

ArtsQuest

ProSocial Valuation Statement



The ProSocial Valuation Service

What We Do, Why and How We Do It

The ProSocial Valuation Service (PSV) unlocks the promise of technology and big data to value social ROI with the same rigor, transparency and clarity used to measure financial ROI.

We value what has widely been considered unmeasurable: social capital—a term we use broadly to refer to all types of public goods that benefit people and planet. While not traded on a commercial marketplace, the currency that PSV values shapes the health and well-being of individuals, neighborhoods and nations.

Backed by evidence-based research in which there is a proven correlation between a given intervention and a specific outcome, we convert each unit of social capital into a universally understood dollar value, typically based on savings to the public and/or benefits to individuals.

We account for positive, negative and independently occurring impacts.

PSV has been used to value community effects in areas as diverse as health, education, homelessness, community redevelopment, clean water and social inclusion. Our mathematical grounding, use of outcome-based primary research and complete transparency—we are explicit about what is valued, the value assigned and the research supporting the calculations—resonates equally with foundations and trusts, strategic philanthropists, brands, governments, volunteers and impact investors as well as nonprofits, NGOs and social enterprises.

PSV also audits the activation programs of sponsors and values any elements with prosocial overlays.

Methodology. We use the same methodology for every Valuation. This allows comparisons across markets, genres and approaches. Step one in the process: identifying the taxonomy of outcomes which could be created by an initiative. This typically involves a data audit and literature review. Step two, measuring which, if any, of those outcomes occurred and if so, to what extent and subtracting any negative outcomes and what would have occurred anyway. Primary research and world-class datasets provide this information. Next, we mathematically convert each unit of social capital into a dollar value. We also audit the activation programs of sponsors and value the pieces with prosocial overlays.

We also account for intellectual capital, the six intangibles that drive scale and progress. These are: 1) Audacity: envisioning big, bold solutions and tackling chronic problems over temporary ones; 2) Connectivity: creating buy-in among multiple constituencies; 3) Capacity: use of data, talent development and governance; 4) Ingenuity: disrupting entrenched approaches; 5) Tenacity: leveraging relationships and resources required to persevere; and 6) Diversity: the number of discrete sources of funding. To remove bias, each intangible has a scoring narrative. Example: To receive the top score on “diversity” an organization must have at least five discrete sources of funding. PSV’s algorithm for valuing intangibles is a combination of velocity—the importance of the market(s) in which the program is held (based on its MSA (Metropolitan Statistical Area) and soft power, i.e., the ability to persuade by attraction and persuasion rather than by coercion or force)—and the rank and weight of each intangible relative to the other five.

We combine the value of the tangibles and intangibles, then divide that sum by the budget to arrive at the cost/benefit ration and ProSocial ROI.

The ProSocial Valuation Service (continued)

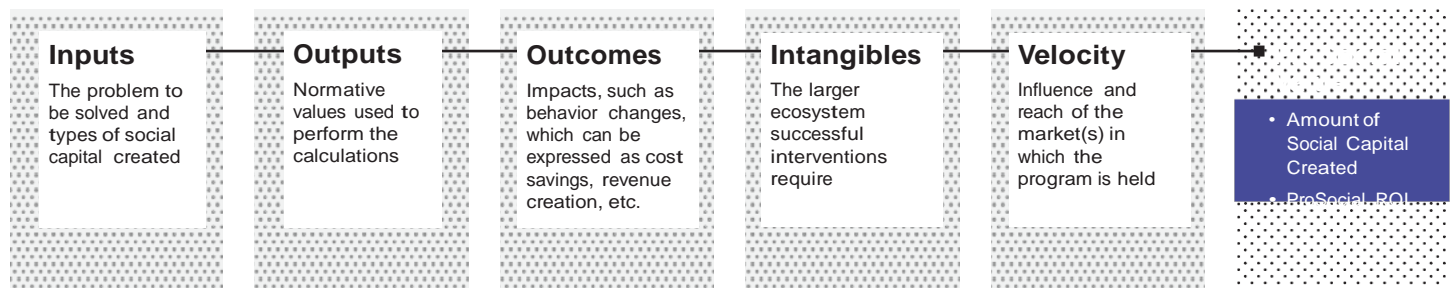
In every instance of calculating the social capital created by ArtsQuest, we erred on the side of fiscally conservative:

- We only count outcomes backed by independently verified research;
- We only count primary effects and do not include tertiary outcomes. For example, ArtsQuest is the reason other attractions, such as the Smithsonian's National Museum of Industrial History, have located in Bethlehem's SouthSide Arts District. No spending or revenue associated with the museum or other businesses and attractions that located or relocated near SteelStacks or Banana Factory is included in our Valuation.
- We only credit ArtsQuest with the percent of the outcome it caused and do not include what would have occurred otherwise. We refer to this as the attribution percentage. For example, if an outcome generates a one-year value of \$10,000 and ArtsQuest's measurable contribution to the outcome is 20 percent, the value attributed to ArtsQuest is \$2,000.
- We calculate one-year, rather than lifetime, value. Thus, we did not include capital investments—totaling more than \$100M at SteelStacks—or the upcoming \$16M-\$18M Banana Factory renovation. Nor did we include the value of legacies, such as public art commissioned by ArtsQuest.

- We did not include ArtsQuest purchasing or increased tax revenue attributable to ArtsQuest. Example: Though we can show a causal relationship between SteelStacks and raising property values on Bethlehem's SouthSide near the arts campus, we did not include increased tax revenue from higher property values.
- We did not include the \$1.5M in annual depreciation on ArtsQuest buildings and fixtures.

About. PSV was launched in 2016 by Lesa Ukman, founder of IEG and creator of the analytics used to select, value and optimize ROI in sponsorships (www.lesaukman.com) and Jed Pearsall and Bill Doyle, co-founders of Performance Research (www.performanceresearch.com), a global leader in measuring the marketing impact of corporate partnerships with sports leagues and events, entertainment properties and nonprofits. Funders—foundations, trusts, strategic philanthropists, impact investors and governments—use PSV to determine where to invest to have the greatest impact. Nonprofits and NGOs, including Homeless World Cup, the American Bar Association's Free Legal Answers and Miami's New World Symphony, use PSV to make visible what has been invisible and demonstrate the value they create, make the case to funders and stakeholders and drive improvement.

