Australia's National
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# STEM Together

## Mid-Term Evaluation Summary Report

Sarah Renals & Christopher Banks

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## Important disclaimer

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# STEM Together – Mid Term Evaluation Summary

**Introduction**

STEM Together is a national initiative delivered by CSIRO Education and Outreach (CEdO), through co-funding from the BHP Foundation and CSIRO. STEM Together intends to act as a catalyst to boost student engagement and diversity in STEM. It prioritises opportunities for underrepresented groups in STEM, namely Aboriginal and/or Torres Strait Islander students, girls, and students from regional or lower opportunity areas. It aims to help students and educators build their confidence, capability, and connection with STEM using evidence backed, strength-based approaches and real-world learning opportunities, supported by industry.

**Strategic Approach**

Funded from April 2022 to December 2026, STEM Together seeks to generate conditions for change generated via 9 program elements focused on young people (pink), educators (blue), communities (green), and evidence (purple).

| | | | | | |
|---|---|---|---|---|---|
|  | Future Shapers |  | Educator Professional Learning |  | Local Connections |
|  | CSIRO Youth Reference Council |  | Science Educators Reference Group |  | STEM Insights Network |
|  | Data Analytics Project |  | Durable Impact Project |  | Monitoring, Evaluation, and Learning |

STEM Together's 3 phase program promotes conditions for change and enables continuous improvement and system-wide learning. The phases are: Incubate - pilot and test new approaches, Aggregate - learn, share, and build evidence, and Amplify - scale and sustain impact across the STEM ecosystem.

## Mid-Term Evaluation

For this mid-term evaluation, a formative developmental evaluation approach has been applied using mixed methods. The purpose of the evaluation is to assess the progress of STEM Together towards its intended outcomes and impact, measured against 7 key evaluation questions. This evaluation report utilised data from 115 evaluation activities between August 2022 and June 2025, with over 1,000 instances of participation, applying eight different data collection methods (surveys, interviews, focus groups, observations, document review, workshops, learning logs, and Photovoice).

## Key Outcomes and Impacts

***Participation*** **-** The total number of instances[1] of participation for the first three years of the STEM Together Program July 2022-June 2025 included over 1,000 incidences of engaging young people, nearly 2,000 educators, nearly 100 allies, and close to 200 family members.

***Young People*** **-** To date, 76 young individuals have been selected as Young Future Shapers, with 95 per cent coming from historically underrepresented groups in STEM. These participants have shown statistically significant increases in STEM awareness, confidence, aspirations, and identity, as measured through self-assessment. Adult Future Shapers have also reported enhanced confidence and capability in supporting youth engagement in STEM. Four successful STEM camps have been delivered nationally, fostering deep engagement and meaningful connections among participants.

***Educators*** **-** Across 33 events, there have been 1,619 educator attendances recorded. Of those surveyed, 94 per cent reported an increase in knowledge, and 80 per cent expressed greater confidence in applying what they had learned. The “Classroom Brain” series was particularly well received, engaging over 1,000 educators and demonstrating strong interest in innovative teaching approaches.

***Community*** **-** Ten Local Connection Projects have been established, resulting in 691 engagement instances with community leaders and industry professionals. Additionally, 17 training workshops have been delivered, with 93 per cent of participants reporting increased knowledge, and 87 per cent noting improved confidence. These initiatives have strengthened ties between STEM programs and local communities.

***System-Level Initiatives*** **-** The CSIRO Youth Reference Council has been formed to embed authentic youth voices into program design. In collaboration with ASTA, the Science Educators Reference Group has been established to ensure alignment with classroom needs.

[1] Caveat: Young people, educators, allies and family will be counted more than once in program totals if they participate on multiple occasions in a STEM Together program element.

Furthermore, the STEM-INSIGHTS Network has been launched to promote cross-sector collaboration and shared learning across the STEM ecosystem.

***Evidence and Innovation*** **-** The Data Analytics Project has developed causal inference models to better understand STEM pathways. The Durable Impact Tool has been piloted and refined to assess and enhance long-term program sustainability. Monitoring, evaluation, and learning practices have been embedded throughout all program elements, driving continuous improvement and innovation.

**Program progress against success criteria**

Seven success criteria have been established for the mid-term evaluation along with a four-point rating system (Transformative - creating systemic change, Exceeding - going beyond goals, Effective - consistently meeting goals, and Emerging - established with early achievements).

| Rating | Success criteria |
|---|---|
| Exceeding ●●●○ | Engaging students from historically underrepresented groups and the educators who support them. |
| Exceeding ●●●○ | Increasing young people's capability, confidence, and connection with STEM. |
| Exceeding ●●●○ | Increasing students' aspirations and motivation towards STEM education and STEM-related careers. |
| Effective ●●○○ | Increasing the capability and confidence of educators in creating inclusive and engaging STEM learning for their students. |
| Effective ●●○○ | Increasing the capability and confidence of community leaders and industry professionals, to build capability and confidence in engaging young people in STEM. |
| Emerging ●○○○ | Developing and embedding mechanisms for learning and sharing insights about works to increase engagement and diversity of underrepresented groups in STEM. |
| Emerging ●○○○ | Developing and embedding mechanisms for durable impact. |

The program demonstrates strong performance, with 3 success criteria rated as Exceeding and 2 as Effective, indicating significant progress in engaging underrepresented students and

building STEM capability and confidence among youth and educators. However, 2 criteria that relate to newer program elements remain at the Emerging stage, particularly around embedding systemic mechanisms for long-term impact and diversity. Notably, no criteria have reached the Transformative level, highlighting an opportunity to shift from programmatic success toward systemic change. Overall, the program is well-positioned to consolidate its strengths over the next 18 months while prioritising strategies that accelerate durable impact and equity at scale.

