# Empowering Tomorrow's Engineers

IMPACT REPORT 2024-25 ACADEMIC YEAR

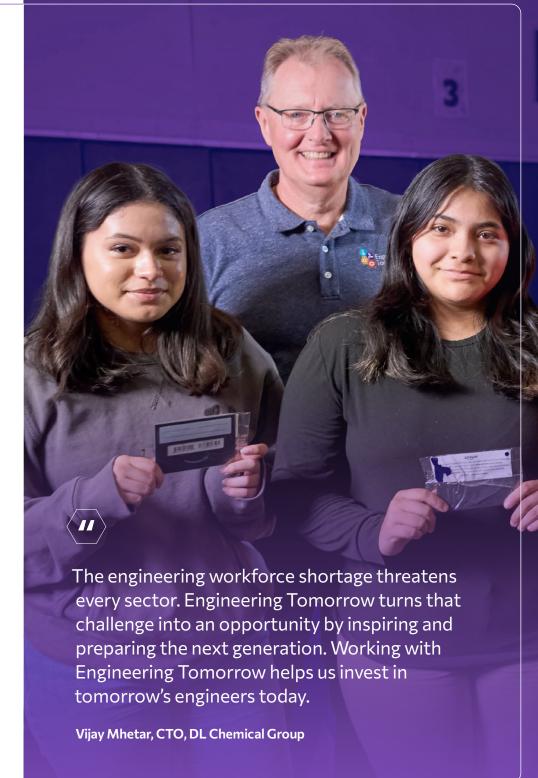






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LETTER FROM OUR FOUNDER

## To stay ahead, we need to plan ahead.



For a long time, the U.S. enjoyed the undisputed position of world leader in technology and innovation. That is no longer the case.

Countries like India and China are catching up. China now contributes roughly six times more patent applications than the U.S. Both India and China now boast more science and engineering graduates — 2.5 million and 2 million respectively, to our 900,000.

We need to cultivate a broad interest in innovation and technology among tomorrow's leaders, or we are going to fall behind.

Engineering Tomorrow's mission is to create a larger, more diverse engineering workforce to solve the engineering challenges of the future. We bring no-cost engineering and STEM labs to students who might not otherwise be able to access them. Since our inception, we've reached almost 1.5 million students in more than 7,000 schools across the country.

Our labs provide real-world applications of how math and science are used to solve complex problems. Labs, such as those exploring bridges, semiconductors, water reuse, and electric vehicle design, demonstrate practical applications of engineering concepts and principles. Students can explore a whole world of designing, making, and building, and it's accessible with a two-year degree or a four-year degree.

Our corporate partners understand that in order to ensure our advantage tomorrow, we need to invest in our students today.

We can bridge this gap. Fostering this curiosity and inspiring our students enables U.S. leadership for the future, provides great careers and jobs, and gives underserved students a path many of them didn't know they had.

Together, you can help us make our mission a reality.

In partnership,

William A. Woodburn

Founder and Chairman of the Board

William Woodbern



REPORT INTRODUCTION

### Capitalizing on opportunities and strengths

This year's impact report focuses on the theme of growth — how Engineering Tomorrow has harnessed increased awareness of our program to grow our footprint, and how we continue to evolve to ensure we are meeting the needs of tomorrow's world.

This report outlines our successes and impact over the last year. It demonstrates our progress toward our mission during the 2024–25 school year and showcases the voices of our students, teachers, and donors.

