



Note from the Board Chairman

Dear STEM Synergy Community,

The second quarter of 2025 has been a period of meaningful progress for STEM Synergy, and I am deeply encouraged by the positive impact we continue to see in the lives of young people across Ethiopia. Every step we take brings us closer to our vision of creating access to quality STEM education and empowering the next generation of innovators.

This important work is only possible through the generosity of our partners and supporters. I warmly invite donors, organizations, and friends who share our vision to join us in expanding opportunities, fostering innovation, and shaping a brighter future for our youth. Together, we can make lasting change.

Please support our organization and our mission by donating today at <https://stemsynergy.org/>

Dr. Nate Woods, PhD
Board of Directors, Chairman
STEM Synergy International

Quarter in Review

In the second quarter of 2025, STEM Synergy marked significant progress in advancing STEM education and sustainable technology across Ethiopia. We organized key educational initiatives, including a lab-based secondary school STEM training in collaboration with DBU, the 10th local Science and Engineering Fair in partnership with AASTU, a Girls' STEM Camp in collaboration with Kotebe University of Education, participated in the revision of the National STEM Framework, and also successfully transferred solar-powered bakery units to support entrepreneurs in Wolayita.

These achievements reflect our continued commitment to equitable, innovative, and sustainable development. As we look ahead, STEM Synergy remains focused on expanding its reach and strengthening its impact across communities.

Conducting a Comprehensive STEM Training @Debre Birhan

A total of 256 secondary school students gained valuable hands-on experience in various STEM fields through a collaborative initiative between STEM Synergy and Debre Birhan University. The program provided practical training in science experiments, electronics, coding, and website development, aiming to expand access to quality STEM education for underserved students and to nurture the next generation of innovators.

The selected trainees came from 59 secondary schools across the North Shoa Zone and Debre Birhan City Administration, with a particular focus on students from conflict-affected areas who demonstrated both ability and interest in STEM fields.



The STEM training program covers a wide range of disciplines designed to build practical and relevant skills among students. It includes training in Artificial Intelligence and Robotics, Electronics and Circuit Design, Space Science and Technology, SQL Server and Coding Fundamentals, and Website Development. The program also features a dedicated Girls Coding Program to support gender inclusivity in technology, along with a Project-Based Innovation Track that fosters hands-on learning and creative problem-solving.



On May 31, 2025, STEM Synergy proudly recognized outstanding STEM trainees who had been participating in various hands-on training programs since February 8, 2025, at Debre Birhan University. The event celebrated their dedication, creativity, and achievements, highlighting the importance of practical STEM education in nurturing young innovators and future problem-solvers



Organizing 10th Local Science and Engineering Fair at AASTU

On May 25, 2025, STEM Synergy, in partnership with Addis Ababa Science and Technology University (AASTU), organized the 10th Local Science and Engineering Fair under the theme ***“Inculcating a Culture of Science and Engineering and Promoting Innovation.”*** The event showcased projects developed by students who completed a 10-week STEM training at the AASTU STEM Center.



This year’s competition featured eight student-led projects addressing national challenges in *agriculture, water purification, transportation, and climate change*. These solutions were shaped through hands-on training, mentorship, and problem-solving exercises that helped students transform real-world issues into practical innovations demonstrating the power of STEM education in shaping future leaders.



Guests, including Mr. Abiyot Lakew, Country Director of STEM Synergy Inc.; Dr. Dereje Engida, President of AASTU; and Mr. Dereje, STEM Expert from the Ministry of Education, attended the closing program. They commended the students for their creativity and the practical value of their work.



A total of 290 students, from Level 1 to Level 3, successfully completed the 10-week structured STEM education program, including 156 female and 134 male participants—demonstrating strong gender inclusion and encouraging progress in girls’ participation in STEM fields. All students received certificates of completion based on their respective levels, recognizing their dedication and accomplishments throughout the program.



Organizing Girls STEM Camp at Kotebe University of Education

On June 7, 2025, STEM Synergy successfully concluded its Girls' STEM Camp Training held at Kotebe University of Education. **Over the course of eight weeks**, 25 exceptional young women from nearby secondary schools participated in an immersive, hands-on learning program. The training focused on Electronics and Information Technology (IT), providing participants with practical skills and knowledge to encourage their continued engagement and success in STEM fields.



Throughout the training, participants engaged with real-world challenges, developed innovative solutions, and acquired practical skills that fostered confidence, creativity, and leadership.

The program concluded with a closing ceremony, where each student was honored with a certificate of completion in recognition of their dedication and hard work. In addition, two teams were specially recognized and awarded for their exceptional project work—one in the field of Engineering and the other in Information Technology—reflecting the creativity, teamwork, and problem-solving skills they developed during the training.



Participants addressed real-world challenges by developing innovative solutions, including an *automated parking assistance system*, an *automatic fire extinguisher*, an *optimizer for temperature and heartbeat sensors for newborn babies*, and a *fatal movement tracker*.



The event was honored by the presence of distinguished guests and supporters of STEM education, including Mr. Abiyot Lakew, Country Director of STEM Synergy Inc.; H.E. Dr. Berhanemeskel Tena, President of Kotebe University of Education; University Vice Presidents; the STEM Center Coordinator; Mrs. Selam Alemu, Head of Community Engagement and Indigenous Knowledge at the Ministry of Education; and Mrs. Xihong, UNESCO Representative.



