

NETWORK FINANCIAL PROJECTIONS

The purpose of these financial worksheets is to assure both network members and the Bureau of Primary Health Care (BPHC) that the network has adequate funding to support network computer information system establishment and operations. These worksheets document the financial portion of the business plan for the proposed network. The costs and revenues associated with implementation of the network are projected for both the first year and the first five years of network operations.

The sample worksheet in this text is also provided separately as an Excel file (see [Financing Plan – Template](#)). Modifications and adaptations may be done to the worksheet to customize it to your needs. For example, you may want to use the detailed First-Year Financing Plan to support calculations for each of the five years. Or, you may want to use the five-year summary spreadsheet for fewer or more than the five years. Finally, you can use the spreadsheets to compare several alternative products or funding mechanisms. You can use a set of spreadsheets to support each alternative. You can then compare the five-year summary for each alternative to determine where differences lie.

The projected costs and revenues are primarily for information system items, telecommunications, staff, and facilities required to support the network. You should also include narrative to clarify assumptions that are made in developing your projections.

CURRENT YEAR OR CONSTANT DOLLARS

Costs can be expressed in current year dollars or constant dollars. Current year dollars are dollars that include inflation for subsequent years. For example, training expenses for this year may be \$5000. You estimate that training costs are increasing 5% per year and you plan to purchase the same amount of training each year. Estimated training costs in current year dollars for years 2 through 5 are:

Year 1	Year 2	Year 3	Year 4	Year 5
\$5,000	\$5,250	\$5,513	\$5,788	\$6,077

Constant dollars are dollars less the predicted inflation for subsequent years. Using the same example, training costs using constant dollars would be:

Year 1	Year 2	Year 3	Year 4	Year 5
\$5,000	\$5,000	\$5,000	\$5,000	\$5,000

The key is to ensure that costs across the current year and all alternatives are captured in a consistent manner.

FIRST-YEAR FINANCING PLAN PROJECTIONS

The First-Year Financing Plan has two major components: *Costs* and *Revenues*. Table 1 on the following page shows a sample of a first-year financing plan. The cost elements and the revenue sources are described below. The projected costs and revenues that can be directly attributed to clinics are allocated to the individual clinics and are added together to

TABLE 1. SAMPLE FIRST-YEAR FINANCING PLAN (VERSION 5.0)

