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“ACME Investments”

A Group Decision-Making Task

Developed by Professor Poppy L. McLeod
Cornell University

This booklet contains information necessary to use the ACME Investments task either in research experiments or in classroom exercises. This is an information sharing, hidden profile task, and the materials contained in this booklet are configured for use in four-person groups. The task involves a decision to acquire one of three available companies. Participants are presented with information on the three companies regarding their financial performance, business strategy, characteristics of the management team and human resources practices.

The contents of this booklet are: task instructions and information sets for each of the three decision alternatives arrayed for a four-person group; individual pre- and post-discussion decision forms; a group decision form; an information sharing checklist which can be used by experimenter to code the specific pieces of information actually shared in the group discussion.

The information is distributed among three of the four group members in order to create a “hidden profile.” That is, three sets contain only partial information, and this information is biased toward one of the *incorrect* decision alternatives. The fourth set contains the full information, which leads to the *correct* decision alternative. In a four-person group, therefore, the person who receives the full information set is expected to be a minority opinion holder. The full set of information can be redistributed to create different information sharing configurations.

Each set of task information in the configuration presented here is labeled by a symbol which appears immediately below the title label. Individual pre- and post-discussion response forms are labeled with corresponding symbols. The code to the symbols is as follows:

~~~ Full information set (Pro Company A)  
\*\*\*\* B1 -- Partial information set (Pro Company B)  
\*\*\*\*\* B2 -- Partial information set (Pro Company B)  
\*\*\*\*\* B3 -- Partial information set (Pro Company B)

Based on the full set of information, the correct decision is Company A. This Company offers the highest financial return for the lowest risk. Moreover, the description of its business strategy, management team and human resources practices lead to the conclusion that this company is best poised for long term growth. Company B is “resting on its laurels”, and is on the decline financially. Company C is “in the middle.” It poses neither much risk nor much potential for return.

#### Validation Information

The task was extensively pre-tested and revised. Two types of pre-tests were conducted. First, the full set of information was given to a panel of business school professors who gave their judgment on the correct rank ordering and provided their reasoning. Four professors, one in management, one in accounting, one in finance and one in marketing made up this panel. Three of the four agreed that Company A was the best investment for the reasons designed into the task (i.e., long term performance, potential for improvement and growth, low risk to potential return). The fourth panel member thought that Company B was the best investment because the short term return appeared to be highest. This panelist indicated that Company A would be the second choice, but that the choice between Companies A and B would depend on an investor’s preference for long vs. short term returns. Since the decision criteria we developed specified importance of long term return, we felt that even this panelist’s judgment validated the design of the task, given the reasoning provided.

The second type of pre-test was giving the different sets of information to a sample of undergraduate business majors. The full set of information was given to 24 individuals and each of the three partial sets was given to 14 individuals. These people completed the task of indicating what they thought should be the correct rank ordering, and providing their reasoning. Among the 24 who received the full sets of information, 19 chose Company A as the best investment. Of these, 12 chose Company C as second and 7 chose Company B as second. The remaining 5 chose B or C as the best choice. Among the people to chose Company A as the best choice, their reasoning matched that designed into the task. Those who did

not choose Company A as the best generally explained that they were hesitant about the initial inexperience of its management team. Among the 42 individuals who received the partial sets of information containing the hidden profile, only 3 failed to choose Company B as the best choice. Two of these chose Company A and 1 chose Company C. It thus appears that the materials will reliably result in creating a minority opinion holder in the bulk of experimental groups. Further, this pretest demonstrated that participants in general should be able to find the correct answer with the full information.

Altogether, there are 34 pieces of information about Company A, 38 pieces about Company B and 23 about Company C. The information is distributed in the current version so that the three members in the majority receive 22 pieces of the information about Company A and 29 of the pieces of information about Company B. All four group members receive the same full information set about Company C.

