MINNESOTA STEM ECOSYSTEM

Bridging the Gap

Connecting STEM Learning to the Workforce

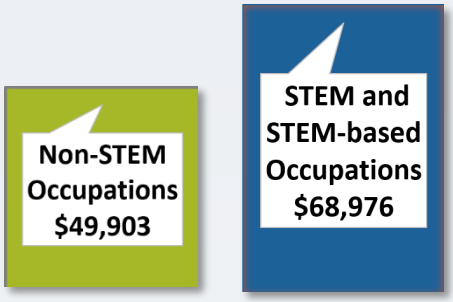
The Jobs Gap

Non-STEM Occupations

STEM and STEM-related Occupations

Over the next 10 years, STEM and STEM-related occupations will grow at a rate of more than 12%![1]

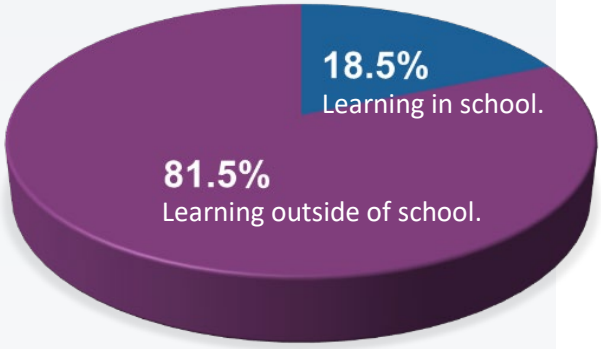
The Wage Gap



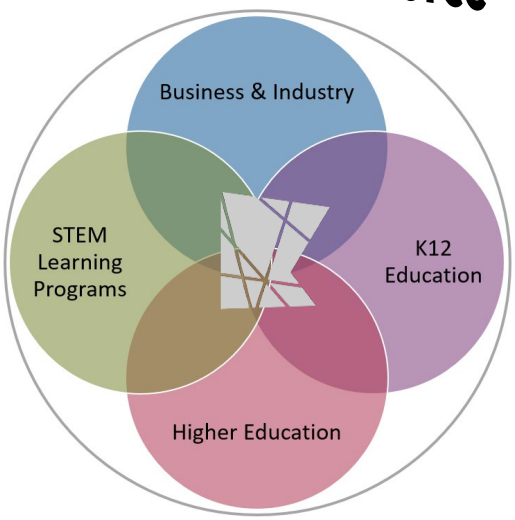
On average STEM and STEM-related occupations pay on average $20,000 a year MORE than non-STEM occupations.[2]

The Learning Gap

More than 80% of learning is done outside of the classroom! AND 81% of students believe experiential, industry-based learning experiences are important![3]



The Minnesota STEM Ecosystem supports STEM learning and workforce development across sectors and systems to coordinate and align statewide STEM learning strategies with Minnesota's workforce needs.



Internships in Greater Minnesota: Through our network of over 50 learning and workforce development partners, we launched STEM internships in key sectors, including Medical, Advanced Manufacturing, and Emerging Technologies.

MN STEM Learning & Workforce Advisory Council: We established a unique cross-sector, cross-system Council bringing together K-12 and Higher Education, out-of-school time (OST) providers, state agencies, and industry partners to develop statewide STEM learning with workforce development strategies.

STEM Career Exploration: Working with our partners, launched hands-on STEM career exploration opportunities that connect students directly with high-demand careers in STEM fields.

Public-Private Partnerships: We are working directly with industry to provide schools and OST programs with tools, and resources to prepare learners for the future workforce.

Connecting OST STEM Programs with Career Pathways: We are collaborating with OST STEM providers to align learning outcomes with career pathways, ensuring students engage in experiential learning relevant to Minnesota's future workforce needs.

Strengthened Regional STEM Networks: We engaged STEM Asset mapping and to develop and support regional STEM networks that connect educators, OST providers, and industry partners.