How We Do It: Heart + Smart



ProSocial Valuation

Social Capital Created by ArtsQuest in 2019: **\$99,996,000**

| | | | | | | | | | |
|---|---|---|---|--------------------|-----------------------|--------------------|--------------------|--------------------|--------------------|
| Inputs: Types of Capital ArtsQuest Creates | Community Capital ¹ | Civic Capital ² | Human Capital ³ | | | | | | |
| | Housing stats—demand, turnover; Population shifts; AQ attribution rate; Earned media | Attitude shifts; Crime stats; Volunteer stats; AQ fundraising and ProSocial sponsor activations | Educational access that would not otherwise happen; Student GPAs; Training; Perceptions of AQ | | | | | | |
| | SouthSide Regeneration: \$2.3M Attraction/Attachment: \$8.0M Branding/Image Shift: \$12.5M | Social Cohesion/ Inclusion: \$17.9M Civic Engagement: \$7M Advocacy & Fundraising: \$2.7M | Academic Achievement: \$7M Skills and Employment: \$5.9M Health & Well-Being: \$35.9M | | | | | | |
| | \$22,800,000 | \$27,600,000 | \$48,800,000 | | | | | | |
| Tangibles: Sub-totals | | | | | | | | | |
| + | | | | | | | | | |
| Intellectual Capital: Intangibles ⁴ | <table><tr><td>Audacity \$223K</td><td>Connectivity \$96K</td><td>Capacity \$151K</td><td>Ingenuity \$87K</td><td>Tenacity \$191K</td><td>Diversity \$48K</td></tr></table> | | | Audacity \$223K | Connectivity \$96K | Capacity \$151K | Ingenuity \$87K | Tenacity \$191K | Diversity \$48K |
| Audacity \$223K | Connectivity \$96K | Capacity \$151K | Ingenuity \$87K | Tenacity \$191K | Diversity \$48K | | | | |
| = | | | | | | | | | |
| ProSocial Value | Social Capital = \$99,996,000 (Tangibles: \$99.2M + Intangibles: \$796K). ProSocial ROI = \$9-to-\$1 (\$99.9M/\$11M, 50% of ArtsQuest budget). | | | | | | | | |

ArtsQuest

Stronger than Steel

In 1995, after 140 years of operations, Bethlehem Steel shuttered the last blast furnace in its eponymous hometown leaving behind 1,800 acres of vacant industrial structures, 3,600 jobless workers, the largest brownfield in the country and the question of survival for the Pennsylvania city.

Most Rust Belt towns that lost their dominant employer have been decimated. Bethlehem not only survived deindustrialization, but today it is thriving. It has the highest median HHI in Pennsylvania, the lowest poverty rate and indexes higher than the national average in attracting young professionals, 41 percent versus 57 percent (Source: U.S. census data). The innovation engine driving Bethlehem's resurgence is ArtsQuest, the award-winning nonprofit that uses culture for community engagement and development.

Formed in 1984 to launch Musikfest, ArtsQuest has built a bank of social capital it leverages to support a portfolio of destination events, community programming and venues—including SteelStacks, the 10-acre campus that opened in 2011 on the site of the brownfield with soaring blast furnaces as its skyline.

Formerly, Bethlehem residents derived value from manufacturing jobs. Today, ArtsQuest creates value in less obvious but no less important ways, including programming that attracts the next generation of talent, which in turn attracts employers to the area.

ArtsQuest has traditionally been viewed through the lens of economic impact. However, this is just part of the story. Many of ArtsQuest's most valuable effects are the public goods it creates—social inclusion, civic engagement, educational success and more. These public goods are what's measured and valued in this report.

This ProSocial Valuation, which covers the year 2019, tells a powerful story of ArtsQuest's social impacts. It created \$99,996,000 in measurable social value. This sum is in addition to ArtsQuest's \$150M in economic impact. Combined, these two figures result in an impact of more than \$249M. Allocating half of its \$22M budget to social capital (and the other half to economic impact), means that ArtsQuest's ProSocial ROI is 900%, for every \$1 invested in ArtsQuest, \$9 in social capital is created.

ArtsQuest assets include:

■ **SteelStacks Arts & Cultural Campus**

Venues: ArtsQuest Center; Levitt Pavilion SteelStacks; Frank Banko Ale House Cinemas; Musikfest Café; Hoover-Mason Trestle; Bethlehem Visitor Center in the renovated 1863 Stock House.

Events: Musikfest; Christkindlmarkt; Sabor Latin Festival; Levitt Pavilion Concert Series; Blast Furnace Blues; Improv Comedy Festival; SouthSide Arts & Music Festival; Lehigh Valley SoccerFest; Oktoberfest; Step Outdoors; Southside Film Festival; Food Truck Border Brawl; PEEPSFEST; Docent-led tours of the blast furnaces.

■ **Banana Factory** 63,000 square-foot visual arts center with galleries, artist residencies, glass blowing studio, multi-media studio, classrooms, etc.

■ **ArtsQuest Programs** ArtSmart, after school enrichment with school district; Creative Aging in senior centers; ArtsQuest in the Community.

■ **501(c)3s** ArtsQuest; ArtsQuest Foundation; Friends of Levitt Pavilion SteelStacks.

ArtsQuest (continued)

2019 in Numbers

Participants

1.9M

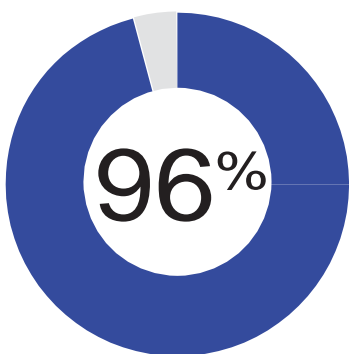
Attendees of ArtsQuest
Events, Venues and Programs

Followers

2.7M

ArtsQuest Owned Media

Believers



ArtsQuest is “Very Important”
to Lehigh Valley*

Donors

5,398

ArtsQuest Volunteers,
Donors and Members

Sponsorship

\$2.4M

150+ Corporate Partners

“That a small Pennsylvania town dependent on Big Steel reinvented itself to become an economically diverse community with a standard of living, education levels and cultural riches any town would be proud to have...happened not by looking back at a past that could not be recaptured, but by embracing new ideas with a hopeful spirit.”

