



2023-2027

DRAFT Strategic Plan Zink Center for Competitive Innovation and Leadership



College of Engineering,
Architecture and
Technology

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INTRODUCTION

The *Zink Center for Competitive Innovation and Leadership* was founded in 2022 with a gift from the Zink Family Foundation. The Center perpetuates the spirit of John “Jack” Zink, whose legendary ingenuity, grit, and competitive drive carried his team to the Indianapolis 500 Victory Circle and beyond.



VISION

The Zink Center will transform Oklahoma State University students into ethical, next generation leaders, whose grit, innovation, and competitive spirit will make the world a better place for all.

We envision graduates of Zink Center programs prepared to lead intellectually, technically, and ethically. We envision graduates who are ready and willing to tackle the 'impossible', who have the technical, interpersonal and leadership skills necessary to propose innovative solutions to challenging problems—and the grit, perseverance, and creativity to get the job done!



MISSION

The mission of the Zink Center is to provide the tools necessary for students to imagine and experiment with bold ideas, think outside the box, and develop a high level of imagination and creativity so they can succeed at the highest level.

We promote imagination and creativity by maintaining modern, fully equipped virtual and physical makerspaces for our student teams. We mentor, instruct, and inspire by enlisting our faculty, alumni, industry sponsors, and technical staff to engage with our student design and competition teams. We build technical skills by providing hands-on instruction in our makerspaces.



Competition Teams Goal: Identify, compete, and win in national and international student competitions



Many engineering societies are well-known for their international collegiate competitions. Competitions bring together students from across the country or the region to compete for top honors in a variety of categories. The Zink Center will leverage the recent successes of our teams to develop and maintain vibrant, nationally recognized, student-run competition teams. We will provide design and build spaces for our teams and mentor team leaders in communication, project management and teamwork skills.

Strategies for Competition Teams Goal

- Develop Student leaders by:
 - Sponsoring leadership seminars.
 - Providing hands-on training in manufacturing, design, planning, and problem-solving skills.

- Mentoring team leaders in one-on-one and group settings.
- Develop and maintain well-equipped, well-organized, safe, and collaborative, student-run makerspaces and design environments.
- Sponsor team travel to national competitions.
- Create *Excellence in Leadership* fellowships.
- Create bylaws that:
 - Articulate the leadership and funding model governing the Zink Center.
 - Articulate the qualifications, responsibilities, and benefits associated with membership on the:
 - Zink Center Industry Advisory Board
 - Zink Center College of Mentors
 - Zink Center Student Leadership Council

Metrics for Competition Teams Goal

- 12 leadership seminars each semester.
- 6 'hands-on' training modules in industry-critical fabrication and manufacturing processes offered once each semester.
- 3 faculty and/or industry mentors engaged with each Zink Center competition team.
- State-of-the art, student-run makerspaces supporting 5 Zink Center Competition teams.
- \$100,000 in annual team competition travel and *Excellence in Leadership* fellowships.
- Ensure at least three teams win 1st, 2nd or 3rd place in regional, national, and international competitions.

Interdisciplinary Design Teams Goal:
Achieve national recognition for our highly professional, student-led, interdisciplinary design teams.



The CEAT Interdisciplinary Senior Design program was initiated in 2017 by faculty in MAE and ECEN. Since then, it has developed into a high profile, CEAT-wide design competition and expo. The Zink Center will leverage the success of this program to create inspirational opportunities for innovation and competition across the college. By creating relevant and accessible competitions and by developing partnerships with innovation,

entrepreneurship, and outreach organizations across the university, the Zink Center will broaden the impact of the CEAT interdisciplinary programs.

Strategies for Interdisciplinary design Teams Goal

- Create comprehensive student leadership seminar series.
- Collaborate with faculty and Heads in all academic units to develop and execute excellent interdisciplinary projects.
- Partner with faculty in existing design courses to create curricula-integrated design competitions.
- Organize large student-led teams to tackle complex, industry-sponsored projects.
- Engage with CEAT Grand Challenge Scholars to create and support interdisciplinary teams.
- Create and maintain well-equipped, safe 'Do it yourself' spaces where students gather to create, invent, and learn.

Metrics for Interdisciplinary Design Teams Goal

- 12 CEAT- wide leadership seminars annually.
- 250 Seniors engaged in annual *CEAT Capstone Design Competition*.
- 400 Freshmen engaged in annual *CEAT Cornerstone Design Competition*.
- All interdisciplinary design teams fully supported by faculty and industry mentors.
- 25 interdisciplinary design teams supported annually by state-of-the-art maker spaces.

STEM Outreach Collaboration Goal: Create and deliver inspirational hands-on activities to support CEAT STEM outreach initiatives.

The Zink Center is uniquely positioned to support CEAT programs and activities designed to inspire Oklahoma middle and high school students to pursue careers in science, technology, engineering, or mathematics. Zink Center technical staff will collaboratively create and deliver hands-on activities in our makerspaces and will work with CEAT faculty and staff to create outreach material for off-campus events.

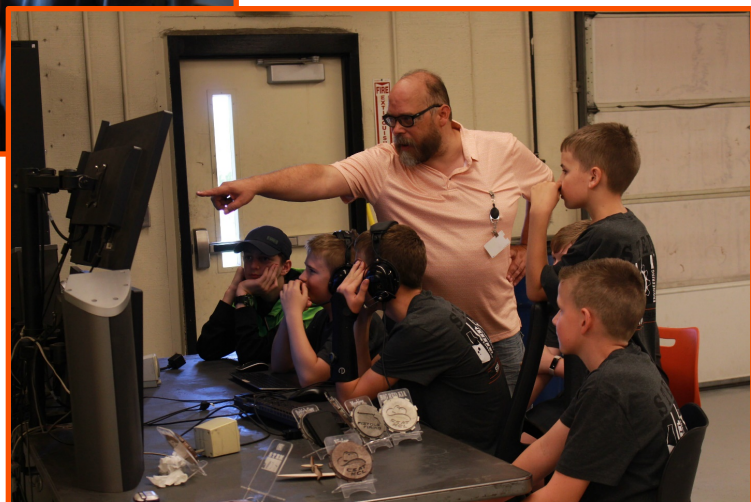


Strategies for STEM Outreach Collaboration Goal

- Partner with CEAT summer camp administrators to create and deliver age-appropriate activities for

participating students.

