

# VALUATION ON INVESTMENT (VOI) TOOL: *USER'S GUIDE*

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Corporation for  
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## About the Tool

### Tool Purpose.

This Valuation on Investment (VOI) tool was designed specifically for CNCS grantees and sponsors to provide ***an evidence-based approach and easy-to-use template to calculate the net value of your national service program***. This tool is intended to help you use data to gain insights and learning in managing your program and to make the case for investments made by funders of your CNCS service program. The tool will allow you to calculate the VOI for multiple CNCS-supported programs.

This first version of the VOI tool has been created in a low-tech, spreadsheet format to make it widely accessible by organizations with different levels of organizational capacity. It has been developed with the input of CNCS grantees and sponsors and it is intended for grantees and sponsors to enter data and calculate the VOI for *your* national service program. ***You own the data, and there is no expectation or requirement to share your data with CNCS.***

### Tool Limitations.

Initially, this tool will enable grantees and sponsors to estimate the supply side value of your national service program – that is, the value of your program in terms of the costs to supply the services and activities. It does not attempt to capture measures of program effectiveness, which would be necessary to develop an estimate of the value of social capital generated by your national service program, such as the value to individual lives and society of more students graduating from high school and entering college. In other words, ***the value side is limited to converting the hours served by National Service Participants into a dollar value (plus other non-NSP resources used by your program) but it does not include the outputs and outcomes of your national service program in the calculation of value***. For this reason, this tool calculates a program's Valuation on Investment and not its Return on Investment.

CNCS will make every attempt to responsibly release the tool with instructions, support and technical assistance to encourage proper use of the results it generates. CNCS support and technical assistance may include step-by-step instructions, webinars, videos, one-on-one technical assistance, hosted discussion groups or other materials and communication media. However, because CNCS will not host the tool nor store the data, we cannot control or guarantee the quality, accuracy and completeness of the data. As the saying goes, "garbage in, garbage out." ***CNCS and its contractors are not responsible for what you, the end user, ultimately do with the data.***

## How It Works.

You will enter information about your national service programs' expenditures and services, and the tool will automatically calculate a number of investment performance measures for each program. **These measures include each program's net present value (NPV), return on investment (ROI)<sup>1</sup>, and benefit-cost ratio.** It also will calculate the total investment in each program, dollar value of the program services per service year, and other measures.

These various investment measures compare program costs to the value of program services. **On the cost side of the ledger**, the tool takes into account all of the pertinent expenditures paid with federal, state and local government funding sources as well as with private funds. It also takes account of contributed resources for which no expenditures have been made.

**On the value side**, the dollar value assigned to program services by the tool is the estimated cost of delivering the same services using alternative suppliers charging market prices. The main component of this estimate is the alternative supplier's cost of labor. The required labor hours are estimated as the hours of National Service Participants (NSPs) spent delivering program services, adjusted for the relative productivity of NSPs compared to regular paid workers. The cost of the labor per hour is estimated as the wage rate paid to regular workers plus the fringe benefits they are paid and the overhead costs that alternative providers would incur.

The other component of an alternative supplier's cost is non-NSP costs, notably for equipment, materials, and direct supervision. Your programs' expenditures on these items are used to estimate these costs.<sup>2</sup>

For an overview of the methodology featuring a fictitious education example, see the Power Point presentation, **Valuation on Investment Tool: A Tool for Grantees and Sponsors.**

## Acknowledgements.

This methodology, tool and documentation were designed and developed by Abt Associates, Inc., with assistance from Relyon Media, for our client, The Corporation for National and Community Service. We thank CNCS staff, grantees and sponsors who participated in the workgroups for their helpful comments in reviewing an earlier version of the tool. We especially thank Heather Peeler, Nathan Dietz and James Siegal at CNCS for championing this project.

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<sup>1</sup> Although this tool is limited to calculating the dollar value of services provided by National Service Participants, or the Valuation on Investment (VOI), it uses the formula for Return on investment (ROI): the net value of the program (value minus cost) divided by its cost, expressed as a percentage.

<sup>2</sup> As described in the Appendix of this guide, the alternative-supplier's cost approach to valuing goods and services was first developed 30 years ago and has been applied to dozens of employment and training programs in rigorous cost-benefit evaluations.

## Step-by-Step Instructions

**Step 1. Assemble Your Data.** To use the VOI tool you will need to supply program expenditure and service information.

- **The expenditure data** will come from your organization's accounting system or from administrative files. The data should cover all pertinent programs and funding sources for one accounting year, which typically will be the most recent year for which accounting data are available. However, the data could be from any year—a federal fiscal year, a calendar year, or another accounting-year definition that your organization may use.
- **The service data** will come from timesheets or National Service Participant tracking records. The data include participant service hours in service activities, and these hours should correspond to the same year as the expenditure data. In addition, you have the option to develop a productivity value for National Service Participants based on data you have on their performance evaluations. Otherwise a default relative productivity value will be used.

Once you have assembled your data, you are ready to begin entering it into the VOI tool. Click on Worksheet Tab "Step 2" to enter set-up information.

**Step 2. Set Up.** This information should be entered in the data entry boxes provided on the set-up worksheet.

- In the top data-entry box on the set-up worksheet, enter your organization's name.
- In the second box, enter the accounting year that is being used in the VOI analysis.
- In the third box, enter the national service programs to be included in your VOI analysis. After entering a program, click on 'Add' and the program's name will appear in the panel at the right. You may enter as many national service programs as you like.
- Generally speaking, we expect that grantees and sponsors will separately enter programs with administrative differences, such as National and State AmeriCorps programs. However, the decision is yours.
- After you have entered program names, you will be asked whether each one is an AmeriCorps program (as opposed to a Senior Corps program). Please click the appropriate box.

When you are done, click on Worksheet Tab "Step 3" to input the funding and expenditure data needed to estimate program costs.

