

Georgia Governor's Office of Student Achievement

Innovation Fund SROI Analysis Final Report Executive Summary

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SOCIAL RETURN ON INVESTMENT (SROI) METHODOLOGY

This study examines the social return on investment (SROI) of four of the Race to the Top Innovation Fund grantees. The SROI approach focuses on understanding what has changed as the result of a program, what matters to stakeholders about those changes, and the social value (value to stakeholders and society) of those changes. SROI studies involve stakeholders in a transparent process in which verifiable claims about value are founded on qualitative data (such as stakeholder interviews) and quantitative data (such as graduation rates), including financial information (such as program costs). In an SROI, money is simply one widely-accepted way of conveying value.

When establishing impact, the SROI approach accounts for:

- **Deadweight** – outcomes that would have happened even if the program had not existed;
- **Displacement** – situations in which program outcomes displaced outcomes for other stakeholders outside of the program;
- **Attribution** – the influence of other activities, events, organizations, or people on the outcomes associated with the program being evaluated; and
- **Drop-off** – the fading of a program's effects over time.

This is a forecast SROI, involving estimates of future data; the results of the SROI should be thought of as the ratio of cost:value that will be achieved *if the estimates of future data turn out to be correct*. The forecast is not what *will* happen, but our best prediction of what *could* happen based on current information. Some outcomes we assume will continue to generate value after the program ends. We discounted any outcomes which generated financial value over multiple years, using a discount rate of 2.5%. Discounting is necessary for comparisons between current and future values.

With this SROI, IMPAQ used financial proxies where appropriate to understand and estimate the social value of changes that stakeholders experienced (or may experience). For Innovation Fund grantees, we established what changed for them as a result of the funding, identified the outcomes of those changes and how the changes can be measured, and assigned a monetary value to outcomes where appropriate. We then compared the monetary value to the investment made to determine a ratio of cost:value.

Innovation Fund Grantee Selection

Because Innovation Fund grantees have many different program goals and outcomes, we assessed programs' SROI feasibility to enable the analysis to focus on a subset of programs likely to be rewarding to study in terms of the information gained. The four programs recommended for analysis after this process focused on high school transitions to college and career.

1. **21st Century STEM Collaborations: Applications of the Direct to Discovery Model ("D2D")**, Barrow County School System, Round 1, \$1,772,325.
2. **STEM for Life Program ("STEM for Life")**, Carroll County Schools, Round 2, \$999,911.
3. **Student Applied Learning, New Teacher Induction, and Staff Leadership Program ("Morehouse")**, Morehouse College, Round 2, \$1,042,095.
4. **Tift County Mechatronics Partnership ("Mechatronics")**, Tift County Board of Education, Round 2, \$1,004,762.

TIFT COUNTY MECHATRONICS PARTNERSHIP

The Tift County Mechatronics Partnership (“Mechatronics”) aims to bring together the Tift County Board of Education, Moultrie Technical College (MTC), and local business partners in an effort to provide an innovative STEM applied learning program for high school students.

The Tift County Mechatronics Partnership established elective mechatronics classes in the high school, taught by MTC instructors. The classes are in the career, technical, and agricultural education (CTAE) content area. Students can join the program as sophomores and continue through senior year. Mechatronics also provides a week-long summer camp for current and prospective students. Some students also participate in the school chapter of SkillsUSA, a national organization that sponsors competitions for students in career and technical classes. Parents of Mechatronics students are involved through twice-yearly family STEM nights. Mechatronics also offers paid internships for seniors in coordination with industry partners, in which students can develop their skills in a real-world work setting. At the conclusion of the program, students receive technical certificates of credit from Moultrie Technical College, work-ready certificates, and a high school diploma.

We describe the expected and unexpected outcomes as a result of the Mechatronics program. Many of the outcomes are affective and were not monetized in this analysis. Other outcomes were monetized using program-specific financial data or financial proxies.

By summing the benefits of Mechatronics and subtracting deadweight, displacement, attribution, and drop-off, we calculated the following SROI cost:value ratio.

Lower bound of SROI ratio: \$1 : \$1.97

Upper bound of SROI ratio: \$1 : \$8.54

Expected Outcomes

- Moultrie Technical College has more dual enrollment funding *
- Students have higher postsecondary educational aspirations*
- Students get college credits*
- Mechatronics courses created, replacing outdated engineering program
- New mechatronics career pathway for state
- Moultrie Technical College has higher profile and future opportunities for growth
- Students have more specific postsecondary plans
- Students have increased confidence, better study habits
- Parents have increased STEM knowledge

Unexpected Outcomes

- District gets new Innovation Fund grant to replicate program in another district*
- Students provide service fixing electronic devices at school*
- Students build computers and repair electronics at home*
- Students get skilled summer jobs, such as computer support*
- Industry partners have a new source to recruit employees*
- Industry partners save money on technical training*
- Mechatronics course aligned to math and English language arts standards
- Higher than expected parental involvement
- Students won national SkillsUSA titles
- Increased attention to and respect for CTAE courses at school
- Local, state, and regional publicity for quality of program
- Mechatronics attracts academically diverse student body
- Parents worry less about students’ academic performance and postsecondary plans
- Community feels pride in quality of program