	Network	Clinic A	Clinic B	Clinic C	Clinic D	Clinic E	Clinic F	Clinic G	Clinic H	SITE TOTAL	NETWORK +SITE TOTAL
COSTS											
Hardware	5,000	100	100	100	100	100	100	100	100	800	5,800
Network	5,000	-	-	-	-	-	-	-	-	-	5,000
Site	-	100	100	100	100	100	100	100	100	800	800
Software	400,500	200	300	800	200	200	300	200	200	2,400	402,900
Licenses	400,000	100	100	700	100	100	100	100	100	1,400	401,400
Network Software	500	-	-	-	-	-	-	-	-	-	500
Site Software	-	100	200	100	100	100	200	100	100	1,000	1,000
Telecommunications	200	500	700	700	400	300	400	400	200	3,600	3,800
Network Infrastructure	100	-	-	-	-	-	-	-	-	-	100
Site Infrastructure	-	400	500	600	100	200	300	300	100	2,500	2,500
Network Recurring Costs	100	-	-	-	-	-	-	-	-	-	100
Site Recurring Costs	-	100	200	100	300	100	100	100	100	1,100	1,100
Facilities	4,000	-	-	-	-	-	-	-	-	-	4,000
Network Facilities	4,000	-	-	-	-	-	-	-	-	-	4,000
Staff	110,000	-	2,500	20,000	500	1,000	2,500	2,000	1,000	29,500	139,500
CIO	70,000	-	-	-	-	-	-	-	-	-	70,000
MIS Staff	40,000	-	-	-	-	-	-	-	-	-	40,000
Other Staff	-	-	2,500	20,000	500	1,000	2,500	2,000	1,000	29,500	29,500
Maintenance (Fees Only, No Staff Costs)	150,000	1,000	1,500	2,000	-	-	-	-	-	4,500	154,500
Network	150,000	-	-	-	-	-	-	-	-	-	150,000
Site	-	1,000	1,500	2,000	-	-	-	-	-	4,500	4,500
Training (Fees and Staff Training Time Not Included Above)	2,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	8,000	10,000
Network	2,000	-	-	-	-	-	-	-	-	-	2,000
Site	-	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	8,000	8,000
Sub-Total	671,700	2,800	6,100	24,600	2,200	2,600	4,300	3,700	2,500	48,800	720,500
Number of Users by Site		30	45	91	10	20	45	35	12	288	
Sites Weighted by Number of Users		10.4%	15.6%	31.6%	3.5%	6.9%	15.6%	12.2%	4.2%	100.0%	
Allocated Network Cost (671,700)		69,969	104,953	212,239	23,323	46,646	104,953	81,630	27,988	671,700	-
Total Costs	-	72,769	111,053	236,839	25,523	49,246	109,253	85,330	30,488	720,500	720,500
REVENUES											
BPHC - Network MIS Grant	200,000	-	-	-	-	-	-	-	-	-	200,000
BPHC - ISDI Grant	100,000	-	-	-	-	-	-	-	-	-	100,000
Kellogg - Network Grant	40,000	-	-	-	-	-	-	-	-	-	40,000
Other Grants	5,000	1,000	-	3,000	1,000	-	-	1,000	1,000	7,000	12,000
Network Reserves	260,000	-	-	-	-	-	-	-	-	-	260,000
Site Contributions	-	-	1,000	1,000	-	-	1,000	-	-	3,000	3,000
Loan - Fed Guarantee	100,000	-	-	4,000	-	-	1,000	-	-	5,000	105,000
Other	14,800	-	-	-	-	-	-	-	-	-	14,800
Sub-Total	719,800	1,000	1,000	8,000	1,000	-	2,000	1,000	1,000	15,000	734,800
Number of Users by Site		30	45	91	10	20	45	35	12	288	
Sites Weighted by Number of Users		10.4%	15.6%	31.6%	3.5%	6.9%	15.6%	12.2%	4.2%	100.0%	
Allocated Network Revenue (719,800)		74,979	112,469	227,437	24,993	49,986	112,469	87,476	29,992	719,800	-
Total Revenues	-	75,979	113,469	235,437	25,993	49,986	114,469	88,476	30,992	734,800	734,800
Difference (should be greater than or equal to zero)	-	3,210	2,416	(1,402)	470	740	5,216	3,145	504	14,300	14,300

compute the *Site Total*. The costs incurred and revenues accrued at the network level are entered against each cost element and sub-element under the *Network* column. The last column of the table (Network + Site Total) is computed by adding the results of the *Network* column and the *Site Total* column for each row of the table.

COSTS

The cost section of the spreadsheet contains cost elements and a methodology for allocating network costs. There are seven major cost elements:

- Hardware
- Software
- Telecommunications
- Facilities
- Staff
- Maintenance
- Training

Hardware

Projected *Hardware* costs include expenditures for new or upgraded hardware systems and components that will be required during the first year to implement network operations and reporting. The two sub-elements under *Hardware* are *Network* and *Site*. The entries in each of these two rows are rolled up to the *Hardware* row. The *Network* costs include the hardware costs required to establish and operate the network office. This may include the cost of PCs, printers, and servers. The *Site* costs include hardware costs that will be incurred by sites (i.e., clinics and centers) to make needed system upgrades.

Software

Software costs are comprised of three sub-elements: *Licenses*, *Network Software* and *Site Software*. The column entries in each of these three rows are added together and rolled up to the *Software* row. The cost of commercial off-the-shelf (COTS) software such as patient management systems that will be used to implement the network is entered in the *Licenses* row. These costs may be attributable to the network, such as the cost of server software, or to the clinics, such as client software. These costs are entered under the appropriate column. Costs associated with software that will be developed or modified to support network operations as a whole are to be entered in the *Network Software* row under the *Network* column. The cost of modifications to clinic applications so that they may exchange data for network operations are entered in the *Site Software* row under the appropriate *Clinic* column(s).