**Step 3. Calculate Program Costs.** All federal, state, local and private funding sources for your programs are considered in calculating program costs. Data on the expenditures charged to these funding sources during the accounting year should be entered in the boxes on the 'Input Funding Data' worksheet.

- Enter your funding sources in the box at the top of the worksheet, beginning with the CNCS grant. After entering the name of a source, click on 'Add' and the source will appear in the panel below.
- Input total annual expenditure amounts in the appropriate cells of the main panel, by funder, for the first funding source. 'Total' means all funds spent on the program during the accounting year. Enter only expenditures—that is, only the monies from a given funding source that were spent on the program during the year.
- Repeat this step for the other program funding sources. Funding sources include private contributions.
- If applicable, enter major sources of program resources that didn't involve expenditures.

When you have finished entering total funding data for each of your program's funding sources, click on Worksheet Tab "Step 4, Part 1" to begin calculating program value.

### **Step 4. Calculate Program Value, Part 1: Input National Service Participant (NSP) Service Hours Data.**

The first type of service information you will enter into the VOI tool is the time devoted to service activities by National Service Participants in each of your programs. These are the hours spent in service activities. The hours should be apportioned between service areas, such as 'Adult Education and Literacy.' This is done for each program as follows:

- Choose the service areas pertinent to the program from the list provided in the panel.
- Enter service hours by National Service Participants in each service area.

#### **STEP 3: EXAMPLES**

**Total Annual Expenditure Amounts.** *If your CNCS grant was for \$200,000 and the program spent only \$190,000 during fiscal year 2011 (this being the accounting year used in the analysis), you should enter \$190,000 in the panel.*

**Other Program Funding Sources.** *If your program received a contribution of \$10,000 from a foundation to pay for part of the salary of an employee, the contributor should be listed and the expenditure should be entered.*

**In-Kind Donations.** *If a company contributed the equipment and materials for a service project, the market value of those resources should be entered. If equipment is given (not loaned) and has a useful life beyond the accounting year used in the analysis, enter only the value of depreciation during the year (based on IRS depreciation rules or another accepted accounting practice).*

In this step, ignore National Service Participant hours spent in training or in other program activities not directly related to service delivery.

When you are finished entering NSP hours data for all programs, click on Worksheet Tab "Step 4, Part 2", where hours spent in service support and non-service activities will be addressed.

#### **Step 4. Calculate Program Value, Part 2: Allocate**

**Hours by Type of Service.** In this step, enter hours information for National Service Participants across all service activities. For each program, do the following:

- For *Service Hours*, enter the total service hours for National Service Participants in this program. This number should be hours spent in actually delivering services.

Note: VISTA sponsors may need to convert days to hours.

- For *Service Support Hours*, enter all service-related time spent off site or in non-service activities related to program delivery, including time spent in orientation and training for providing services. Service Support Hours are analogous to on-the-job training that an alternative provider would provide to its employees.
- For *Non-Service Hours*, enter time spent in non-service activities that are unrelated to program delivery. This covers a range of off-site activities that are not directly related to services (e.g., education activities, general training on how to be a program member or national service volunteer, recognition events, or social activities). The key difference between Service Support Hours and Non-Service Hours is whether the hours are related to, and for the most part necessary for, providing the actual service.

If your hours information does not distinguish between these three categories, allocate the hours using assumptions and note the assumptions you have made. The example at the right illustrates how you might use reasonable assumptions to make this allocation.

#### **STEP 4, PART 1: EXAMPLE**

**Entering Service Hours.** *If 10,000 service hours were devoted to your VISTA, half for Capacity Building and the other half for GED, then 5,000 hours should be apportioned to each service area.*

#### **STEP 4, PART 2: EXAMPLES**

**Distinguishing between Service, Service Support, and Non-Service Hours.** *Suppose 10 participants each recorded 8000 hours in the program during the accounting year and all were service hours except for three days of training (24 hours) per participant plus "a few" hours for miscellaneous non-service activities (thought to be about one percent of total hours). In this case you would enter 7,680 service hours, 240 service support hours, and 80 non-service hours.*

Once the service hours data are allocated to the type of service, the VOI tool will automatically calculate the Total Participant Hours as reported to CNCS. It will also calculate the percentage of service hours and service support hours out of total participant hours.

When you are finished entering hours data, click on Worksheet Tab "Step 4, Part 3" to address participant productivity.

**Step 4. Calculate Program Value, Part 3: Relative Productivity (Optional).** This part of Step 4 is optional. If you do nothing, the VOI tool will assume that the productivity of your participants is consistent with that measured in past evaluation research (cited in Appendix). This study involved a large sample of National Service Participants in multiple CNCS-funded programs around the country.

However, you have the option to substitute program-specific estimates of relative productivity. We recommend that you do this only if you have solid evidence on which to base the estimates. Such evidence would probably come from participants' on-site supervisors, and ideally would involve a comparison of participants' on-the-job performance to that of paid employees in the same organization. If you have this kind of evidence for some, but not all of your programs, you can supply relative productivity estimates for those programs and use the default estimate for the others.

When you are finished, click on Worksheet Tab "Step 4, Part 4" to enter itemized program expenditure information.

**Step 4. Calculate Program Value, Part 4: Input Itemized Program Expenditure Data.** The itemized program expenditure data should be entered in this step.

- On the top of the page, the programs entered at the set-up step again will appear. On the left, the two types of itemized program expenditures should be entered.
- The first type of expenditures covers service-related equipment and materials. These include the various non-NSP inputs used by programs in delivering services.

