

ANNUAL IMPACT REPORT 2023

CONNECTION
COLLABORATION
COMMUNICATION





MESSAGE FROM THE DIRECTOR

What a remarkable year it has been at the Omaha STEM Ecosystem! We have witnessed the incredible outcomes that can be achieved when a community unites to make a positive impact. The Omaha STEM Ecosystem has continued to adhere to the principles of our collective impact organization to foster a shared understanding of core talent needs. We implemented an actionable framework that guides our collaborative endeavors to help shape the workforce and the future of our community.

Harnessing the social capital of our partners, we have successfully expanded our cross-collaborations through the STEM Connect Series. In 2023, the series brought together over 300 participants for four focused events. These sessions included facilitating conversations between educators and business/industry partners to develop a framework of collaboration; hosting unique career fairs for young adults to navigate their post-school career steps; and reviewing milestones and roadmaps for the STEM Community Platform. The series culminated with a National STEM Day Challenge and an event featuring a nationally known speaker and former Google Education Evangelist, Jaime Casap, who inspired us with the boundless possibilities of education and the future of workforce.

I find continuous inspiration in the commitment of our community partners who embrace the challenge of broadening our impact beyond mere connections. The STEM Community Platform, launched in 2022, serves as a testament to this commitment. In our vision for making a lasting impact, the next crucial step involves incorporating a comprehensive toolkit specifically designed to capture critical data, generate unique insights and empower data-driven decisions.

Of course, our achievements would not be possible without the extraordinary generosity and unwavering support of our donors. I extend my heartfelt gratitude to them, as well as to the numerous partners who have dedicated their time, talent and expertise.

As we finalize our 2024-2026 strategic plan, we are delighted to witness the ongoing growth of the Omaha STEM Ecosystem and we look forward to a dynamic and engaging 2024. In sharing this report, we want to spotlight the dedication and hard work of our partners, committee members and supporters who ensure our community remains vibrant and poised for continued success.

Thank you,
Julie Sigmon / Director

Mission

Building a stronger STEM community by connecting education and business development for tomorrow's workforce.

Vision

Transforming Omaha into a robust center of STEM excellence and innovation.

IDENTIFYING THE PROBLEM

The demand for STEM talent is increasing throughout the state of Nebraska as STEM occupations are projected to grow by 11% between 2020 and 2030, faster than non-STEM occupations at 7.7% (Nebraska Department of Labor, 2022).

- 23 of occupations in Nebraska are STEM
- 97.7% of STEM occupations require some level of education past high school
- 36% of STEM occupations are High Wage, Skill, and Demand (H3)

Projected growth in some of the top industry clusters for the state of Nebraska

- **Architecture and Engineering:** Nebraska has a projected growth of 8.3% vs the national average at 5.6%
- **Computer and Mathematical:** Nebraska has a projected growth of 13.7% vs the national average at 14.1%
- **Healthcare Practitioners & Technical:** Nebraska has a projected growth of 10.2% vs the national average at 10.8%

The relentless pace of economic expansion in the Greater Omaha area, coupled with an escalating demand for scientific and technical competencies, demonstrate that the current model is clearly unsustainable.

Solution

Breaking down educational silos and fostering interconnected pathways remains the central focus of the Omaha STEM Ecosystem (OSE). Drawing on current research, particularly highlighted by Robert H Tai, Christine Qu Liu, Adam Maltese, and Xitao Fan (2006), the OSE recognizes the pivotal roles of early exposure and linked engagement in guiding students toward STEM careers. To address these principles, the ongoing development of the STEM Community Platform continues to ensure accessibility to STEM resources and promote equity by connecting trusted providers with youth and families through a unified system.

In addition, the STEM Community Platform streamlines access to internship opportunities, a critical component in addressing the talent gap. In 2023, we actively engaged the community through communication, collaboration and fostering connections through our STEM Connect events. Our primary objective was to cultivate a shared understanding of the core talent requirements within STEM disciplines and create an actionable framework for optimal pathways.

What is STEM?

