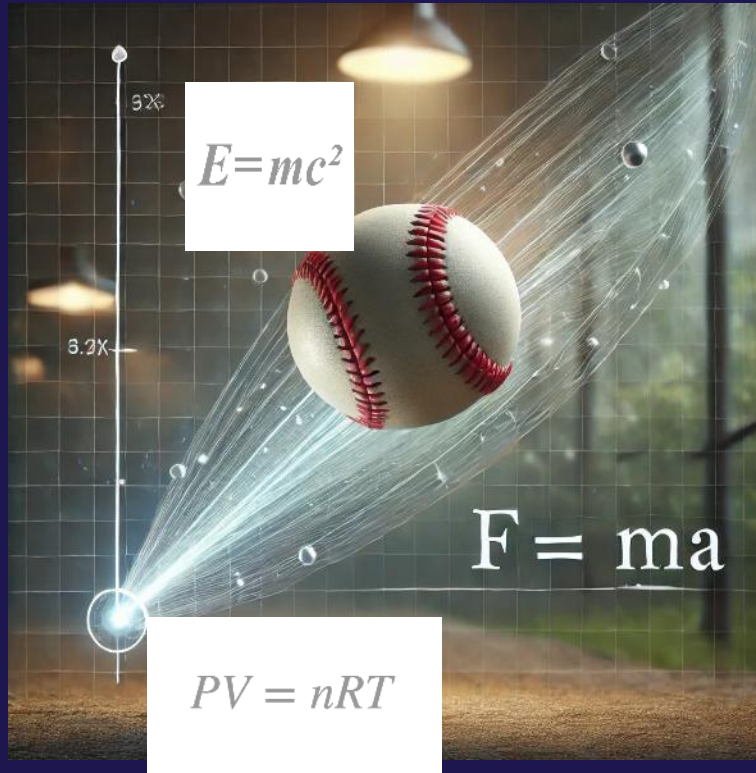




Workforce Development Presentation

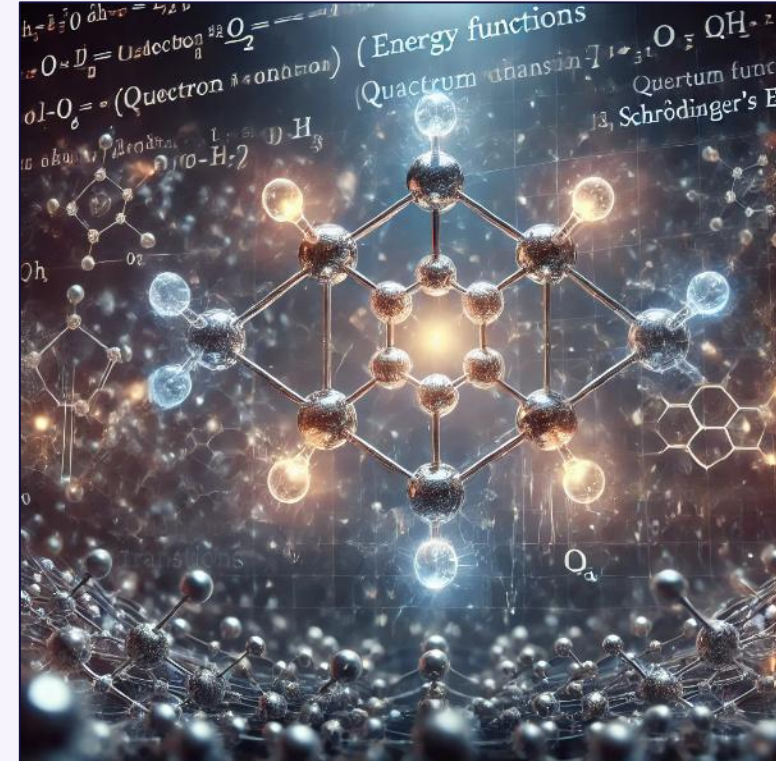
Elevate Quantum

Classical Mechanics



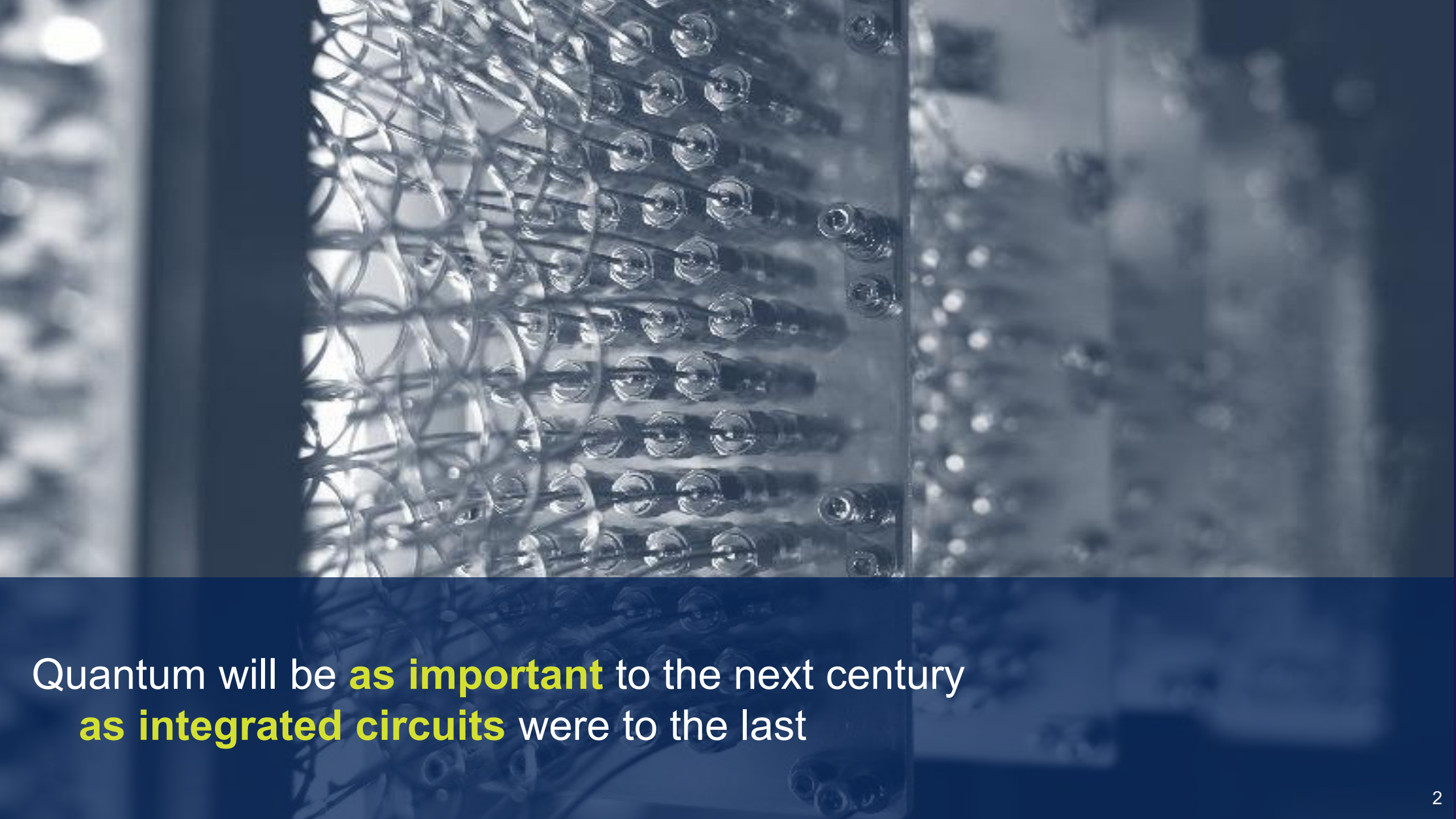
What goes up, must come down

Quantum Mechanics



entanglement – properties of two particles are shared, no matter their distance

superposition – a particle is in all of its states



Quantum will be **as important** to the next century
as integrated circuits were to the last

There are 3 dominant fields in quantum

Sensing

What it is

Highly sensitive, accurate, and efficient sensors that are self calibrating, and less vulnerable to interference

What it could do

- **Defense**: Enable the next generation of autonomous navigation
- **Healthcare**: Early detection of cancers
- **Space**: Study previously unobservable celestial bodies

