



The NPower Service Model: Documentation

For Service Model v2a, December 2000

NPower is a non-profit organization in Seattle, Washington whose mission is to help non-profits use technology to better serve their communities. NPower offers a variety of low-cost and no-cost services, including training, volunteer matching and consulting with planning and implementation of technology solutions.

The NPower Service Model is a spreadsheet created by NPower to assist with mapping out demand, service delivery, revenues and expenses for non-profit technology assistance services. It is based on the service delivery model used by NPower, but it is adaptable and could be used by anyone interested in starting non-profit technology assistance services. This is one of several toolkits available from NPower to assist with the delivery of non-profit technology services. The focus of this model is on consulting and training services; because volunteer matching services are less standardized and do not generate revenues, they are not included here except insofar as the associated staffing can be included in the budget.

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This model is a work in progress and NPower welcomes suggested improvements, as well as feedback on any errors or problems. Please refer comments, questions, and suggestions to NPower’s National Outreach Team at National@NPower.org.

Basic Things to Know

Who should use this model? Although this model was developed by NPower for other organizations seeking to develop an NPower program, it can be used to develop a non-profit technology service provider more generically.

What you need to know to use this spreadsheet model:

- ▶ **Excel skills:** You must have a basic working knowledge of Microsoft Excel. At a minimum, you must be able to navigate within and among multiple worksheets and edit cell contents. To create customized budgets, you should also know simple formulas and possibly adding and deleting rows. To adapt the model in ways that require structural changes to the spreadsheet, you must be familiar with more advanced functions such as complex formulas and IF statements, worksheet protection and conditional formatting.
- ▶ **Background data:** You should have basic information about the non-profit sector in your target service area - specifically, numbers of non-profits broken out by revenue size. You should also know about existing non-profit technology service providers in the community, and be able to estimate

the proportion of the market which is already being served. For more information about obtaining this information, see NPower's companion Community Assessment Toolkit.

- ▶ **Proposed services:** Although this model can help you refine service offerings, staffing and fees, you should have a set of starting assumptions about who you will serve, what services you will provide, what you might charge for those services, and what kind of capacity you will have to provide services.

How does this model work? The basic concept is that you enter knowledge and assumptions about your environment and the proposed services and staffing of the new technology assistance program. Based on this input, the model projects demand for services, service delivery, and program revenues. In addition, you have the option to use this model to create a program budget.

What's in this spreadsheet model? There are seven worksheets. Following is a brief explanation of the seven worksheets and how they interact. More detail about each worksheet is provided later in this document. In any worksheet, a red triangle in the corner of a cell indicates that there is a comment in that cell which may provide more information; to view the comment, hover your mouse over the cell.

- ▶ **Assumptions:** You start by entering what you know and your assumptions about the non-profit community, their likely utilization of services, and proposed staffing and capacity for the new NPower, for four years.
- ▶ **Sample Assumptions:** As a basis for comparison, sample assumptions are provided based on the experience of NPower Seattle. As more NPower programs develop around the country, their experience will be entered here as well, so users of the model can see what happened in different communities.
- ▶ **Demand:** Based on your Assumptions, the Demand Worksheet calculates the volume of demand for different services. You do not edit this worksheet.
- ▶ **Service Delivery:** Based on your Assumptions, the Service Delivery worksheet shows the volume of service you can deliver with your assumed capacity, and how this compares with demand. This worksheet cannot be modified.
- ▶ **Revenues:** Based on your Assumptions, the Revenues worksheet calculates the revenues that would be earned from service delivery. This worksheet cannot be modified.
- ▶ **Sample Budget:** This worksheet provides a format for creating a program budget. This worksheet can be modified.
- ▶ **Summary:** The Summary worksheet pulls together service delivery, revenues, expenses and fees in one easy-to-view page. You do not need to edit this worksheet unless you've used a worksheet other than the Sample Budget to calculate expenses.

Other tips and things to know:

- ▶ **Macros:** When you open this spreadsheet, you will be informed that there are Macros and asked if you want to enable them. The only Macros in the spreadsheet are shortcuts to quickly clear out assumption data. These macros are convenient but not necessary, and all necessary functions in the spreadsheet will work even if Macros are disabled.
- ▶ **What if I want to modify the spreadsheet?** This spreadsheet contains some complex formulas. Because they would be difficult to recreate if accidentally deleted, the following worksheets have been partially or completely password protected: Assumptions, Sample Assumptions, Demand, Service Delivery, and Revenues. If you are a confident Excel user and wish to modify the spreadsheet structurally, choose Tools > Protection > Unprotect Sheet, and the password is "npower" (all lower case). The Demand, Service Delivery and Revenue sections in particular include nested IF statements and conditional formatting.

