CONSTELLATION FUND

QUANTITATIVE ANALYSIS OVERVIEW

Thank you for participating in our impact analysis process, and for the important work your organization is leading in the community!

The Constellation Fund supports its poverty-fighting mission by weighing careful qualitative evaluations with quantitative analyses that are driven by peer-reviewed research, local demographic information, and data directly from nonprofits. What follows is a summary of our quantitative findings, which are balanced alongside our qualitative learnings to drive our grantmaking decisions. However, it is important to put this information into the appropriate context.

Benefit-Cost Analysis

Constellation calculates the value of poverty-fighting benefits that accrue to program participants at or below 185% of the federal poverty guideline. The primary two measurables throughout all of our metrics are lifetime improvements to health and income. We take care to apply metrics that capture both direct and intersectional impacts (e.g. educational outcomes resulting from stabilized housing). To better isolate the impact of an organization, Constellation builds and uses counterfactuals, comparing what happens to participants in a given program against what would have likely have happened had they not received the assistance. These counterfactual estimates are subtracted from our outcomes so as not to overestimate actual impact. All of this work results in a private benefit-cost ratio (BCR), which encapsulates the amount of measurable poverty-fighting benefits created by a potential grant from Constellation for every dollar of that cost. It is worth emphasizing that a private BCR is different than a social BCR, which generally includes public returns on investment (e.g. savings to taxpayers). Constellation acknowledges and applauds such benefits; however, since these benefits generally accrue to people living above the poverty line, they are intentionally excluded from our analysis of impacts for individuals and families living in poverty. As a result, our BCRs are often lower that those of a social BCR.

Additional Context

CONSTELLATION'S METRICS ARE:	CONSTELLATION'S METRICS ARE NOT:
A Standard for Comparing Opportunities: Metrics allow for the weighting of similar and dissimilar programs.	**The Only Criteria for Making Grant Decisions:** Observations and qualitative information has a coequal role in our approach to grantmaking.
A Tool for Achieving Transparency: Constellation welcomes outside voices to examine, criticize, and improve the metrics.	**Report Cards on Potential Grantees:** A nonprofit can fulfill its own mission without scoring high on Constellation's metrics.
A Diagnostic Device: What do highest-scoring organizations have in common? Lowest?	**Exact and Unchanging:** Neither the data captured nor the calculations applied are perfect and, with additional research and refinement, our metrics are designed to evolve.
A Method for Assessing Constellation: We measure our own impact the same way we measure other organizations: how much poverty-fighting good we do with each dollar we spend.	**The Only Approach to Smart Philanthropy:** Other funding organizations may employ different but useful standards.

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QUANTITATIVE ANALYSIS REPORT

Organization Name:

30,000 Feet

Impact Area:	Education	Geography:	East St. Paul

GRANT AMOUNT:	BENEFIT-COST RATIO:	TOTAL BENEFITS:
$63,000	$3.10 : 1	$195,432

ORGANIZATION OVERVIEW

ORGANIZATION DESCRIPTION:

30,000 Feet, formerly known as ANEW BAM, is focused on addressing educational disparities faced by African American students in St. Paul, ensuring that all students are able to achieve their full potential. Its objectives are to increase academic achievement among African American students, reveal and nurture students' artistic skills, and use art as a way to improve literacy outcomesAfrican American students in Saint Paul. 30,000 Feet works towards this goal by providing culturally-responsive academic tutoring to elementary and middle school students during the school year, enrichment activities during the summer, and a coding program targeted at high school students, including those who have had involvement with the justice system.

GRANT PURPOSE:

Funds will support 30,000 Feet in achieving its mission to increase engagement of African American students in school, increase the number of African American students in leadership positions, and increase the number of teens accessing high paying technology jobs. Specifically, funds will be used for academic coach wages, literacy and computer science curriculum, teen tech jobs, and ensuring that youth have the technology they need to access programming remotely.

BENEFITS

ANALYSIS OF BENEFIT-COST RATIO:

30,000 Feet's services generate an estimated $3.10 in benefits for each dollar invested. Benefits captured in this BCR include impacts of academic and afterschool programs for youth and both short- and longer-term impact of the coding program. The largest source of benefits comes from the core program of academic tutoring, which includes both direct impact on academics as well as changes in behavior for school settings. The Constellation Fund developed two new metrics for academic tutoring and afterschool programs for this grant cycle. We applied both metrics to this program given the structured, high-quality academic content and the focus on developing youth with a culturally informed lens.

