

MINES@150



COLORADO SCHOOL OF MINES
EARTH • ENERGY • ENVIRONMENT

Playbook



MINES@150 Prelude

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.

Our Timeless Mission



“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

Approaching 150 Years

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.

Surrounded by Dynamic and Disruptive Change

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



AUTOMATION: WE CAN BE REPLACED

PREPARING FOR JOBS THAT DON'T EXIST TODAY

GLOBAL EQUALIZING AND NEW DELIVERY/BUSINESS MODELS

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

Accessible and
attractive to qualified
students from all
backgrounds

A leader in educating
STEM students and
professionals

A producer of
differentiated and
highly desired STEM-
educated leaders

A go-to place for use-
inspired research and
innovation needed for
challenges facing
industry and society

A preferred partner for
talent, solutions and
life-long learning

The exemplar for
alumni affinity, visibility
and involvement



MINES@150: Macro-Level University Design Goals

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.

	Fall 2018 Values	Mines@150 Aggregate Design
Undergraduate Students	4908	5000
Masters/Non-Degree Students	670	1600
Doctoral Students	550	900
T/TT Faculty	223	250
Teaching Faculty & Professors of Practice	88	90
Research Grants & Contract Awards	\$66M	\$85M

MINES@150 Initiatives: Achieving Our Goals



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

MINES@150 School-Level Initiatives	MINES@150 High-Level Goals						
	1	2	3	4	5	6	7
Family Friendly Initiative	•						
MINES Leadership Institute	•						
Diversity, Inclusion, Access Plan Development	•	•					•
Cohort Scholarship Programs	•	•	•	•			•
Trefny Innovative Instruction Center Initiatives			•	•		•	
Program-Level Pathways of Distinction Plans			•	•	•	•	•
Business Programs Expansion			•	•	•		
Alumni Special Interest Focus Groups		•	•	•			•
Oredigger Camp	•	•	•	•			•

1 - A great community to learn, explore, live and work in

2 - Accessible and attractive to qualified students from all backgrounds

3 - A leader in educating STEM students and professionals

4 - A producer of differentiated and highly desired STEM-educated leaders

5 - A go-to place for use-inspired research and innovation needed for challenges facing industry and society

6 - A preferred partner for talent, solutions and life-long learning

7 - The exemplar for alumni affinity, visibility and involvement

Sample MINES@150 School-Level Initiatives

MINES@150 School-Level Initiatives	MINES@150 High-Level Goals						
	1	2	3	4	5	6	7
Sibson Process Re-engineering Initiative	•				•	•	
Sibson Compensation Benchmarking Initiative	•						
Center for Entrepreneurship and Innovation		•	•	•	•	•	•
Payne Institute			•	•	•	•	•
Fryrear Chairs for Innovation and Excellence	•		•	•	•		
Honors Programs Expansion		•	•	•			•
Engineering, Design and Society		•	•	•			•
MINES@150 Frontiers Initiatives (Research + Education)			•	•	•	•	
MINES Signature Student Experience Initiatives		•	•	•			•

1 - A great community to learn, explore, live and work in

2 - Accessible and attractive to qualified students from all backgrounds

3 - A leader in educating STEM students and professionals

4 - A producer of differentiated and highly desired STEM-educated leaders

5 - A go-to place for use-inspired research and innovation needed for challenges facing industry and society

6 - A preferred partner for talent, solutions and life-long learning

7 - The exemplar for alumni affinity, visibility and involvement

MINES@150: VP Area Strategic Priorities

Academic Affairs	Administration and Operations	Student Life	Research and Technology Transfer	Colorado School of Mines Foundation	Legal Services	Other
Pathways of Distinction	Mines Financial Health	Wellness	Promote R&D @Mines	Secure Support for MINES@150 Initiatives	Efficient and Pragmatic, Legal & Contract	Brand Identity
Student Recruitment	A Preferred Partner	Engaged Students	Grow/Diversify Funding	Strengthen and Expand External Relationships	Support for AA, A&O, R&D/TT	Affinity
Student Success	Physical Environment	Affinity	Pan-University R&D Initiatives	Increase Alumni Affinity, Visibility and Involvement	Advise on Legal Landscape Relevant to MINES@150 Goals and Initiatives	Tell the MINES@150 Story (Mktg & Comm)
Faculty Hiring & Professional Development	Seamless Systems and Service	Professional Development	Regional Partnerships & Alliances			Developing Future Alumni Affinity
Enrollment and Research Growth	Leading Edge Technology	Co-Curricular Components of the Signature Student Experience	Research Infrastructure	Tell the MINES@150 Story		Pathways of Distinction (Mines Alumni Association)
Affinity	A Great Place to Work		Student R&D Support			

