

Project Ranking Method Example

Problem: There are many classes of Capital Projects. These include Streets/Sidewalks, Recreation, Public Safety, and Economic Development. It is difficult but possible to rate the importance of projects within each class without data on the benefits that project generates relative to other similar projects in that class. However, it is virtually impossible to do this for projects in different categories or classes. To address this dilemma, an evaluation matrix process is often used.

To demonstrate the problem, consider the difficulty of selecting a vacation for a family with two parents and two teenagers. There are several categories of vacation, and within each category there are several choices of destinations. If the family has pre-decided on a type of vacation, then the selection of a first, second, and third choice for a destination can generally be agreed on by the family without too much difficulty.

Example: A family living in Winston-Salem wants a beach vacation. They could easily narrow their choices to Myrtle Beach, Atlantic Beach, Daytona Beach, and Virginia Beach based on past experience, availability of hotels, quality of beach, entertainment, amenities, etc. They can then as a group talk about the relative benefits of each of these features and by common consent pick the number 1, 2, 3, and 4 choices for that family. The key is that all the selections are within the same limited category: beaches.

Now, consider the added difficulty that comes from not having the agreement that a beach vacation is the family choice. Perhaps mom and dad want an educational or tourism vacation for the family, but the children want a beach or amusement park vacation. The family now has a dilemma. How do they evaluate or judge the relative benefits of each type of vacation, and how do they give everyone equal say in the decision?

One way this can effectively be done is for the family to agree at the start about what benefits they want from the vacation, then assign a relative value to that benefit, then evaluate how well each destination provides that benefit, then finally total up the weighted scores for each family member. An example of how this would work using a 10 point scale is shown in the table below:

Destination	Economical	Educational Value	Family Bonding	Fun Activities	Relaxation Time	Total
Weight	50	10	15	15	10	
Disney World	7	5	5	9	3	
Weighted Total	350	50	75	135	30	640
Myrtle Beach	9	3	5	8	7	
Weighted Total	450	30	75	120	70	745
Washington, DC	6	10	7	6	5	
Weighted Total	300	100	105	90	50	645
Grand Canyon	5	9	8	3	8	
Weighted Total	250	90	120	45	80	585

The above scores represent the Father’s view. It is very likely the other family members would have different scores, so everyone goes through the same scoring exercise, and the table below shows a possible result. Note that the ranking is determined by how many total points a destination receives, and note that everyone’s opinion is equally considered.

**Quantitative Decision Making
Family Vacation Example – Part 2**

Destination	MOM	DAD	DAUGHTER 1	DAUGHTER 2	TOTAL	RANK
Disney World	645	640	475	780	2540	1
Myrtle Beach	735	745	445	555	2480	3
Washington, DC	700	645	485	690	2520	2
Grand Canyon	640	585	485	745	2455	4

This type of process can also be used to evaluate the relative benefits of Capital Projects for a potential bond referendum. An example of a hypothetical list of projects and their rating under this process is shown in the table below. **It is important to remember this is a hypothetical example and does not reflect any actual Winston-Salem projects.**

Department	Project	Total	Category Rank	Overall Rank
Transportation	54 th Street Widening	2550	2	4
Transportation	Silas Creek/Patterson Interchange	2600	1	3
Transportation	Balloon Street Sidewalk	2300	3	6
Facilities	City Hospital HVAC Upgrade	2850	1	1
Facilities	City Hall Expansion	2200	2	7
Facilities	Soccer Stadium AstroTurf Installation	1950	3	11
Public Safety	Police Heliport	2350	1	5
Public Safety	Emergency Management Bomb Shelter	2050	3	9
Public Safety	Fire Department Tanker Plane	2100	2	8
Economic Dev	Banking Office Park	2650	1	2
Economic Dev	Parking Deck Vehicle Lift System	2000	2	10
Economic Dev	Pedestrian Mall Conversion	1850	3	12

A bond-project specific process like the above is what the City Manager’s Office proposes the Citizens’ Capital Needs Committee use for evaluating the more than 40 projects that it needs to consider. Once the Committee sees how projects score and are ranked using this process, they will be able to better decide on a final ranking, and this in turn will allow them to develop the final recommended bond package for City Council.