As we prepare for our 150th anniversary in 2024, dynamic and disruptive change is all around us.

We must navigate an increasingly competitive higher education landscape, respond to the changing education and innovation needs of industry and society, and not be complacent.

MINES@150 is our plan to position MINES for future success. It calls for change, but also to stay true to our timeless mission, pillars, and core values.

MINES@150 leverages our size, location, and history, ensures that our graduates will continue to be distinctive and highly-valued, places MINES at the frontiers of STEM education, research, and innovation, and elevates our status among the world’s top universities.
“We, the Colorado School of Mines community, are united by our commitment to our timeless mission of educating and inspiring students from all backgrounds and advancing knowledge and innovations, with the aspiration that our graduates, ideas, actions, and innovations will have a transformative impact on individuals and society, leading to shared prosperity and sustainable use of the Earth’s resources.”

From Values of the Colorado School of Mines Community (2017)
Our Pillars: The Foundation of MINES

- **Focused**: A unique public mission
- **Selective**: Looking for team players with a passion for STEM and making an impact, a strong work ethic, and a get-it-done attitude
- **Challenging**: Our programs combine technical rigor + practical application + professional preparation
- **Collaboration**: Teams are necessary for success
- **Use-Inspired**: Our research, innovation and discovery are relevant
- **Connections**: Partnerships with industry and mission-oriented agencies are highly-valued
- **Honest Broker**: Of information and objective analyses
- **Great People**: Students, faculty, staff, and alumni
- **Immense Pride**: In being part of the MINES community, and in the transformative and enduring value we create
Today, MINES is a jewel in the higher education landscape; highly-respected locally and in industries and regions of the world aligned with our historical expertise in earth, energy, and environment.

Our longevity is attributable in part to our unique mission and success at:

Producing **distinctive graduates**. Employers particularly value their success in teams, resilience, grit, hands-on experiences, and ability to get things done.

Creating **transformative and enduring value** through the students we graduate, the discoveries we make, and the challenges we solve for industry and society.

**Being a pioneer at the frontiers of science and engineering**, from locating and recovering earth resources, to new energy production processes, new materials, advanced manufacturing processes, health innovations, and space exploration.
The world is changing. As we look around, we see threats to our future:

**Competition**: increasingly competitive higher education landscape

**Relevance**: changing needs for education and research

**Complacency**: believing the status quo will be successful in the future

- **Minimal Public Investment**
- **Increased Competition for Top STEM Students**
- **The 4th Industrial Revolution is Here**
- **Demographic Shifts in College-Bound Students**
- **Preparing for Jobs That Don't Exist Today**
- **Global Equalizing and New Delivery/Business Models**
- **Automation: We Can Be Replaced**
- **Millennial and iGen Learners**
Our Call to Action – The Imperatives

Based on the identified threats, a self assessment, and campus discussions, we know that **to succeed as a mid-sized and uniquely focused school, we must:**

- **be a top-of-mind and first-choice school** for students, public and private partners, and faculty and staff.
- **expand offerings and diversify delivery**, in particular for professionally-oriented pre- and post-graduate education.
- **grow the scale and impact of our research**: focus on thematic strengths, develop a more social research culture, diversify funding sources.
- **strengthen affinity** for MINES among our students, alumni, and external partners.
- **be more innovative and entrepreneurial**, especially in the use of our resources
- **attract private investment** to support our key strategic initiatives
Top-of-Mind and First-Choice

There is no single formula, but top-of-mind and first-choice schools typically:

• have a strong brand identity, likely built on well-known strengths in education and/or research, distinctive programs, and a signature student experience.

• have attractive student success indicators (high retention, graduation, employment, and return on investment).

• are financially accessible to qualified applicants from all backgrounds.

• develop strong affinity for the school among students, alumni, and partners.

• are agile and entrepreneurial.

• have comprehensive partnerships with industry and agencies, and other complementary education-focused entities.
MINES@150: The Seven High-Level Goals

After considering our call to action imperatives and what it takes to be first-choice and top-of-mind, the MINES community has decided to focus our efforts around seven high-level goals:

- **In 2024+, MINES will be:**
  - A great community to learn, explore, live and work in
  - A preferred partner for talent, solutions and life-long learning
  - A leader in educating STEM students and professionals
  - A producer of differentiated and highly desired STEM-educated leaders
  - Accessible and attractive to qualified students from all backgrounds
  - A go-to place for use-inspired research and innovation needed for challenges facing industry and society
  - The exemplar for alumni affinity, visibility and involvement
MINES@150 also includes **macro-level design parameters** that define our size in the future. These reflect program input, review of our financial model, benchmarking and our goals.

<table>
<thead>
<tr>
<th><strong>MINES@150 Aggregate Design</strong></th>
<th><strong>Fall 2018 Values</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate Students</td>
<td>4908</td>
</tr>
<tr>
<td>Masters/Non-Degree Students</td>
<td>670</td>
</tr>
<tr>
<td>Doctoral Students</td>
<td>550</td>
</tr>
<tr>
<td>T/TT Faculty</td>
<td>223</td>
</tr>
<tr>
<td>Teaching Faculty &amp; Professors of Practice</td>
<td>88</td>
</tr>
<tr>
<td>Research Grants &amp; Contract Awards</td>
<td>$66M</td>
</tr>
<tr>
<td></td>
<td>5000</td>
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<td></td>
<td>1600</td>
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<td></td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>$85M</td>
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</tbody>
</table>
MINES@150 Initiatives: Achieving Our Goals

Call to Action
Imperatives

MINES@150
High-Level Goals

Top-of-Mind, First-Choice Ingredients

Strategic Thought Groups & MINES Community

MINES@150 Initiative Proposals

Leadership Team(s)

Priority Initiatives + Resources + Metrics + Ownership

Progress Tracking & Reporting

Our MINES@150 initiatives will be fluid and driven and supported at different levels.