- Support established state, regional and national STEM



programs by providing participating student teams access to Zink Center makerspaces.

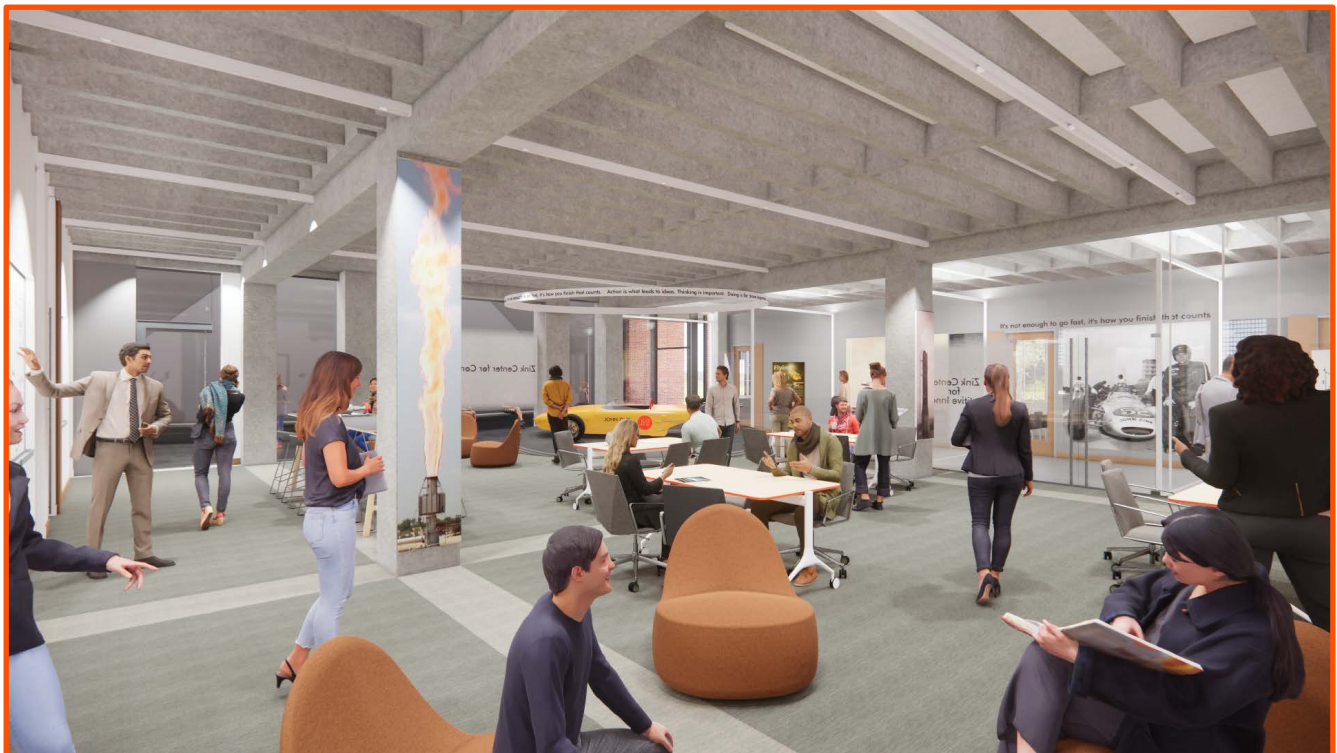
- Encourage, train, and incentivize CEAT student leaders to participate in CEAT STEM outreach activities.

Metrics for Interdisciplinary Design Teams Goal

- Support 5 summer camps and outreach activities each year.
- Annually support 2 national and regional STEM programs in our makerspaces.
- 5 student leaders actively collaborating with CEAT outreach programs and activities.

Facilities Goal: *Build and maintain state-of-the-art, high visibility collaborative design, seminar, and makerspaces.*

The public face of the *Zink Center for Competitive Innovation and Leadership* will reside in the newly renovated first floor of Engineering South located in the heart of OSU's Stillwater engineering campus. This space will consist of competition 'team' rooms and collaborative spaces for design, mentoring, seminars, and lectures. The existing CEAT North Campus Labs will be transformed into Zink Center makerspaces to support the Zink Center competition and interdisciplinary design teams.



Strategies for Facilities Goal

- Develop state-of-the-art collaborative learning environment in Engineering South for Zink Center competition and interdisciplinary design teams
- Develop and maintain maker spaces to support a wide range of 'hands-on' skill levels the prototyping needs of all Zink Center competition and interdisciplinary design teams.
- Develop state-of-the-art transport capabilities to support competition team travel and the STEM outreach efforts of the Center.

Metrics for Facilities Goal

- Renovate Engineering South Zink Center collaborative meeting place to fully accommodate all Zink Center instructional, mentoring, and administrative activities.
- Develop plans for the reorganization and retooling of CEAT North Campus Labs to create state-of-the art rapid prototyping and collaborative design space for Zink Center competition teams and interdisciplinary design groups.
- Build out Zink Center Competition Trailer to support team travel to national competitions and CEAT outreach events