**monetized in analysis*

BARROW COUNTY DIRECT TO DISCOVERY PARTNERSHIP

The Barrow County 21st Century STEM Collaborations program leverages the previously developed Direct to Discovery (D2D) model by building on and expanding the partnership between the Georgia Institute of Technology (Georgia Tech), the Georgia Board of Regents, and Barrow County Schools in an effort to provide an innovative STEM applied learning program for middle and high school students.

D2D works through close partnerships between high school teachers and Georgia Tech scientists. A scientist worked closely with two partnering teachers from Barrow County high schools during the summer to prepare for the program. They created a series of three to five 1-hour lesson plans. During the school year, the teachers hosted interactive videoconferencing classes in which students were actively engaged and applied math and science concepts to real-life STEM projects. To enable these sessions, the district equipped the schools with mobile video technology and provided students with tablets to perform their projects.

We describe the expected and unexpected outcomes as a result of D2D. Many of the outcomes are affective and were not monetized in this analysis. Other outcomes were monetized using program-specific financial data or financial proxies.

By summing the benefits of D2D and subtracting deadweight, displacement, attribution, and drop-off, we calculated the following SROI **cost:value ratio**.

Lower bound of SROI ratio: \$1 : \$0.56

Upper bound of SROI ratio: \$1 : \$5.51

Expected Outcomes

- Graduate students gained teaching experience and changed their career aspirations*
- Students have higher postsecondary educational aspirations*
- Scientists gained K-12 outreach experience
- Teachers increased their content knowledge and gained practical examples
- Teachers increased their pedagogical skills, incorporated project-based and research
- Teachers incorporated technology in the classroom
- Students enhanced their problem-solving and higher-order thinking skills
- Students increased their engagement, excitement, and ownership of learning
- Students showed positive gains on tests
- Students became more interested in pursuing postsecondary education

Unexpected Outcomes

- District created a new Teaching and Learning department and a new building*
- District started a new student IT internship program*
- District created new permanent employment positions*
- District created new IT job positions*
- District expanded new partnerships with researchers and businesses
- District was included in new National Science Foundation grant applications
- Scientists gained greater visibility and exposure of their research work
- Teachers gained more visibility among students and parents
- Students engaged with college students and got perspectives on pursuing college
- Parents were excited about children's interest in STEM and in college education
- Community felt pride in quality of program

**monetized in analysis*

CARROLL COUNTY STEM FOR LIFE

STEM for Life brings together the Carroll County School System (CCSS) and the Southwire Company to help students stay in school, gain work and life skills, and earn a paycheck. Founded in Carroll County in 1950, Southwire is a leading wire and cable manufacturer. In 2007, Southwire and Carroll County Schools created 12 for Life, a program to increase the local graduation and retention rates while employing students as part-time Southwire employees at a student-only facility. STEM for Life expands on the original 12 for Life program by adding a STEM academic component through classroom instruction, increasing opportunities to apply STEM knowledge and skills in a real-world setting, and targeting the program to students traditionally not represented in STEM.

STEM for Life provides at least 20 hours of work per week for students at Southwire, while also establishing onsite STEM classes, credit-recovery options, tutoring, mentoring, summer school, and enrichment activities. Students can choose to attend class onsite at the Southwire facility, and can also choose between three work-shift options. The program is designed for those CCSS students most at-risk of dropping out of school. The goals of the program are for students to graduate from high school with the necessary skills for career and college success and be prepared for careers and postsecondary study.

We describe the expected and unexpected outcomes as a result of STEM for Life. Many of the outcomes are affective and were not monetized in this analysis. Other outcomes were monetized using program-specific financial data or financial proxies.

By summing the benefits of STEM for Life and subtracting deadweight, displacement, attribution, and drop-off, we calculated the following SROI cost:value ratio.

Lower bound of SROI ratio: \$1 : \$9.36

Upper bound of SROI ratio: \$1 : \$11.27

Expected Outcomes

- Students get immediate earned income*
- Southwire has a less expensive labor source*
- Southwire retains strong student employees, saving money on recruiting and training*
- Carroll County has increased opportunities for future grant funding, including a three million dollar i3 grant*
- Community has social and economic savings from lower dropout rate*
- Improved student self-confidence and self-management skills, workforce skills
- Improved student attendance and grades
- Increase in number of students choosing STEM careers/enrolling in STEM postsecondary education
- Students participate in a greater diversity of jobs at the Southwire facility
- Southwire employees participate in civic engagement and feel good about their community
- Southwire can keep jobs in Georgia rather than outsourcing overseas
- Southwire employees have greater job satisfaction
- Teachers have a flexible work environment