MINES@150



Playbook: Supplemental Materials



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.

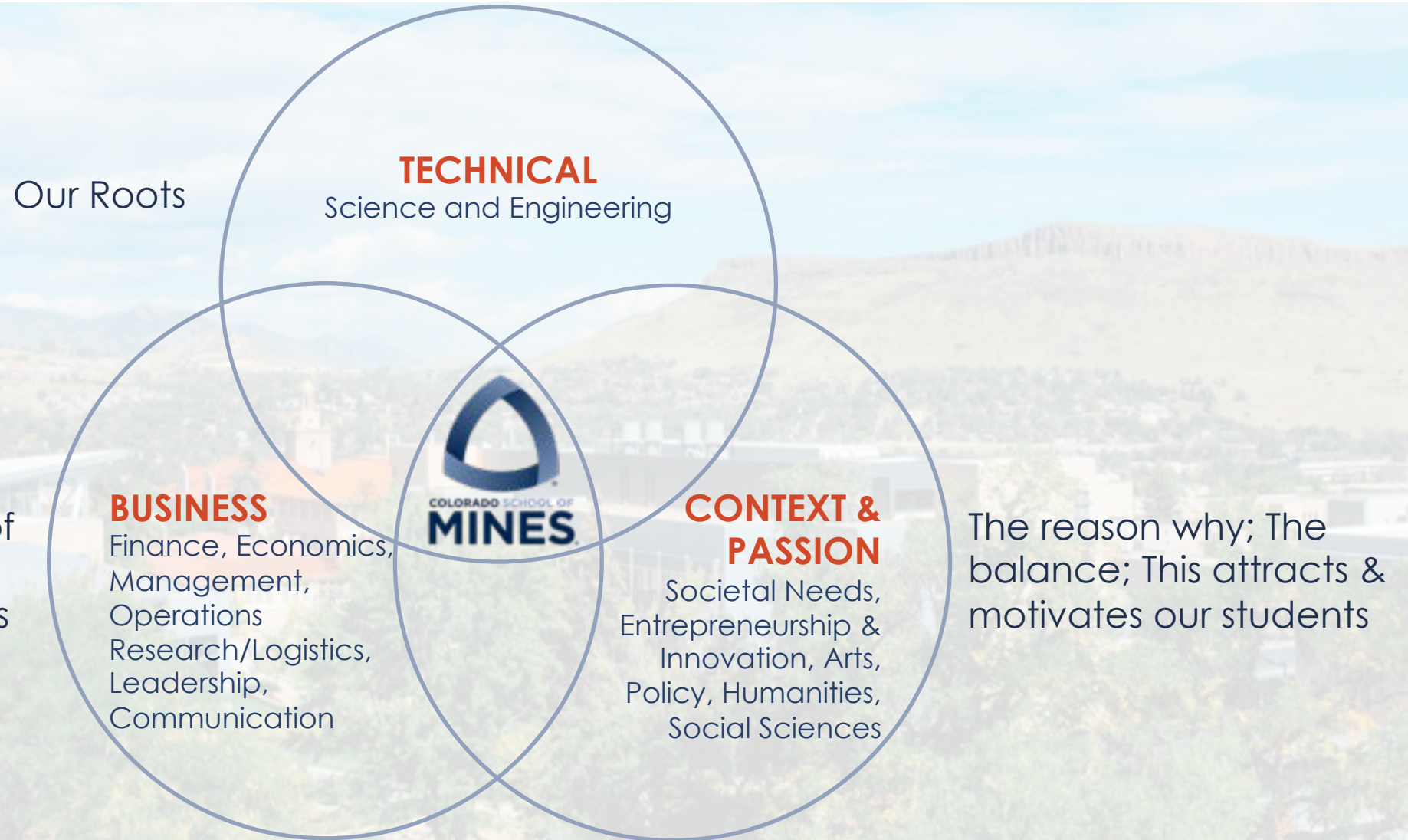
PRESENT:

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

POSSIBILITIES: MINES@150

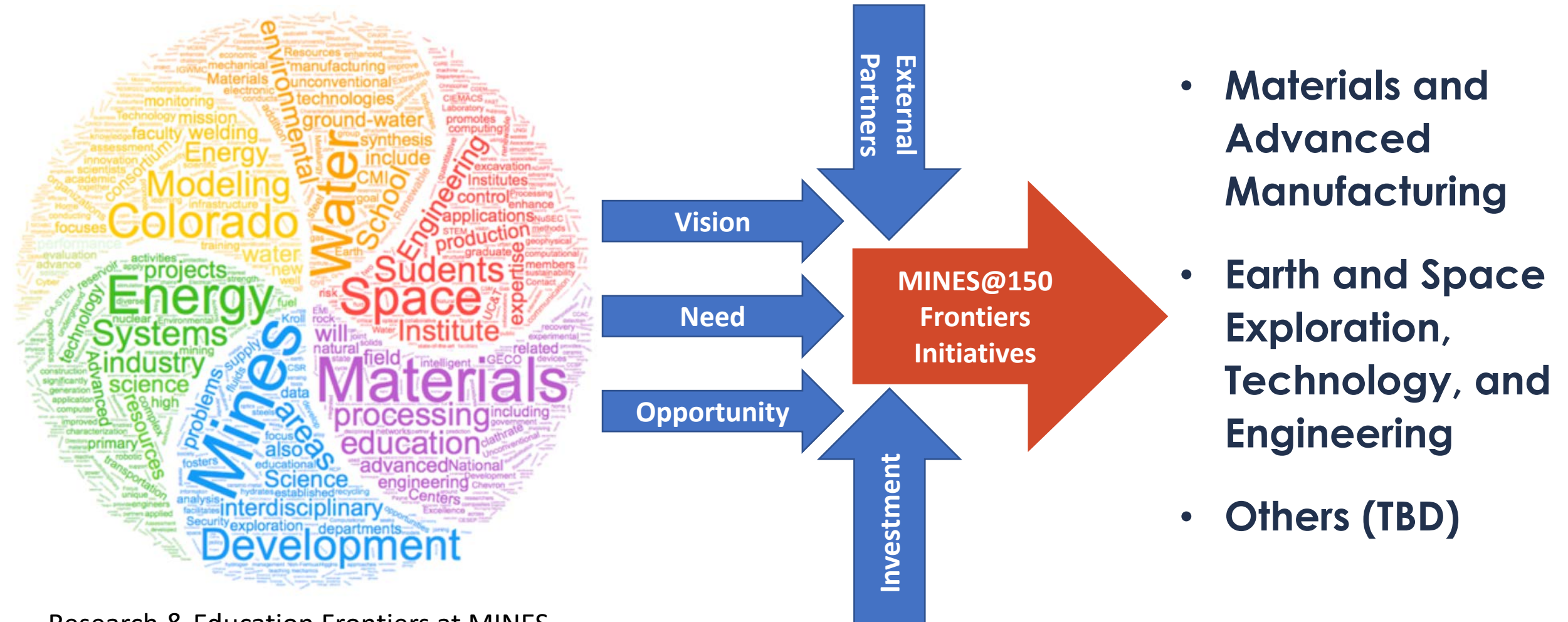
- Business acumen, leadership, entrepreneurship, societal context & personal passion, global awareness.
- Strong Affinity. Pay it forward.
- Hard-working, creative, & collaborative problem solvers.
- Technical and scientific expertise.
- Academic rigor.
Grit and resilience.
Get things done.

MINES Future is at the Intersection



MINES@150

The Frontiers Initiatives



Research & Education Frontiers at MINES

MINES@150 Infrastructure Investments



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: Materials Under Development in Fall 2018:

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