The Assumptions Worksheet

On this worksheet, you first enter some information about the non-profit sector in your community. You enter this information only once. You then enter assumptions for up to four years of operation for the new technology service provider. ▶ Each year of assumptions contains the same data elements. ▶ Yellow cells are places where data should be entered. ▶ In a field as dynamic as technology, it is of course hard to predict what will happen in four years. The most productive use of the later years in this model is to project out your starting assumptions to see how they play out in the longer term, recognizing that the environment will change and new opportunities will emerge that you cannot predict now.

- ▶ **Non-profit characteristics:** This model assumes that the program will be membership-based, with the option of dividing non-profit organizations into up to four categories based on revenue size. ▶ In the first section of the assumptions, enter the number of non-profit organizations in the community or target service area, divided into your proposed membership categories. ▶ If there are already technology service providers in the community, you may want to enter only the proportion of the non-profit community which you estimate to be un-served. For example, if there are 1,000 non-profits, but your community assessment suggests that about 10 percent of the market is being adequately served, you might only enter 900 non-profits into the model.
- ▶ **Service utilization:** In this section, you will estimate the number of non-profits who will join the NPower, and then estimate the volume of services used by the different membership categories as well as by non-members. ▶ You can leave any of these services blank if you do not expect to provide them. ▶ If you do not plan to charge dues, you can still use the membership line to estimate the number of non-profits who will use your services, and simply leave the dues line blank. ▶ For guidance on what to expect in terms of demand, look at the Sample Assumptions to see what happened in Seattle (and in later versions of this model, in other communities). These sample numbers are based on the level of service actually provided by NPower Seattle; bear in mind that service delivery can be limited not only by demand, but also by capacity - in other words, just because NPower Seattle delivered 100 hours of a certain service in its first year doesn't mean there was only demand for 100 hours. Perhaps more hours would have been delivered if there had been more consultants in that first year.
- ▶ **Training:** You will see a line for the number of classroom hours of training (i.e. tuition) and a line for billable customized training hours purchased for each membership group. ▶ The classroom training line item should be used for any services billed per-student, per-hour. Each classroom hour is one student hour of training for which you will charge tuition, whether that's in an "open" class (e.g. where people from many organizations register for a class listed in a course schedule) or a private class (e.g. where an organization pays to have a custom class taught to a group of its staff). ▶ An hour of billable customized training is essentially a consulting fee for development and/or delivery of customized training. ▶ So, when one student attends a four-hour class, that is four classroom hours. When eight students attend a two-hour class, that is 16 classroom hours. When a trainer spends 8 hours preparing for a four-hour customized class attended by ten people, there are several ways you could charge the member organization:
 1. Eight billable hours (for the prep time) and 40 classroom hours (ten people, four hours each).
 2. 12 billable hours (for prep and teaching time) and 40 classroom hours (10 people, 4 hours each).
 3. 12 billable hours only, with no per-student charge for the classroom time (this is considerably less financially viable).
- ▶ **Consulting:** The consulting section allows you to specify up to five different consulting services, each of which can have a different demand profile and different fees. ▶ The assumptions are entered as follows: For each service, how many projects do I expect to do for every hundred organizations? And what is the average length of this type of project? From this, the model will calculate total number of consulting hours, but thinking about projects is more intuitive for most people. ▶ For Scheduled Support, it's easiest to classify a "project" as one month of

scheduled support; thus the metric is how many months of scheduled support are purchased per 100 agencies, and what's the average number of hours per month. ▶ When entering hours, enter only billable hours, as these cells are used to calculate revenues. NPower is currently looking at the issue of non-billable hours needed for different types of projects, and this information should be available in the future.