PROJECTED BENEFITS SUMMARY:	
Academic tutoring by adults outside of school leading to increased test scores and future earnings	$567,456
After school programs leading to improved behavior, high school graduation, and lifetime earnings	$786,067
Wages for Teen Tech Geeks (short-term)	$83,670
Juvenile aftercare programs (job skill-building) impact on recidivism and leading to lifetime earnings	$40,320
TOTAL IMPACT	$1,477,513

ORGANIZATION'S BENEFIT-COST RATIO:

Benefits:	$1,477,513
Costs:	$476,296
BENEFIT-COST RATIO	$3.10 : 1

30,000 FEET DATA & COMPUTATIONS

METRICS:

METRIC	Academic tutoring by adults outside of school leading to increased tests scores and future earnings	TOTALS
Equation	(# participating children) x (Q1: Impact of tutoring on test scores) x (Q2: Impact of improved test scores on earnings) x ($ average lifetime earnings of low-income individuals)	
Explanation	This metric estimates the impact of programs with the primary purpose of providing academic tutoring delivered by adults outside of classroom settings on improved test scores and subsequent impacts on increased earnings. Number of participating children: [**138]** Reported by program. Q1: Impact of tutoring on test scores: **[0.08].** This is estimated by Constellation Fund staff using the following formula: $Q = ES * Base\%$ In this formula, ES is the effect size from a meta-analysis conducted by Constellation Fund **[0.04]** (Lauer, P.A., et al., (2006); Zimmer, R., et al., (2010)). The base percentage is the observed standard deviation of the average score on the Minnesota Comprehensive Assessment Series 3 reading test (Reading MCA-III Test) of low-income children in Minneapolis **[1.9]**. Q2: Impact of improved test scores on earnings: **[0.1]**. We find evidence of an increase of 10% in earnings per 1.0 effect size increase in test scores from Krueger, A.B. (2003) and Levin, H., et al. (2007). Average lifetime earnings of low-income individuals: **[$514,000]**. We use the average earnings of individuals with a high school diploma to approximate the lifetime earnings of low-income individuals (U.S. Census Bureau, 2016). These benefits are already discounted to present value.	
References	Krueger, A. B. (2003). Economic considerations and class size. The Economic Journal, 113(485), F34-F63. Lauer, P. A., Wilkerson, S. B., Apthorp, H. S., & Snow, D. (2006). Out-of-School-Time Programs: A Meta-Analysis of Effects for At-Risk Students. 76(2), 275–313. Levin, H. M., Belfield, C., Muennig, P. A., & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. Minnesota Department of Education. (2018). Subscore report. Retrieved from http://w20.education.state.mn.us/MDEAnalytics/DataTopic.jsp?TOPICID=31 using the following search criteria: District: Minneapolis School District; School: All Schools; Test: MCA-III; Year: 2017; Grade: 3; Gender: All Students; Race/Ethnicity: All Students; Category: Free/Reduced Priced Lunch.	

	U.S. Census Bureau. (2016). American Community Survey 5-year estimates – public use microdata sample, 2012-2016. Generated using Public Use Microdata Area (PUMA) in the Seven-county Twin Cities Metropolitan Area. Zimmer, R., Hamilton, L., & Christina, R. (2010). After-school tutoring in the context of no Child Left Behind: Effectiveness of two programs in the Pittsburgh Public Schools. Economics of Education Review, 29(1), 18–28. https://doi.org/10.1016/j.econedurev.2009.02.005	
	TOTAL:	**$567,456**