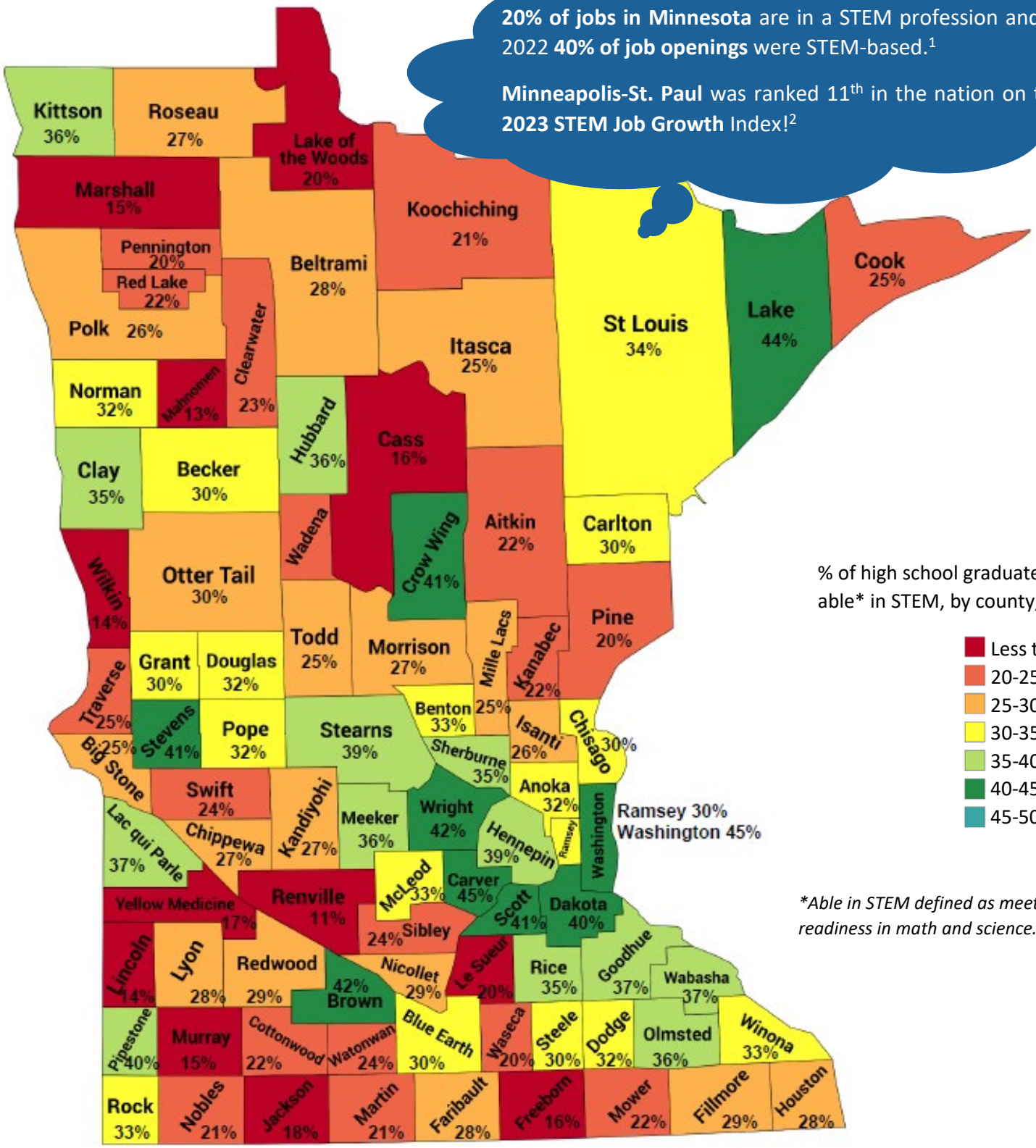
stemmn.org

1 US Bureau of Labor and Statistics
2 The National Science Board- The STEM Labor Force
3 Afterschool Alliance, Minnesota

Is Minnesota STEM Ready?

20% of jobs in Minnesota are in a STEM profession and in 2022 **40% of job openings** were STEM-based.[1]

Minneapolis-St. Paul was ranked 11th in the nation on the **2023 STEM Job Growth** Index![2]



% of high school graduates who are able* in STEM, by county, 2020

- Less than 20%
- 20-25%
- 25-30%
- 30-35%
- 35-40%
- 40-45%
- 45-50%

**Able in STEM defined as meeting college readiness in math and science.*

ACT data by county collected by Minnesota Compass; this data ceased to be collected in the same way during or following the COVID19 pandemic. However, in **looking statewide at the MCA [MN Comprehensive Assessment] for 2024, less than 35% of all high school juniors (11th grade) were proficient in grade level math.**

1 Mn Dept of Employment & Economic Development
2 STEMdex, RCLO

Minnesota STEM Learning and Workforce Development Support

Minnesota Senate and House of Representatives
Minnesota Senate Building and State Office Building
St. Paul, MN 55155

Date: March 3, 2025

RE: House File 1847/Senate File 1726 (Minnesota STEM Ecosystem Bill)

Dear Minnesota Legislators,

We are pleased to express our collective support for recognition and funding of the Minnesota STEM Ecosystem and Minnesota Advisory Council for STEM Learning and Workforce Development.

Minnesota faces significant challenges in developing a robust STEM workforce. Recent data from Minnesota Compass shows that less than 30% of Minnesota's high school graduates meet STEM college and career readiness benchmarks—a concerning trend that affects over 80% of greater Minnesota. Meanwhile, STEM occupations account for more than 20% of jobs across the state, and in 2022, nearly 40% of all job openings were in STEM fields. Projections indicate that over the next decade, STEM employment will grow at twice the rate of other occupations.

Recognizing these challenges, Minnesota's industry leaders saw this as a call to action. Understanding that the state's future economic success depends on a well-prepared STEM workforce, businesses embraced this need and invested in establishing the Minnesota STEM Ecosystem. **This initiative was built with the intent of creating a sustainable public-private partnership to support workforce development through collaborative, cross-sector efforts.** The Ecosystem's focus on aligning education and industry ensures that learners across the state gain the skills and experiences necessary to thrive in emerging STEM careers.

Over the past year, the Ecosystem has collaborated with key industry partners meaningful STEM internship opportunities, worked with more than 50 learning partners to align after-school STEM learning programs with career readiness outcomes and partnered with the Minnesota State Centers of Excellence to connect students directly with industry professionals and emerging technologies. By providing a statewide infrastructure, the Ecosystem is creating a model that can scale STEM workforce development and career exploration efforts to every corner of Minnesota.