– Jeffrey Parks, founder, ArtsQuest

* Source: Performance Research
Survey of ArtsQuest Attendees, 2019



Banana Factory houses studios for hot glass, fusing and slumping, digital imaging, ceramics, jewelry, photography + 30 artist studios and three galleries



Free concerts at Levitt Pavilion feature bands like Flor De Tolache, all-female GRAMMY-winning Mariachi group



The finish line at the Runner's World Half & Festival at the ArtsQuest Center at SteelStacks. Photo credit: Ryan Hulvat

ArtsQuest (continued)

The ArtsQuest Effect

Where would Bethlehem, Pennsylvania be without ArtsQuest?

Put another way, how much of the credit for Bethlehem's growth is attributable to ArtsQuest?

We can't run a clinical trial: Bethlehem with ArtsQuest versus Bethlehem without ArtsQuest. But we did find troves of independent research comparing Bethlehem's performance against its neighbors, against other small and mid-sized cities with a history of metal production, and against other cities once dominated by a single employer.

Here's what we learned: Bethlehem's ability to reinvent itself after the loss of Bethlehem Steel is the exception, not the norm.

- A 2017 study of 24 small and medium-sized Rust Belt cities found two-thirds were in decline or stagnant. Bethlehem was one of only eight experiencing growth. Between 2000 and 2015, half of the cities studied lost population and most of the rest remained flat with one exception: Bethlehem. Its population grew a full five percent during that time.⁵
- A 2018 study of 70 older industrial cities (OICs) revealed Bethlehem as one of only four that grew their share of metropolitan employment since 1990. Additionally, Bethlehem was one of only 16 OICs to earn Brookings' top classification as strong; a result of its performance on growth, prosperity and inclusion.⁶
- A 2012 study of 13 smaller cities surrounding Philadelphia found Bethlehem had the highest median household income, lowest poverty rate, lowest violent crime rate and second lowest unemployment rate.⁷
- Lehigh County, which includes Bethlehem, grew 4.66 percent between 2010 and 2017, significantly outpacing the 1.83 percent growth of its neighboring county.⁸

- While young professionals comprise only about 4.5 percent of the U.S. population, the group comprises 5.7 percent of the residents of Bethlehem. Bethlehem's ability to attract the next generation of workers is even more impressive when compared to the 3.7 percent average for other small and mid-sized legacy cities.⁹

As to the role of the arts, research comparing outcomes of neighborhoods with rich cultural assets, like those offered by ArtsQuest, to those with few cultural offerings—as well as studies comparing behavioral differences among people with high arts engagement to low arts participation—both identify the arts as a singularly productive investment.

- A 2018 study that used “Understanding Society” data (a nationally representative longitudinal sample of 30,476 people in the U.K.) found that “beyond major personality traits, demographic variables, wealth, education and engagement in other social activity (e.g., sports), people's greater engagement with the arts predicts greater prosociality (volunteering and charitable giving) over a period of two years.”¹⁰
- A 2017 study of NYC neighborhoods found that after controlling for economic status, race and ethnicity, the higher presence of cultural resources in lower-income neighborhoods is linked with a 14 percent decrease in indicted investigations of child abuse and neglect, an 18 percent decrease in the felony crime rate and a 17.5 percent increase in the number of students scoring at the highest level on standardized Math and English tests.”¹¹
- A 2019 study by Performance Research of 1,049 ArtsQuest attendees also supports the ArtsQuest effect. Attitudes about Lehigh Valley varied widely between respondents whose level of engagement with ArtsQuest was high versus those who were less engaged. For example, there was a 30-point spread in answer to the question, “I feel deeply

ArtsQuest (continued)

connected to the community.” Seventy percent of highly engaged respondents agreed but only 42 percent of less engaged agreed (see Table 3). Respondents who answered 7 or higher, on a scale of 1-10, where 10 is the highest, to each of the following questions were defined as highly engaged: “How familiar are you with ArtsQuest?” “How important is ArtsQuest to you personally?” and “How important is ArtsQuest to Lehigh Valley?” Almost seven in 10 respondents (69 percent) qualified as “highly engaged.” The 31 percent of respondents who did not answer a 7 or higher on all three questions were considered “less engaged.”

Table 1: Attraction of Creative Class

Recent College Graduate Settlement Rates
Pennsylvania Cities with Population over 20,000 in 2016

| | % of Residents Age 25+ with College Degrees | % of Residents Age 25-34 | % of Residents Age 25-34 with College Degrees |
|--|---|--------------------------|---|
| Allentown | 15 | 15 | 17 |
| Altoona | 17 | 13 | 23 |
| Bethlehem | 27 | 15 | 38 |
| Chester | 10 | 14 | 10 |
| Easton | 20 | 14 | 24 |
| Erie | 22 | 16 | 28 |
| Harrisburg | 18 | 17 | 22 |
| Hazleton | 11 | 13 | 10 |
| Lancaster | 20 | 19 | 26 |
| Lebanon | 10 | 13 | 9 |
| Philadelphia | 26 | 18 | 41 |
| Pittsburgh | 41 | 20 | 59 |
| Reading | 9 | 14 | 7 |
| Scranton | 22 | 13 | 29 |
| Wilkes-Barre | 16 | 14 | 19 |
| Williamsport | 20 | 15 | 23 |
| York | 12 | 16 | 15 |
| USA | 30 | 14 | 34 |
| Selected Cities with History of Metal Production | | | |
| Youngstown, OH | 12 | 13 | 12 |
| Birmingham, AL | 25 | 17 | 33 |
| Waterbury, CT | 15 | 14 | 18 |
| Pueblo, CO | 19 | 14 | 17 |