**STEP 4, PART 2: EXAMPLES, CONTINUED**

**Service Hours.** *In a Senior Companion program, this includes hours spent by National Service Participants with their clients plus hours spent travelling to and from their clients.*

**Service Support Hours.** *If a Senior Companion program provides 16 hours of initial training to participants and one hour to in-service training every two weeks, those hours should be considered support hours.*

**Non-Service Hours.** *If a Senior Companion program's National Service Participants meet one evening every two weeks for two hours, with one hour devoted to in-service training and the other hour to social conversation, the first hour is 'service support' and the second is 'non-service'.*

- The second type of expenditures covers compensation costs of supervisors of participants in service activities.
- Enter the total annual expenditure—across all funding sources—on equipment and materials used by each program in the process of delivering services. Because this is the total expenditure, the dollar amount may be different from the amount charged to your CNCS grant alone.
- Also enter the total fair market value of equipment and materials donated to the program—that is, items for which there was no expenditure.
- Then repeat this process for supervisor expenditures. These expenditures are

#### STEP 4, PART 4: EXAMPLES

**Materials and Equipment.** *An AmeriCorps program's total expenditure during a year might be \$20,000, 60 percent of which (\$12,000) was charged to the CNCS grant, with the remainder charged to state and local government funds.*

**In-kind Donations.** *In addition to the \$20,000 total expenditure in the example above, the AmeriCorps program might have received a donation of \$5,000 worth of additional equipment. This amount also should be entered in this step.*

**Supervisor Expenditures.** *It may be difficult to determine the cost of the fringe benefits provided to program staff who supervised National Service Participants. In situations like this, you will be given two options:*

- *One option is to enter no expenditure information.*
- *The other option is to estimate the needed expenditure amounts using the prompts provided by the VOI tool. For example, you can estimate the fringe benefits paid to supervisors by multiplying their wages and salaries by a percentage rate.*

limited to compensation (wages and fringe benefits) for **direct** supervisor labor—that is, employees who directly supervise national service participants working on specific service activities (such as housing rehabilitation). They exclude indirect supervision provided by program administrators or staff who do not directly involved in day-to-day operation of specific service activities.

- In some cases these specific expenditures may be difficult to determine.

When you are finished entering the itemized program expenditure data, click on Worksheet Tab “Step 5” to review your work and check for updates.

**Step 5. Review Entered Data and Check for Updates.** Use the following checklist in reviewing the entries you have made:

- ✓ Have you included all intended programs in the VOI analysis?
- ✓ Did you enter all of your funding sources, expenditures, and contributed resources?
- ✓ Did you apportion all National Service Participants' service hours between service categories? If you apportioned the hours to only one service category for simplicity's sake, would it be better to allocate the time across more than one category?
- ✓ Did you note assumptions used in dividing participants' hours in service, service support, and non-service time?
- ✓ If you have developed relative productivity estimates, have you applied these estimates to the programs where they are appropriate? Have you noted the sources of the estimates?
- ✓ Have you entered equipment and materials costs related to service activities, including the value of donated items? Have you entered the costs of supervision of participants in service activities?

When you've finished your review, click the "Generate VOI Reports" button to see the results.

**Step 6. View Results of Your VOI Analysis.** When you have completed Step 5, the tool will automatically calculate three overall investment performance measures for each of the analyzed programs:

- The program's net present value (NPV): this is the program's aggregate value minus its cost, expressed in dollars.
- Return on investment (ROI): this is the net value of the program (value minus cost) divided by its cost, expressed as a percentage. ROI is a familiar investment measure. We have attached the acronym VOI to the tool you are using, rather than ROI, because the return on investments in CNCS programs is limited to the dollar value of services provided by National Service Participants. These programs have several other important benefits not addressed by the current version of the tool.
- Benefit-cost ratio: this is the gross value of the program divided by its cost, expressed as a number with two decimal places.

Each measure will be based on the investment made in the accounting year used in the analysis. The VOI tool also will calculate the total investment in each program and dollar value of the program services per service year as well as other measures, and it also will provide guidance for using the various measures it has computed.

## **Frequently Asked Questions (FAQ)**

### **General**

**Q: What is the research underlying the methodology used in the tool?**

A: The methodology used in this tool has been used in many cost-benefit evaluations of employment and training programs. See the Appendix for a more detailed description of the methodology.

**Q: Who developed the tool?**

A: CNCS commissioned Abt Associates to develop an approach and methodology to calculate the ROI of national service programs. CNCS then asked Abt Associates to apply the methodology to a tool for the national service field.

**Q: When will the tool be released to the field?**

A: At the time this Guide was developed, CNCS is in the process of developing a rollout and dissemination plan that will answer this question.

**Q: Where and how will the tool be made available?**

A: At the time this Guide was developed, CNCS is in the process of developing a rollout and dissemination plan that will answer this question.

**Q: Does the tool require duplicate data entry as what we already enter into eGrants?**

A: The current version of the tool requires that these data be entered. A future version may allow automatic use of eGrant data.

**Q: What assistance will be provided to grantees and sponsors that want to use the tool?**

A: CNCS has developed several resources to support grantees and sponsors in using the tool. These include the excel-based, step-by-step Tool, a Power Point Overview of the VOI Tool Methodology featuring a fictitious education example, and this User's Guide containing: information about the tool purpose and limitations, step-by-step instructions for inputting data with contextual examples, an FAQ incorporating questions from CNCS staff, grantees and sponsors, additional examples for each focus areas plus capacity building, and, an appendix describing the methodology, assumptions and calculations.

**Q: How many programs can the tool accommodate?**

A: The tool can calculate the VOI for up to 25 national service programs.

**Q: Would it fall to the grantee/sponsor to decide if I want to break out our programs separately, or decide not to break them out in some instances?**

A: Yes. If desired, you could analyze the VOI of one or more of your programs by combining the total costs and value. By breaking out cost and value separately per program, you will have more accurate results at the program level.

**Q: Can I plug in the average state numbers for cost and value?**

A: Yes. Short cuts like this one may provide a useful way to produce quick, 'back of the envelope' VOI estimates. However, such short cuts are not recommended for anything but preliminary analyses, because they reduce accuracy. We recommend you enter the actual data for your program to produce a more accurate analysis.