As Minnesota businesses, we know firsthand the importance of a well-prepared workforce in maintaining our state's economic strength and competitiveness. Without action, the growing demand for skilled workers will outpace our ability to fill these critical roles, stifling innovation and economic growth. **We urge you to support this legislation; together, we can build a brighter future for Minnesota.**

Sincerely,

MINNESOTA STEM ECOSYSTEM

Our STEM Learning and Workforce Development Partners

Ignite Afterschool

United Way Twin Cities

MnTech (MN Technology Association)

MTN (MN Technology Network)

Northern Lights Collaborative

Minndependent

SciMathMN

STEM Forward

TIES Teaching Institute

STEM Next

The Science Museum of Minnesota

The Bakken Museum

The Bell Museum

The Works Museum

Code Savvy

High Tech Kids

Girls Dream Code

createMPLS

VEX Robotics

The Minnesota STEM Partnership

The Minnesota Zoo

Junior Achievement North

The Minnesota Academy of Science (MAS)

Science from Scientists

STARBASE Minnesota

Minnesota 4-H

We Share Solar

Minnesota Service Cooperatives

Raspberry Pi

Women in Tech

Minnesota CTE TIP

Mn State Colleges Centers of Excellence

Ntl Center for Autonomous Technology

Masonic Cancer Center, University of MN

St. Thomas University

US Patent and Trademark Office

Minnesota FFA

Minnesota HOSA-FHP

SkillsUSA Minnesota

Minnesota Compass

Bloomington Public Schools

Sparkpath

Future Forward

New Vision Foundation

The Hormel Institute

CS for ALL MN

The MN Department of Education

The development of the Minnesota STEM Ecosystem has been generously supported through congressionally directed funds and matching contributions from industry leaders including:

Boston Scientific
Medtronic
Xcel Energy
3M Science. Applied to Life.™
SEAGATE
ECOLAB
H.B. Fuller
MAYO CLINIC
BEST BUY

Additional program support provided by:

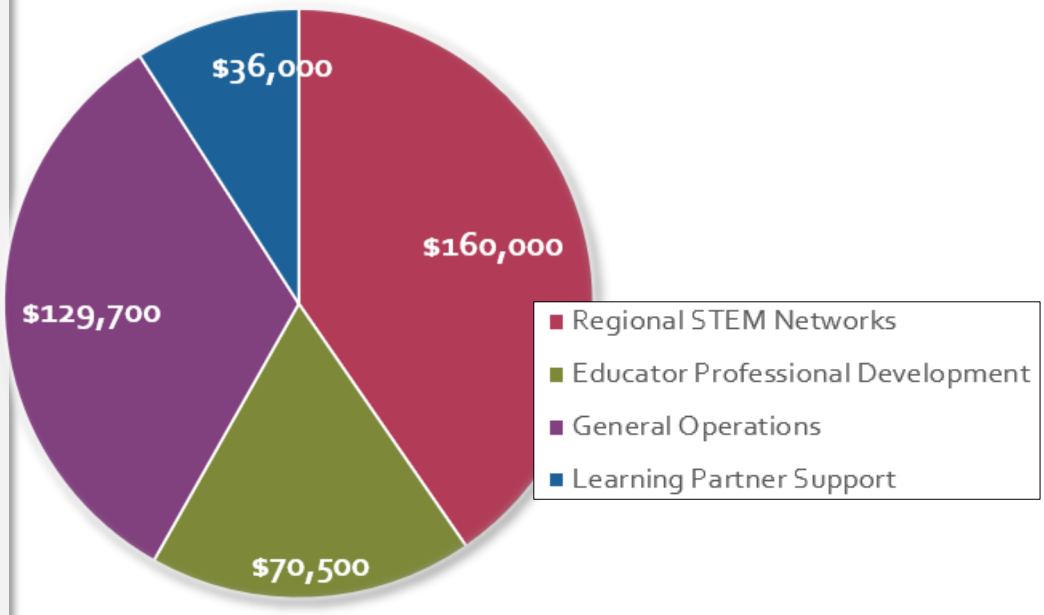
stemnext OPPORTUNITY FUND
ignite AFTERSCHOOL

Sustainable Public- Private Partnerships

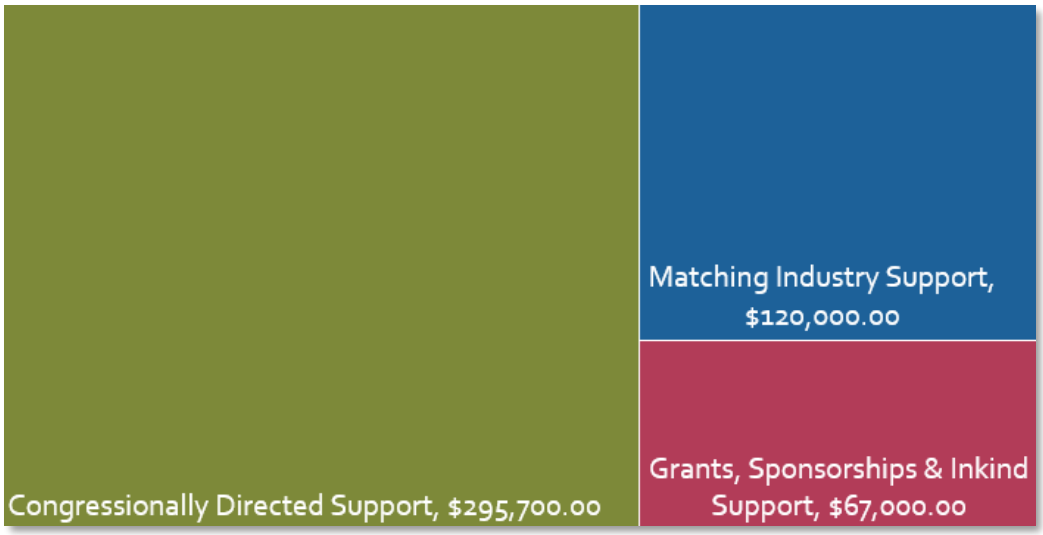
We have made it a priority to forge strong partnerships that blend financial resources and the strengths of the public and private sectors facilitating industry standards and practices into STEM education, creating pathways for students to engage in internships, apprenticeships, and mentorships.