Source: American Fact Finder, U.S. Census Bureau

Table 2: Economic Well-Being of Community

Pennsylvania Cities with Population over 20,000 in 2016

| | Median Household Income \$ | % Below Poverty Level | Median Residential Property Value \$ |
|--|----------------------------|-----------------------|--------------------------------------|
| Allentown | 37,256 | 27 | 126,100 |
| Altoona | 36,741 | 22 | 85,400 |
| Bethlehem | 49,349 | 17 | 168,900 |
| Chester | 27,217 | 37 | 66,800 |
| Easton | 45,361 | 19 | 127,300 |
| Erie | 35,205 | 26 | 86,700 |
| Harrisburg | 32,688 | 32 | 83,800 |
| Hazleton | 32,460 | 25 | 87,200 |
| Lancaster | 36,233 | 29 | 109,300 |
| Lebanon | 35,737 | 26 | 89,300 |
| Philadelphia | 39,700 | 26 | 147,300 |
| Pittsburgh | 42,450 | 22 | 100,800 |
| Reading | 27,247 | 39 | 68,400 |
| Scranton | 38,232 | 23 | 104,500 |
| Wilkes-Barre | 31,248 | 30 | 76,700 |
| Williamsport | 35,872 | 28 | 99,900 |
| York | 30,068 | 36 | 76,100 |
| USA | 55,322 | 15 | 184,700 |
| Selected Cities with History of Metal Production | | | |
| Youngstown, OH | 22,448 | 38 | 43,300 |
| Birmingham, AL | 32,404 | 29 | 87,100 |
| Waterbury, CT | 39,681 | 25 | 129,500 |
| Pueblo, CO | 35,770 | 25 | 116,800 |

Source: American Fact Finder, U.S. Census Bureau

Table 3: How Perceptions Vary Between ArtsQuest Audiences

| | Highly Engaged | Less Engaged |
|---|----------------|--------------|
| The future of Lehigh Valley is bright | 88% | 68% |
| Lehigh Valley is a vibrant community | 87% | 64% |
| Lehigh Valley is a diverse community | 84% | 66% |
| Lehigh Valley is a great place to raise a family | 82% | 66% |
| I'd recommend moving to Lehigh Valley to family and friends | 81% | 59% |
| I feel deeply connected to the community | 72% | 42% |

Source: Performance Research Survey of ArtsQuest Attendees, 2019

Valuation Notes

Footnotes, Assumptions and Research

1. Community Capital is the public goods created by ArtsQuest—primarily in Bethlehem and SouthSide Bethlehem, location of the Banana Factory and SteelStacks. The outcomes we valued were a) the revitalization of the SouthSide; b) the increased attraction of Bethlehem as a place to live; and c) the shifting brand narrative of Bethlehem from tired Rust Belt city to city of culture and heritage. The following assumptions and methodology were used to arrive at the value for each of these outcomes.

1a. SouthSide Regeneration, worth \$2.3M, was calculated as follows:

- Average CAGR for owner-occupied units in zip codes 18015 (SouthSide Bethlehem) and 18018 (neighboring area) in 2015-2017 (1.04 percent and -0.18 percent, respectively). Source: U.S. Census data.
- Median value of owner-occupied units in zip codes 18015 in 2017 (\$156,400) and the total housing units in zip code 18015 (21,160). Source: U.S. Census data.
- Apply attribution rate (percent of differential rise in property value attributable to ArtsQuest) of 10 percent based on interviews with Lehigh Valley real estate experts.
- Note: Arts-driven revitalization often comes with negative social impact, e.g., gentrification. When this occurs, the value is lowered accordingly. This was not the case in SouthSide Bethlehem, as evidenced by low/no turnover in owner-occupied residences.

1b. Attraction/Attachment. This refers to population shifts in Bethlehem as well as growth of creative economy jobs attributable to ArtsQuest.

Population growth, worth \$7M, was calculated as follows:

- Average annual population shift in Lehigh County, 2010-2018, compared to population shifts during

those years in Pennsylvania's other 67 counties. Lehigh population grew 0.85 percent more per annum. Source: U.S. Census data.

- Average 2.68 people per household.
- Apply attribution rate of 10 percent of the differential growth to ArtsQuest (using the same level of credit for property value above to population growth) and valued based on the county's median income (\$60,116).

Arts-sector-related income, worth \$1M, was calculated as follows:

- Total income from arts-related jobs in the Allentown-Bethlehem-Easton, PA-NJ MSA in 2017;
- Total estimated population in the Allentown-Bethlehem-Easton, PA-NJ MSA in 2017;
- Total income from arts-related jobs in peer PA MSAs in 2017; and
- Total estimated population in peer PA MSAs in 2017.
- Apply attribution rate of 39 percent. Source: 2019 Performance Research Survey of ArtsQuest Attendees (Table 3 of this Report), which found that ArtsQuest programming accounted for 39 percent of total arts programming for residents in the MSA.

1c. Branding/Image Shift. Establishing and managing a compelling brand image not only helps sell a city, it also shapes and builds the city. It's the glue that can join people and institutions in a common spirit and purpose. Whether trying to attract residents, visitors, students, investors, corporations, conventions, capital investment or events, brand matters.

ArtsQuest created some 3.9 billion media impressions via 3,700 stories in 525 media outlets in 2018. Results were comparable in 2019, according to ArtsQuest. PSV values an impression at \$.0025.

Valuation Notes (continued)

In addition to its earned media, ArtsQuest's owned media includes seven websites, four social media channels, two mobile apps and printed program guides for its major events. Sites and unique visitors in 2019 include [Steelstacks.org](https://steelstacks.org), 740,431; [Christmascity.org](https://christmascity.org), 772,090; [Musikfest.org](https://musikfest.org), 679,959; levittsteelstacks.org, 302,696; [ArtsQuest.org](https://artsquest.org), 134,547; and [Bananafactory.org](https://bananafactory.org), 116,694.