**Key learnings and their significance**

***Targeted, strengths-based approaches work*** - Programs like Future Shapers demonstrate that personalised, equity-focused strategies effectively engage underrepresented groups and build STEM confidence, capability, and connection.

***Educators, community leaders, and industry partners are critical multipliers*** **-** Building the confidence and capability of adults to engage young people in STEM creates ripple effects for thousands of young people, making professional learning and local partnerships essential for systemic impact.

***Culture and ways of working drive success*** - A positive, values-based team culture, underpinned by trust, flexibility, and psychological safety, is enabling innovation and resilience in a complex environment.

***Evidence-informed practice is non-negotiable*** - Embedding Monitoring, Evaluation, and Learning (MEL), durability planning, and data analytics ensures decisions are grounded in evidence and supports continuous improvement.

***Scaling and sustainability require planning now*** - Proven models and accumulated learnings offer opportunities for national scale and long-term impact through legacy resources, diversified funding, and system-wide dissemination.

**Opportunities for the next 18 months**

***Scalability and Durability***: Expand and adapt the model for lasting impact and strong return on investment.

***Evidence and Evaluation:*** Use data, feedback, and tools to continuously improve and align with needs.

***System Impact:*** Share insights, support replication, and shape broader engagement approaches.

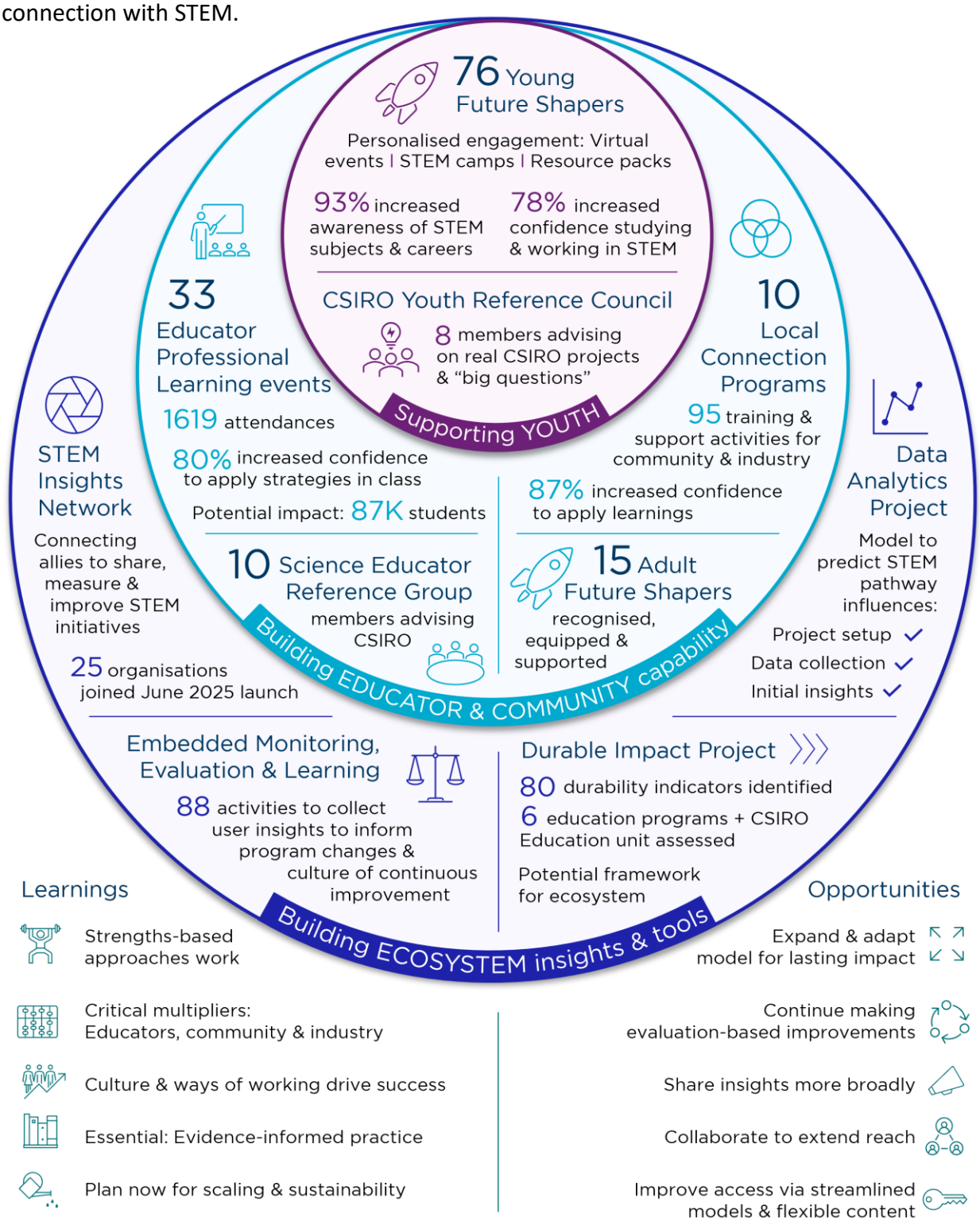
***Collaboration:*** Work across sectors to coordinate efforts, co-design tools, and extend reach.

***Accessible Delivery:*** Improve access and engagement through streamlined models and flexible content.

# STEM Together: Program elements and highlights

## April 2022 – June 2025

A series of interconnected program elements to ultimately help young people from underrepresented groups and their supporters strengthen their confidence, capability and connection with STEM.



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