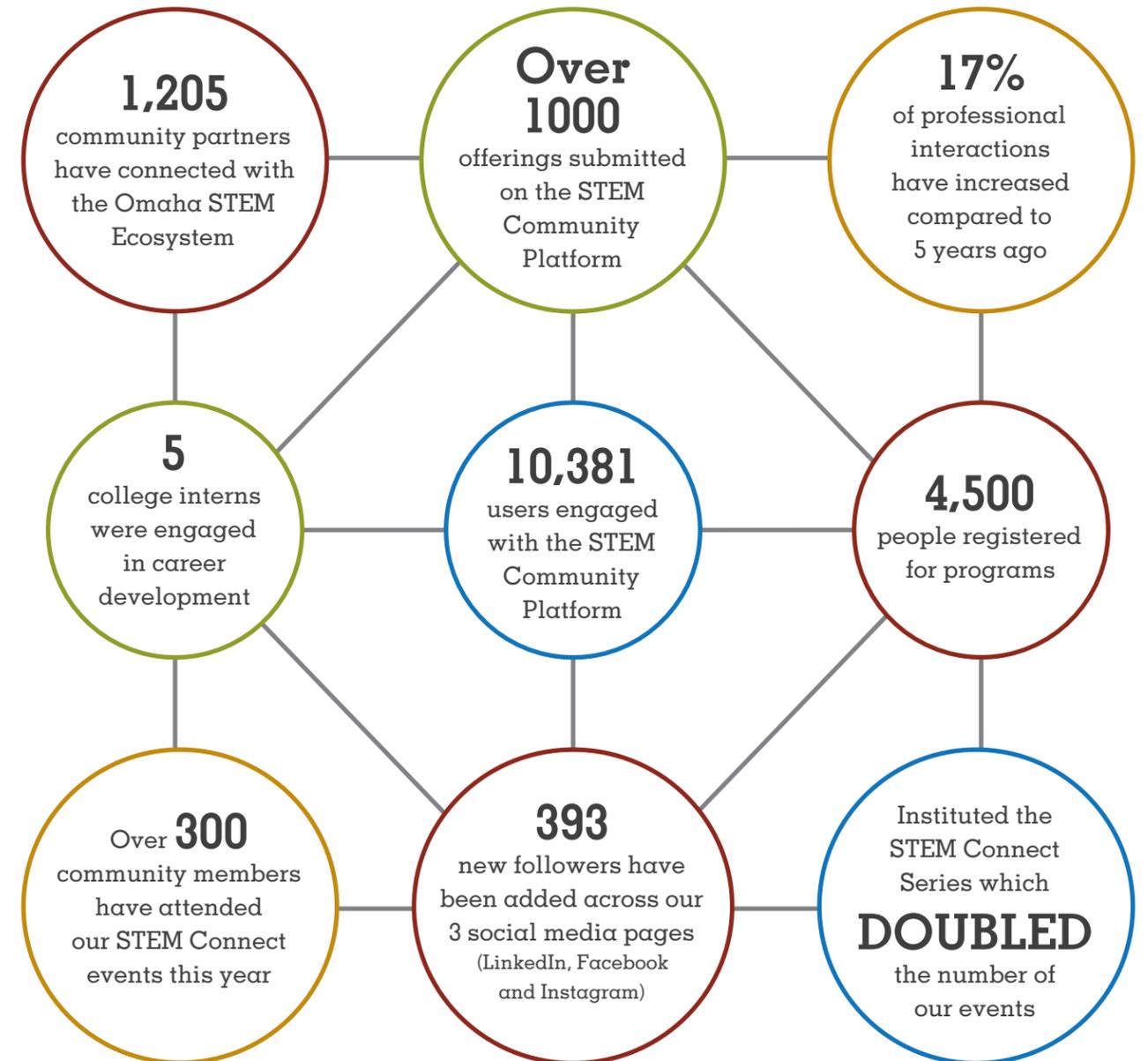
STEM is science, technology, engineering and mathematics.
At its fundamental core, STEM is exploration and critical thinking for solving solutions.



2023

THE POWER OF COLLECTIVE ACTION is derived from the use of focused communications, connection and collaboration.

CONNECTIVITY THROUGH NUMBERS



CONNECTIVITY TO STEM OPPORTUNITIES

The OSE leverages the social capital of each partner to address the STEM workforce gap by connecting education to workforce development.

Board of Directors

- Clarkson College
- AIM Institute

Advisory Boards

- Education
 - Clarkson College
 - UNO STEM Leadership Team / STEM TRAIL Center
- High School STEM Academies
 - Ralston School District
 - Millard STEM Academies
 - Omaha Public Schools
 - Papillon La Vista Community Schools
- Jesuit Academy Advisor



Nonprofits

- Million Girls Moonshot
- Heartland Workforce Solution
- Aviation STEM-AHA
- BioNE – Women in STEM
- NE Beyond School Bells
- Greater Omaha Chapter, AFCEA
- ACE Mentoring
- Metro Science and Engineering Fair

Science Centers and Museums

- Kiewit Luminarium
- Omaha's Henry Doorly Zoo & Aquarium®

Department of Defense Research / Stevens University

COLLABORATIVE PARTNERSHIPS

Outreach to our community partners involves unique collaborations that are all valuable in assuring our STEM community remains vibrant.