**Q: What if my program's VOI is negative?**

A: This is useful information you can use in at least two ways. First, this VOI analysis has only assigned a dollar value to the program's direct services. It has not valued leveraged volunteer hours, the impacts of education (during the program or after it, using Segal awards) on participants' productivity, or other important outcomes. Thus, a negative VOI can be seen as the cost of securing these other important program benefits. Second, the negative results of the VOI analysis may provide insights into how you might improve the program. With new knowledge, you will be better informed about how to make your program more valuable to the target beneficiaries, the community and the general public.

## **Cost Calculation**

**Q: Is the VOI calculated on federal dollars only? What is the VOI for other funding sources?**

A: The tool calculates the VOI for the entire investment in programs, including all funding sources. There is no generally accepted way to differentiate the valuation on investment by one funding source compared to another, and the return is generally assumed to be the same across sources. Thus, the VOI, a percentage of the net investment cost, is considered the same for all sources. Assume the cost of a program is \$100,000, including \$60,000 from source A and \$40,000 from source B, and that the value of is estimated to be \$150,000. The VOI is 50 percent for both Source A and Source B. However, the measure 'net present value' is an absolute dollar amount—the difference between value and costs—is \$90,000 for A and \$60,000 for B.

**Q: Should I list State and National funds from CNCS separately (I have both)?**

A: Yes, we generally recommend that you do, because they are generally considered separate programs and often have different funding sources, program objectives, and/or service emphases. However, you are free to combine them if you wish. You also may wish to consider conducting two analyses—one in which the programs are analyzed separately and another in which they are combined.

**Q: AmeriCorps is not required to report on all funding from other sources. Do I need to list that in the tool?**

A: Yes, if you want a more accurate VOI analysis you need to account for the full costs of the program.

**Q: Are in-kind contributions monetized?**

A: It's optional, but strongly recommended. The market value of the contributions should be used in both Steps 3 and 4 (Part 4). Make your best estimates of the market value. It is important to recognize that contributions used in delivering program services figure into both the cost and the value of a program.

**Q: Are Segal Education Awards included in the VOI calculation? If yes, how?**

A: Yes, they are a cost of AmeriCorps programs. The value of the education purchased with the awards is not considered in the VOI analysis. Grantees and sponsors are encouraged to note that this value has been well documented.<sup>3</sup> If the VOI is positive, you can note that the net value of your program(s) is understated. If the VOI is negative, the negative dollar amount can be seen as the price of paying for additional education as well as other valuable program outcomes (see answer to previous question).

## Value Calculation

**Q: With respect to CNCS service areas, are those all prescribed?**

A: Yes, and they map to the service areas in eGrants.

**Q: Could I use estimates for total hours for the current year? If I chose to use actual historical data, this tool could only be used to analyze fully completed program years. Could I use the term minimums (900, 1700, 675, etc.), or would that undervalue the actual return?**

A: Yes, you can use estimates. We recommend using historical data or carefully made estimates, because these produce the most credible and defensible results.

**Q: What adjustments are made to the valuation of hours served by National Service Participants, and why?**

A: The following adjustments are made to National Service Participant hours. See the Appendix for a detailed explanation of the methodology.

- Non-service hours are removed from the calculation.
- National participant hours are multiplied by a relative productivity estimate, which adjusts the value down. There is an optional step that allows you to customize the productivity rate for your National Service Participant(s).
- Service hours are matched to BLS labor categories, and either the median or 25<sup>th</sup> percentile wage is automatically applied, depending on the experience level required by the occupation.
- Fringe and overhead/supervision are automatically applied that adjust the value up.

**Q: Would training related to the service count toward the service hours?**

A: Such training counts as service support hours. In the VOI analysis, such hours contribute to the estimated value of programs.

**Q: Can I apply different wage rates to volunteers that perform different service activities?**

A: Yes, if you can accurately track the National Service Participant's time in different service areas, then the corresponding BLS occupational categories and wage rates will be applied. Doing so will increase the accuracy of the VOI analysis.

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<sup>3</sup> See, for example, Henry Levin and Patrick McEwan, *Cost-Effectiveness and Education Policy* (American Education Finance Association, 2002).

**Q: Does the tool use regional wage data?**

A: Regional wage data are not used in the initial tool, in part because such data are not consistently available from BLS across all pertinent occupations. There are additional methodological issues. A future version of the tool may address this limitation.

**Q: How did you come up with the 43.3% assumption for calculating fringe?**

A: Fringe data come from the BLS's *Employer Costs for Employee Compensation (2010)*. Since fringe benefits constitute 30.5% of compensation, we multiply base wages by 1.434 to obtain total compensation (i.e. the fringe benefit rate is 43.4%).

**Q: How did you come up with the 1.21 mean overhead and supervision rate? Is it from a for-profit or non-profit perspective?**

A: The data of overhead come from William Bedsworth, Ann Goggins Gregory and Don Howard, *Nonprofit Overhead Costs* (The Bridgespan Group, 2008). This study found the median overhead rate for nonprofit organizations to be 21 percent. Comparable data are not available for profitmaking organizations, where overhead varies a great deal according to industry and firm structure. For example, the largest for-profit in-home tutoring firm in the U.S., Club Z, has a franchise structure, charging about \$20,000 plus six percent of revenues for providing many of the business's overhead functions; the local franchise owner performs other overhead functions and/or pays to have them performed.

**Q: Does the overhead rate include all overhead e.g. building expenses, telephone?**

A: This estimates what it would cost an alternative supplier to provide the program. It includes supervision provided directly on site, and oversight of NSP activities. In this step, there should be nothing that constitutes an indirect cost. This step is trying to estimate the value side of the ledger. This is what it would cost for someone else to run your program.