Computing

Computers that have advanced processing power – solving problems computationally impossible for today's computers

- **Pharma**: Reduce drug discovery time and unlock next generation of personalized medicine
- **Energy**: Enable rapid advancement in clean energy technology (e.g., fusion)

Networking

Coded information and transmission between quantum processors, such as quantum computers, or sensors across the globe

- **IT**: Enhance encryption, future-proofing cyber risks created through quantum
- **Other industry**: Extend the range and speed of communication – enabling real-time global collaboration

EQ will be headquartered at the Quantum COMMONS

Future home to EQ and a host of Mountain West quantum startups

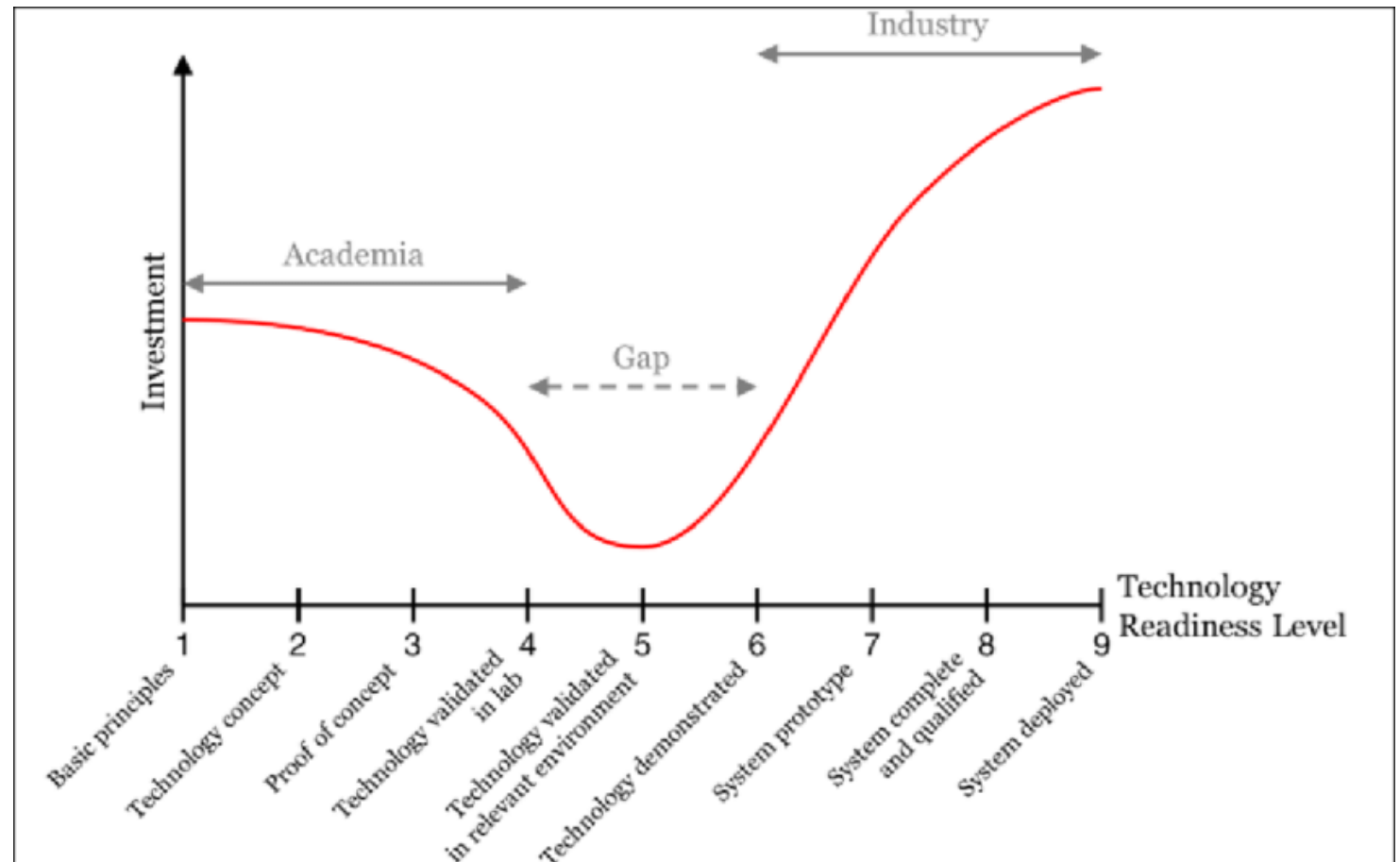


- 70 acres dedicated to quantum located midway between Boulder, Denver, and Golden
- ~50,000ft² of existing laboratories and other facilities designed for shared use
- Will house Elevate Quantum's Lab / Fab / admin building rent-free to EQ
- All other quantum organizations selected by EQ/R1s can negotiate ground leases
- In an Enterprise Zone, with associated local, state, and federal tax/grant advantages
- Fast-track permitting handled directly by the Colorado School of Mines rather than State/County

EQ Mission

**Dramatically
Accelerate
Commercialization
of Quantum
Technologies**

To maintain dominance in this field, we need to focus on helping critical technologies cross the valley of death



The Mountain West is the most vibrant and fertile region for quantum in the world

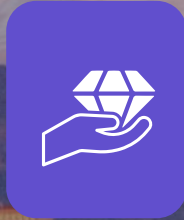
Right players



65+

Largest global cluster of quantum and quantum adjacent companies; #1 state for QED-C members

Right place



#1

Colorado ranking for new businesses; is also top 5 for venture capital investment per capita

Right leaders



7

Leading research institutions and universities; 4 Nobel prizes on related topics since 2000

Right talent



3,600

Existing quantum jobs in the region (20-30x other ecosystems)

Colorado is home to the top quantum & quantum enabling companies that are solving today's most complex issues