METRIC	After school programs leading to improved behavior, high school graduation, and lifetime earnings	TOTALS
Equation	(# participants) x (% impact of program on disruptive behavior) x (Q: impact of disruptive behavior on high school graduation) x {[($ difference in lifetime earnings for high school graduates vs. no high school completion) x (% causation factor of high school on earnings)] + [(% counterfactual rate of low-income high schoolers who enroll in college but do not graduate) x ($ difference in lifetime earnings of individuals with some college vs. high school with no further education) x (% causation factor of some college on earnings)] + [(% counterfactual rate of college progress - associate degree) x ($difference in lifetime earnings of individuals with an associate degree vs. high school with no further education) x (% causation factor of college on earnings)] + [(% counterfactual rate of college progress - bachelor's degree) x ($difference in lifetime earnings of individuals with a bachelor's degree vs. high school with no further education) x (% causation factor of college on earnings)]}	
Explanation	This metric estimates the impact of after school program on youths' behavior and the resulting additional earnings associated with increased probability of receiving a high school diploma. It also estimates benefits from the subsequent increased chance of enrolling or earning a higher educational degree. In this metric, we define after school programs as an organized program offering one or more activities that: (a) occurred during at least part of the school year; (b) happened outside of normal school hours; and (c) was supervised by adults. Programs must be sequenced, emphasize active forms of learning, and be focused on personal or social skills development and explicit in defining those skills. This can be applied to programs serving youth age 5 through 18. The personal and social skills being developed should include any one or a combination of skills in areas such as problem-solving, conflict resolution, self-control, leadership, responsible decision-making, or skills related to the enhancement of self-efficacy or self-esteem. Number of participants: **138**. Reported by program. Impact of program on disruptive behavior of youth: **[0.3]**. This is the estimated percent reduction in problem behavior associated with the intervention (Durlak, et al., 2010). <u>High school</u> Q: Impact of disruptive behavior on high school graduation: **[0.141]**. This is estimated by Constellation Fund staff using the following formula: In this formula, ES is the effect size from a meta-analysis of disruptive behavior on high school graduation **[0.43]** (WSIPP, 2019). The base percentage **[65%]** is the graduation rate of low-income students in the Twin-Cities (Minnesota Compass, 2018). Difference in lifetime earnings between high school graduates vs. individuals with no high school completion: **[$198,700].** This is computed using ACS data (U.S. Census Bureau, 2016). These benefits are already discounted to present value. Causation factor of high school on earnings: **[0.5].** This is the percentage of observed earnings gains are caused by high school graduation. This factor measures the degree to which the observed difference in earnings between high school graduates and non-high school graduates is causal (WSIPP, 2019).	

Some college

Counterfactual rate of college enrollment without completion for individuals with a high school diploma: **[25%].** We use national enrollment data for students from low-income schools to estimate the college enrollment in Minnesota. In Minnesota, **[51%]** of high school graduates enroll in college (Minnesota Department of Education, 2018). Data from the National Student Clearing House (2016) indicates that low-income students enroll in college **[15%]** less than higher-income students. Thus, we estimate that **[43%]** of low-income students in Minnesota enroll in college. We subtract the percent of students who graduate (average of the 2- and 4-year degree program graduation rate) **[48%]** to obtain an estimate of the percentage of students who enroll in college but do not graduate **[25%]**.

Difference in lifetime earnings between some college vs high school: **[$99,500].** This is computed using ACS data (U.S. Census Bureau, 2016). These benefits are already discounted to present value.

Causation factor of some college on earnings: **[0.56].** This is the percentage of observed earnings gains are caused by the impact of some college experience ("some college") on earnings. This factor measures the degree to which the observed difference in earnings between of individuals with some college experience and those with only a high school diploma is causal (WSIPP, 2019).

Associate degree

Counterfactual rate of college graduation for individuals with a high school equivalent: **[6%].** We estimate this rate as follows: As shown above, **[43%]** of low-income students in Minnesota enroll in college, **[46%]** of these students enroll in 2-year institutions, and **[29%]** of them graduate (National Student Clearing House, 2016).

Difference in lifetime earnings for individuals with an associate degree vs. a high school diploma: **[$112,300].** This is computed using ACS data (U.S. Census Bureau, 2016). These benefits are already discounted to present value.

Causation factor of some college on earnings: **[0.56].** This is the percentage of observed earnings gains are caused by an associate degree, which is approximated using the causation factor from "some college". This factor measures the degree to which the observed difference in earnings between individuals with some college and those with only a high school diploma is causal (WSIPP, 2019).

Bachelor's degree

Counterfactual rate of college graduation for individuals with a high school equivalent: **[9%]**. We estimate this rate as follows: As shown above, **[43%]** of low-income students in Minnesota enroll in college, **[35%]** of these students enroll in 4-year institutions, and **[57%]** of them graduate (National Student Clearing House, 2016).

Difference in lifetime earnings for individuals with a bachelor's degree vs. a high school diploma: **[$465,800].** This is computed using ACS data (U.S. Census Bureau, 2016).

