

Dear reader,

From the beginning of our history, Alaskans have relied on innovation. Surviving cold, dark, and distance requires constant creativity. Our extreme environment and unique challenges have made our people inventors, and our land has been a center of natural observation and a proving ground for new technologies. Everything we do in Alaska is knowledge-based: the prosperity of our culture, preservation of our environment, and economic growth depend upon sound science and inventive thinking. We understand that our resources include not just what's beneath our feet, but what's between our ears.

With this two-part report, Alaska's State Committee on Research (SCoR) aims to celebrate our innovative culture and to foster further invention and creativity by highlighting areas in Alaska that are ripe for further research, development, and technological advancement. It is the culmination of a long process that began with a 2003 state legislative request for a research and development plan, and re-emerged in 2011 as a SCoR priority.

First, SCoR has commissioned *Northern Innovators*, an exciting collection of stories about Alaska's inventors. From the first Alaskans who fashioned "sunglasses" to prevent snow blindness or built kayaks to withstand rough seas, to contemporary Alaskans' chemical engineering discoveries and pioneering inventions in wireless technology – Alaskans find a way. *Northern Innovators* tells a history of inventive Alaskans that will inspire future generations.

But the continued success of Alaskans' innovation, research and development depends upon strong cohesion between federal and state agencies, the University of Alaska system, primary and secondary educators, and private industry and business. It depends upon a robust STEM

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2. A solid foundation of basic research in Alaska. If we don't have a firm grasp on the facts about our world, we'll never dream about innovative ways to improve our economy, health, safety and, environment. Applied research (invention) requires basic research (knowledge).

3. A robust STEM education system in Alaska. Many efforts are already underway around the state and in our schools. We would like to see these efforts evaluated, supported, improved and expanded with defined metrics and goals, so we can have a home-grown STEM-educated workforce in the state.

4. An Alaska that maintains and builds upon