Revolutionizing environmental monitoring, preventing climate harm and energy loss with cutting-edge methane leak detection

Boulder, CO



Securing global infrastructure with jam-resistant GPS, eliminating vulnerabilities in power grids, financial transactions, telecom, & transportation

Arvada, CO



Powering ultra-precise position, navigating, and timing systems which will be not disrupted by weather or intentional interference— among other innovations

Golden, CO



Building leading-edge, powerful quantum computers and harnessing quantum-generated data to supercharge Gen AI creating insights and solutions that classical systems cannot

Broomfield, CO



Creating the connectivity layer necessary to network quantum computers, supercharging computational power and laying the foundation for the quantum internet

Boulder, CO



Creating near-zero temperature environments necessary to manipulate and communicate with qubits, enabling quantum breakthroughs

Denver, CO

At EQ we are laying the groundwork for quantum technology to achieve its potential

Impact generated across four pivotal areas



Commercialization

A **commercial quantum lab** with access to hardware and space for startups to run their business; A rapid turnaround **PIC fab**; and **HI** packaging facility



Accelerated **commercialization** for startups, formed spinouts, and industry to **translate and scale** their quantum innovations



Workforce

The curriculum, training programs, credentialing pathways, and formal degree programs needed to **fill labor gaps in quantum**



Job placement, education, upskilling, and reskilling opportunities for all Mountain West workers



Acceleration

The **investor network** and **acceleration resources** necessary to support the growth of new quantum companies



Increased **investment in the Mountain West** across the quantum value chain enabling quantum **startups to reach scale** more quickly



Ecosystem

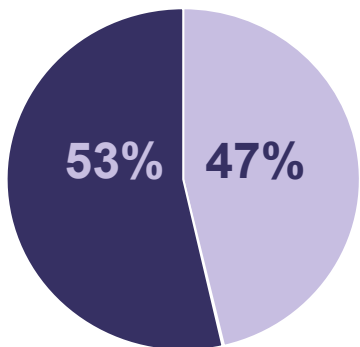
Management of the overall consortium helping facilitate cross collaboration between a diverse set of stakeholders



The world's largest cluster of **quantum stakeholders** (companies across the supply chain, investors, educators, etc.)