Some will be focused locally, while others will be broad school-wide initiatives.
Sample MINES@150 School-Level Initiatives

<table>
<thead>
<tr>
<th>MINES@150 School-Level Initiatives</th>
<th>MINES@150 High-Level Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Friendly Initiative</td>
<td>1</td>
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<tr>
<td>MINES Leadership Institute</td>
<td>•</td>
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<tr>
<td>Diversity, Inclusion, Access Plan Development</td>
<td>•</td>
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<tr>
<td>Cohort Scholarship Programs</td>
<td>•</td>
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<tr>
<td>Trefny Innovative Instruction Center Initiatives</td>
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<tr>
<td>Program-Level Pathways of Distinction Plans</td>
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<tr>
<td>Business Programs Expansion</td>
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<tr>
<td>Alumni Special Interest Focus Groups</td>
<td></td>
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<tr>
<td>Oredigger Camp</td>
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## Sample MINES@150 School-Level Initiatives

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<tr>
<td></td>
<td>1</td>
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<tr>
<td>Sibson Process Re-engineering Initiative</td>
<td>•</td>
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<tr>
<td>Sibson Compensation Benchmarking Initiative</td>
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<tr>
<td>Center for Entrepreneurship and Innovation</td>
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<tr>
<td>Payne Institute</td>
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<tr>
<td>Fryrear Chairs for Innovation and Excellence</td>
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<tr>
<td>Honors Programs Expansion</td>
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<tr>
<td>Engineering, Design and Society</td>
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<tr>
<td>MINES@150 Frontiers Initiatives (Research + Education)</td>
<td>•</td>
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<tr>
<td>MINES Signature Student Experience Initiatives</td>
<td>•</td>
</tr>
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<table>
<thead>
<tr>
<th>Academic Affairs</th>
<th>Administration and Operations</th>
<th>Student Life</th>
<th>Research and Technology Transfer</th>
<th>Colorado School of Mines Foundation</th>
<th>Legal Services</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Recruitment</td>
<td>A Preferred Partner</td>
<td>Engaged Students</td>
<td>Grow/Diversify Funding</td>
<td>Initiatives</td>
<td>Tell the MINES@150 Story</td>
<td>Tell the MINES@150 Story (Mktg &amp; Comm)</td>
</tr>
<tr>
<td>Student Success</td>
<td>Physical Environment</td>
<td>Affinity</td>
<td>Pan-University R&amp;D Initiatives</td>
<td>Strengthen and Expand External Relationships</td>
<td>Developing Future Alumni Affinity</td>
<td>Developing Future Alumni Affinity</td>
</tr>
<tr>
<td>Faculty Hiring &amp; Professional Development</td>
<td>Seamless Systems and Service</td>
<td>Professional Development</td>
<td>Regional Partnerships &amp; Alliances</td>
<td>Increase Alumni Affinity, Visibility and Involvement</td>
<td>Pathways of Distinction (Mines Alumni Association)</td>
<td>Pathways of Distinction (Mines Alumni Association)</td>
</tr>
<tr>
<td>Enrollment and Research Growth</td>
<td>Leading Edge Technology</td>
<td>Co-Curricular Components of the Signature Student Experience</td>
<td>Research Infrastructure</td>
<td>Tell the MINES@150 Story</td>
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<tr>
<td>Affinity</td>
<td>A Great Place to Work</td>
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<td>Student R&amp;D Support</td>
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</tbody>
</table>
Employer Feedback on MINES Graduates Today

**Strengths**
- Great Team Players
- Bright & Strong Work Ethic
- Get Things Done
- Hands-On
- Resilient

**Opportunities**
- Professional Development
- Business Acumen
Signature Traits of MINES Graduates

Distinctive, Highly-Valued, & Successful Graduates

“From MINES, Anywhere”

PAST:
- Technical, applied scientific expertise.
- Academic rigor.
- Grit and resilience.
- Get things done.

PRESENT:
- Hard-working, creative & collaborative problem solvers.
- Technical and scientific expertise.
- Academic rigor.
- Grit and resilience.
- Get things done.

POSSIBILITIES:

MINES@150
- Business acumen, leadership, entrepreneurship, societal context & personal passion, global awareness.
- Strong Affinity. Pay it forward.
- Hard-working, creative, & collaborative problem solvers.
- Technical and scientific expertise.
- Academic rigor.
- Grit and resilience.
- Get things done.

“From MINES, Anywhere”

Distinctive, Highly-Valued, & Successful Graduates
MINES Future is at the Intersection

Our Roots

TECHNICAL
Science and Engineering

BUSINESS
Finance, Economics, Management, Operations Research/Logistics, Leadership, Communication

CONTEXT & PASSION
Societal Needs, Entrepreneurship & Innovation, Arts, Policy, Humanities, Social Sciences

The next step in many of our graduates’ educations and careers

The reason why; The balance; This attracts & motivates our students
The Frontiers Initiatives

Positioning MINES for leadership at future S&T frontiers

- Materials and Advanced Manufacturing
- Earth and Space Exploration, Technology, and Engineering
- Others (TBD)

Research & Education Frontiers at MINES
MINES@150 Infrastructure Investments

“InnoHub” Area
Multi-use/multi-purpose space for hands-on learning/building/constructing, physical prototyping, freshmen and capstone projects, national competition teams, innovation and entrepreneurship resources and programs
MINES@150 Pathways of Distinction Plans
(program-specific plans)

The Campaign for MINES@150

MINES@150 Metrics

The MINES@150 Signature Student Experience

MINES@150 Diversity, Inclusion, and Access Plan