The field of engineering is constantly evolving to meet new challenges head-on. Ensuring that we can fulfill our country's growing need for engineers is our primary objective, and this year, we took huge steps toward that goal including:

new initiatives

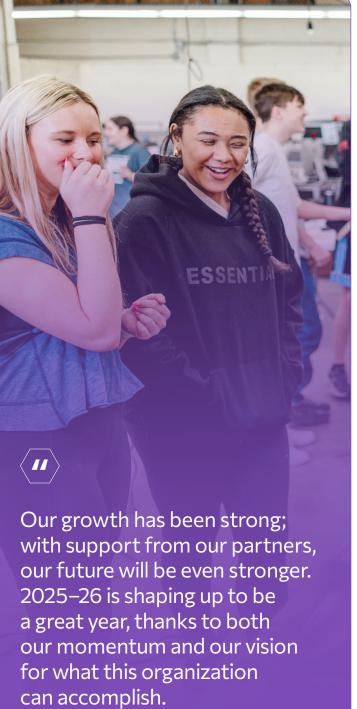
new labs

new partnerships with aligned organizations

a focus on closing the persistent engineering gender gap

Together, we can achieve our vision of a thriving engineering and innovation environment in America, fueled by a broader and more diverse workforce.





Megan Barrett, Executive Director, Engineering Tomorrow



ENGINEERING TOMORROW AT A GLANCE

### Students today. Engineers tomorrow.

Engineering Tomorrow is a nonprofit founded in 2014 to bring the multifaceted world of engineering to high school students who might not otherwise have access.

We provide no-cost engineering and STEM labs, delivered by professional engineers. Students work together to build electric cars, bridges, circuits and more, connecting what they learn in the classroom to real-world engineering challenges.

2014

Engineering Tomorrow founded

#### No cost

To students, teachers or schools

#### 4M+

Individual labs completed



### Our Mission

Inspiring high school students to pursue an engineering degree in order to create a larger, more diverse engineering workforce to solve the engineering challenges of the future. 1.

To reduce historic barriers to entering the engineering profession by reaching underprivileged and historically underrepresented students with our programs.

2.

To increase the number of U.S. students pursuing engineering degrees to ensure that America remains the global leader in innovation and technology.

3

To develop engineers who are skilled and motivated to solve global challenges.



OUR FUTURE

### Driving STEM Forward: Engineering Tomorrow's 5-Year Roadmap

2025 marks the beginning of our "Driving STEM Forward" 5-year roadmap. We've determined three goals that will bring us closer to achieving our mission and objectives.

The additional resources provided by partners like you will enable us to develop and expand initiatives that achieve these goals.



#### COAL

Deepening Student Engagement with Hands-On Learning

Expand core offering to include new skills modules, helping students develop technical skillsets



#### GOAL

Building Stronger Connections Between Students, Colleges, and Industry

Launch regional programming at community colleges in areas with significant workforce needs





#### Scaling Our Reach and Impact

Increase our funding to reach more students and introduce them to a wider array of engineering disciplines



### Progress Along Our Roadmap

This year, we made progress toward each of our three Roadmap goals through a variety of initiatives. We expanded into new geographies, developed new labs, and refined our outlook to better prepare today's students for tomorrow's realities.

"I give to Engineering Tomorrow because the organization empowers students to discover and fulfill their potential. Its labs and STEM experiences spark curiosity and increase interest in engineering in ways that go beyond what's possible through traditional classroom instruction."

Telva McGruder, Executive Director, Global Body Manufacturing Engineering, General Motors







### Deepening Student Engagement with Hands-On Learning

"Engineering Tomorrow is such a necessity for so many schools, especially low-income urban schools. It provides our students with opportunities to do hands-on labs that otherwise may only be available at schools with more resources."

Keith Willert, Chicago, IL

### New lab offerings

We are constantly evolving our lab offerings, adding new and emerging fields like cybersecurity and smart circuits as they become more critical to our future.

This year, we introduced two new labs: Remediated Sites and Semiconductors. These new labs are in addition to the 20+ labs we offer across diverse engineering disciplines.

COMING IN 2025: 3 NEW LABS



Packaging Engineering



Artificial Intelligence



**Scientific Computing** 

SciComp

We launched the Scientific Computing Course (SciComp) in collaboration with Brookhaven National Lab to help students build their coding skills and learn how to analyze and present on large data sets through hands-on, project-based learning.

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SciComp builds critical thinking, collaboration, and technical skills that prepare students for future STEM careers. Early feedback has been overwhelmingly positive, with teachers and students alike highlighting the program's unique ability to make complex concepts accessible and exciting.