**Q: What's the difference between service hours, service support hours and non-service hours?**

A: **Service hours** are time spent by National Service Participants in working on their service activities. For direct service programs, that involves providing services directly to target beneficiaries such as tutoring a child, rehabilitating housing or responding to a disaster. **Service support hours** include specific training to be an AmeriCorp member or a Senior Corps volunteer, analogous to on-the-job training that an alternative supplier would have to provide for a new employee. Both service hours and service support hours are included in the valuation of service hours. However, National Service Participants' time spent on activities not related to providing service, such as member education or a volunteer recognition event, are considered **non-service hours**, and these are not factored into the calculation of VOI.

**Q: Do capacity building activities count as service hours?**

A: Yes, capacity building activities that are a primary activity of the CNCS-supported organization or National Service Participant are considered service hours, not service support hours. For National Service Participants engaged in capacity building activities, service hours includes indirect service such as conducting a community assessment to identify local needs, goals and recommendations, or developing a wiki to share and exchange program information. VISTA sponsors may need to convert days to hours. The newly created "Capacity Building" CNCS service area is included under each CNCS issue area, so that grantees can indicate hours spent in providing capacity building services for specific issue/focus areas.

**Q: Is the value of leveraged dollars and leveraged volunteer hours included in my VOI analysis?**

A: Leveraged dollars and hours are counted in the VOI analysis in the following way. Any amount contributed toward a program's regular service activities is counted as a cost in Step 3 (cash value for leveraged dollars, estimated market value for leveraged hours) and as part of value in Step 4. It is important to recognize that leveraged dollars and hours generate costs (to the contributors) as well as value (to the program). The VOI Tool assigns a somewhat higher value to the leveraged resources than the cost it estimates – that is, the program adds value.

Leveraged dollars and hours are not counted if they *do not contribute to program service activities*. Thus, if a program helps recruit volunteers for community activities that the program does not manage or maintain, the value of those leveraged hours is not counted in the analysis. The fact that these dollars and hours are not counted in the analysis does not mean that they are not important or valuable. We encourage grantees and sponsors to point out that, in addition to the dollar value estimated in this VOI analysis, their programs leverage other resources that are valuable to their communities.

**Q: Should we include both cash and in-kind equipment and materials in Step 4, Part 4?**

A: Yes. Expenditures on service-related equipment and materials should be included, regardless of funding source. The estimated market value of contributed items also should be included.

**Q: What's the difference between direct and indirect supervision?**

A: Direct supervision that (1) is labor paid for by the program and/or its funders, (2) is involved in specific service activities, and (3) oversees the effort of national service participants. It is a hands-on job that is needed in service activities such as housing rehabilitation and large environmental restoration projects. If the same services were to be delivered by an alternative provider from the marketplace, that provider would also need to supply such supervisory labor.

Indirect supervision of participants may be provided by program administrators or other program staff who are not directly involved in day-to-day operation of specific service activities. In valuing program services, this kind of supervision is covered by the overhead mark-up rate (which covers, in addition to indirect supervision, management, accounting, marketing, and a number of other functions).

**Q: What is the purpose of the Relative Productivity step? How does this impact the data? When/if the data is added, how will it benefit the calculation?**

A: The relative productivity step is an optional step, but recommended for a more accurate VOI analysis. Essentially, this step translates the time actually taken by National Service Participants to perform services into estimates of the hours it would take an alternative supplier to deliver identical services.

**Q: Why doesn't this tool calculate the social value of my program?**

A: Because that is really hard to operationalize in a standard tool for all national service programs. But we do encourage you to evaluate the effectiveness of your programs so that you can speak about the "supply-side value" of your program – what it would take for an alternative provider to **reproduce all the goods and services** produced by the program – in the context of program effectiveness and program outcomes.

## More Examples

### Disaster Services

(A fictitious AmeriCorps program in which participants work in the Disaster Mitigation service area.)

#### Program Cost

The tool computes program value by estimating the sum of all of the resources used to run the program. During the 2011 Fiscal Year, a partner organization provides office space valued at \$24,000. Home Depot donated building materials valued at \$12,000. CNCS provided a grant of \$155,000. The cost of Segal Education Awards for members is \$45,000. A local philanthropy provided a grant of \$60,000 which was used for various program needs.

$$\text{Cost (C)} = \$24\text{K} + \$12\text{K} + \$155\text{K} + \$45\text{K} + \$60\text{K} = \$296,000$$

#### Program Value

The tool computes program value by estimating what an alternative provider would need to pay to supply the program. An alternative supplier would need to cover the costs of both the labor and the materials provided by the program.

- *Value of Labor*  
During the 2011 Fiscal Year, members completed 20,000 National Service Participant (NSP) hours, all in the service area of Disaster Mitigation. To estimate labor costs, the CNCS VOI Tool uses data on wages and fringe benefits from the Bureau of Labor Statistics. In this example, the relevant wage is \$14.01/hour. The tool excludes non-service hours from the calculation of program value and adjusts for the productivity of National Service Participants relative to paid workers. Estimated program value also includes accounts for the fringe and overhead costs an alternative provider would incur. The value associated with 20,000 NSP hours in the service area of Disaster Mitigation is about \$412,000.
- *Value of Materials and Equipment*  
The value of the materials (tools, lumber) used in the projects was \$30,000.

$$\text{Value (V)} = \$412\text{K} + \$30\text{K} = \$442,000$$

#### Program Valuation on Investment

The tool computes the program valuation on investment by comparing the costs of the investment with the value of the investment. Specifically,

- Valuation on Investment =  $\frac{\text{Net Value}}{\text{Cost}} = \frac{V-C}{C}$
- Valuation on Investment =  $\frac{146,000}{296,000} = 49\%$

This means that for every dollar invested in the program, the program produces \$1.49 worth of value.

$$\text{Valuation on Investment (VOI)} = 49\%$$

## Economic Opportunity

(A fictitious AmeriCorps program in which participants work in the Housing Rehabilitation and Construction service area.)