The MN STEM Ecosystem operates as part of the MN Service Cooperatives and has the capacity to act as both an LEA and a nonprofit. While there are 9 service cooperatives and we work with all of them, our fiscal agent and home is the Southeast Service Cooperative.

Snapshot: 2023-24 Expenditures



Snapshot: 2023-24 Income



MINNESOTA STEM ECOSYSTEM

The Minnesota Advisory Council on STEM Learning and Workforce Development

The cross-sector, cross system council was established to develop statewide STEM learning and workforce development strategies. The Advisory Council provides guidance and programmatic oversight to the Minnesota STEM Ecosystem. The Minnesota STEM Ecosystem is housed within the Minnesota Service Cooperatives system, providing the statewide reach needed to be impactful.

After-School Learning Providers and Nonprofits:
Kari Denissen Cunnien, Executive Director, Ignite Afterschool
Steven Walvig, Program Officer, Community Impact, Greater Twin Cities United Way
Joseph Adamji, Director, The Center for Equity and Systems Change, Science Museum of Minnesota
Anika Taylor, Vice President of Learning, The Bakken Museum
Cheryl Moeller, Executive Director, High Tech Kids
Charity S. Johnson, Director, STARBASE Minnesota – Duluth
Valerie Lockhart, Executive Director, MN Technology Network

Business and Industry:
Katie Staub, Principal Program Manager, Seagate Technology
Jessica Aleshire, Senior Manager, Global Community Engagement, Boston Scientific
Sam Holsen, Manager, Social Investments, Xcel Energy
Heidi Jedlicka Halvarson MPA, Senior Program Manager, Medtronic Foundation
Mandy Satterfield, Career Awareness Specialist, Workforce Development, Mayo Clinic

PK-12 Education and Administration (In-School Learning):
Lavyne Rada, Ph.D., Director, CTE TIP (Career and Technical Education Teacher Induction Program)
Cindy Walters, Executive Director of Career and Alternative Programs, SW Metro Intermediate District
Sally Goodman, M.S., K-5 Forest School Teacher, Cedarsong Way Certified Teacher, Duluth Forest School

MN Department of Education:
Sarah Carter, STEM and Computer Science Integration Specialist, Minnesota Department of Education
Tim Barrett, Trade and Industry Specialist, Minnesota Department of Education
Stephanie Graff, Deputy Commissioner, Minnesota Department of Education

MN State Colleges, Universities and the Centers of Excellence:
Robb Lowe, Career Pathways Director, Academic Affairs Division, MN State Colleges and Universities
Eva Scates-Winston, CTE Equity Specialist, Academic Affairs Division, MN State Colleges and Universities
Jason Bruns, BSME, MBA, Director, Minnesota State Engineering Center of Excellence
Stephanie Rispa, Assistant Director, National Center for Autonomous Technologies

MN Governor's Children's Cabinet:
Jennifer Moses, Program Director Children's Cabinet, Office of Governor and Lieutenant Governor

MN Department of Employment and Economic Development:
Katie McClelland, Director, Governor's Workforce Development Board

Minnesota State Cooperatives:
Anne Kilzer, Executive Director, Minnesota Service Cooperatives

March 3, 2025

Minnesota Senate Jobs and Economic Development Committee
Senator Champion, Chair
3401 Minnesota Senate Building
St. Paul, MN 55155

Subject: Support for STEM Ecosystem – SF 1726

Dear Minnesota Legislators,

We, the undersigned Minnesota robotics teams, urge you to support Senate File 1726 which provides funding for the Minnesota STEM Ecosystem to expand STEM learning opportunities and workforce development programs. As robotics teams across the state, we have experienced firsthand how these programs equip students with the technical, problem-solving, and teamwork skills that are important for Minnesota's future workforce.

Through robotics, we have developed hands-on experience in engineering, programming, and innovation—skills that directly align with Minnesota's growing demand for STEM professionals. Beyond technical skills, robotics has taught us leadership, critical thinking, and collaboration, preparing us for careers in fields like advanced manufacturing, computer science, artificial intelligence, and engineering.

However, not all students in Minnesota have access to these opportunities. By supporting this bill, you are making sure that more students, regardless of their background or location, can participate in robotics and other STEM programs. This investment is crucial in preparing the next generation of innovators, problem solvers, and workforce leaders for Minnesota's economy.

We respectfully ask for your support of SF 1726 to make STEM learning and career pathways more accessible for students across the state. Thank you for your time and for championing Minnesota's future workforce.