Telecommunications

Telecommunications costs are comprised of four sub-elements: *Network Infrastructure*, *Site Infrastructure*, *Network Recurring Costs*, and *Site Recurring Costs*. The column entries in each of these four rows are added together and rolled up to the *Telecommunications* row. The *Network Infrastructure* and *Site Infrastructure* sub-

elements include costs for additional hardware and software items such as a PBX that are required for communications between the network facility and the clinics. Also, clinics may require additional LANs to support intra-clinic interactions for new network applications. An additional cost under these sub-elements is the initiation of service fee from a telecommunications provider. Enter the projected costs under the appropriate column heading (i.e., **Network** and for each **Clinic**). Enter the projected monthly costs (x 12 months) for line usage charges in the appropriate row (**Network Recurring Costs** and **Site Recurring Costs**) under the appropriate column heading. The **Network Infrastructure** and **Network Recurring Costs** sub-elements will have entries only under the **Network** column while the **Site Infrastructure** and **Site Recurring Costs** may have entries under any of the **Clinic** columns.

Facilities

You should include **facilities** costs incurred only at the network level. Examples of required expenditures may be to acquire office furniture for network staff, to upgrade the air conditioning in the server room, or to acquire additional fire canisters. Enter the projected cost of facility modifications in the **Network Facilities** row under the **Network** column, unless they are for a specific **Site**.

Staff

Staff costs are only for individuals directly supporting network operations. This cost element is comprised of three sub-elements: **CIO**, **MIS staff**, and **Other Staff**. The Chief Information Officer (**CIO**) operates at the network level while Management Information Systems (**MIS**) staff and **Other Staff** can be at either the network level or at the clinic level. **Other Staff** may include trainers, technical writers, etc. The objective is to capture the cost of all potential changes. The fully burdened salaries (i.e., including benefits, etc.) for each of these three staff types should be projected and included in the appropriate row and column. The column entries in each of these three rows are added together and rolled up to the **Staff** row.

Maintenance

Maintenance costs include fees only and no staff costs. Maintenance for hardware and software may be required. **Maintenance** costs are comprised of two sub-elements: **Network** and **Site**. The column entries in each of these two rows are rolled up to the **Maintenance** row. The maintenance fees, which can include both one-time and recurring costs, should be allocated to the network for items such as centralized server hardware and software. Fees for clinic software maintenance can be allocated based on the number of users at each clinic, and hardware maintenance can be based on the actual equipment installed or number of users in the clinic.

Training

Training costs include training fees and staff training time not included above. **Training** costs are comprised of two sub-elements: **Network** and **Site**. The column entries in each of these two rows are rolled up to the **Training** row. The cost for training required by staff at the network level (i.e., the CIO and network MIS staff) will be allocated to the **Network**

while the cost of user training on network applications will be assigned to the clinics (i.e., *Site*).

Sub-Totals

The entries for the *Sub-Total* row are computed by adding together figures at the cost element level which are shown in bold in the cost portion of the table. Thus, the *Hardware*, *Software*, *Telecommunications*, etc. totals are added together to get the *Sub-Total*.

Allocation of Network Costs to Clinics

The network must decide on a method to allocate network costs to the clinics. The sample shown uses the number of users as the basis for determining the allocation. Other allocation methods (such as the number of software licenses by site, number of patients served, or clinic revenues) may be used as long as all network members agree to the approach.

Enter the number of users for each clinic under the appropriate *Clinic* column. These numbers will sum to the total number of users in the *Site Total* column. The percentage of the network costs that will be allocated to each site will appear below the *Number of Users* (or *Licenses*) by *Site*.

The amount that will be allocated across the clinics to support the network will appear in parentheses in the *Network* column of the *Allocated Network Cost*. The *Allocated Network Cost* for each clinic is computed by multiplying the value in the *Network* column of the *Sub-Total* row by the percentage shown for the clinic in the *Sites Weighted by Number of Users* (or *Licenses*) row. The results appear under the appropriate *Clinic* column. The amount shown in the *Site Total* column for *Allocated Network Cost* should match the *Allocated Network Cost* (but not have the parentheses).

Total Costs

The *Total Costs* for each clinic is computed by adding the value in the *Sub-Total* row to the value in the *Allocated Network Cost* row under each *Clinic* column. The values in the *Site Total* column and the *Network + Site Total* column of the *Total Costs* row will be equal (all network costs are allocated to the clinics).

REVENUES

Revenue for networks may come from many different sources and may vary widely from network to network. The following eight revenue sources identified under the *Revenues* column of the sample plan are used as an example:

- BPHC—Network Grant
- BPHC—ISDI Grant
- Kellogg—Network Grant
- Other Grants
- Network Reserves

- Site Contributions
- Loan—Fed Guarantee
- Other

The spreadsheet should be modified to show the revenue sources that are appropriate for your network.

