About TechLink

• The DoD’s nationally focused partnership intermediary for technology transfer since 1999

• PIA between OSD, the Air Force, and Montana State University-Funded in DoD budget since 2004

• Over 1,425 technology-transfer agreements or projects for DoD

• 12 National Economic Impact Studies (EIS)

• Brokered/facilitated over 70% of DoD licenses over past 10 years & 95% with small businesses
TechLink’s 12 National EIS

- Air Force SBIR/STTR Program (2015)
- Navy SBIR/STTR Program (2016)
- National Cancer Institute SBIR/STTR Program (2018)
- The entire DoD SBIR/STTR Program-13 agencies (2018)
- Army, Air Force, and Navy CRADA Programs (2019)
Successes & Challenges

• Successes
  ➢ First-ever EIS of a federal agency T2 program & the entire DoD SBIR/STTR Program
  ➢ Response rates are 90-96% (DoD SBIR/STTR-Nearly 17,000 awards, 4,400 companies)
  ➢ First study of Air Force SBIR/STTR Program won David Sikora the Tibbetts Award
  ➢ Studies were referenced more than 15 times by Senators Marco Rubio and Ben Cardin with the Senate Small Business & Entrepreneurship Committee (May 2019)

• Challenges
  ➢ Release of final reports
  ➢ Company & respondent fatigue
  ➢ Background data from federal agencies
  ➢ Maintaining our high response rate & ensuring accuracy of results
TechLink’s Methodologies

- A team of researchers attempts to contact every company
- Official letter of authorization from the government agency
- Extensive experience using databases to track personnel
- Pledge confidentiality and only report aggregate findings
- Use IMPLAN to estimate economic outputs

[Diagram showing IMPLAN (NAICS CODES) input and output categories]

- Final reports-Program history, statistics, IMPLAN outputs & qualitative findings
2018 DoD Licensing Economic Impacts

$58 billion in total economic impact nationwide

$27 billion in total sales of new products and services resulting from the DoD license agreements

$4.5 billion in sales of new products to the U.S. military

$6 billion in new tax revenues (federal, state, and local)

214,791 jobs (11,933 per year) with average compensation of $74,762
2018 NCI Economic Impacts

- **$9.1 BILLION**
  in total sales to date of products and services resulting from the NCI SBIR/STTR Phase II grants

- **$26.1 BILLION**
  in total economic output nationwide

- **368**
  awards with sales, royalties, and follow-on R&D funding

- **$2.9 BILLION**
  in new tax revenues (federal, state, and local)

- **$8.1 BILLION**
  in labor income

- **107,918**
  estimated new jobs in the U.S.
NCI-Patient & Societal Impact Questions

- What is the current development state of the SBIR/STTR funded technology?
- What cancer type is your technology used for?
- If approved by the FDA, what is the exact indication for which it is approved?
- What improvement does the SBIR/STTR funded technology bring for cancer patients?
- Did the award provide access to capital at a pivotal or critical moment for the company?
- Did the award provide a scientific validation that helped you achieve a next step?
- Was a university involved with this technology?
Evidence Based Decision Making

- SBIR/STTR Congressional reauthorization hearings in May of 2019
- Quantify and highlight success stories and impacts on the warfighter
- 247 new technologies the NCI SBIR/STTR program funded and helped develop for treating cancer
- Return on investment & effective spending of tax dollars
- Relating to the National Security Innovation Base
Three Main Points

• Methodology & response rates are critical for accuracy of results
• Senators referenced studies for Congressional hearings and SBIR/STTR reauthorization
• Analyzing success beyond the numbers & the National Security Innovation Base
Questions

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Backup Slides
IMPLAN Outputs

• Economic impacts derived from IMPLAN modeling:
  ✓ Total economic output
  ✓ Value added (new wealth added to economy)
  ✓ Employment
  ✓ Labor income (including average income per job created)
  ✓ Tax revenues (federal and state)
Key Terms Defined

• Economic Output: The total value of production, including intermediate goods and services

• Value Added: The contribution to total GDP, which equals output *minus* the intermediate input costs

• Employment: Expressed in "job years"—equal to one job over one year

• Labor Income: Total compensation of employees (wages and benefits) and proprietors (profits)
Total Economy Wide Impact

• Direct Impact-Initial economic activity
  ✓ Sale of laser

• Indirect Impact-Inter-industry purchases
  ✓ Purchasing of components, supplies, etc.

• Induced Impact-Payroll spending
  ✓ Household spending as workers spend payroll in the economy

INDUCED-$16.2 B
INDIRECT-$15.03 B
DIRECT $26.98 B
Key Terms Defined, cont.

- **Direct Impact**
  
  *Initial economic activity* (e.g., SBIR R&D expenditures, sales of resulting technology products)

- **Indirect Impact**
  
  *Inter-industry purchases* of machinery, components, and supplies needed to manufacture products

- **Induced Impact**
  
  *Payroll spending* by workers, spending their earnings on goods and services in the economy