Sincerely,

Cheryl Moeller, Executive Director

High Tech Kids & the Undersigned Robotics Teams of Minnesota

16981	Gear Ratios	Alexandria
27955	Knano Knights	Alexandria
43037	Scuba Studs	Alexandria
46827	The Chomps	Alexandria
46828	Lego Masters in a Yellow Submarine	Alexandria
7000	RoboSharks	Bloomington
21606	Method 2 R Madness	Bloomington
22072	Capybotas	Bloomington
22074	Ignition 2031	Bloomington
23296	Cougar Robotics Collective	Bloomington
23620	Artificial Intelligence	Bloomington
30432	The Coders	Bloomington
61206	Thunderbots	Bloomington
22074	Ignition 2031	Bloomington
6176	Deep Sea Divers	Byron
6178	Kingdom of Evermore Deathly Complexity	Byron
10075	Wapple	Byron
11409	Kraken Koders	Byron
14452	Tridents	Byron
14454	Computer Claws	Byron
17178	Tidal Force	Byron
27287	AI Alligators	Byron
27289	CyberBears	Byron
63368	Drenched Einsteins	Byron
60832	BustedBots	Carlton
57717	Good Legos Make Waves	Chanhassen
66976	Build A Bot Brick Bros	Chanhassen
23779	Lectric Lemons	Chaska
27651	Lectric Limes	Chaska
61576	Cool Beans	Coon Rapids
17968	Coral Seals	Cottonwood
20178	Lego Legends	Cottonwood
20178	Clockwork	Cottonwood
22253	Robo Ratchets	Cottonwood
24172	Gone Fission	Cottonwood
26232	Kracken-Ators	Cottonwood
11206	Devildogs	Duluth
21305	Rogue Cats	Duluth
25957	Happy Hamsters	Duluth
27431	Magnificent Moose	Duluth
27432	Giddy Geese	Duluth
27434	Laughing Loons	Duluth
27435	Radical Roosters	Duluth
30355	Awesome Alpacas	Duluth
30356	Fabulous Flamingos	Duluth
30357	Curious Cows	Duluth
30358	Nifty Narwhals	Duluth
33336	Playful Piglets	Duluth
33337	Silly Snakes	Duluth
33338	Yodeling Yaks	Duluth
45231	The Team With No Name	Duluth
52216	Spaceotics	Duluth
57348	Shooting Stars	Duluth
57350	Komet Krazy	Duluth
62077	Cosmic Cold	Duluth
65122	Galactic Gators	Duluth
65123	Planet Pluto	Duluth
11879	The Fishy Kids	Eagan
11886	Fishinators	Eagan
18535	Frozen Code	Eagan
26205	Thunder Wolves	Eagan
26869	Blue Top Hats	Eagan
26870	Blue Vortex	Eagan
26871	Blue Infinity	Eagan
26871	Blue Infinity	Eagan
26872	Blue Aetherion	Eagan
56517	Crazy Water Coders	Eden Prairie
36415	Sassy Sea Otters	Ely
27202	Terminal Velocity	Excelsior
52933	Chips & Bots	Excelsior
63066	Code Creators	Farmington
7372	Tie-Dyed Swimming Wolves	Forest Lake
7807	Robotic Rover Company	Forest Lake
64992	Team Coral	Forest Lake
23467	Gearshift VR	Fridley
29474	Team Ratner/Shapiro	Golden Valley
56450	Astro Sharks	Hopkins
10238	TigerBots	Hutchinson
16731	TigerBots	Hutchinson
30474	Robot Rampage	Inver Grove Heights

22264	Digital Disruptors	Lakeville
24367	Chaos Potatoes	Lakeville
24487	Gadget girls	Lakeville
44947	Lego Lightning	Lakeville
45295	Purple Pirate Monkeys	Lakeville
57266	Chaotic Aquatic Robotic Chickens	Lakeville
30867	LC Axolotls	Little Canada
30868	LC Llamas	Little Canada
30895	LC Ocelots	Little Canada
33606	LC Chickens	Little Canada
33607	LC Turtles	Little Canada
33608	LC Pandas	Little Canada
33609	LC Dolphins	Little Canada
26383	Mighty Morphing Banana Slugs	Luverne
19566	Coding the Cosmics	Maple Grove
26126	Steele tigers	Medford
22178	Infrared	Minneapolis
37914	Underwater Cows - Team 1	Minneapolis
61478	Underwater Cows - Team A	Minneapolis
7289	Genius	North Branch
8636	FIRE	North Branch
7877	Reef Robotics	Otsego
7878	The Aqua Bros	Otsego
7879	The Twin Cities	Otsego
7880	The Shark Crew	Otsego
8840	Lego Dragons	Otsego
12045	Mech Tech	Otsego
16917	Gear Wizards	Otsego
19892	Digital Ducks	Otsego
22110	Exploding Microwaves	Otsego
24125	The Tidepools	Otsego
24126	Riptide Robotics	Otsego
24127	Brick Heads	Otsego
24770	Dolphin Discoveries	Otsego
24873	The Free Builders	Otsego
24874	Twin City Dolphin Fishermen	Otsego
24951	Super Submarines	Otsego
25956	Sensory Overload	Otsego
26171	Tech Titans	Otsego
26462	Titan Bots	Otsego
26669	Lego Mini Kitties	Otsego
26670	Press Start	Otsego
26671	The Lego Masters	Otsego
26801	Team Reptile Pugs	Otsego
26802	The Lego Legends	Otsego
28661	Electric Lizards	Otsego
28662	Despicable Machines	Otsego
32533	3rd Grade Kings	Otsego
53461	Sea Patrol	Otsego
53638	The Droids	Otsego
57282	Electrified Legos	Otsego
57548	Fantastic Fish Pants	Otsego
57734	Megalobots	Otsego
61983	Rising Guppies	Otsego
61984	Geometric Difficulties	Otsego
68286	Sea Serpents	Otsego
16539	Aluminum Warriors	Plymouth
27409	The Automatons	Rochester
53616	Lincoln K-8	Rochester
23245	Bots 'O' Gold	Rosemount
60101	Robo Osos	Roseville
51049	Shooting stars	Savage
68927	Nebula Knights	Savage
8808	Ponytail Posse	Shoreview
19706	Potential Energy	Shoreview
14672	Micro Militia	St. Michael
23739	Byte Brigade	St. Michael
24062	Pico Platoon	St. Michael
26528	Digital Division	St. Michael
26529	Nano Navy	St. Michael
26530	Atomic Aces	St. Michael
15369	RoboPilots	St. Paul
23363	The Wizards	St. Paul
6699	Tempest	St. Paul
13076	Argonauts	St. Paul
63995	Bulldogs	Swanville
54961	Tracy Elementary Pirate Panthers	Tracy
5501	Robo Dweebs	Two Harbors
61047	Agate Prime	Two Harbors
20032	Cyber Machina	Woodbury