- ▶ **Dues and Fees:** In this section you will enter the proposed dues and service fees. ▶ Again, you can leave these sections blank if you do not intend to provide a given service or charge a fee. ▶ The Assumptions worksheet allows you to have a “sliding fee” system of different fees for different membership categories, and also allows you to have different fees for different services. You probably do not want to have both, as the fee structure becomes very complicated. ▶ For simplicity's sake, there is only one fee for consulting services provided by interns. If you plan to have different fees for different intern services, use this cell to enter an average fee.
- ▶ **Capacity:** In this section, you enter your assumptions about staff, interns and contractors, and the volume of service that each can provide. ▶ Once again, refer to the Sample Assumptions to get a sense of reasonable expectations for service delivery for each FTE (Full Time Equivalent).
 - ▶ **Training:** ▶ For the Training Director and any additional trainers, enter the percent time available for classroom teaching and billable customized training hours combined. The “percent time available for direct service” is calculated from the Available Work Hours Per Year, which is the last item in the Capacity assumptions. Thus, if a trainer has 1,500 hours available for direct service (once leave and professional development are backed out) and you assume each trainer can spend 50% of their time for either classroom teaching or billable consulting, each trainer will have 750 hours available for direct service. ▶ If you plan to use contract trainers, enter the number of hours of training to be delivered by contractors and the hourly fee you will pay for their services. Bear in mind that managing contractors requires time from the Training Director. ▶ It is reasonable (but not necessary) to expect that technology consultants can also provide some training. For example, a database consultant might be expected to teach one or two classes per month on Filemaker or MS Access. Bear in mind that not every consultant has the skills to be a good trainer, no matter how well they know their technology. If you expect some but not all consultants to train, enter the average training hours for all consultants.
 - ▶ **Consulting:** ▶ When entering consultant FTEs, you may want to “back out” portions of some positions which are expected to do substantial work other than direct consulting. For example, you may want to treat the Consulting Director as a .5 FTE director and .5 FTE consultant, and only enter the .5 FTE consultant time here. Similarly, if one of the consultants is also the in-house IT person, you may want to back out a portion of that person's time. ▶ If you plan to use contract consultants, enter the number of hours of consulting to be delivered by contractors and the hourly fee you will pay for their services. Bear in mind that managing contractors requires time from the Consulting Director. ▶ The “percent time available for direct services” is calculated from the Available Work Hours Per Year, which is the next item in the Capacity assumptions. Thus, if a consultant has 1,500 hours available for direct service once leave and professional development are backed out, and you assume each consultant will be 33% billable, each consultant will be expected to bill 500 hours. ▶ For interns, enter only the number of billable hours you expect from each intern. Unlike the consultant data, the intern assumptions are based on numbers of people rather than FTEs, since the duration of an internship can differ considerably.
 - ▶ **Calculating Available Work Hours Per Year:** ▶ As mentioned above, this last section in Capacity is used to adjust direct service FTEs to account for leave, holidays and professional development. ▶ It is important to factor in the need for technical staff to keep their technical skills current through ongoing training and certification programs.

The Sample Assumptions Worksheet

The Sample Assumptions worksheet is basically identical to the Assumptions worksheet, except that it has suggested assumptions based on the experience of NPower Seattle. Because NPower Seattle has existed only since March 1999, not all four years are filled in. In future, as new NPower affiliate programs develop, this worksheet will be modified to include the experience of other NPower programs as well. ▶ For Scheduled Support, a “project” is one month of scheduled support; thus the metric here is how many months of scheduled support are purchased per 100 agencies, and what’s the average number of hours per month.

The Demand Worksheet

This worksheet is automatically calculated, based on your Assumptions. It shows the projected demand for different services, based on the numbers of non-profits and their estimated service utilization. The same tables are presented for Year 1 through Year 4.

- ▶ In the **Membership** section, you will see how many organizations will join the NPower, by membership category.
- ▶ In the **Training** section, you will see the number of classroom hours of training and billable customized training hours that would be purchased for each membership group if full demand could be met. In other words, this is not the volume of services you will deliver. It is the volume of services demanded based on your assumptions. As described for the Assumptions worksheet, each classroom hour is one student hour of training for which you will charge tuition, whether that’s in an “open” class or a private customized class. An hour of billable customized training is essentially a consulting fee for development and/or delivery of customized training.
- ▶ In the **Consulting** section, you will see the number of projects and number of consulting hours that would be purchased for each membership group if full demand could be met. In other words, this is not the volume of services you will deliver, it is the volume of services demanded based on your assumptions. These are only billable hours.

The Service Delivery Worksheet

This worksheet is automatically calculated, based on your assumptions. It shows the volume of service you can deliver given your capacity assumptions, and how that compares with demand. The same tables are presented for Year 1 through Year 4.

