



SpringBoard

Maximizing Technology Transfer Opportunities for DOD

DEPARTMENT OF DEFENSE PARTNERSHIP INTERMEDIARY

Multimillion-dollar projects offer opportunities for DoD technologies in the energy, mining, transportation, aerospace, environmental, and forest products industries. Maximizing the benefits of being in Alaska, the SpringBoard team creates technology transfer opportunities for Department of Defense laboratories and the private sector anywhere in the nation. Working with key national industrial sectors that have significant footprints in our region, we determine the current and developing innovation needs and discover collaborative technology transfer partnership opportunities.

TECHNOLOGY TRANSFER

Mining

SpringBoard's Focus on the Mining Sector

- Alaska has a vast potential reservoir of nonfuel strategic minerals
- Alaska's mining industry employs 3,000 people and generates \$11 million in tax revenue for local governments
- The estimated market value of metals produced in Alaska far exceeds \$1 billion annually
- Numerous technology needs are associated with the mining industry



PHOTO: MICHAEL PENN

Three industrial-scale hard rock mines in Alaska are currently producing zinc, lead, gold, silver and other minerals. The state is also seeing significant growth in proposals for developing large new



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open-pit and underground mines—nearly a dozen are proposed for state and federal lands, each of which spans thousands of acres.

Alaska's mining industry currently employs around 3,000 people and generates nearly \$11 million in tax revenue for local governments. The estimated market value of metals produced in Alaska far exceeds \$1 billion annually.

Mining Sector Technology Needs

Exploration and Resource Characterization

- Remote control and autonomous exploration devices for extreme environments
- Laser analytical technologies for in-situ analysis
- Sensors for effective underwater exploration

Mining Equipment and Processes

- Improved roof control
- Blasting techniques for minimizing dust and flying rock
- "Miniature" technologies for mining thin seams or small veins
- Improved separation/cleaning technologies to reduce waste and increase product value
- Sensors guidance and navigation of semi-autonomous machines

Health, Safety and Environment

- Lighter weight materials and supplies
- Advanced simulation systems and warning systems for catastrophic failures
- Acid drainage and air quality monitoring



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