2. **Civic Capital is the behaviors and attitudes enabled by ArtsQuest that positively contribute to the collective life of the Lehigh Valley region.** Even after controlling for socio-demographic variables such as age, race and education, participation in the arts at least once a year is linked to three dimensions of civil society: a) social tolerance; b) civic engagement; and c) other regarding behavior or advocacy. The following assumptions and methodology were used to arrive at the value for each of these outcomes.

2a. Social Cohesion/Inclusion. ArtsQuest creates points of connection and exchange among diverse social groups. Events such as free concerts at Levitt Pavilion SteelStacks break down ethnic and economic silos, facilitating interactions that increase empathy and tolerance. Social Cohesion/Inclusion, worth \$11.6M, was calculated as follows:

2019 ArtsQuest Total Audience = 1.9M.

Reduce Total Audience by 31 percent to only include the "highly engaged" segment as defined as answering 7 or higher, on a scale of 1-10, where 10 is the highest, to each of the questions in Table 3. Sixty nine percent of the ArtsQuest audience met the high engagement threshold. Source: Performance Research Survey of ArtsQuest Attendees, 2019. Sixty nine percent of 1.9M = 1,311,000.

Reduce highly engaged audience by 21 percent, only including the 79 percent who reside in Lehigh Valley. Seventy nine percent of 1,311,000 = 1,035,690.

Apply attribution: Respondents who feel "deeply connected" to Lehigh Valley = 72 percent of 1,035,690 = 745,696.

Apply value of \$24 for the attitude shift, which is the lowest cost per lead used by businesses marketing to consumers. (Source: Lindemann, Nigel (2017) 'Average Cost per Lead by Industry: The Final Answer from 22 Influential Articles.' <https://bit.ly/2uuRHmh>) \$24 x 745,696 = \$17,896,704.

Supporting research regarding outcomes of bringing together people from diverse socio-economic backgrounds:

- Bringing together audiences from high, middle and low-income households is directly linked to opportunities for upward mobility and better outcomes. Example: A study of 40 million children and their parents found that "upward mobility (i.e., having a higher income in adulthood than one's parents) is strongly correlated to less economic and racial segregation." (Catterall, James S., et al. (1999) 'Chicago Arts Partnerships in Education Summary Evaluation,' In E. Fiske (Ed.), *Champions of Change: The Impact of the Arts on Learning*, (47-62). <https://bit.ly/2L6Oa4F>).
- And, Labor economists Anne Case and Lawrence Katz have shown that, regardless of race, inner-city youth living in neighborhoods with high levels of civic engagement are more likely to finish school, have a job, and avoid drugs and crime, controlling for the individual characteristics of the youth. Other researchers found similar neighborhood effects on the incidence of teen pregnancy and high school graduation rates.

2b. Civic Engagement. Outcomes of increased civic engagement typically include higher rates of voting, volunteerism, charitable contributions and lower crime rate. For ArtsQuest, we measured and valued decrease in crime and increase in volunteerism and charitable contributions.

Crime reduction, worth \$1.3M of engagement value, was calculated as follows:

Trailing three-year average for one-year change in crime (both physical and property crime), average sentencing length for each type of crime and the average annual incarceration cost in Pennsylvania. (Source: Pew Center, 'Time Served: The High Cost Low Return of Longer Prison Terms—Time Served in Pennsylvania,' Pew Center on the States (2009). <https://bit.ly/2ZjmBiE>).

Apply ArtsQuest attribution factor of 3 percent (proportion of total crime reduction attributable to ArtsQuest). This was arrived at after consulting with the chief of police and audited the body of research on the evidence linking exposure to the arts to changes in criminal behavior.

The rest of the engagement value is volunteerism and donations.

Assumptions: In 2019, ArtsQuest had 1,859 volunteers; 2,278 members and 161 Circle Donors.

Valuation Notes (continued)

Volunteer hours, valued at \$510,000, was calculated as follows: ArtsQuest volunteers donated 43,699 hours in 2019.

We allocated 75 percent of those hours to administrative type work using the PA minimum wage of \$7.25 per hour.

The other 25 percent were for tasks requiring more specialization, valued at \$24.94 per hour. (Source: Independent Sector (2018) 'The Value of Volunteer Time/State and Historical Data'.)

We also valued the physical and emotional benefits that accompany service and charitable contributions. Until now, the value of volunteer programs has been expressed in terms of hours donated multiplied by an hourly rate.

But the value to society is not merely or primarily the value of donated hours. Rather it is the outcomes of volunteering on the volunteer. Akin to volunteering, charitable donations also improve individual well-being. We calculated these outcomes as follows:

Attribution: We combined research on the health benefits of volunteering (Source: Konrath, Sarah, et al. (2011) 'Motives for Volunteering Are Associated with Mortality Risk in Older Adults,' American Psychological Association: Health Psychology, Vol 31 No. 1 97-96. <https://bit.ly/2KVjzbz>) with Actuarial Life Tables from the Social Security Administration to arrive at 152 "saved lives" per 100K people. We used the EPA estimates for the value of a saved life and total number of 2019 volunteers.

We adjusted this figure using data from the 2019 Performance Research Survey of ArtsQuest Attendees indicating that 39 percent of their arts exposure is attributable to ArtsQuest.

Finally, this dollar figure was adjusted by the risk-free rate and discounted for the average remaining life of a 39-year-old-male.

Supporting research on the link between arts and volunteering and on the value of volunteering and donating:

- Support for the idea that the arts encourage individual altruism in the form of volunteerism, a statistical analysis of GSS data found the volunteer rate among those who participated in any kind of cultural activity was 34 percent; among those who did not participate it was only 20 percent.
- Young adults who were actively involved in visual and performing arts programs in middle and high

school had a higher propensity for volunteering and voting in the national election and were more likely than their peers to engage in school and neighborhood politics and community service activities. (Source: Catterall, James S. (2009) Doing Well and Doing Good by Doing Art: A 12-Year National Study of Education in the Visual and Performing Arts on the Achievements of Young Adults, Los Angeles, London: I-Group Books. A growing body of research from neurology, sociology and gerontology finds that volunteering is linked to health and emotional benefits for the giver, after accounting for demographics, gender and participation in other activities such as sports.