- ▶ The **Training** section first shows the number of direct service hours (whether classroom or billable) available given capacity assumptions. ▶ To the right, the total number of service delivery hours available is divided by the assumed class size, to show how many hours of classroom time you could teach each week with your capacity. This number is not class hours as we have been using them so far to look at demand, but rather how many classes you could offer if all of your direct service time went into classroom teaching. ▶ Lastly, the total demanded hours of training service (class and billable hours) is shown, along with the percent of demand which could be met with your presumed capacity. This last figure combines class and billable hours.
- ▶ The **Consulting** section first shows the number of billable consulting hours available given capacity assumptions. Notice that hours are totaled with and without interns, since the services and fees for interns are different from the services and fees available using fully trained consultants. ▶ To the right are the total numbers of hours demanded for each service. ▶ Lastly, the total demanded hours of training service is shown, along with the percent of demand which could be met with your presumed capacity, with and without interns. Note that these proportions divide total hours delivered by total hours demanded, without breaking out different consulting services. This is because you are not breaking consultants, subcontractors or interns out by the type of service they provide, you are simply generating an aggregate number of hours.

The Revenues Worksheet

This worksheet is automatically generated, based on the assumptions you entered. It calculates the revenues that would be earned from your proposed service delivery. The same tables are presented for Year 1 through Year 4. It is important to know what you are getting on this worksheet and be aware of a few methodological assumptions/caveats.

- ▶ For each type of service, you will see service delivery based on capacity. This is calculated by taking demand for that specific service from the Demand worksheet, and multiplying it by the proportion of demand that can be met with your capacity, which was calculated on the Service Delivery worksheet. So, if the Service Delivery worksheet shows that you can meet 75 percent of overall demand for consulting services in Year 1, the Revenue worksheet multiplies the demand for each individual consulting service by 75 percent. In other words, the model assumes that you meet the demand for all consulting services at the same rate - it does not allow you to meet 100 percent of demand for databases services but only 25 percent of demand for network services. Since it is difficult to estimate the exact skill set you will have, this approximation is probably close enough - in fact, if the fees do not differ among consulting services, it makes no difference in the end revenue calculations. If you have very different consulting fees or if you think you will target your capacity at certain types of services but not others, you can tinker with the utilization assumptions to reflect what you propose to provide, rather than reflecting true demand (but simply be aware of this as you look at the results of the model). You can also remove the password protection from the worksheets and make structural changes to calculate different rates.
- ▶ The previous bullet point also applies to training - the Revenues spreadsheet assumes that with your capacity, you meet the same proportion of demand for customized training and classroom training.
- ▶ At the end of the Training and Consulting sections, the total revenues are adjusted to reflect any subcontractor costs, based on the number of contractor hours and the cost per hour of contractor services which you entered in your Assumptions.
- ▶ The Consulting revenues are also adjusted to include revenues generated by interns. Since the length and compensation arrangements for internships vary widely, making a formulaic cost calculation difficult, the place to include any intern stipends would be in the Budget worksheet.

The Budget Worksheet

This worksheet can be used to produce a program budget, using a fairly standard budget format. ▶ The line items are suggested only, and can be changed, added to or deleted. ▶ Personnel detail can be entered at the bottom and will be automatically copied into the budget. ▶ The personnel detail will pull consultant, trainer and intern FTEs from the Assumptions worksheet. ▶ Because subcontractor fees are deducted from program revenues on the Revenues worksheet, you do not need to enter them here. ▶ If you want to develop a separate “ramp-up” budget, either for a start-up period prior to Year 1 or for one-time start-up costs as part of Year 1, you can use the right-hand column. If you choose to do this, be sure you’re clear about what is in the Year 1 budget and what’s in the ramp-up budget. For example, you could consider the ramp-up costs as an additional time period prior to the start of Year 1, and then pro-rate all Year 1 costs to a partial year (e.g., three months ramp-up and nine months of operating costs in the Year 1 budget). In this case, you may want to change all of your Year 1 assumptions to reflect nine months of operation (and remember that the sample assumptions show 12 months for Year 1). ▶ If you need to create budget calculations for other line items (such as travel), this worksheet is not password protected so you can use other parts of the sheet for calculations to link into the budget.

The Summary Worksheet

This worksheet brings together a summary of four years of service delivery, revenues and expenses, and also shows service fees, providing a snapshot of the entire project. ▶ If you use the Budget Worksheet, the expense figures will automatically drop into the Summary. If you used a different budget worksheet you will need to enter expenses in the Summary worksheet. ▶ Only starting (Year 1) dues and fees are shown.