BPHC Grants

The BPHC has grants available to support network formation. These grants come in two forms. There are Network Grants to support joint network information systems and there are Integrated Services Development Initiative (ISDI) Grants which support management, service, and other types of integration. Enter the grant amount expected from these sources in the Network column of the ***BPHC—Network MIS Grant*** or ***BPHC – ISDI Grant*** rows.

Other Grants

The network and clinics may receive grants from other sources such as the Kellogg Foundation. These grants may be awarded to the network or to individual clinics. Enter the amount of funds that will be received from other sources and used to support the network under the appropriate column (***Network*** or any of the ***Clinics***). Please note the source of ***Other Grants***.

Network Reserves

The amount shown in the ***Network Reserves*** is based on the amount of funds that the clinics have pooled together to support network operations. Enter the amount under the ***Network*** column.

Site Contributions

Beyond the initial network reserves, clinics may contribute additional funds to support the network during the first and subsequent years. Enter the amounts to be contributed in Year 1 in the ***Site Contributions*** row under the appropriate ***Clinic*** column.

Federally Guaranteed Loans

If federally guaranteed loans will be used to support the establishment and operations of the network indicate the amount under the ***Network*** column or the appropriate ***Clinic*** column of the ***Loan—Fed Guarantee*** row.

Sub-Totals

The entries for the ***Sub-Total*** row are computed by adding together the revenue source values for the ***Network*** column and for each of the ***Clinic*** columns.

Allocation of Network Revenues

Again, network members must agree on a method for allocating network revenues across sites. The method used to allocate revenues does not need to match the method used to

allocate costs. Refer to the *Allocation of Network Costs* discussion to determine the possibilities for how to allocate network revenues.

Total Revenues

The *Total Revenues* for each clinic is computed by adding the value in the *Sub-Total* row to the value in the *Allocated Network Revenue* row under each Clinic column. The values in the *Site Total* column and the *Network + Site Total* column of the *Total Revenues* row will be equal.

FIVE-YEAR FINANCING PLAN PROJECTIONS

The five-year financing plan shown in Table 2 is a simplified version of the first-year financing plan. The cost categories are shown at a summary level and projections of Costs and *Revenues* are made for each of the five years at the total network level, including the clinic level costs and revenues. Again, you may decide that the level of detail that is provided in the Year 1 Plan is more appropriate. You may go to that level of detail for all five years, if desired.

TABLE 2. SAMPLE FIVE-YEAR FINANCING PLAN (VERSION 5.0)

FINANCING PLAN
5 years
Version 5.0

COSTS	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
Hardware	5,800	10,000	5,800	60,000	5,800	87,400
Software	402,900	20,000	10,000	10,000	10,000	452,900
Telecommunications	3,800	12,000	12,000	16,000	20,000	63,800
Facilities	4,000	-	6,000	-	-	10,000
Staff	139,500	140,000	140,000	80,000	80,000	579,500
Maintenance	154,500	120,000	120,000	120,000	120,000	634,500
Training	10,000	20,000	5,000	3,000	3,000	41,000
Total Costs	720,500	322,000	298,800	289,000	238,800	1,869,100

REVENUES	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
BPHC - Network Grant	200,000	250,000	100,000	-	-	550,000
BPHC - ISDI Grant	100,000	100,000	50,000	-	-	250,000
Kellogg - Network Grant	40,000	-	-	-	-	40,000
Other Grants	12,000	-	-	200,000	200,000	412,000
Network Reserves	260,000	-	-	-	-	260,000
Site Contributions	3,000	28,000	100,000	10,600	-	141,600
Loan - Fed Guarantee	105,000	-	-	-	-	105,000
Other	14,800	20,000	20,000	25,000	25,000	104,800
Total Revenues	734,800	398,000	270,000	235,600	225,000	1,863,400