MINNESOTA STATE
Northern Agricultural Center of Excellence

AgCentric
CONNECTING EDUCATION & AGRICULTURE

Keith Olander, Executive Director
Judy Barka, Assistant Director
1830 Airport Road
Staples, MN 56479

0-218-894-5163
M-763-257-2881
Keith.Olander@clcmn.edu
Agcentric.org

February 4, 2025

Minnesota Senate and House of Representatives
Minnesota Senate Building and State Office Building
St. Paul, MN 55155

Dear Minnesota Legislators,

I am expressing support for the continued growth and legislative recognition of the Minnesota STEM Ecosystem. The Minnesota STEM Ecosystem was established on public-private partnerships supporting workforce helps address STEM challenges, especially those in rural Minnesota:

- Less than 30% of Minnesota's high school graduates meet STEM college and career readiness benchmarks – affecting over 80% of greater Minnesota.
- STEM occupations account for more than 20% of jobs across the state.
- In 2022, nearly 40% of all job openings were in STEM fields.
- Projections indicate that over the next decade, STEM employment will grow at twice the rate of other occupations.

The Ecosystem ensures learners statewide gain the skills and experience necessary to thrive in emerging STEM careers by aligning education and industry. The Minnesota State Transportation Center of Excellence has collaborated with the Ecosystem to advance several key initiatives:

- Educator Professional Development: Professional development that empowers educators to integrate emerging technologies into classrooms, giving students the knowledge they need for success in tomorrow's economy.
- Enhanced STEM Career Pathways: Our partnership introduces students to STEM career pathways through hands-on learning opportunities and career exploration activities.
- STEM Real-World Experiences: We have laid the groundwork for meaningful internship opportunities that provide students with real-world experience in STEM industries while addressing workforce gaps statewide.

We need to build on the momentum already developed, so I urge you to support legislation to advance the Minnesota STEM Ecosystem. Thank you for your time and consideration.

Sincerely,

Keith Olander, Executive Director
Dean of Agricultural Studies
AgCentric and Agricultural Partnerships

MINNESOTA STATE
IT Center of Excellence

Date: January 30, 2025

Subject: Letter of Support for the MN STEM Ecosystem

Dear Minnesota Legislators,

On behalf of the Minnesota State IT Center of Excellence, I am honored to show our support for the continued growth of the Minnesota STEM Ecosystem.

Minnesota stands at a crossroad. Minnesota faces challenges to build a diverse and equitable STEM workforce, especially in our rural and tribal communities. Fewer than 30% of high school graduates statewide meet STEM college and career readiness benchmarks, a reality that impacts over 80% of greater Minnesota. With every career in Minnesota using some part of the STEM focus areas, and STEM careers making up over 20% of all jobs in our state, with future growth and demand twice the rate of other fields, Minnesota's future success depends on decisive action and innovative collaboration to meet these challenges head-on.

The Minnesota Stem Ecosystem is the prime example of what we can accomplish when we work together. Through aligning education, industry, community, and technology, the Ecosystem builds pathways that inspire, prepare, and empower learners from all backgrounds and locations to thrive in high-growth and high-demand careers shaping our economy. At the Minnesota State IT Center of Excellence, our mission is to provide access and opportunities for those lacking tech resources or those who are tech curious. Our strategy had led us to partner with the Ecosystem on forward reaching initiatives, that helped move Minnesota forward. These initiatives include:

- Inspiring Students: Provide opportunities that help individuals get a foot in the Technology door through AI training, CTE Instructor Programming, Certification Training, and Career Exploration.
- Enhancing Education: Provide expanded opportunities for IT certification and education through AI Hackathons, Certification, Non-Technical (Soft skill) content, Cyber Savvy training and soon a full-scale broadband training program.
- Engaging Industry: Provide low or no-cost training opportunities in AI, Cyber, Softskills, and Broadband

The Minnesota State IT Center of Excellence cannot do this alone. With the partnership with the Minnesota STEM Ecosystem, we continue to make a real and measurable impact, especially to our rural and tribal communities. To build on this momentum, we urge you to support legislation that advanced the Minnesota STEM Ecosystem. Together we can transform workforce challenges into opportunities, while ensuring all Minnesotans have the skills and abilities they need to lead, innovate, and success.

Thank you for your leadership as we together shape Minnesota's future.
Sincerely,

Janice Aanenson, PhD
Executive Director, MN State IT Center of Excellence

MINNESOTA STATE
Transportation Center of Excellence

January 29, 2025

Minnesota Senate and House of Representatives
Minnesota Senate Building and State Office Building
St. Paul, MN 55155

Dear Minnesota Legislators,

I am expressing support for the continued growth and legislative recognition of the Minnesota STEM Ecosystem. The Minnesota STEM Ecosystem was established on public-private partnerships supporting workforce development through collaborative, cross-sector efforts, and helps address various STEM challenges, especially those in rural Minnesota:

- Less than 30% of Minnesota's high school graduates meet STEM college and career readiness benchmarks – affecting over 80% of greater Minnesota.
- STEM occupations account for more than 20% of jobs across the state.
- In 2022, nearly 40% of all job openings were in STEM fields.
- Projections indicate that over the next decade, STEM employment will grow at twice the rate of other occupations.