STEM Synergy's Country Director, Mr. Abiyot Lakew, highlighted the organization's mission to empower youth, stating, "We strive to make STEM education more accessible through hands-on training and project-based learning, nurturing a generation ready to solve challenges. The progress is encouraging—women are emerging as leaders and innovators. The creativity and confidence shown today reflect a bright future, and the growth of youth-led startups demonstrates that investing in STEM education is essential for Ethiopia's innovation and development."



At the closing ceremony, H.E. Dr. Berhanemeskel Tena, President of Kotebe University of Education, highlighted the importance of supporting young women in STEM. He stated, "Women can succeed if given the chance. This generation has unprecedented access to knowledge. STEM Synergy's investment will yield lasting results. Thank you for your efforts to transform the future of STEM."



Participating in the Revision of the National STEM Framework

STEM Synergy actively participated in the national initiative led by the Ministry of Education (MoE) to revise and improve Ethiopia's National STEM Framework, conducted from May 14–28, 2025 G.C. This collaborative effort brought together key stakeholders—including academic institutions, development partners, and education experts—to strengthen the country's strategic approach to Science, Technology, Engineering, and Mathematics (STEM) education.

As an organization devoted to advancing STEM education in Ethiopia since 2016 G.C, STEM Synergy brought valuable grassroots experience and technical expertise built over years of delivering impactful STEM programs across various regions.



STEM Synergy remains committed to continued collaboration in building a future-ready, innovative, and inclusive STEM education system that empowers Ethiopian youth to solve real-world challenges and compete in the global knowledge economy.

In particular, STEM Synergy has been playing a key role in shaping provisions related to STEM Centers, STEM education, and the organization of science competitions. Our field-tested models of extracurricular STEM engagement, mentorship, and social enterprise development were cited as best practices to be scaled nationally.



Our Country Director, Mr. Abiyot Lakew, actively participated in the workshop sessions, contributing practical recommendations on key programmatic components such as science shared campuses, STEM outreach programs, science fairs, STEM education through media, STEM camps, STEM for Kids initiatives, laboratory sessions, STEM visiting programs, science cafés, science week activities, girls' coding programs, and the integration of emerging technologies like AI, robotics, UAV, drones, and the Internet of Things (IoT). He also emphasized the importance of strengthening STEM teacher training and capacity-building initiatives.



We commend the Ministry of Education for its inclusive and forward-thinking approach, and we are proud to support the alignment of the National STEM Framework with Ethiopia's long-term vision for science-driven development.

Transferring Two Solar Powered Bakeries for Wolayita Entrepreneurs

In June 2025, in partnership with a dedicated group of volunteers from Wolaita, Ethiopia, now living in the U.S., STEM Synergy Inc. successfully installed its fourth solar-powered bakery unit in Bitena Town, Duguna Fango Woreda, Wolaita Region. This achievement represents another important step in integrating renewable energy solutions with local economic empowerment.



This initiative goes beyond simply transferring technology; it aims to foster entrepreneurship, economic empowerment, and sustainable development. By combining solar energy solutions with practical business and technical training, the project tackles two critical challenges facing rural Ethiopia: energy poverty and unemployment.



Through practical, on-site training sessions, STEM Synergy's technical team equipped local entrepreneurs with the skills and knowledge needed to confidently operate and maintain the solar-powered bakery machines, ensuring long-term sustainability and self-reliance. In addition to the technical training, the entrepreneurs received bread-baking and

entrepreneurship training to help them run their businesses effectively.

The solar-powered bakeries are designed to support affordable and eco-friendly bread and pastry baking. The initiative specifically targets youth and women-led enterprises, providing them with the skills and opportunities to launch and expand their businesses.



These bakeries play a vital role in empowering women and youth-led businesses by creating meaningful job opportunities and fostering local entrepreneurship. By relying on clean solar energy, they lower operational expenses while eliminating dependence on costly and polluting fuels. The bakeries improve efficiency and scalability, boosting overall productivity. Moreover, they contribute to food security by ensuring communities have consistent access to fresh, affordable bread and pastries.



Partnerships

To further enhance and strengthen STEM education across Ethiopia, STEM Synergy has intensified its outreach and collaboration efforts throughout 2025. These initiatives aim to broaden partnerships with both local and international stakeholders, fostering a more resilient, innovative, and future-ready STEM education ecosystem.

A significant milestone was achieved with the formal signing of a Memorandum of Understanding (MoU) between STEM Synergy Inc. and Armath by the Union of Advanced Technology Enterprises (UATE). This agreement sets the stage for jointly expanding access to high-quality STEM education by introducing the innovative Armath Makerspace model and upgrading five existing STEM centers nationwide.

The partnership is designed to institutionalize collaborative efforts, enhancing the scale and quality of STEM education by leveraging international expertise and resources. By integrating STEM Synergy's extensive network with Armath's makerspace approach, the initiative will promote creativity, innovation, and hands-on learning, empowering the next generation of engineers, technologists, and innovators.

Furthermore, ongoing discussions and the drafting of a Memorandum of Understanding with *Harar Lijoch Without Borders*, charitable organization based in US, are in progress, reflecting STEM Synergy's continued commitment to inclusive, community-driven STEM education initiatives.