- Volunteer work predicts greater life satisfaction in most countries surveyed by the Gallup World Poll (2009-2017; N=1,073,711) while controlling for several important covariates, such as age, household income, gender, food security, education and marital status. (Source: World Happiness Report (2019) 'Happiness and Prosocial Behavior: An Evaluation of the Evidence,' Chapter 4, Lara B. Akinin, Ashley V. Whillans, Michael I. Norton and Elizabeth W. Dunn. <https://bit.ly/2znnxTO>)
- In a sample of 66,343 respondents, volunteering was associated with greater well-being, as measured by the General Health Survey, a validated scale which includes several items related to general happiness. (Source: Tabassum F., J. Mohan and P. Smith (2016) 'Association of Volunteering with Mental Well-Being: A Lifecourse Analysis of a National Population-Based Longitudinal Study in the UK,' BMJ Open. <https://bmjopen.bmj.com/content/bmjopen/6/8/e011327.full.pdf>)
- In a sample of 10,317 women and men recruited from the Wisconsin Longitudinal Study, volunteering predicted well-being above and beyond numerous demographic characteristics and participation in self-focused social activities, such as formal sports, cultural groups, or country clubs. The Wisconsin Longitudinal Study also found that volunteering is associated with lower mortality risk in older adults. (Source: Piliavin, J. A. and E. Siegl (2007) 'Health Benefits of Volunteering in the Wisconsin Longitudinal Study,' Journal of Health and Social Behaviour, 48 (4), 450-464.)

Valuation Notes (continued)

- Responses from the more than one million people in 130 countries surveyed by the Gallup World Poll indicate that financial generosity—measured as whether one has donated to charity in the past month—is one of the top six predictors of life satisfaction around the world. Source: World Happiness Report (2019).
- “Charitable donations appear to activate reward centers within the human brain, such as the orbital frontal cortex and ventral striatum.” (Source: Harbaugh, W. T., U. Mayr and D. R. Burghart (2007) ‘Neural Responses to Taxation and Voluntary Giving Reveal Motives for Charitable Donations,’ Science, 316 (5831), 1622-1625.)
- In a representative sample of more than 600 American adults, individuals who on average spent more money in a typical month on others by providing gifts and donating to charity reported greater happiness. Meanwhile, how much money people reported spending on themselves was unrelated to their happiness. (Source: Dunn, E. W., L. B. Aknin and M. I. Norton (2008) ‘Spending Money on Others Promotes Happiness,’ Science, 319 (5870), 1687-1688. doi: 10.1126/ science.1150952.)

2c. Advocacy. ArtsQuest creates civic capital via advocacy in multiple forms. The three we measured and valued were legislation, fundraising for other nonprofits and the prosocial activations by its sponsors.

Legislation: ArtsQuest incents businesses to support additional quality arts education by delivering school programs that qualify for Pennsylvania’s Education Improvement Tax Credit. During the first seven years of the 10-year SteelStacks Partnership for Education and Outreach, the partnership has committed \$3.85M to deliver more than 95 arts, education and cultural programs—all of them free—to residents of Bethlehem. These include arts, education and cultural programming that teaches kids to read, gives job skills to students and showcases the region’s rich cultural heritage.

Fundraising: ArtsQuest advocates for other nonprofits. For example, it provided free/discount use of SteelStacks for fundraisers such as YWCA Pop-Up Prom Shop; St. Luke’s VIA Marathon; Walk to End Alzheimer’s; Zero Prostate Cancer Run/Walk; Autism Speaks; American Cancer Society’s Making Strides; and Jewish Federation’s Hatikva.

We estimate that altogether \$2M was raised from these events in 2018 and used a 20 percent attribution rate,

assuming 80 percent of the funds would have been raised without the use of SteelStacks.

Prosocial activations by ArtsQuest Partners: ArtsQuest teams with more than 150 businesses each year and is a pioneer at creating solutions for companies incorporating marketing, sales, employee engagement, community affairs, corporate social responsibility and philanthropic goals. Indeed, ArtsQuest coined the term “philanthroship” to describe its approach, which attracts a diverse portfolio of partners, including ABC6, Absolut Vodka, Bank of America, Capital BlueCross, Coca-Cola, Giant Food Stores, Green Mountain Energy, Guardian Life Insurance, Just Born, KIND Snacks, Levitt Foundation, Service Electric, United Airlines, U.S. Army, Verizon Foundation and Yuengling Traditional Lager.

In 2019, ArtsQuest sponsorship totaled \$2.4M. This sum is not included in the prosocial Valuation calculations given that we have already accounted for the outcomes of ArtsQuest programs and events. However, more than a dozen ArtsQuest partners, including PNC, Coordinated Health and Wells Fargo, activate their ArtsQuest partnerships in ways that benefit local communities. These initiatives are included in this calculation because a) they are in addition to the public goods ArtsQuest creates; and b) the prosocial activation is a result of the power of the ArtsQuest brand and image, as well as the desirability of its audience.

Examples of prosocial sponsor activations:

- PNC Bank. Titles concert series in the Musikfest Café and PNC Plaza. The bank’s prosocial activations include: PNC Backstage Experience, behind-the-scenes tours at Musikfest that introduce high school students to careers in the entertainment industry; and funding for SteelStacks’ Partnership for Education and Outreach.
- Coordinated Health. The hospital and health network activates its presenting sponsorship of Levitt Pavilion SteelStacks with programs designed to improve the wellness IQ of residents. Examples include Stay Healthy clinics and Physician Talks before the series of 50 free concerts.
- Wells Fargo. Volunteer recognition program at Musikfest awarding front row tickets to volunteers and their families and friends.

To value, we audited the activation programs of ArtsQuest partners, identified those that were prosocial and categorized them under four broad categories as shown in Table 4.