In partnership with other Colorado partners working in quantum, we are building an end-to-end ecosystem

Quantum is cutting edge, but quantum jobs are accessible to all



Today, half of quantum jobs don't require advanced degrees (closer to 80% for enabling hardware)

Share of technician jobs expected to double in 5 yrs

— 2x



The average quantum job pays >\$125,000/yr

Frame: Ft. Collins
Skills: Fabrication/Welding
Education: Trade/CC

Gas Handling: Ft. Lewis
Skills: Welding/Pipefitting
Education: Trade/CC

Vacuum system: Golden/EU
Skills: Pipe fitting
Education: Trade/CC

Thermalization plates: Durango
Skills: Machining/Welding
Education: Trade/CC

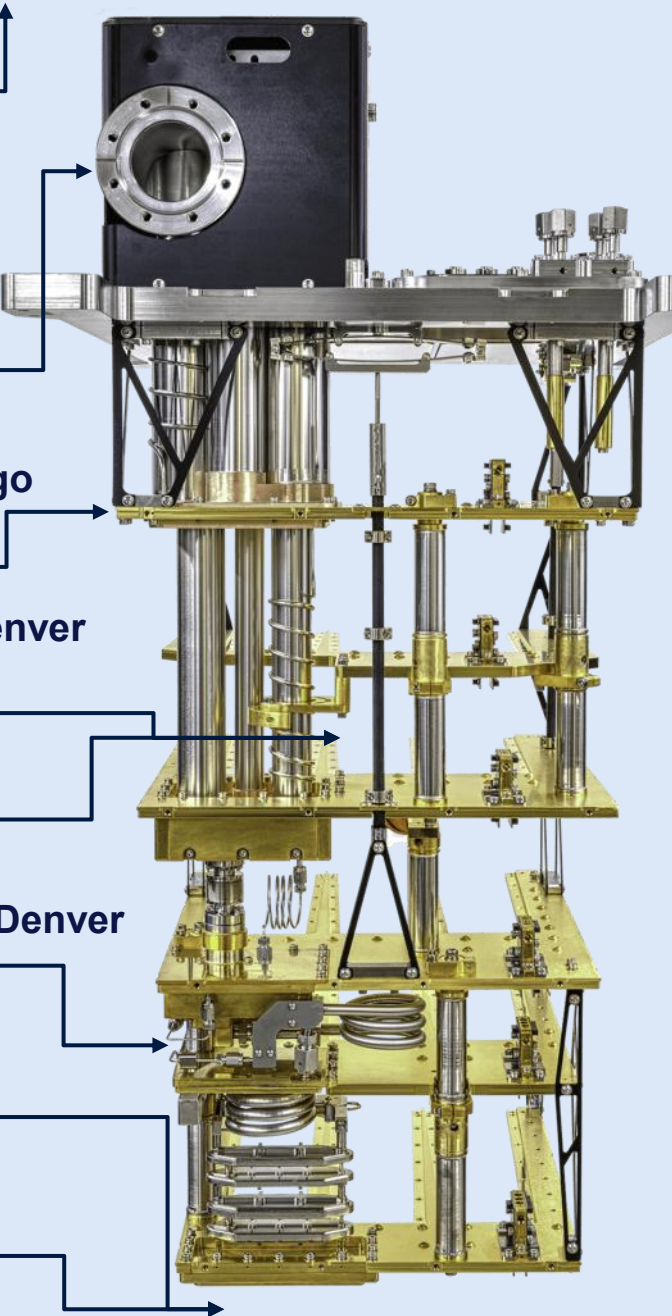
Quantum wiring assembly: Denver
Skills: Soldering
Education: Trade/CC

Wire tree validation: Denver
Skills: VNA/Oscilloscope
Education: BS/MS

Cryogenic system assembly: Denver
Skills: Vacuum brazing/welding
Education Requirement: Trade/CC

Processor Installation:
Skills: AWG/CE
Education Requirement: PhD

Algo/Software: Global/Remote
Skills: Math/programming
Education Requirement: PhD



The job demands in this industry are varied and span all skill levels

What are the top 5 most common titles of your employees?