#### REMEDIATED SITES

Decontaminating and Restoring an Environment

Students learn how engineers from different disciplines work together to monitor and clean up sites that have become contaminated by pollutants.



#### **SEMICONDUCTORS**

Electroplating and Integrated Circuit Production

Students learn what semiconductors are and how they form the "brains" of modern electronics.

### Partnership with Engineers Without Borders

We're partnering with Engineers Without Borders to develop lab challenges for community colleges. The partnership supports our core philosophy that engineering education should be engaging, relevant, and connected to real-world impact.







### Building Stronger Connections Between Students, Colleges, and Industry

"Greenheck Group is proud to help inspire the next generation of problem-solvers. We see a direct and immediate line of sight on our investments and the corresponding impact on students."

Scott Graf, Chief Manufacturing Officer, Greenheck Group

### New corporate partnerships

We are actively seeking new partnerships with businesses, foundations, and individuals interested in sponsoring labs at the national or regional level.

This year, in addition to our national labs, we've forged or deepened partnerships with businesses focused on improving the engineering talent pipelines in specific geographic areas.



### Partnership with Greenheck Group

KNOX COUNTY, TENNESSEE

We're deepening our partnership with Greenheck Group to develop a robust engineering program for the schools of Knox County, Tennessee. Through this initiative, we'll inspire students to explore STEM career paths and take their classroom learning to the next level.

### Partnership with DL Chemical Group

SAN JACINTO COUNTY, TEXAS

We're working with DL Chemical Group to build a workforce development pipeline in Aldine, TX and the surrounding county. Practically overnight, we've seen tens of thousands of students — most with no previous exposure to engineering — taking part in our labs.





### Scaling Our Reach and Impact

"The Bridges lab was fun, challenging, and confirmed that I'm on the right path by considering engineering as a future career."

12th grader, Upper Marlboro, MD

### New schools and geographies

We engage with students all over the country, but this year in particular we expanded our geographic reach to new areas both urban and rural.

This expansion ensures we meet our objective of reaching underprivileged and historically underrepresented students.



#### Girls in STEM

We expanded our work to close the persistent engineering gender gap. We held labs with all-female panels, worked with all-girl schools, and collected data and feedback to help us better understand our female students' aspirations and challenges and pinpoint ways to better serve this underrepresented population.





Northwestern University





### College advising session

We hosted a special event dedicated to the college admissions process, attended by more than 5,000 students. A panel of admissions experts from four colleges across the country shared invaluable tips, guidelines, and suggestions for crafting a standout application.

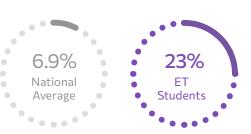


OUR IMPACT

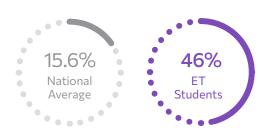
# We intentionally seek out diverse student populations.

Our labs inspire students to pursue engineering as a career. A significant number of students who participate in our labs enroll as engineering majors in college.

Percentage of Incoming Freshmen Studying Engineering



Percentage of Engineering Tomorrow Students Who Are Black/Hispanic Studying Engineering



Our Students

50%/50%

Female/Male

49%

Qualify for free/reduced lunch

Above the public School

Public School

### Seizing — and creating — new opportunities.

This year, we brought our labs to more students than ever before. We built on last year's unprecedented growth to cultivate existing relationships and foster new ones, extending our impact into new geographies and schools.