Valuation Notes (continued)

Table 4: Valuation of Prosocial Sponsor Activations

| Type, Reach | ProSocial Value |
|---|--------------------|
| Health | \$ 325,000 |
| Messaging (Reach: 250K) | |
| Screenings (Reach: 5,000) | |
| Promote/Incent People to Participate in Fitness Events, e.g., Oktoberfest Run (Reach: 10,000) | |
| Volunteers | \$ 300,000 |
| Recruitment (Reach: 10,000) | |
| Recognition (Reach: 35,000) | |
| Outreach, Access and Education | \$ 375,000 |
| Ticket Giveaways, Mentoring, Internships (Reach: 250,000+) | |
| Fundraising | \$ 535,000 |
| ArtsQuest sponsors raise money and awareness for arts and education via fun runs, golf tournaments, etc. (Reach: 100,000) | |
| Total | \$1,535,000 |

3. Human Capital refers to skills, knowledge and well-being that individuals gain from ArtsQuest programs, classes and events. Outcomes include a) better educational performance; b) access to training and career opportunities impossible in the absence of ArtsQuest; and c) improved health and well-being. The following assumptions and methodology were used to arrive at the value for these outcomes.

3a. Academic Achievement. Seventy-seven percent of participants in ArtsQuest's ArtSmart educational program maintained a higher grade point average (GPA) of ~0.3 points compared to non-participants in 2018. Applied this research to the 650 participants in 2019. Higher GPA yields a 7.6 percent increase in college completion rates.

A college grad earns ~\$2.2M over their lifetime as opposed to \$1.3M for those with only a high school diploma. (Source: Carnevale, Anthony P. et al. (2009) 'The College Payoff: Education, Occupation, Lifetime Earnings,' The Georgetown University Center on Education and the Workforce. <https://cew.georgetown.edu/cew-reports/the-college-payoff/>) We discounted this sum by the risk-free rate and the average remaining life of an 18-year-old male using data from the Social Security Administration Actuarial Tables.

Supporting research linking arts participation and educational achievement.

- SAT scores co-vary, i.e., they tend to increase linearly, the more arts classes, the higher the scores. Notably, students who took four years of arts coursework outperformed their peers who had one half-year or less of arts coursework by 58 points on the verbal portion and 38 points on the math portion of the SAT. (Source: Catterall, James S. (2002) 'Involvement in the Arts and Success in Secondary School,' In Richard J. Deasy (Ed.) (2002), Critical Links: Learning in the Arts and Student Achievement and Social Development, Washington, DC: AEP. 4.)
- Data from a large-scale randomized control trial reveals that increasing students' arts educational experiences significantly improves educational outcomes. Arts education: 1) reduces the proportion of students receiving disciplinary infractions by 3.6 percentage points; 2) increases writing achievement by 0.13 of a standard deviation; and 3) bolsters students' compassion for others by 0.08 of a standard deviation. (Source: Bowen, David H. and Brian Kisida (2019) 'Investigating Causal Effects of Arts Education Experiences: Experimental Evidence from Houston's Arts Access Initiative.' Rice University's Kinder Institute for Urban and Research Houston Education Research Consortium Report.)
- More research on arts and academic achievement can be found at ArtsEdSearch.org, which builds on Critical Links: Learning in the Arts and Student Academic and Social Development, a compendium of 62 peer-reviewed studies connecting student learning in the arts to a wide spectrum of academic and social benefits.

3b. Skills and Employment. ArtsQuest passes on cultural knowledge to students—introducing them to dance and music, taking them to museums and historic sites.

Familiarity with culture has been shown to effect educational and economic success. (Source: Bourdieu, Pierre (1984) Distinction: A Social Critique of the Judgement of Taste. London: Routledge & Kegan Paul.) For the 5,500 students who would otherwise have completed the academic year with no arts education, we valued ArtsQuest's contribution at 10 percent of the value of its programming where student GPAs are tracked. This is not to say it is worth only 10 percent of the value but rather, without research, the outcome is unknown. However, assuming the schools without any arts education are

Valuation Notes (continued)

serving students from families with lower household income, and given the research showing the importance of cultural knowledge and its increased impact on students from lower-income homes, we could not ignore this asset.

Also included in Skills and Employment valuation:

- Internships for 27 students in 2019. We valued these by increased wages of six percent (Source: Saniter, et al. (2015) 'The Effects of Student Internships on Labor Market Outcomes,' DIW Berlin and IZA Bonn, University of Hamburg. <https://www.sole-jole.org/16029.pdf>) and applying this incremental value to the median wage rate for Lehigh Valley in 2017. (Source: U.S. Census Bureau.)
- Masterclasses and performance opportunities for 100 students at ArtsQuest events such as the SteelStacks High School Jazz Showcase, valued at \$463 each, or 10 percent of an ArtsQuest internship.
- Professional training for 175 teachers and educators, valued at \$1,252 each based on the average cost of employee training. (Source: Association for Talent Development.)
- Healing Arts & Music for 4,000 survivors of domestic house and their children valued \$100, 30 percent of one therapy session.

3c. Health and Well-Being. ArtsQuest provides a social infrastructure where crucial connections are formed.

Our assumptions and calculations underlying the health and well-being benefits of ArtsQuest were as follows:

- People with "high arts exposure" had a 0.07 percent reduction in mortality. (Source: Konlaan, Boinkum B., et al. (2000) 'Visiting the Cinema, Concerts, Museums or Art Exhibitions as Determinant of Survival: A Swedish Fourteen-Year Cohort Follow-Up,' Department of Social Medicine, University of Umea Department of Welfare and Social Statistics, Scandinavian Journal of Public Health, Vol. 8: 174–8. <https://www.ncbi.nlm.nih.gov/pubmed/11045748>)
- Attribution: Ten percent of ArtsQuest's audience attends 65+ arts events per year, which was our threshold for "high arts exposure." ArtsQuest accounted for 39 percent of their total arts attendance. (Source: Performance Research Survey of ArtsQuest Attendees, 2019. bit.ly/ProSoci-alAQ2018)
- Life expectancy of a 39-year-old male is 78. (Source: Social Security Administration Actuarial Life Tables.)
- Apply the EPA estimate for the value of a saved life (\$7.4M) adjusted by the risk-free rate and discounted for the average remaining life of a 39-year-old male.
- Note: Further support for ArtsQuest's link to residents' well-being can be seen by the wide variance in perception among the highly engaged portion of its audience to the less engaged, (See Table 3.)