- **Laser engineer, assembly and test technician**
- Sales engineer, support engineer
- Manufacturing manager, **technical sales representative**
- CEO, scientific advisor, business development, business intern
- Scientist, engineer, C-suite
- VP of product development, head engineer, quantum scientist 1, quantum scientist, **electrical engineer**
- **Quantum technician**, mechanical engineer, **cryogenic scientist**
- Quantum engineer, process engineer, designer (chip), test engineer
- **Photonics engineer**, principal scientist
- Innovation consultant, senior advisor
- Physicist, software engineer, general **operations manager**, architectural and engineering manager
- **Optical engineer / technician**, software engineer, electrical engineer
- Applications engineer, assembly technician, manufacturing engineer, **machinist, business development** representatives

How will your workforce change in the next 3-5 years, what new roles you envision?

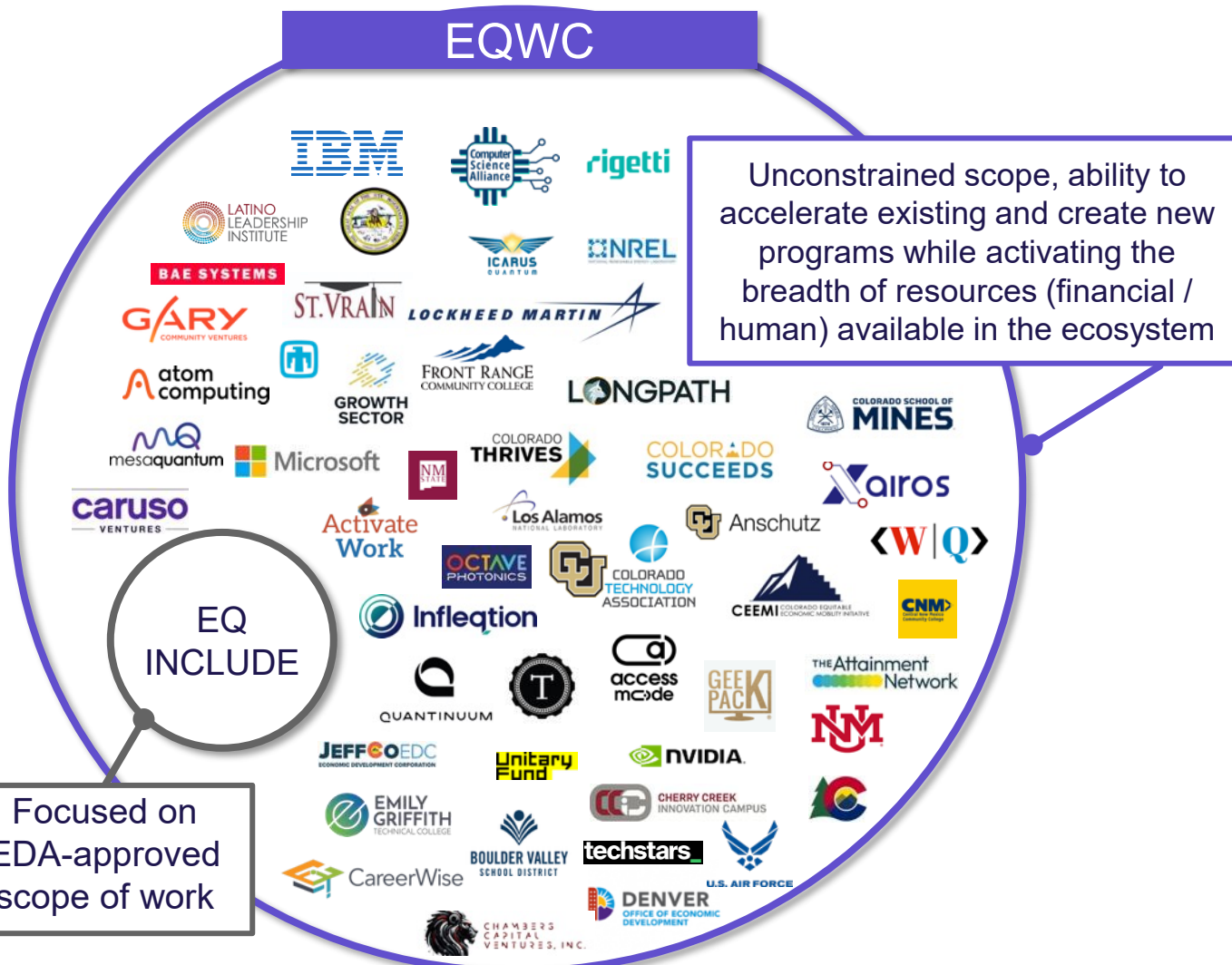
- Packaging technician, mechanical engineer
- **Product assembly**, sales team, tech portfolio expansion, and **HR**
- Lab technicians, sales engineers, commercial operations engineers
- Manufacturing technician, shipping technician, **marketing / comms** manager, technical sales representative
- More roles around operations and operators of our technology – junior / entry **level tech positions** to **work with our scientists** in the labs and oversee the day-to-day **operations of the technology**
- Chip manufacturing and testing
- **More roles in manufacturing**, roles ranging from scientists, techs, and **tradespeople** to support our efforts productizing devices
- Will are and will continue to see a fundamental shift towards production and will need roles to support manufacturing and deployment
- We plan to hire more technicians and engineers
- Mostly engineering hires with **more support staff** to support our operations as we grow (marketing, accounting, finance, etc.)
- Marketing, assembly

