

## Exercise 9: Advanced Data Analysis

The chapter and this exercise show some basic spreadsheets you can use to get started. **The bonus materials on [the book's website](#)<sup>1</sup> include those spreadsheet templates in Excel format.** Again, these are quite rudimentary. As soon as you start doing this, you will see relationships between the sets of data that you have assembled, and you will start building much more comprehensive spreadsheets in preparation for transition to a proper data tool.

Remember again: all of this is happening just as a result of collecting some ordinary lists. That's the Past Principle at work!!

A. Analyze the contracts.

1. See whether the contracts can easily be allocated to the programs and the investments within them. If not, make a note to yourself to fix that as time goes on.

Contract #	Vendor	Business Unit	Division	Current Year Value (\$M)
123-456-789	ABC Corp	North	Production	3
987-65-4321	M&M BROS	North	Shipping	2.1
243-465-876	ABC Corp	South	Production	3.6
453-746-424	JKL HAULING	South	Shipping	1.8
845-930-203	JKL HAULING	East	Shipping	2.4
433-345-987	ABC Corp	West	Production	3.2
524-240-350	JKL	West	Shipping	3.2
302-323-923	ANALYTICS INC	HQ	Marketing & Sales	1.1
753-943-092	SWAG CO	HQ	Marketing & Sales	0.3
423-535-237	EXEC ASSTS	HQ	Administration	2.8
423-424-998	GFD ENGRG	HQ	Design	2.0
<b>TOTAL</b>				<b>25.5</b>

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<sup>1</sup> [www.simmer-system.com](http://www.simmer-system.com)



2). Determine a standard labor cost for contractor labor (or for several different key labor categories, as time permits). Assess the number of contract personnel that money should support, and, if possible, the mix of labor categories that it represents. When doing so, remember that all we are really looking for is an assessment of the total capacity to do work. The important thing is to capture the main effort rather than worrying about the precise duties of the last five percent of that workforce.

Contract #	Vendor	Business Unit	Division	Machine operator	Materials mixer	Warehouse	Driver	Sales	HR + Admin	Finance	Engineer
123-456-789	ABC Corp	North	Production	6	12						
987-65-4321	M&M BROS	North	Shipping			1	11				
243-465-876	ABC Corp	South	Production	11	10						
453-746-424	JKL HAULING	South	Shipping			3	7				
845-930-203	JKL HAULING	East	Shipping	4	10						
433-345-987	ABC Corp	West	Production	14	4						
524-240-350	JKL	West	Shipping	20	10						
302-323-923	ANALYTICS INC	HQ	Marketing & Sales							6	
753-943-092	SWAG CO	HQ	Marketing & Sales								
423-535-237	EXEC ASSTS	HQ	Administration						16		
423-424-998	GFD ENGRG	HQ	Design								11
<b>TOTAL</b>				<b>55</b>	<b>46</b>	<b>4</b>	<b>18</b>	<b>0</b>	<b>16</b>	<b>6</b>	<b>11</b>

- B. Now compare the program budget data with what you have just learned about personnel and contracts. You do not need precise by-name cost rates to this; an average cost of a resource, with some adjustments for unusually high-value or low-paid skills, should get you into the ballpark cost for a program. Don't worry too much about accuracy. It is just a "smell test" to see whether the personnel and contract numbers support your hypothesized program breakouts. Keep adjusting the definition of those programs and make them conform to actual reality.

In the example tables provided here, the total dollar values are consistent. It's a lot more trouble to make up stuff that is wrong; you have to keep remembering what you did to get it that way. That is another example of the Transparency Principle in action. Once you tell people something, you have to be able to tell them the same thing again.

In your real world, it may well happen that exercise C reveals a massive gap between the stated and actual costs of the program. Government and non-profit organizations frequently ignore internal labor costs in planning for projects and programs. Budget analysts probably do not intend to suggest to millions of people (including themselves) that their work has no value. There is just a perception that these people are going to be on the payroll anyway so there is no point bothering with all that extra mathematics and book-keeping. But there is an opportunity cost. Workers engaged on one effort cannot work on another. If their manager can assign them to a low-priority activity because it appears to be very low cost (meaning only that it uses few contracts), they end up not working on much higher priority activities - or that activity cannot be funded for "lack of resources," while the resources are in fact sitting that very building all along. This is a great example of the importance of the Zero-Sum principle. Count all the money and all the people.

C. Priorities. This will be fun.

- 1) Map the priority lists from the enterprise level down to the priorities at the next level. Identify enterprise priorities that are not being addressed at the lower level. Identify the lower-level priorities that do not seem to fulfil any of the top-level priorities.
- 2) Repeat the mapping down through successive levels down to one level below the governance board.
- 3) If the department head agrees, run this test. Ask the department head what his/her top three priorities are right now. 'At the next meeting of the division managers, ask each of them to write down what they believe the department's top three priorities to be. Tally the answers. This well-known exercise usually results in about half of the managers' answers being other than the three that the department head wrote down; it is quite common that at least one of the department head's top three priorities is not mentioned by anybody.

D. Local activities.

- 4) Map all the activities on the consolidated list to the lowest-level priority listing. **NOTE THAT THIS IS THE SAME CHART USED IN EXERCISE 7.** Hopefully some of the answers have been clarified since then!
- 5) For each operational group within the part of the organization managed by the PPFMO, work with the group managers to make sure that each group has at least one operational activity (as opposed to a project) on the list. Try not to have more than a half-dozen operational activities per group.

Strategic Goal	Strategic Initiative	Business Unit	BU Initiatives
Goal I	Initiative A	North	
			Initiative NA
			Initiative NB
Goal I	Initiative B	East	
Goal II	Initiative C	South	
Goal II	Initiative D	South	
Goal II	Initiative D	East	
Goal III	Initiative E	North	Missing
Goal III	Initiative E	East	
Goal III	Initiative F	South	
Goal IV	Initiative G	North	x
			Initiative NG1
			Initiative NG2
Goal IV	Initiative H	West	
		North	Initiative NW1
		North	Initiative NW2
		North	Initiative NX1
		North	Initiative NZ1
		North	Production Sustainment
		North	Shipping Operations
		South	Production Sustainment
		South	Shipping Operations
		East	Production Sustainment
		East	Shipping Operations
		West	Production Sustainment
		West	Shipping Operations

- 6) Identify priority list items that none of the actual work items address.
- 7) Identify activities that do not implement any of the items of the priority lists.

- 8) Map the performing contracts to the list of activities.
- 9) Map organizational groups against the activities to which they must provide resources.

E. There are many possibilities! At least for now, while we only have seven lists, they can be expressed in a matrix challenging you to mix and match the data: Think about how you might be able to use any of the pairings and groupings that the matrix offers, and fill in another box or two. The exercises here only consider 1:1 comparisons. What would happen if we put together data from several places at once, as in Exercise C?

	Organization, mission and functions	Strategic plans	Budget	Personnel	Contracts	Priorities	Activities
Organization, mission and functions							
Strategic plan	B.1						
Budget	C						
Personnel	D, H.6		F				
Contracts	E.1		F	E.2			
Priorities						<b>G</b>	
Activities	C,H.2	B		H.6	H.5	H.3/4	

Notice, too, that part of the PPFMO's role is to ensure traceability of information from higher levels to lower and back again. Thus, the intersections (comparing a data elements against itself) may be open, as shown for Exercise D.