Supporting research linking the arts and well-being:

- The health benefits of having density of cultural resources, like ArtsQuest, in a neighborhood has been studied by researchers Mark Stern and Susan Seifert. Their 2017 study of New York City neighborhoods found after controlling for socio-economic status and ethnic composition, "the presence of cultural resources in a neighborhood—particularly in low-income neighborhoods—was statistically significant allowing residents to beat the odds and enjoy better health." (Source: Stern, Mark J. and Susan C. Seifert (2017) 'The Social Wellbeing of New York City's Neighborhoods: The Contribution of Culture and the Arts. Culture and Social Wellbeing in New York City,' Philadelphia, PA: University of Pennsylvania's Social Impact of the Arts Project (SIAP). <https://bit.ly/2ZpoGsy>)
- Comparing lower-income neighborhoods with the highest Cultural Asset Index to those with the lowest Cultural Asset Index, the higher CAI neighborhoods exhibited:
 - Declines of 3 percent to 5 percent in the proportion of the population reporting they suffer from diabetes, hypertension, or obesity
 - Declines of 25 percent for teen pregnancies
 - Declines of 14 percent for indicated investigation of child abuse and neglect
- Higher CAI neighborhoods also had other benefits: An 18 percent decline in the felony crime rate; a five percent decline in students with low performance on standardized tests; and a 17 percent-to-18 percent increase in the proportion of students scoring in level four (highest level) for both Math and English Language Arts.
- After engaging in the arts, 82 percent of people in deprived communities in London enjoyed greater well-being; 79 percent ate more

Valuation Notes (continued)

healthily; and 77 percent engaged in more physical activity. (Source: All-Party Parliamentary Group on Arts, Health and Wellbeing Inquiry Report (2017) 'Creative Health: The Arts for Health and Wellbeing,' Second Edition. <https://bit.ly/2znoWK4>)

4. Intellectual Capital. Intangibles are valued by a combination of outcomes, velocity and the individual rankings and weighting of each Intangible. Velocity represents the momentum a program creates using PSV's proprietary weighted index of population, soft power and social media reach in the market(s) a program occurs. We use Metropolitan Statistical Area (MSA) rankings for market size. Bethlehem is in the Allentown-Bethlehem-Easton, PA-NJ MSA which is ranked 69 out of 383 in the USA. Soft power sources are: The Soft Power 30, A Global Ranking of Soft Power; Overall Best Country Rankings (U.S. News & World Report); Elcano Global Presence Report; The World Factbook: Country Comparisons (CIA); and We Are Social's Compendium of Digital Statistics. PSV's range for Intangibles is based on analyzing the average percentage of intangible assets on the balance sheets of major publicly traded companies on the New York, London, Tokyo, Shanghai and Bombay stock exchanges, Euronext (Amsterdam), Deutsche Boerse (Frankfurt) and B3 (Sao Paulo). The combined CAPEX of these companies accounts for 50 percent of total global market capitalization.

ArtsQuest received the highest percentile ranking on each intangible. To remove bias, intangibles are turned into qualitative questions. For example, to receive the top score on "diversity" an organization must have at least five discrete sources of funding. ArtsQuest meets this standard, generating funds from hotel/motel tax; its for-profit media subsidiary; philanthropic grants; sponsorship; food, beverage and merchandise sales; and tickets and venue rentals. To receive the top score on ingenuity, disrupting entrenched approaches with innovation, requires at least three firsts or rare accomplishments. ArtsQuest was the first arts organization to qualify for the Neighborhood Partnership Program; is one of only three projects in the country to have won both the Rudy Bruner Award for Urban Excellence and the Urban Land Institute Global Award for Excellence; and ArtsQuest

is part of the only team in Pennsylvania recognized by the Kennedy Center's "Ensuring Arts for Any Given Child" initiative. Another example: ArtsQuest partners with 200 nonprofits each year, brings its programming to 60 schools and senior centers, and the fastest growing segment of its volunteers is from the Hispanic community, earning it a top score for "connectivity."

5. Source: Hollingsworth, Torey and Allison Goebel (2017) 'Revitalizing America's Smaller Legacy Cities: Strategies for Postindustrial Success from Gary to Lowell,' Lincoln Institute of Land Policy. <https://bit.ly/2MDfTgJ>
6. Source: Berube, Alan and Cecile Murray (2018) 'Renewing America's Economic Promise through Older Industrial Cities,' Metropolitan Policy Program at Brookings, The Brookings Institution. <https://brook.gs/2Pf2BJh>
7. Source: Mallach, Alan (2012) 'Philadelphia's Shadow: Small Cities in the Third Federal Reserve,' Community Development Studies and Education Department, Federal Reserve Bank of Philadelphia.
8. Source: U.S. Census Bureau (2018) 'Quick Facts: Lehigh Township, Northampton County, Pennsylvania.' <https://bit.ly/2Zk4zwL>
9. Source: U.S. Census Bureau (2018) 'Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2018.' <https://bit.ly/2KTvy9m>
10. Source: Van de Vyver, Julie and Dominic Abrams (2018) 'The Arts as a Catalyst for Human Prosociality and Cooperation,' Social Psychological and Personality Science, 9 (6) 664-674. <https://bit.ly/2KWXyZr>
11. Source: Stern, Mark J. and Susan C. Seifert (2017) 'The Social Wellbeing of New York City's Neighborhoods: The Contribution of Culture and the Arts. Culture and Social Wellbeing in New York City,' Philadelphia, PA: University of Pennsylvania's Social Impact of the Arts Project (SIAP). <https://bit.ly/2ZpoGsy>

Full copies of all research referenced in this Valuation and PDF of Appendix can be found at bit.ly/ProSocialAQ2019



The ProSocial Valuation Service harnesses the power of technology and big data to enable clients to invest resources where they will do the most good for people and planet.

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