

SOUTH DAKOTA BOARD OF REGENTS

Budget and Finance

AGENDA ITEM: 6 – A (2)
DATE: July 31 – August 1, 2024

SUBJECT

Research Park Report – SDSMT

CONTROLLING STATUTE, RULE, OR POLICY

[SDCL chapter 5-29](#) – Research Parks

BACKGROUND / DISCUSSION

South Dakota School of Mines and Technology will present to the Board, providing updates on the current status of operations and future plans of the research park.

IMPACT AND RECOMMENDATION

The annual reports of the research parks provide an opportunity for the Board to stay apprised of the activity underway, while also fulfilling various reporting requirements of the parks.

ATTACHMENTS

Attachment I – SDSMT PowerPoint Presentation

INFORMATIONAL ITEM



Vanderboom Laboratory for Entrepreneurial Research



SOUTH
DAKOTA
MINES

V-LAB RENOVATIONS

Operational: Governor's
Research Center for
Understanding and Disrupting
the Illicit Economy



Near Completion: Center for
Sustainable Solutions

CURIOUS
SMART
TENACIOUS



SOUTH
DAKOTA
MINES

V-LAB RENOVATIONS

Expansion: AMP Lab

High-Power Impulse Plasma Source (HiPIPS)

Coatings technology to improve manufacturing flexibility and reduce costs

The HiPIPS system at Mines was custom-designed to support ongoing DOD research and is the **first of its kind at an academic institution.**



CAT MINESTAR COLLABORATION CENTER

Industry Partner:



Caterpillar's presence on campus provides internship-style opportunities for students

Develop high-tech mining operations

Multidisciplinary:

- Computer Engineering
- Business Management in Technology
- Mechanical Engineering
- Mining Engineering
- Electrical Engineering



The CAT Collaboration Lab will move to new Nucor Mineral Industries Building upon completion.





SOUTH
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MINES

ECONOMIC DEVELOPMENT



Beth Lambeth

Associate Vice President for Research-Innovation
and Entrepreneurship



National Innovation Network – Great Plains I-Corps Hub

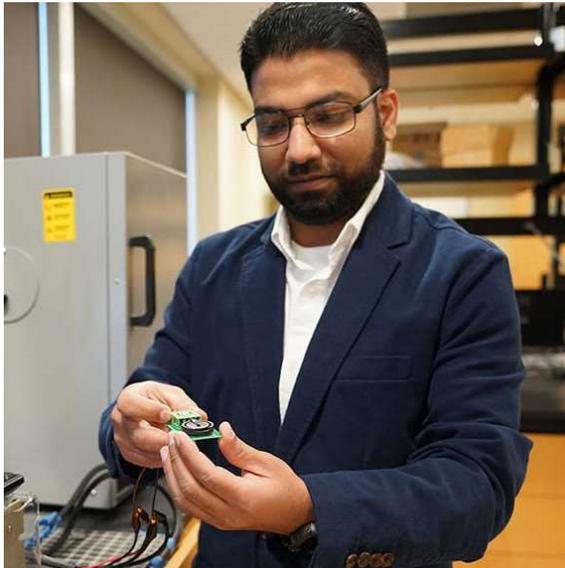
Beth is part of the Great Plains Hub summer cohort. The ten teams enrolled in this cohort are set on reaching a minimum of 20 customer discovery interviews to help them better understand their market.



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ECONOMIC DEVELOPMENT

Emerging Technologies at South Dakota Mines

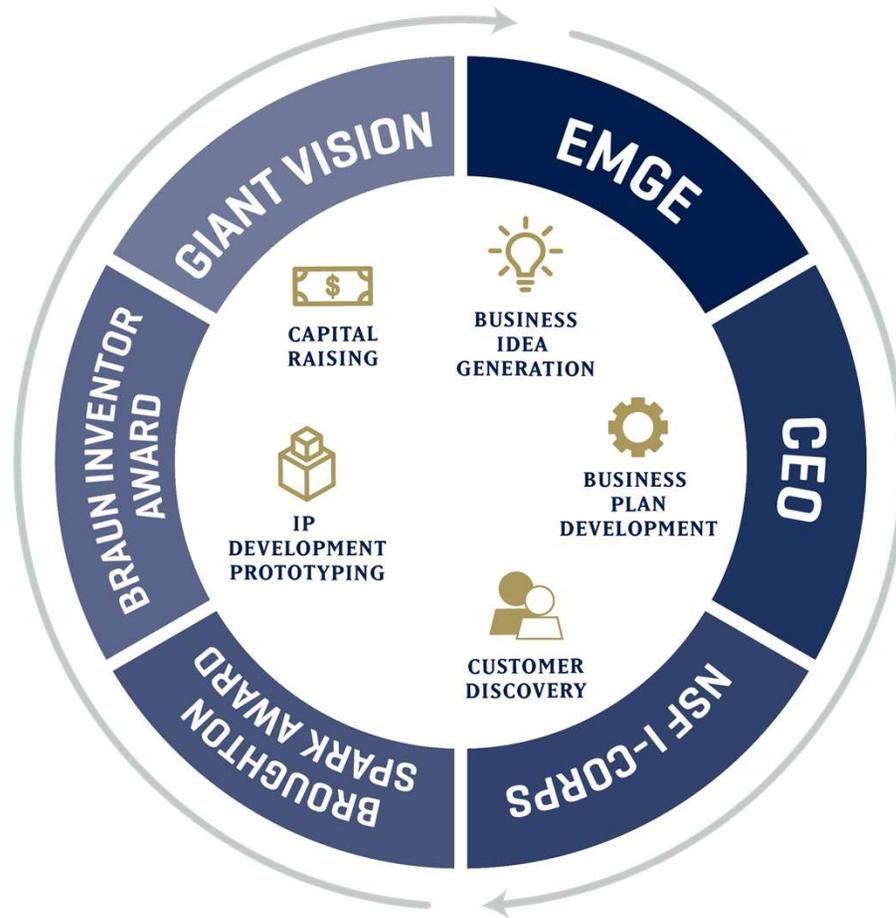


- Healing ointment with hyaluronic acid
- Human motion monitoring
- Security printing ink
- CO₂-gas conversion to rock using microbes for C-storage
- Enhanced electrolytic solutions for batteries
- Bioconversion of corn stover



SOUTH
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INNOVATION CYCLE



Entrepreneurial programming assists students in developing ideas into business startups.



**SOUTH
DAKOTA
MINES**

EDA TECH HUB



**Strategy Development for the Innovation District from
downtown Rapid City to South Dakota Mines has begun.**

Expected completion: July 2025

**Market and Workforce Development
Innovation District Site Plan**
focused on

Autonomous mining equipment
Advancing underground decarbonization solutions
Mining operational safety and automated systems



Thank You!



SOUTH DAKOTA MINES