### Program Cost

The tool computes program value by estimating the sum of all of the resources used to run the program. During the 2011 Calendar Year, a partner organization provides office space valued at \$24,000. A home supplies company donated materials valued at \$12,000. CNCS provided a grant of \$200,000. Segal Education Awards are valued at \$67,166. A local philanthropy provided a grant of \$60,000 which was used for various program needs.

$$\text{Cost (C)} = \$24\text{K} + \$12\text{K} + \$200\text{K} + \$67\text{K} + \$60\text{K} = \$363\text{K}$$

### Program Value

The tool computes program value by estimating what an alternative provider would need to pay to supply the program. An alternative supplier would need to cover the costs of both the labor and the materials provided by the program.

- *Value of Labor*  
During the 2011 Calendar Year, members completed 30,000 National Service Participant (NSP) hours, all in the service area of Housing Rehabilitation and Construction. To estimate labor costs, the CNCS VOI Tool uses data on wages and fringe benefits from the Bureau of Labor Statistics. In this example, the relevant wage is \$14.01/hour. The tool excludes non-service hours from the calculation of program value and adjusts for the productivity of National Service Participants relative to paid workers. Estimated program value also includes accounts for the fringe and overhead costs an alternative provider would incur. The value associated with 30,000 NSP hours in the service area of Housing Rehabilitation and Construction is about \$620K.
- *Value of Materials and Equipment*  
The value of the materials used in the projects was \$30K.

$$\text{Value (V)} = \$620\text{K} + \$30\text{K} = \$650\text{K}$$

### Program Valuation on Investment

The tool computes the program valuation on investment by comparing the costs of the investment with the value of the investment. Specifically,

- Valuation on Investment =  $\frac{\text{Net Value}}{\text{Cost}} = \frac{V-C}{C}$
- Valuation on Investment =  $\frac{287\text{K}}{363\text{K}} = 79\%$

This means that for every dollar invested in the program, the program produces \$1.79 worth of value.

$$\text{Valuation on Investment (VOI)} = 79\%$$

## Education

(A fictitious Foster Grandparents Program in which participants work in the Secondary Education and Special Education service areas.)

### Program Cost

The tool computes program value by estimating the sum of all of the resources used to run the program. During the 2010 Calendar Year, CNCS provided a grant worth a total of \$150,000. Local school districts provided resources totaling \$100,000. A local philanthropy covered part of the salary of a program administrator, at a cost of \$5,000.

$$\text{Cost (C)} = \$150\text{K} + \$100\text{K} + \$5\text{K} = \$255,000$$

### Program Value

The tool computes program value by estimating what an alternative provider would need to pay to supply the program. An alternative supplier would need to cover the costs of both the labor and the materials provided by the program.

- *Value of Labor*  
During the 2010 Calendar Year, members completed 1,700 National Service Participant (NSP) hours in the service area of Secondary Education and 6,800 NSP hours in Special Education. To estimate labor costs, the CNCS VOI Tool uses data on wages and fringe benefits from the Bureau of Labor Statistics. In this example, the relevant annual wage for secondary education is \$42,070 and the relevant annual wage for special education is \$41,210. The tool excludes non-service hours from the calculation of program value and adjusts for the productivity of National Service Participants relative to paid workers. Estimated program value also includes accounts for the fringe and overhead costs an alternative provider would incur. The value associated with 1,700 NSP hours in the service area of Secondary Education and 6,800 NSP hours in Special Education is \$278,139.
- *Value of Materials and Equipment*  
No materials or equipment were provided by this program.

$$\text{Value (V)} = \$278,139$$

### Program Valuation on Investment

The tool computes the program valuation on investment by comparing the costs of the investment with the value of the investment. Specifically,

- Valuation on Investment =  $\frac{\text{Net Value}}{\text{Cost}} = \frac{V-C}{C}$
- Valuation on Investment =  $\frac{23,139}{255,000} = 9\%$

This means that for every dollar invested in the program, the program produces \$1.09 worth of value.

$$\text{Valuation on Investment (VOI)} = 9\%$$

## Environmental Stewardship

(A fictitious AmeriCorps program in which participants work in the "Clean and Safe Waters" and in the "Wildlife, Land, & Vegetation Protection or Restoration" service areas.)

### Program Cost

The tool computes program value by estimating the sum of all of the resources used to run the program. During the 2011 Fiscal Year, a partner organization provides office space valued at \$15,000. Home Depot donated building materials valued at \$20,000. CNCS provided a grant of \$40,000 which was used for member stipends. A local philanthropy provided a grant of \$20,000 which was used for various program needs.

$$\text{Cost (C)} = \$15\text{K} + \$20\text{K} + \$40\text{K} + \$20\text{K} = \$95,000$$

### Program Value

The tool computes program value by estimating what an alternative provider would need to pay to supply the program. An alternative supplier would need to cover the costs of both the labor and the materials provided by the program.

- *Value of Labor*  
During the 2011 Fiscal Year, members completed 14,000 National Service Participant (NSP) hours in the service area of "Wildlife, Land, & Vegetation Protection or Restoration" and 1,700 NSP hours in the service area of "Clean and Safe Waters". To estimate labor costs, the CNCS VOI Tool uses data on wages and fringe benefits from the Bureau of Labor Statistics. In this example, the relevant wage is \$10.08/hour. The tool excludes non-service hours from the calculation of program value and adjusts for the productivity of National Service Participants relative to paid workers. Estimated program value also includes accounts for the fringe and overhead costs an alternative provider would incur. The value associated with 15,700 NSP hours is about \$261,246.
- *Value of Materials and Equipment*  
The value of the materials (tools, lumber) used in the projects was \$40,000.

$$\text{Value (V)} = \$261\text{K} + \$40\text{K} = \$301,000$$

### Program Valuation on Investment

The tool computes the program valuation on investment by comparing the costs of the investment with the value of the investment. Specifically,

- Valuation on Investment =  $\frac{\text{Net Value}}{\text{Cost}} = \frac{V-C}{C}$
- Valuation on Investment =  $\frac{206,000}{95,000} = 217\%$

This means that for every dollar invested in the program, the program produces \$3.17 worth of value.

$$\text{Valuation on Investment (VOI)} = 217\%$$

## Healthy Futures

(A fictitious Senior Companion Program in which participants work in the Independent Living service area.)