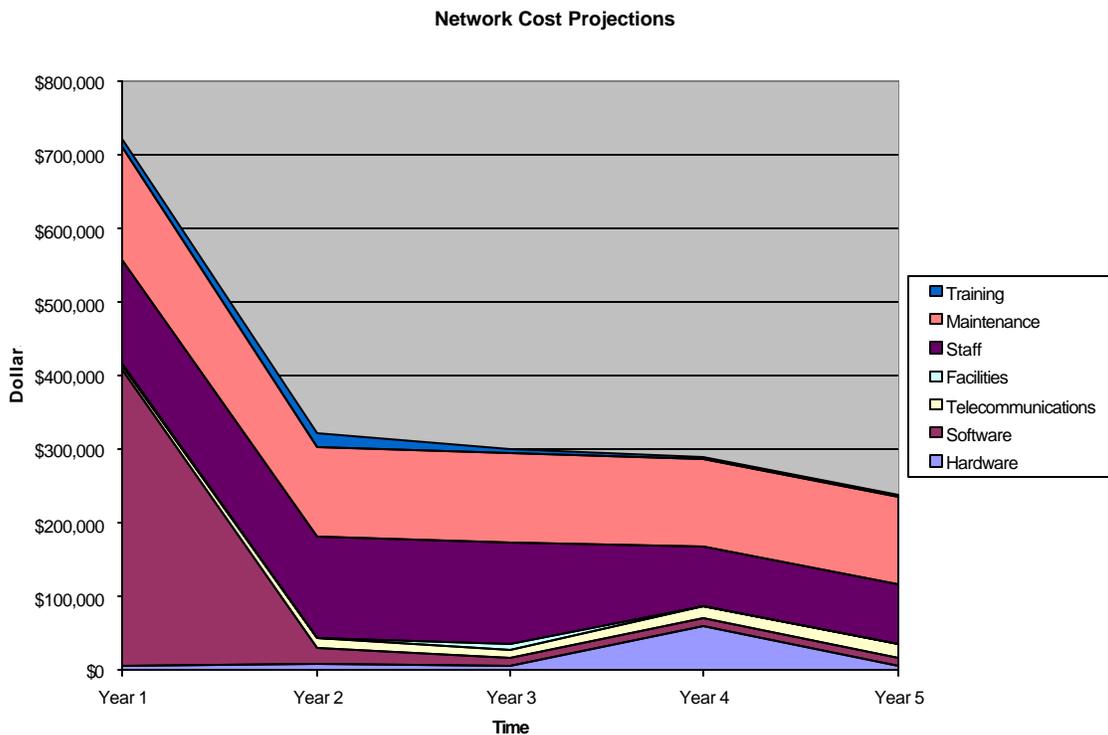
Difference	14,300	76,000	(28,800)	(53,400)	(13,800)	(5,700)
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Costs for Years 1—5

The values for the *Year 1* column entries are linked to the detailed one-year spreadsheet. The costs for Years 2 through 5 are based on your implementation and operating assumptions. For example, hardware costs may be high in *Year 1* when new equipment must be acquired and another cost spike may be expected in *Year 4* based on an assumption of a three-year life cycle for items such as servers. Training costs may be high as new network applications are implemented with the cost decreasing in later years to account for training new staff or for refresher courses. Costs for items such as staff will increase each year (if the all of the same individuals continue) to accommodate pay raises, changes in benefits, and marketplace pressures.

The figure below graphically shows the changes in the network costs over each of the five years. The relative proportion of each of the cost elements can be seen below. This figure was produced using the graph function of Excel based on the contents of the spreadsheet shown in Table 2. Therefore, as you change the data in Table 2, Excel will automatically generate a similar graph based on your cost projections.

Obviously, the breakdown of costs will be highly dependent on the type of project that you will be undertaking. For example, a data warehouse, a wide area network and installation of a practice management system may have very different cost breakdowns. In general, however, the largest share of the costs will be in the hardware, software and personnel cost elements. Each of these elements may comprise 20-35% of the total project costs. Telecommunications may also comprise as much as 15% of project costs. The cost share for the remaining elements should be below 10% of total project costs.