Metropolitan Science and Engineering Fair

Nebraska STEM: For One, For All



University of Nebraska Omaha and National Science Foundation Grants

Clarkson Career Fair

STEM Professional at OPS



Meta Action Grant Recipient for STEM Community Platform

MCL Construction - Change Makers Events



Heartland Developers Conference

AIM Institute: Tech Awards and Tech Mixer



Annual City Nature Challenge

AFCEA Omaha Chapter - Dinner with a Scientist



Leadership Omaha Small Group #4 Class of '45



STEM COMMUNITY PLATFORM

The initial launch of the STEM Platform two years ago laid the groundwork for equitable access to critical information and programs within our community. The STEM Platform was meticulously designed to bolster a robust STEM network, uniting trusted providers, youth and families within a unified system.

Additionally, it guaranteed access to resources, tech education and career development for underrepresented communities, creating an environment that can break the cycle of poverty by opening doors to H3 (High Wage, High Skill, High Demand) tech career pathways. Visit the platform at stemplatform.aiminstitute.org



Visions for 2024

- Implementing a toolkit for community stakeholders to capture critical data, generate unique insights and develop data-driven strategies to assure quality youth opportunities are available in the neighborhoods that need them most.
- Connecting families with local youth opportunities, this tool brings together all of the city's youth-serving providers onto one unified platform. This makes it simple for families to connect with opportunities and get started on their path to success.
- Engaging youth-serving organizations with a set of purpose-built tools to deliver their programs, connect with young people and support their success.
- Providing access to quality workforce development opportunities for internships, vetted STEM curricula for youth and a custom gig board to match providers with the mentors best fit for their programs.

COLLABORATIVE COMMUNITY EVENTS

OMAHA STEM ECOSYSTEM: 2023 STEM CONNECT SERIES

Roadmap & Milestones - April 20, 2023

Roadmap & Milestones, hosted at R&R Realty, celebrated the collective impact of the OSE and the STEM Community Platform (SCP) over the past year while mapping out the next steps that were needed. Great feedback was provided and utilized on how we can make Omaha a more vibrant STEM community for all.

Building Connections - July 18, 2023

Our Building Connections event, hosted at MCL Construction, focused on building connections between education and business sectors. Great connections were made, including one between Clarkson College and Omaha's Henry Doorly Zoo & Aquarium. Through this meeting, Clarkson College was able to create a 3D printed Gorilla Blood Pressure Cuff for the Zoo. We love collaboration!

Lighting the Spark - September 12, 2023

Lighting the Spark at Metro Community College's Fort Campus supported what research has shown about a spark of innovation being the key indicator that ignites a student's interest in pursuing a STEM-centered career. To help light the spark, the event provided a platform for partners to not only reflect on their own experiences but also to inspire and encourage the next generation of STEM enthusiasts.

Hope and Innovation - November 8, 2023

Hope and Innovation, hosted at the OHDZA, featured Jaime Casap, a former Google Educational Evangelist. He spoke on the power and potential of technology as a tool in promoting inquiry-driven learning models. When asked about next steps, Jaime said, "We need to determine how to translate and take advantage of all of the technology innovation so we can better prepare our students for the future workforce when we don't really know what that is going to look like yet." We hoped our audience was inspired to be the change agents in their organizations.



COMMUNICATING OSE'S MISSION

The strength and success of the Omaha STEM Ecosystem requires a clear and concise message that guides stakeholders to become engaged in building a thriving STEM community.

- Monthly OSE Newsletters connected us with our members and community
- New monthly OSE Committee Newsletters increased our cross-communication and collaboration efforts
- STEM Challenge promoted interactions between organizations, including:
 - NE Department of Labor
 - Durham School of Architectural Engineering and Construction
 - UNO STEM Trail Center
 - Clarkson College
 - Collective for Youth
 - IT OWL
 - Invention Scouts
 - Mathnasium of Papillion
 - Mary our Queen Catholic School
 - Everyday Science and Science Support Non-Profit
 - Mid-America Council, Boy Scouts of America
 - ESU 3
 - ESU #3 - Gifford Farm Education Center



Media Reach

There were 17 earned news media placements that resulted in:

- 4.2 million audience reach
- \$698,129 ad equivalency value
- \$2 million publicity value

Media

- Omaha World-Herald
- Midlands Business Journal
- News Channel Nebraska
- KIOS



2024-2026 STRATEGIC PLAN

Vision

- Our vision is transforming Omaha into a robust center of STEM excellence and innovation

Mission

- The Omaha STEM Ecosystem is building a stronger STEM community by connecting education and business development for tomorrow's workforce

Practical Vision

- Build Capacity that Supports Mission Impact
- Utilize Evidence-Driven Research & Evaluation to Advance Outcomes
- Advocate for Community through Intentional Communication, Collaboration, & Connection
- Ensure Financial Sustainability through Diversified Funding