### **Program Cost**

The tool computes program value by estimating the sum of all of the resources used to run the program. During the 2011 Calendar Year, a partner organization provides office space valued at \$24,000. A medical supplies company donated health monitoring devices valued at \$12,000. CNCS provided a grant of \$200,000. A local philanthropy provided a grant of \$60,000 which was used for various program needs.

$$\text{Cost (C)} = \$24\text{K} + \$12\text{K} + \$200\text{K} + \$60\text{K} = \$296,000$$

### **Program Value**

The tool computes program value by estimating what an alternative provider would need to pay to supply the program. An alternative supplier would need to cover the costs of both the labor and the materials provided by the program.

- *Value of Labor*

During the 2011 Calendar Year, members completed 20,000 National Service Participant (NSP) hours, all in the service area of Independent Living. To estimate labor costs, the CNCS ROI Tool uses data on wages and fringe benefits from the Bureau of Labor Statistics. In this example, the relevant wage is \$13.44/hour. The tool excludes non-service hours from the calculation of program value and adjusts for the productivity of national service participants relative to paid workers. Estimated program value also includes accounts for the fringe and overhead costs an alternative provider would incur. The value associated with 20,000 NSP hours in the service area of Independent Living is about \$396,445.

- *Value of Materials and Equipment*

The value of the materials (gas reimbursement, health monitoring devices) used in the projects was \$30,000.

$$\text{Value (V)} = \$396\text{K} + \$30\text{K} = \$426,000$$

### **Program Return on Investment**

The tool computes the program return on investment by comparing the costs of the investment with the value of the investment. Specifically,

- Return on Investment =  $\frac{\text{Net Value}}{\text{Cost}} = \frac{V-C}{C}$
- Return on Investment =  $\frac{130,000}{296,000} = 44\%$

This means that for every dollar invested in the program, the program produces \$1.44 worth of value.

**Return on Investment (ROI) = 44%**

## Veterans and Military Families

(A fictitious RSVP program in which participants work in the Mental Health service area.)

### Program Cost

The tool computes program value by estimating the sum of all of the resources used to run the program. During the 2009 Calendar Year, a partner organization provides office space valued at \$10,000. CNCS provided a grant of \$100,000 which was used for member stipends. A local philanthropy provided a grant of \$40,000 which was used for various program needs.

$$\text{Cost (C)} = \$10\text{K} + \$100\text{K} + \$40\text{K} = \$150,000$$

### Program Value

The tool computes program value by estimating what an alternative provider would need to pay to supply the program. An alternative supplier would need to cover the costs of both the labor and the materials provided by the program.

- *Value of Labor*  
During the 2009 Calendar Year, members completed 12,000 National Service Participant (NSP) hours, all in the service area of Mental Health. To estimate labor costs, the CNCS VOI Tool uses data on wages and fringe benefits from the Bureau of Labor Statistics. In this example, the relevant wage is \$14.38/hour. The tool excludes non-service hours from the calculation of program value and adjusts for the productivity of National Service Participants relative to paid workers. Estimated program value also includes accounts for the fringe and overhead costs an alternative provider would incur. The value associated with 12,000 NSP hours in the service area of Mental Health is about \$254,503.
- *Value of Materials and Equipment*  
No materials or equipment were provided by this program.

$$\text{Value (V)} = \$254,503$$

### Program Valuation on Investment

The tool computes the program valuation on investment by comparing the costs of the investment with the value of the investment. Specifically,

- Valuation on Investment =  $\frac{\text{Net Value}}{\text{Cost}} = \frac{V-C}{C}$
- Valuation on Investment =  $\frac{104,503}{150,000} = 70\%$

This means that for every dollar invested in the program, the program produces \$1.70 worth of value.

$$\text{Valuation on Investment (VOI)} = 70\%$$

## Capacity Building

(A fictitious VISTA program in which participants work in the Capacity Building service area.)

### Program Cost

The tool computes program value by estimating the sum of all of the resources used to run the program. During the 2010 Calendar Year, a partner organization provides office space valued at \$10,000. CNCS provided a grant of \$100,000 which was used for member stipends. A local philanthropy provided a grant of \$40,000 which was used for various program needs.

$$\text{Cost (C)} = \$10K + \$100K + \$40K = \$150K$$

### Program Value

The tool computes program value by estimating what an alternative provider would need to pay to supply the program. An alternative supplier would need to cover the costs of both the labor and the materials provided by the program.

- *Value of Labor*  
During the 2010 Calendar Year, members completed 2,000 National Service Participant (NSP) hours recruiting community volunteers and 15,000 NSP hours training and managing community volunteers. All 17,000 hours fall in the service area of Capacity Building for a mentoring program that leverages volunteers as a primary activity in its program design. To estimate labor costs, the CNCS VOI Tool uses data on wages and fringe benefits from the Bureau of Labor Statistics. In this example, the relevant wage is \$14.77/hour. The tool excludes non-service hours from the calculation of program value and adjusts for the productivity of National Service Participants relative to paid workers. Estimated program value also includes accounts for the fringe and overhead costs an alternative provider would incur. The value associated with 17,000 NSP hours in the service area of Capacity Building is about \$370K.
- *Value of Materials and Equipment*  
No materials or equipment were provided by this program.

$$\text{Value (V)} = \$370K$$

### Program Valuation on Investment

The tool computes the program valuation on investment by comparing the costs of the investment with the value of the investment. Specifically,

- Valuation on Investment =  $\frac{\text{Net Value}}{\text{Cost}} = \frac{V-C}{C}$
- Valuation on Investment =  $\frac{220K}{150K} = 147\%$

This means that for every dollar invested in the program, the program produces \$2.47 worth of value.

$$\text{Valuation on Investment (VOI)} = 147\%$$

## Appendix: Methodology, Assumptions and Calculations

The VOI tool compares the costs of your programs to the estimated dollar value of the services the programs provide. This appendix explains how costs are calculated, the value of services is estimated, and costs and value are compared. It also describes the key program effects that are not taken into account in the VOI tool's calculations, but should ideally be taken into consideration is an assessment of the performance of your programs.