The Ecosystem ensures learners statewide gain the skills and experience necessary to thrive in emerging STEM careers by aligning education and industry. The Minnesota State Transportation Center of Excellence has collaborated with the Ecosystem to advance several key initiatives:

- **Educator Professional Development**: Professional development that empowers educators to integrate emerging technologies into classrooms, giving students the knowledge they need for success in tomorrow's economy.
- **Enhanced STEM Career Pathways**: Our partnership introduces students to STEM career pathways through hands-on learning opportunities and career exploration activities.
- **STEM Real-World Experiences**: We have laid the groundwork for meaningful internship opportunities that provide students with real-world experience in STEM industries while addressing workforce gaps statewide.

We need to build on the momentum already developed, so I urge you to support legislation to advance the Minnesota STEM Ecosystem. Thank you for your time and consideration.

Sincerely,

Carl Borleis
Interim Executive Director
Minnesota State Transportation Center of Excellence

MINNESOTA STATE
Southern Agricultural Center of Excellence

1920 Lee Boulevard
North Mankato, MN 56003

January 29, 2025

Minnesota Senate and House of Representatives
Minnesota Senate Building and State Office Building
St. Paul, MN 55155

Dear Minnesota Legislators,

We are writing to express our strong support for the continued development and legislative recognition of the Minnesota STEM Ecosystem.

Data from Minnesota Compass highlights that fewer than 30% of high school graduates meet STEM college and career readiness benchmarks—a statistic that is even more pronounced in greater Minnesota, where over 80% of students fall short of these benchmarks. Meanwhile, STEM-related jobs account for over 20% of employment opportunities statewide, and in 2022, nearly 40% of all job openings were in STEM fields.

The Minnesota STEM Ecosystem was established to address these challenges by fostering public-private partnerships that bridge the gap between education and industry. Through collaboration and cross-sector initiatives, the Ecosystem equips students with the skills and experiences necessary to thrive in the modern workforce:

- **Educator Professional Development:** Providing teachers with resources and training to integrate emerging technologies into their curricula, ensuring students receive relevant and high-quality STEM education.
- **STEM Career Pathways:** Creating hands-on learning experiences and career exploration opportunities that connect students with STEM professions.
- **STEM Internship Program Development:** Establishing internship opportunities that offer students practical, real-world experience while simultaneously addressing workforce shortages across Minnesota.

Thank you for your time and consideration. We look forward to your leadership in advancing STEM education and workforce development in Minnesota.

Sincerely,

Tina LeBrun
Executive Director
Minnesota State Southern Agricultural Center of Excellence

MINNESOTA STATE
Engineering Center of Excellence

January 27, 2025

Minnesota Senate and House of Representatives
Minnesota Senate Building and State Office Building
St. Paul, MN 55155

Dear Minnesota Legislators,

We are pleased to express our collective support for the continued growth and legislative recognition of the Minnesota STEM Ecosystem.

Minnesota faces significant challenges in developing a robust STEM workforce, particularly in rural regions. Recent data from Minnesota Compass shows that less than 30% of Minnesota's high school graduates meet STEM college and career readiness benchmarks—a concerning trend that affects over 80% of greater Minnesota. Meanwhile, STEM occupations account for more than 20% of jobs across the state, and in 2022, nearly 40% of all job openings were in STEM fields. Projections indicate that over the next decade, STEM employment will grow at twice the rate of other occupations.

Recognizing these challenges, the Minnesota STEM Ecosystem was established on public-private partnerships that support workforce development through collaborative, cross-sector efforts. By aligning education and industry, the Ecosystem ensures learners statewide gain the skills and experiences necessary to thrive in emerging STEM careers. A vital partner in this work has been the Minnesota State Engineering Center of Excellence, which has collaborated with the Ecosystem to advance several key initiatives:

- Professional Development for Educators: Together, we have empowered educators with tools and strategies to integrate emerging technologies into classrooms, equipping students with the knowledge they need for success in the digital economy.
- STEM Career Pathways: Our partnership has introduced students to STEM career pathways through hands-on learning opportunities and career exploration activities.
- STEM Internship Program Development: This collaboration has laid the groundwork for meaningful internship opportunities that provide students with real-world experience in STEM industries while addressing workforce gaps statewide.

These initiatives are already driving positive outcomes, particularly in rural and underserved regions of Minnesota. We strongly urge you to support this legislation to ensure the ongoing success and sustainability of this important work. Together, we can ensure that all Minnesotans have the opportunity to succeed in the STEM workforce and secure a brighter future for Minnesota.

Sincerely,

Jason Bruns, BSMA, MBA | Director

MINNESOTA STATE
Energy Center of Excellence

1593 11th Ave, Granite Falls, MN 56241
energycenter@mnwest.edu
320-564-5020

1/28/2025

Subject: Letter of Support for the MN STEM Ecosystem

Dear Minnesota Legislators,

On behalf of the Minnesota State Energy Center of Excellence, I am honored to express our enthusiastic support for the continued growth of the Minnesota STEM Ecosystem.

Minnesota stands at a crossroads. Our state faces urgent challenges in building a diverse and equitable STEM workforce, particularly in rural and underserved communities. Fewer than 30% of high school graduates statewide meet STEM college and career readiness benchmarks, a concerning reality impacting over 80% of greater Minnesota. Meanwhile, STEM careers make up more than 20% of all jobs in our state, and demand is projected to grow at twice the rate of other fields over the next decade. Minnesota's future success depends on decisive action and innovative collaboration to meet this challenge head-on.