Causation factor of college on earnings: **[0.42].** This is the percentage of observed earnings gains are caused by a four-year college degree. This factor measures the

	degree to which the observed difference in earnings between graduates and those with only a high school diploma is causal (WSIPP, 2019).	
References	Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A Meta-Analysis of After-School Programs That Seek to Promote Personal and Social Skills in Children and Adolescents. American Journal of Community Psychology, 45(3–4), 294–309. https://doi.org/10.1007/s10464-010-9300-6 Minnesota Compass (2018). Education: High school graduation. High school students graduating on time by income. Retrieved from http://www.mncompass.org/education/high-school-graduation#7-6108-d Minnesota Department of Education. (2018). Minnesota report card. http://rc.education.state.mn.us/# National Student Clearinghouse (2016). National College Progression Rates. Retrieved from: https://nscresearchcenter.org/hsbenchmarks2016/ U.S. Census Bureau. (2016). American Community Survey 5-year estimates – public use microdata sample, 2012-2016. Generated using Public Use Microdata Area (PUMA) in the Seven-county Twin Cities Metropolitan Area. Washington State Institute for Public Policy. (2019). Benefit-Cost Technical Documentation. Retrieved from: http://www.wsipp.wa.gov/TechnicalDocumentation/WsippBenefitCost TechnicalDocumentation.pdf	
TOTAL:		**$786,067**

METRIC	Wages for Teen Tech Geeks (short-term)	TOTALS
Equation	N/A	
Explanation	The program reported that $83,670 was paid directly to student participants during training. Students were paid at $15/hour rate.	
References	Data provided by program.	
TOTAL:		**$83,670**

METRIC	ECOXX5 – Juvenile aftercare program (job skill-building) impact on recidivism and leading to lifetime earnings	TOTALS
Equation	(# participants) x (Q: Impact of program on recidivism) x ($ difference in average annual earnings between non-offenders and formerly incarcerated individuals)	
Explanation	This metric assesses the impact of job training or employment programs on juvenile recidivism and the subsequent reduced probability of the youth becoming an adult offender. These programs provide instruction, practice, incentives, and other such activities and inducements aimed at developing skills that will help the juvenile control their behavior and/or enhance their ability to participate in normative prosocial functions. In this metric we do not include any earned wages during the employment/internship program. These earnings are added as a separate line during the totalization of benefits. Number of participants: **[32]** Reported by program. Q: Impact of program on recidivism **[0.04].** The program reduces the recidivism rate 6% (Lipsey, 2009). This implies that participating juveniles go from averaging one additional encounter with the justice system to less than half an encounter. In practice, this means going from being a juvenile recidivist to a one-time offender. According to Tracy & Kempf-Leonard (1996), one-time juvenile offenders are only 0.68 times as likely as a juvenile recidivist to become an adult offender. This implies a reduction of 38% in the chance of becoming an adult offender. The total impact of the program is (0.06 x 0.38 = 0.04) Difference in average annual earnings between non-offenders and formerly incarcerated individuals: **[$31,500].** The average annual earnings of formerly incarcerated individuals is [$2,000], computed using ACS data (U.S. Census Bureau, 2016). Compared to the average annual earnings of employed low-income individuals [$13,500] results in [$11,500] potential increase in annual earnings. We assume three years of benefits accrued from age 18 to age 21. Total additional earnings are already discounted to present value. We estimate the earnings of low-income individuals using the American Community Survey (ACS) 5-year estimate Census data (U.S. Census Bureau, 2016) for the Twin Cities metropolitan area. Note: Whenever possible, we estimate future earnings using available earnings data from the program.	
References	Lipsey, M. W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. Victims and Offenders, 4(2), 124–147. https://doi.org/10.1080/15564880802612573 Tracy, P. E. ., & Kempf-Leonard, K. (1996). Continuity and Discontinuity in Criminal Careers. https://doi.org/https://doi-org.ezp1.lib.umn.edu/10.1007/978-1-4757-9844-9 U.S. Census Bureau. (2016).	

	American Community Survey 5-year estimates – public use microdata sample, 2012-2016. Generated using Public Use Microdata Area (PUMA) in the Seven-county Twin Cities Metropolitan Area. Retrieved from http://factfinder.census.gov Western, B., & Sirois, C. (2017). Racial inequality in employment and earnings after incarceration. Harvard University. Retrieved from https://www.semanticscholar.org/paper/Racial-Inequality-in-Employment-and-Earnings-after-Western-Sirois/4a382dfc2efc093c85274edb81957b59a0eec6b1	
	TOTAL:	**$40,320**