### Key Assumption

The methodology is based on the assumption that the dollar value of services provided by national service programs is equal to the estimated cost of delivering the same services using alternative suppliers charging market prices. All estimates of the value of program services are considered by asking, *What would an alternative provider need to spend to supply this service?*

The methodology used in this tool has been used in many cost-benefit evaluations of employment and training programs. The approach was first developed by economist Lee Friedman and then extended and used in an evaluation of the Supported Work demonstration program.<sup>4</sup> Placing a dollar value on goods and services that are not bought and sold in the marketplace ultimately involves judgments about society's willingness to pay for this output. To avoid such judgments, this approach estimates the dollar amount an alternative supplier would charge for equivalent goods and services. This amount can be estimated using several techniques. The one used here (and most commonly used in cost-benefit research on social programs) involves estimating (a) the cost of labor inputs, based on the hours of labor the alternative supplier would require and the compensation cost of the labor, and (b) the cost of non-labor inputs, based on the market value of the inputs.

### Program Costs

The VOI tool calculates the total cost of your programs. It takes into account all pertinent expenditures, regardless of the funding sources to which they were charged. The tool also takes into account in-kind contributions of goods and services by individuals, organizations or agencies. Thus, if all pertinent entries are made, the tool calculates the dollar value of all resources used by the programs.

From some perspectives, 'leveraged' funding and contributions are not seen as program costs. The programs may acquire these additional resources at no direct cost to their sponsoring agencies or the federal government. From an economic perspective,

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<sup>4</sup> See Peter Kemper and David Long, *The Supported Work Evaluation: Technical Report on In-Program Output and Costs* (New York, NY: MDRC, 1981). The methodology is described in detail in this report.

however, these resources clearly constitute part of the overall investment in the program.

### **Value of Program Services**

The VOI tool calculates the dollar value of CNCS programs by estimating what it would cost to purchase the services provided by the programs at market prices—that is, using paid contractors or employees rather than the National Service Participants (who may receive a stipend substantially below the market wage). To estimate the direct labor costs to an alternative supplier to provide the same services, we estimate the labor hours that would be required, the wage that would be paid, and the fringe benefits that would be provided.

To estimate the direct labor hours required, we multiply the hours devoted to service activities by National Service Participants by a ratio of participants' productivity to the productivity of paid, entry-level employees doing comparable work. Based on earlier evaluation work done by Abt Associates, involving participants in several programs in multiple locations, we put this ratio at .85.<sup>5</sup> This is a default estimate, and grantees and sponsors can replace it with their own estimates if they collect appropriate information from the participants' supervisors.

In order to determine the appropriate wage, we have matched each program service area with an occupation from the Bureau of Labor Statistics' (BLS) Standard Occupational Classification System. BLS estimates the distribution of hourly wages for each occupation.<sup>6</sup> We are using the 50<sup>th</sup> percentile wage for occupations such as Social and Human Services Assistants (SOC 21-1093) and Construction Laborers (SOC 47-2061), which are entry-level positions that do not require education or work experience beyond those that National Service Participants are likely to possess. We are using the 25<sup>th</sup> percentile wage for occupations such as 'Teachers and Instructors, All Other' (SOC 25-3099), because some of the positions covered by this occupational classification (specifically positions in post-secondary and technical institutions) have higher education requirements that few National Service Participants meet. All of our pairings of SOC codes with CNCS service areas are shown in 'Value Calculations worksheet embedded in the tool. The Value Calculations worksheet also indicates the areas where we are using the 50<sup>th</sup> or the 25<sup>th</sup> percentile wage valuing services in a given occupation.

These wage data form the foundation of our measure of program value. National service participants devote different numbers of hours each year to volunteer service activities. To estimate the full cost of obtaining the pertinent services on the open market, we multiply the hourly wage by the corresponding number of hours of service

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<sup>5</sup> The fraction is consistent with the findings on service projects from an earlier Abt Associates evaluation of CNCS programs, which were reported by JoAnn Jastrzab and others in *Impacts of Service: Final Report on the Evaluation of American Conservation and Youth Service Corps* (Abt Associates, 1996).

<sup>6</sup> Wage data come from the BLS's *Occupational Employment and Wages* (May 2009).

work performed by National Service Participants, and then add multiplicative factors for the costs of both fringe benefits<sup>7</sup> and institutional overhead.<sup>8</sup> The fringe benefit rate is 43 percent and the institutional overhead rate is 21 percent. An alternative supplier would need to provide fringe benefits to workers as part of compensation and also would need to carry out its normal oversight and other administrative functions.

### **What This Assessment Is Missing**

A comprehensive assessment of the return on investment in CNCS programs would take into account all their net impacts and all of their net costs.

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<sup>7</sup> Fringe data come from the BLS's *Employer Costs for Employee Compensation (2010)*. Since fringe benefits constitute 30.5% of compensation, we multiply base wages by 1.434 to obtain total compensation (i.e. the fringe benefit rate is 43.4%).

<sup>8</sup> The data of overhead come from William Bedsworth, Ann Goggins Gregory and Don Howard, *Nonprofit Overhead Costs* (The Bridgespan Group, April 2008). This study found the median overhead rate for nonprofit organizations to be 21 percent.