

# Decision Making in Group and Organizations

Executive Education Course  
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Inspiring innovations that change the world

Carnegie Mellon University Qatar



# Today's Overview

- **Introduce Decision-Making Exercise** 8:45-9am
- **Break Intro Groups for Exercise** 9am-9:45am
- **Exercise Debrief and Discussion** 9:45-10:15am
- **Course Debrief** 10:15 - 10:30am
- Break and Networking
- Certificate Presentation

# Doha Foundation Case



\$120 Million

Project		Description	Cost (Millions)	Reviewers Ratings			Other
				Three Reviews 1 (poor) to 10 (best)			
1	Women Working for the Future	Leadership and mentorship training for young women to develop the female workforce	\$6.5	6	7	6	Developing women in the workforce is one of the strategic initiatives in Qatar
2	Visual Arts for Doha	Sponsoring local artists to create and display regional art to preserve the Qatari culture	\$4.5	7	8	8	
3	Sound and Music Doha	Training to put more music classes in local schools, and develop public performances to encourage a musical culture	\$3.5	9	5	6	If this is funded many more difficult and political decisions will need to be made as to what kind of music to teach, and how to teach.
4	Genetic Research for Diabetes	Identifying methods to screen people early in life for potential diabetes risk	\$40	6	7	6	
5	Diagnostics for Prostate Cancer	Early diagnosis and treatment of prostate cancer decreases mortality rates	\$25	3	4	3	
6	Computer Science for High School	Developing computer science skills in the local high schools to encourage kids to study computer science	\$22	8	8	7	Doha foundation has already spent \$85 million trying to improve Computer Science for High Schools in Qatar, and results are showing the programs have little or no impact. The board feels they need to fund further projects like this so they can show some progress on their previous investments.
7	English as a Second Language (ESL) Training for Migrant Workers	English courses and coaching for the migrant laborers to improve their communication skills (leading to better jobs for them in the future)	\$18	9	8	9	

# Rational Decision Model

## 1. Define the problem

- Do NOT define in terms of a proposed solution or diagnosed symptoms.

## 2. Identify the criteria

- What's the objective? Is there more than one?

## 3. Weigh the criteria

- What matters? Some things matter more than others

## 4. Generate alternatives

- What are the courses of action available?

## 5. Rate each alternative on each criterion

- What are the payoffs?

Is there any uncertainty? Do you need to forecast future events?

## 6. Compute the optimal decision

- What is your utility function? What is your tolerance for risk?

# Consensus Method

- Each individual has the opportunity to present his or her ideas to the entire group in a logical manner.
- While everyone must be **willing to accept the final decision**, each individual need not be completely satisfied with the group's recommendations



# Dialectical Inquiry

- Split into **two subgroups**
- Subgroups take opposite or very different approaches to the problem
- Argue about the correct approach, with reasoning supporting your position
- After approaching the problem two different ways, bring the group back together and choose elements of **one or both** solutions



# Devil's Advocate

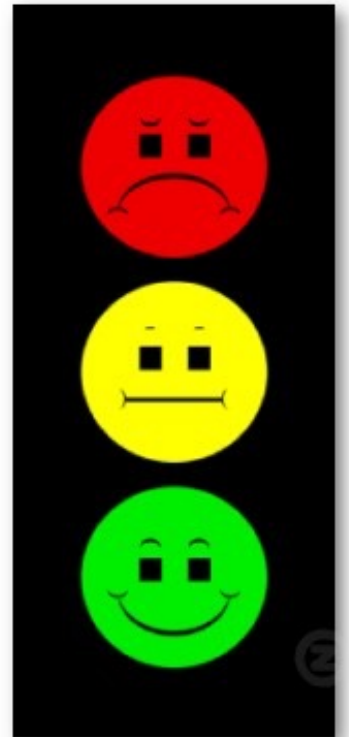
- Have **one silent person** observe the group process
- At various points in the process the “Devil's Advocate” should **point out flaws, and make a counter-argument** directly opposed the the group's plan





# Stoplight Approach

- Individuals rate options independently
- Low ratings are discarded **(RED)**
- Excellent ratings are conditionally approved **(GREEN)**
- Ratings in the middle **(YELLOW)** are the ones you devote time to discussing to reach consensus



# Delphi Method

Potentially Multi-Round (Repeat Steps 1-4)

**Step 1** get independent judgments

**Step 2** aggregate independent judgments

**Step 3** show group members ANONYMIZED group decision

**Step 4** group discussion, or another round of group-informed independent judgments

# Best Member

- Identify who has the most expertise on this problem
- Have them to either influence the group decision heavily, or make the decision
- Eureka tasks – where the answer is obvious once you know it
- High expertise tasks – where specific training is necessary



# Average Member

**Aggregate voting** (yes or no) or empirical measure (survey items, 1=Poor , 3 = Average, 5=excellent)

Best used when:

- Wide base of knowledge is necessary
- Predetermined possible outcomes (fund or not fund) or categories of importance



- Has the benefit of seeing a distribution of beliefs

# Example Presentation

# Doha Foundation Case



\$120 Million

# Doha Foundation Funding Board Presentations



What makes this a  
challenging decision?



Based on your career experience,  
what advice can you give about  
leading a group through a decision?

What factors should  
we consider?

# Course Debrief

What concepts can  
you take home?



**Questions?**

**Comments?**



## Break & Networking

<http://www.qatar.cmu.edu/~gasper/ExecEd/>