

Group Exercise in Problem-Solving:

Individual Activity:

Read through each of the ten scenarios presented in this exercise. Then examine the solution alternatives that follow. Assign each solution alternative a number reflecting the following scale:

- +10 outstanding solution that optimizes both the ethics and feasibility tests.
- 0 neutral solution, that is, neither outstanding nor dismally bad.
- 10 a disastrous solution both from the standpoint of the ethics tests and the feasibility tests.

Given your ranking, are there any scenarios in which no adequate solution alternatives are presented? (Think this through. You don't have to put your thoughts in writing.)

Group Activity:

Your group will meet at least once between February 28, 2001 and March 5, 2001 to prepare a group ranking of the 10 scenarios and to carry out specialized tasks on a single, assigned scenario. Your activities will include the following:

- a. Group ranking of the solution alternatives on all 10 scenarios. You will go over your individual rankings, discuss them, and then reach consensus on a group ranking of the solution alternatives.
 - b. Prepare a solution evaluation matrix on the alternatives presented. Each group will be given a blank matrix form to fill out. Your job is to assign the solution alternatives a letter grade on each of the tests. (A, B, C, D, F).
 - c. Use the following tests to carry out your ranking:
 - Reversibility:*** Would I think this is a good choice if I were among those affected by it?
 - Publicity:*** Would I want this action published in the newspaper?
 - Harm:*** Does this action do less harm than any available alternatives?
 - Code Test:*** Does the solution alternative carry out or violate any code provisions?
 - Feasibility:*** Can this solution be implemented given time, technical, economic, legal, and political constraints?
 - d. Accompany your matrix with an in depth comparison of two alternatives using the above tests. (One of these needs to be your group's Best Available Alternative—BAA—whether it is one of those included after the scenario or one

designed by you and your group.) Be sure to explain and justify the grades you give to the two alternatives on each one of the tests. For example if you give one solution a C on reversibility and the other a D, then explain the grades (Why a C? Why a D?). Explain why one solution is better than the other.

- e. Solve the scenario. Be sure that you justify this solution as the BAA by comparing it with another in terms of the tests mentioned above.
- f. Construct a dialogue in which you implement your solution. For example, in scenario #1 you might propose developing a recyclable inkjet cartridge. Construct a dialogue in which you present your solution to the other members of the R & D team. Imagine their responses. Imagine your replies.
- g. Prepare a short presentation for the class on what you have done. This summary should be 15 to 20 minutes. This includes (1) an explanation of your evaluation matrix, (2) your solution, (3) why you think your solution is the BAA, and (4) a dialogue in which you imagine the implementation of your solution.

How you will be graded:

You will start with 40 points. (This will substitute for two of the quizzes discussed on your syllabus.) This grade will be completely distributed to each member of the group. (In other words if your final grade is a 35, then each member of the group will receive 35 out of 40 points on his or her individual grade.) Points will be taken off for the following: (1) not being prepared for presenting beginning March 7, (2) failing to carry out all of the above tasks, (3) carrying out a task (or all tasks) in an incomplete or negligent manner, (4) failure of all the group members to participate, (5) disrespect displayed by your group members when other groups are presenting, and (6) going overtime on your presentation.

These will be short, low-tech presentations. (At this stage, the logistics of a power point presentation are too time-consuming.) If you prepare transparencies, you can use an overhead projector.s