The Minnesota STEM Ecosystem is a testament to what we can accomplish by working together. Through aligning education, industry, and community, the Ecosystem builds pathways that inspire, prepare, and empower learners from all backgrounds to thrive in high-growth careers shaping our economy. At the Minnesota State Energy Center of Excellence, our mission to cultivate energy education and workforce solutions has led us to partner with the Ecosystem on bold initiatives, including:

- **Empowering Educators:** Providing teachers statewide with tools to bring cutting-edge technology and career readiness into their classrooms.
- **Expanding Career Pathways:** Offering students hands-on STEM experiences that ignite their curiosity and guide them toward transformative opportunities.
- **Building Real-World Experience:** Developing opportunities that equip students and educators with practical skills to fill urgent workforce gaps across the state.

These partnerships have made real, measurable impacts, especially in underserved communities. To build on this momentum, we urge you to support legislation advancing the Minnesota STEM Ecosystem. Together, we can transform workforce challenges into opportunities, ensuring all Minnesotans are prepared to lead, innovate, and succeed.

Thank you for your leadership in shaping Minnesota's future.

Sincerely,

Logan Schrader
Minnesota State Energy Center of Excellence

MINNESOTA STATE
Transportation Center of Excellence

January 29, 2025

Minnesota Senate and House of Representatives
Minnesota Senate Building and State Office Building
St. Paul, MN 55155

Dear Minnesota Legislators,

I am expressing support for the continued growth and legislative recognition of the Minnesota STEM Ecosystem. The Minnesota STEM Ecosystem was established on public-private partnerships supporting workforce development through collaborative, cross-sector efforts, and helps address various STEM challenges, especially those in rural Minnesota:

- Less than 30% of Minnesota's high school graduates meet STEM college and career readiness benchmarks – affecting over 80% of greater Minnesota.
- STEM occupations account for more than 20% of jobs across the state.
- In 2022, nearly 40% of all job openings were in STEM fields.
- Projections indicate that over the next decade, STEM employment will grow at twice the rate of other occupations.

The Ecosystem ensures learners statewide gain the skills and experience necessary to thrive in emerging STEM careers by aligning education and industry. The Minnesota State Transportation Center of Excellence has collaborated with the Ecosystem to advance several key initiatives:

- **Educator Professional Development**: Professional development that empowers educators to integrate emerging technologies into classrooms, giving students the knowledge they need for success in tomorrow's economy.
- **Enhanced STEM Career Pathways:** Our partnership introduces students to STEM career pathways through hands-on learning opportunities and career exploration activities.
- **STEM Real-World Experiences**: We have laid the groundwork for meaningful internship opportunities that provide students with real-world experience in STEM industries while addressing workforce gaps statewide.

We need to build on the momentum already developed, so I urge you to support legislation to advance the Minnesota STEM Ecosystem. Thank you for your time and consideration.

Sincerely,

Carl Borleis
Interim Executive Director
Minnesota State Transportation Center of Excellence

MINNESOTA STATE
Advanced Manufacturing Center of Excellence

Minnesota State Advanced Manufacturing Center of Excellence, 1500 Birchmont Drive NE Box #34, Bemidji, MN 56601 | 218-755-2997

February 4, 2025

Minnesota Senate and House of Representatives
Minnesota Senate Building and State Office Building
St. Paul, MN 55155

Dear Minnesota Legislators:

I am pleased to write this letter supporting the Minnesota STEM Ecosystem for their continued growth and legislative recognition. The Minnesota STEM Ecosystem was established on public-private partnerships that support workforce development through collaborative and cross-sector initiatives, helping to address STEM challenges, especially in rural Minnesota. As you are aware, Minnesota faces significant challenges in the development of a robust STEM workforce, especially in rural regions of the state. Recent data obtained from Minnesota Compass indicates that less than 30% of Minnesota's high school graduates meet STEM college and career readiness benchmarks, impacting 80% of Greater Minnesota. This is concerning, as STEM-related positions account for 20% of the Minnesota workforce, and in 2022, close to 40% of all job openings in the state were in STEM fields. Over the next decade, forecasts indicate that STEM employment will grow at 2x the rate of other occupations – these factors demonstrate the importance and necessity of the Minnesota STEM Ecosystem.

The Minnesota STEM Ecosystem ensures that the future STEM leaders and workforce gain the skills and experience necessary to secure and advance in emerging STEM careers. The Minnesota State Advanced Manufacturing Center of Excellence has partnered with the Minnesota STEM Ecosystem on numerous initiatives, impacting students and educators not only in Northern and Northwestern Minnesota, but across the entire state:

- ***Educator Professional Development*** **– The Center worked with the Minnesota STEM Ecosystem to bring the aiEDU Summit to Bemidji State University, September 2024. This summit focused on providing educators around the state with knowledge and skills related to the dynamic and emerging field of artificial intelligence. Educators have been able to incorporate this knowledge into their classrooms, directly and positively impacting students in Minnesota.**
- ***STEM Internships*** **– The Center has partnered with the Minnesota STEM Ecosystem to develop multiple HS Internship Programs in Northern and Northwestern Minnesota. Through these internships, the Center has developed standing partnerships with multiple manufacturers and high schools. The HS Internship program has positively impacted Native American and Rural students at multiple high schools, providing students with real-world knowledge and experience in STEM and manufacturing careers.**
- ***STEM Career Pathways*** **– The Center has partnered with the Minnesota STEM Ecosystem to develop a comprehensive Robotics Career Pathway, which will contain relevant and timely information to effectively guide students from middle school through college into well-paying, family-supporting STEM Robotics Careers.**

The Minnesota State Advanced Manufacturing Center of Excellence is excited to support legislation positively impacting the Minnesota STEM Ecosystem, which fills an integral role in the development of the Minnesota STEM Workforce. Thank you for your time, and please let me know if you have questions.

Sincerely,

Jeremy Leffelman
Executive Director