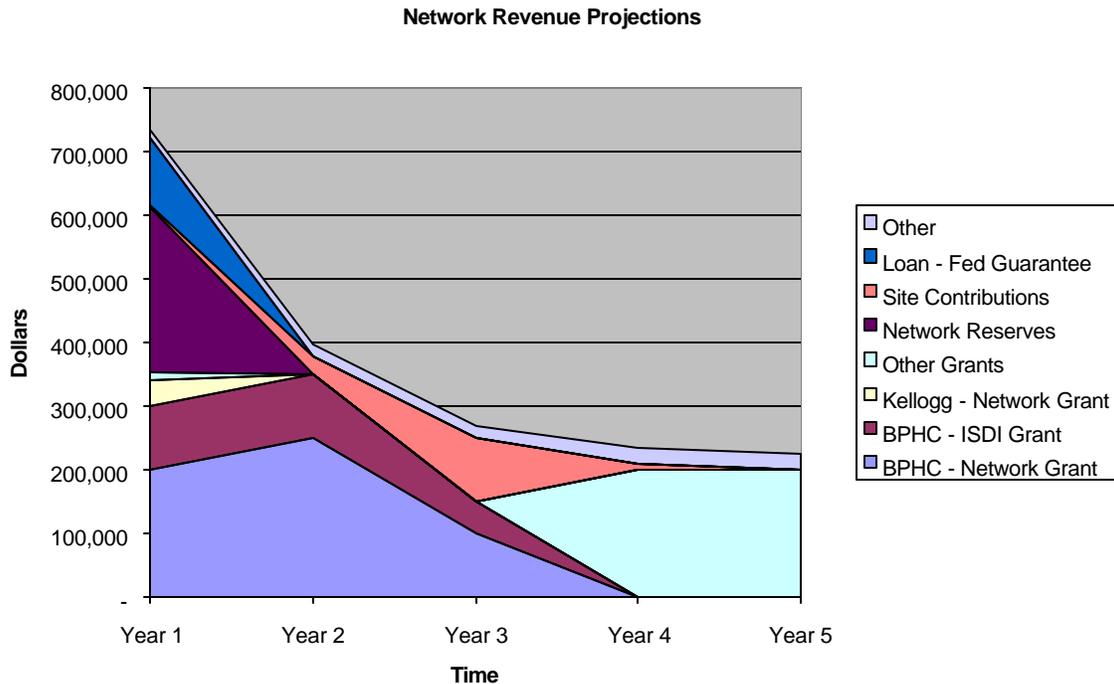


Revenues for Years 1—5

Revenues will vary from year to year based on different assumptions for each of the revenue sources. The assumptions that change the numbers from one year to another for each cost element and revenue source should be explained in the text accompanying the table.

The figure below graphically shows the changes in the projected network revenues over each of the five years. The relative proportion of each of the revenue sources can be seen in the graph. This figure was produced using the graph function of Excel based on the contents of the spreadsheet shown in Table 2. Again, as you change the data in Table 2, Excel will automatically generate a similar graph based on your revenue projections.

The amount of revenue required to support your system in the later years of your project should decrease over time. This is partially due to the need to make investments in the early stages of the project. It is also because you should be seeing a payback on your investment in the out years. Even if there is not be a clear monetary payback, there should be clear benefits attributable to the project. Thus, in general, you will only have BPHC funding to get you started on your project. You should therefore plan to reduce revenue needs, reap cost savings, or find replacement funding to compensate for funding that the BPHC contributes to get the project started.



Total Costs, Total Revenues, and the Difference between Them

The **Total Costs** for each year are computed by adding the values shown for each cost element under the appropriate **Year** column. The results are shaded and bolded. The **Total Revenues** for each year are computed adding the values shown for each revenue source under the appropriate **Year** column. These results also are shaded and bolded. The **Difference** for each year is computed by subtracting the value of the **Total Costs** from the value of the **Total Revenues**. Negative numbers are shown with surrounding parentheses.

The value for each cost element and revenue source of the **Total** column is computed by adding the values shown for Year 1 through Year 5 of each row. The **Total Costs** should equal the **Total Revenues** under the **Total** column and the difference should equal zero. It may require you to do some “what-if” analysis to get revenues to equal costs across all years.

The figure below graphically compares the projected network costs and revenues over each of the five years. This figure was produced using the graph function of Excel based on the contents of the spreadsheet shown in Table 2. As you change the data in Table 2, Excel will automatically generate a similar graph based on your costs as compared to your revenues.

Again, you should see a reduced project-related cost and revenue stream as you progress through your project. Also, you should have project costs and revenues that are relatively close for each year. If your costs outpace your revenues, you may have a cash flow problem.

Cost and Revenue Summary

