by providing industry experience to academic professionals
  - The partnerships will lead to improved curriculum and education as academic professionals obtain a broader perspectives and learn more real world application examples to include in their educational programming.
- Enhance training of graduate students and post-docs to facilitate the development of a cross-trained workforce valuable to academia and industry.
  - Participation in GOALI will provide participants (graduate students, post docs and/or faculty) experiences that will enhance their knowledge of research translation and industrial operations beyond the usual academic research experience.

# GOALI LONG-TERM LOGIC MODEL

## INPUTS

Funding and logistics

- GOALI provides 18-20% of award, reviewing program provides the remainder
- Industry commitment to the partnership with documentation

Intellectual Property agreement

Expertise NSF-funded researchers  
Process, Materials, and Resources

- Industry professionals compensated time
- Industry equipment and maintenance
- Proprietary data

Student and Postdoc  
Mentoring Plans  
Dissemination Plan

## PROJECT ACTIVITIES

Educate and train academics to consider commercialization for research products

Provide on-the-job experience in industry for graduate students, post-docs, and faculty

Establishment of a relationship between academic research and industry partners

Leveraging of additional capital from sources outside the university or NSF e.g. other Federal agencies

## OUTPUTS

Students, Postdocs and PIs are trained for industrial positions

Transfer of new knowledge about industry practices and standards

Facilitation of High Risk/High Reward projects

Publications with industry partners are developed

Intellectual Property is created

A subset of partners continue the relationship after the life of the award

## IMMEDIATE OUTCOMES

**Industry**  
Enlarged recruiting talent pool

Diverse perspectives improve R&D

Patent and license applications for technology developed during GOALI collaborations

**Academia**  
Extension of in-house research capability

Alignment of efforts with viable technology options

Direct and more immediate impact of research on technology

New applications of GOALI research are developed

Researchers and/or students pursue further funding for the technology

**NSF**  
GOALI funds enable collaboration across directorates

## INTERMEDIATE OUTCOMES

**Industry**  
Increased fundamental research efforts

Increased number of cross-trained professionals which can be resources for both industry and academic projects

Improved manufacturing processes

Increased efficiency due to fresh perspectives and new insight from academic partners

**Academia**  
Increase in academically trained staff transitioning to industry careers

Increased appeal of classes delivered by educators with industry experience

Academics incorporate new companies and apply for NSF transition funds (I-Corps, SBIR)

## LONG-TERM OUTCOMES/IMPACT

**Industry**  
Small and medium sized businesses have continued opportunities for mutually beneficial partnerships

Highly qualified and diverse workforce

**Academia**  
Improved transition of GOALI funded trainees to careers in industry

University continues to supports and promote similar partnerships

# Possible Indicators for GOALI

## Human Capital Development

- Number of students, post-docs or faculty supported by GOALI who go on to positions in industry
  - Where are these positions?
- Number of students and postdocs trained by GOALI PI

## Curriculum Development

- PI reported changes in curriculum or course material related to their industry partnership
- PI reported changes in mentoring resulting from industry partnership

## Industry Collaboration

- Number of participants pursuing a continued relationship with their GOALI partners or pursuing involvement with other academics

## Academic culture that values Academic-Industry Partnerships

- Number of GOALI PIs submitting to other programs (e.g. I-Corps, SBIR etc.), or other NSF programs, or other federal agencies
- Number of publicly available patents or licenses purchased from university IP
- Number of PIs reporting career changes/enhancements or research approaches as a result of the relationship sponsored by the GOALI award
- Number of publications supported by the GOALI award
- Number of new research applications identified as a result of the GOALI partnership
- Number of coauthored publications by academic and industry partners after the award

# Data Sources for GOALI Indicators

## RPPR/Annual Report

- Publications supported by the GOALI award
- Number of patents or licenses purchased from university IP
- Number of students and postdocs trained by GOALI PI

## Other NSF Data Systems

- Number of GOALI PIs submitting to other programs (e.g., I-Corps, SBIR etc.) or other NSF programs
- Number of new or continuing awards from NSF

## Life-of-award Monitoring System

- Number of GOALI PIs submitting to other federal agencies

## Post-award Monitoring System

- Publications on technology and/or advancements in the project area supported by the GOALI award
- Number of GOALI related patents or licenses purchased from university IP after the award
- Number of academic participants pursuing continued relationship with their GOALI partners or with other industry partners
- Number of industry participants pursuing continued relationship with their GOALI partners or other academic partners
- Number of GOALI PIs submitting to other federal agencies
- Number of new or continuing awards from other agencies or institutions leveraged from the GOALI award
- Number of students, postdocs, or faculty supported by GOALI who go on to take positions in industry
- Number of revised curricula stemming from GOALI funded industry exposure
- Number of GOALI PIs reporting changes in mentoring approaches as a result of the industry partnership
- Number of new research applications identified as a result of the GOALI partnership

## Other Data Sources (University Reporting, Google Scholar, Internal NSF)

- Number of coauthored publications by academic and industry partners after the award
- Number of similar partnerships via GOALI or other avenues that the university continues to support and promote