Strategic Directions

- Building Sustainability to Increase Impact
 - Evaluated, evolved and established a sustainable nationally recognized organization
 - Strengthened the statewide collaboration between multiple entities
- Expanding Communication to Elevate Collaboration
 - Evaluated and enhanced brand awareness of OSE through value propositions for local, state and national audiences and partners
 - Operationalized effective internal and external communications strategies
- Measuring Impact to Ensure Progress
 - Reflected on the progress of and adjusted benchmarks for assessment of organizations' impact
 - Evaluated the utilization of research studies distributed by OSE for the advancement of STEM in education, business, nonprofits, government, policy makers, etc.

COMMUNITY VOICES

The OSE's STEM Connect Event, Lighting the Spark, successfully connected young adults with key business industry experts in the STEM workforce. No one describes it better than our young professionals who shared their career journey.

"Lighting the spark is just as true as it sounds. Everyone in the STEM world has a distinct moment they remember where their spark was lit, and a lifelong passion ensues. It happened for me as a kid and gave me a passion I will have forever. It is important now that we do our part to make that happen for the next generation, and give them that opportunity to discover their true light."

– Patrick Stolinski



"I thoroughly enjoyed the opportunity to share my career path story. As I recounted my journey, from the early stages of discovering my interests to navigating the challenges of my chosen career path, I felt a genuine connection with the audience. The Lighting the Spark Event not only allowed me to contribute to this mission but also reinforced the importance of mentorship and storytelling in guiding others toward fulfilling their own STEM aspirations."

– Blair Kauzlarich



"Lighting the Spark was an exciting way to tell people about my path to become a patent attorney, which isn't a well-known STEM career. It also allowed me to share that I didn't know what I wanted to do right away and that it all turned out okay!"

– Jeanne Kelley



"As a passionate advocate for STEM education, I was honored to share my Story at 'Lighting the Spark' event. This initiative brilliantly bridges the gap between education and business, fostering a nurturing environment for the workforce of tomorrow. I firmly believe that our collective efforts in this series will ignite a lasting impact on the STEM community, shaping a more innovative and resilient future."

– Monika Philp



STUDENT VOICE

Working with students is a foundational value of the OSE in helping to connect career exploration opportunities.

This is what one of them had to say:

"I worked with OSE as a UNO STEM Star for two years, and it was an incredible experience. Working with OSE gave me an awareness of the many STEM opportunities within our community, and I feel grateful that I was able to be a part of helping families and students learn about these opportunities, as well. OSE is doing amazing things and is such an incredible resource for members of our community."

– Chloe Seidl



FOUNDERS

The Omaha STEM Ecosystem believes in the power of connections, collaborations and communication to address the critical shortfall of STEM professionals in the Greater Omaha area. We could not do what we do without you and our work depends on your support.

- Omaha's Henry Doorly Zoo & Aquarium®
- University of Nebraska at Omaha STEM TRAIL Center
- University of Nebraska Medical Center
- University of Nebraska College of Engineering
- Metropolitan Community College
- Omaha Public Power District
- DLR Group
- Peter Kiewit Foundation
- Clarkson College
- AIM Institute
- Union Pacific Railroad
- Anne Hubbard Foundation
- Parker Family Foundation
- Nebel Family
- CyncHealth
- Cox Business



We invite you to get involved in the Omaha STEM Ecosystem by contributing your time, talent and treasure.

CHAMPIONS

We appreciate all of the volunteer efforts that these organizations provide. They dedicate their time, talent and treasure to moving our mission and goals forward and assuring Omaha remains a robust STEM community.

- University of Nebraska Omaha
 - College of Education, Health and Human Sciences
 - Office of Student Success
 - Office of Engagement
 - College of Information Science & Technology
 - Math and Science Center
- University of Nebraska Foundation
- Omaha Public Schools
- UNMC
- BVH Architecture
- Prairie STEM
- Olsson
- Lukas Partners
- Heartland Workforce Solutions
- NE State Government
 - Department of Labor/Economics
 - Department of Education
- NE for Lifesaving Cures
- MCL Construction
- Nebraska Tech Collaborative/Intern NE
- Meta
- Yates Illuminates-MCC
- Collective for Youth
- UNICH
- Mathnasium
- Every Day Science and Science Support
- The HOPE Center for Kids
- McGrath North
- FlightFillers LLC
- Millard STEM Academy
- Sheppard's Business Interiors, Inc.
- 7x24 Exchange - Silicon Prairie Chapter



To learn more about ways to get involved or support the Omaha STEM Ecosystem, please contact Julie Sigmon.

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