The EQWC was designed to bring together the many initiatives being run by partners in the region



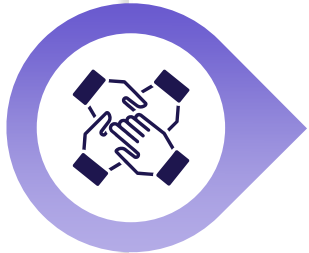
This partnership will enable us to realize ambitious goals set out under Tech Hubs

- 3+ novel and scalable technician **training programs**
- 20+ **organizations engaged** in QIT up/re-skilling & credentialing **programs**
- 20+ new **instructors trained** and delivering quantum tech & QIT related offerings for non-degree holders
- 10+ **career fairs**
- 20+ **high schools** offering career-aligned QIT **modules**
- **10,000** engaged in QIT **pathways**



To realize the potential of quantum in Colorado, we will need our full community involved...

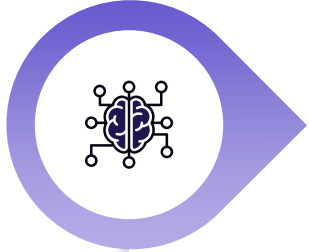
Ways to get involved...



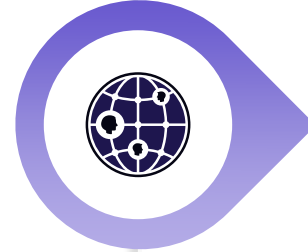
Help connect us with efforts in adjacent technology areas/
cross-sector alignment



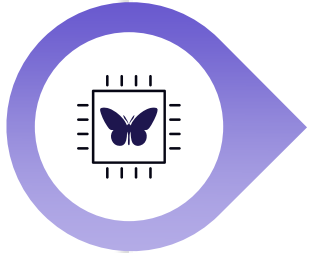
Enroll in quantum upskilling opportunities



Join the EQWC



Participate in International Year of Quantum (IYQ) events



Be a community resource



Attend community events

Reference



For quantum sensing alone, CO has the **largest cluster of companies** working on quantum sensing (particularly PNT) in the world

TOP 20 US-HEADQUARTERED COMPANIES DEVELOPING QUANTUM PNT TECHNOLOGY (CNAS MAY 2025 ARTICLE)

Company	Location	 Has CO Quantum Sensing Ops
Honeywell Aerospace	Plymouth, MN	✓
Lockheed Martin	Moorestown, NJ	✓
Northrop Grumman	Woodland Hills, CA	✓
Teledyne Technologies	Thousand Oaks, CA	
Frequency Electronics	Unlondale, NY	
Leidos	Huntsville, AL	
Geometrics	San Jose, CA	
Microchip Technology	Beverly, MA	
Spectra Dynamics	Louisville, CO	✓
Vescent	Golden, CO	✓
AOSense	Fremont, CA	
TwinLeaf	Plainsboro, NJ	
Excelitas Technologies	Pittsburgh, PA	✓
Quspin	Louisville, CO	✓
Infleqtion	Louisville, CO	✓
SandboxAQ	Palo Alto, CA	
FieldLine Industries	Boulder, CO	✓
Vector Atomic	Pleasanton, CA	
Xairos	Lafayette, CO	✓
Mesa Quantum	Boulder, CO	✓