Unexpected Outcomes

- Students have higher postsecondary educational aspirations*
- Higher than expected Southwire profit*
- Teachers get to know students better, and can work one-on-one with them
- Carroll County schools have smaller class sizes, with at-risk kids removed
- Higher graduation rate for Carroll County

**monetized in analysis*

MOREHOUSE STUDENT APPLIED LEARNING, NEW TEACHER INDUCTION, AND STAFF LEADERSHIP PARTNERSHIP

This program aims to bring together Morehouse College and Clayton County Public Schools to provide an innovative STEM applied learning program for high school students and professional development for teachers and leaders. The program has three separate components for students and teachers. The Student Applied Learning component was a 4-week summer program at Morehouse College's campus from 2012-2014, where students experienced STEM enrichment. At the conclusion of the program, students presented projects at Morehouse's annual Innovation Expo. In addition, about four high-achieving students were selected to live on campus each summer and participate in extra activities, including more intensive research.

The other two components of the Morehouse program concentrate on teacher professional development, aiming to improve instructional quality and train teacher leaders to ultimately improve student learning. During the summer camp, teachers participated in the summer learning program along with the students, assisted the professors, and prepared to deliver more complex and effective science instruction using case- and problem-based lessons. During the following school year, they provided mentoring to colleagues and received ongoing coaching from Morehouse.

We describe the expected and unexpected outcomes as a result of the Morehouse program. Many of the outcomes are affective and were not monetized in this analysis. Other outcomes were monetized using program-specific financial data or financial proxies.

By summing the benefits of Morehouse College's program and subtracting deadweight, displacement, attribution, and drop-off, we calculated the following SROI **cost:value ratio**.

Lower bound of SROI ratio: \$1 : \$1.49

Upper bound of SROI ratio: \$1 : \$7.63

Expected Outcomes

- Students had increased aspirations for postsecondary education*
- Participating teachers returned to the summer program to mentor new participants*
- Participating teachers provided mentoring and support to teachers at their schools*
- Morehouse increased exposure and involvement in community
- Launched scientific literacy center
- Teachers incorporated new instructional strategies such as problem-based learning and case studies
- Teachers had improved connections with parents
- Students were more academically motivated and studious, and more confident in STEM and other classes
- Students understood the college environment better
- Students had more knowledge of STEM career options
- Students had better self- and team-management skills

Unexpected Outcomes

- Morehouse received new planning grant for online scientific literacy program*
- Parents had a free, engaging summer option for their children*
- Morehouse staff gained satisfaction from contributing to students' perspectives on STEM education and careers
- Students made new friends with others in the district who were also STEM-focused
- Parents had greater appreciation for the school district and awareness of Morehouse

**monetized in analysis*

CROSS-PROGRAM SROI CONSIDERATIONS AND CONCLUSION

While we applied the same SROI methodology across the four studied programs and followed the same steps in building the impact maps and in proceeding with the final analysis, we caution readers against comparing between programs the four SROI ranges we established. Each had their own specific goals and unfolded in their own specific contexts, which are not directly comparable. All four programs intended to produce meaningful changes for their students within that context, which we systematically and consistently captured in their expected and monetized outcomes.

The four Innovation Grantees we studied were different in important ways. For example, STEM for Life focused on students who were at risk of not graduating from high school, while Mechatronics involved students across the academic spectrum in a challenging elective course. Morehouse College sought to bolster the academic aspirations of students who were interested in STEM, and D2D focused on connecting high school students and teachers with university scientists. The programs were relatively diverse in their components (e.g., building IT and videoconferencing capabilities in D2D vs. hands-on STEM work-related employment in STEM for Life) and intensity of activities (e.g., 3-5 sessions per year in D2D vs. daily classes over years in STEM for Life). They also differed in their affected stakeholders (e.g. industry partners in Mechatronics and STEM for Life vs. teachers in Clayton County with the Morehouse program).

We started collecting data on January 12, 2015 and continued through February 27, 2015. Additional stakeholder follow-up on details of outcomes mentioned in the interviews continued as needed through the end of April, but no new outcomes were added. These analyses therefore include monetized and non-monetized outcomes that were documented through the end of February, 2015. It is possible that other outcomes emerged or will emerge after this time period; for example, one of the programs could be awarded a new grant to extend work initially begun with Innovation Fund money. These outcomes would not be included in these analyses, however, because they occurred after the close of the data collection window.

For future planning, it may be useful to point out that the one aspect that was most valuable to the SROI ratio across the four programs was the **estimated effect on students' postsecondary plans**. For these programs, the estimates of lifetime earnings associated with increased postsecondary education were the most influential single monetized factor in the ratios. Any program focusing on high school students, regardless of its other features and goals, should therefore consider making a specific, concerted effort to help students make postsecondary plans that are specific and ambitious yet achievable. This will return more social value than any other single program component.