667,000

students engaged in 2024–25

17%

growth over 2023–24

20+

engineering topics taught

3

labs per student, on average

6,000

teachers who conducted their first lab

1,800,000

total labs delivered



### Remembering Milton Davis

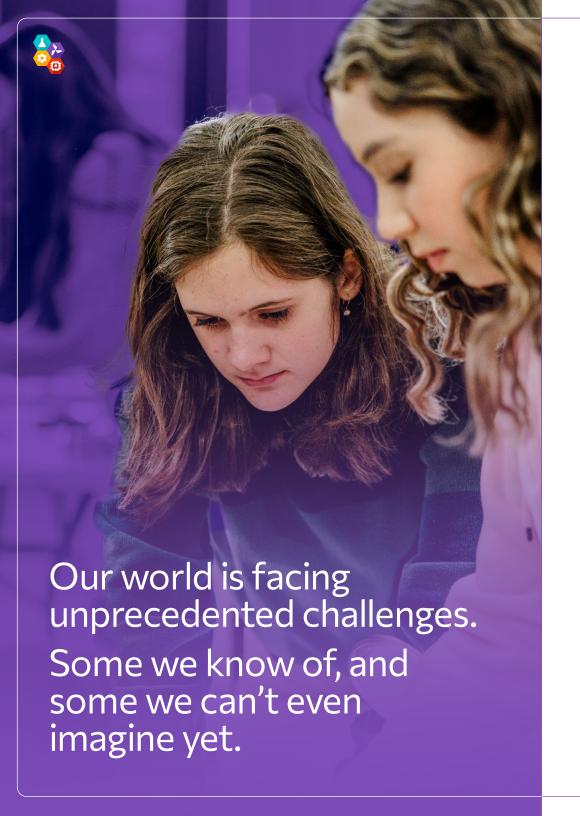
AUGUST 26, 1981 - OCTOBER 11, 2024

Milton Davis was one of a kind. He worked as our curriculum coordinator and lead presenter of labs, generating creative and brilliant ideas that seemed to flow from him effortlessly. He could forge a connection with anyone — students, teachers, staff, partners — and had a knack for making everyone feel special and important.

Milton made a true and meaningful impact on hundreds of thousands of students, giving them the confidence to believe they could make a difference in the field of engineering — and, in turn, the world.

He was the quintessential colleague and consummate friend, and an integral part of making Engineering Tomorrow what it is today. We are truly grateful for the passion he brought to our organization, our mission, and the world as a whole.

Thank you, Milton. We miss you.



The minds we nurture in our classrooms today will become tomorrow's problem-solvers and business leaders. They will inherit a world full of challenges, but also full of opportunities. Their ability to solve those challenges and embrace those opportunities tomorrow depends on our ability to inspire them today.

The engineering and STEM labs we offer teach critical thinking, strategy, collaboration, and more. They open new doors and offer new paths. They bring engineering to students who might not otherwise encounter it, encouraging diversity in the field and strengthening the future of our society.

This year, we brought our no-cost engineering and STEM labs to more students than ever before. When we grow, the students who experience our labs grow with us. When they grow up, they'll help solve the most challenging issues our world faces.

It's thanks to donors like you that we are able to continue expanding our reach and evolving our programs. Together, we can build a brighter future for engineering, for our world, and for students everywhere.

#### JOIN US.

There are many ways to engage with Engineering Tomorrow — by sponsoring a lab, participating in skills-based volunteering, sharing professional expertise, and more.

Click one of the links below, or reach out to our team at contact@engineeringtomorrow.org

PARTNER WITH US

DONATE



### **Engineering Tomorrow team**

#### **Board of Directors**



William Woodburn Founder and Chairman of the Board, A Founding Partner, Global Infrastructure Partners



Erik O. Einset
Director, Engineering Tomorrow

Megan E. Barrett Executive Director



Administration & Operations

Betsy Fortman
Director of Operations
& Staff Engineer



Sean MacCready Director of Development

### Engineers



William Woodburn
Founder and Chairman of the
Board, A Founding Partner,
Global Infrastructure Partners



Erik O. Einset Director, Engineering Tomorrow



Telva M. McGruder Executive Director, Global Body Manufacturing Engineering, General Motors



Alexandra Coleman Director, Engineering Tomorrow



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Constance B. Chiplock Lead Program Coordinator



Jillian Williams
Program Coordinator



Betsy Fortman Director of Operations & Staff Engineer



Joanna Caudle Staff Engineer



Jayanthi Iyengar EVP, Chief Technology & Strategic Sourcing Officer, Oshkosh



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