Please use this task freely in your work. I welcome hearing from you on suggestions for improvement:  
Department of Communication, 325 Kennedy Hall, Cornell University 48154; (607) 254-8896;  
plm29@cornell.edu.

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## ACME Inc.: Group Decision-Making for Investments

### Instructions

\*\*\*\*

Most companies make important investment decisions using a team approach. Your group here today represents the top management team of ACME (“Acquiring Companies Means Employment!”), Inc. Your company has been presented with the opportunity to acquire three smaller firms. ACME has \$100 million to invest, which will allow the acquisition of only one of these firms. The Chairperson of the Board has appointed you to research the three acquisition targets and to recommend which one of them would be best for ACME.

There are a number of key factors that you should consider carefully in evaluating these companies. First, ACME prefers to acquire firms that will maximize wealth, over the long term. Which of these companies has the most promising future? Therefore you should consider the potential return on your investment. A second consideration is the likelihood of you actually getting that return, in the long run. That is, how precise is the projection and what is the probability that your actual return will be significantly different than the best estimate? Third, you should also consider the growth potential of each company’s market. You would prefer to invest in a company that competes in a growing market. A fourth consideration is the quality of the company’s management team. ACME takes a “hands-off” approach with its subsidiaries. Therefore, you prefer to invest in companies whose management team can achieve the profitability you desire. Finally, you should judge each company’s general strategy and business policies. Do they seem like policies that will lead the company to profitability in the future?

In order to help you evaluate these companies, your in-house financial analyst has researched each company. Further, you have retained the consulting services of Smith, Barney & Howe, a highly respected and successful investment consulting firm, also to analyze these three companies. The results appear in the reports contained in your information packets. You should review all of this information, and based upon it, come to a conclusion about which of these three companies would be the right acquisition for ACME.

The Chair of the Board wants each of you individually to submit your personal recommendation, whether or not it agrees with the team recommendation. After you have studied the material and recorded your personal recommendation, you will decide as a team which of the three companies ACME should acquire. You are to rank order the three companies from most to least desirable. **There must be consensus agreement on the top ranked company.**

**Company A**  
**“Whiz-Bang Electronics”**

|           |                                          |
|-----------|------------------------------------------|
| Industry: | Industrial Electronics                   |
| Products: | Electronic manufacturing control devices |
| Location: | Metropol, California                     |
| Size:     | \$50 million in sales; 200 employees     |
| Age:      | Established 5 years ago                  |

**I. Financial**

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 15% annually over the next 10 years. Further, the analyst estimates that there is a 15 percent chance that ACME will have a zero return. The Smith, Barney & Howe consultants concur with the conclusions of your in-house analyst. Both analyses agree that there is a near certain probability that ACME will suffer a loss during the first year, and that you would not achieve any return until after that time. This company’s growth in sales has been halting, hovering around 5% annually from the beginning.

**II. Strategic**

Whiz-Bang Electronics is young, and was founded by a group whose management experience was limited. The inexperience of the management team led to some early mistakes in marketing and distribution such that customer awareness of the products is low, and so are perceptions of service. Furthermore, the pricing structure is not suitable for their target customers. As a result the company has been a market laggard, averaging only a 6% market share. The company leadership has been trying to address these issues head-on.

**III. Labor**

Whiz-Bang Electronics has very high labor costs. It spends a lot of money on employee development, such as providing on-site fitness facilities. Their recruiting processes are drawn-out. These expenditures represent a very large chunk of the company’s operating budget.

## **Company B “Power Energy”**

|           |                                        |
|-----------|----------------------------------------|
| Industry: | Energy                                 |
| Products: | Power for heavy manufacturing          |
| Location: | Bigtown, Texas                         |
| Size:     | \$50.5 million in sales; 225 employees |
| Age:      | Established 25 years ago               |

### **I. Financial**

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 25% annually over the next 10 years. This analyst believes the chances of you actually getting this return is 70 percent. Further, the analyst estimates that there is a 15 percent chance that ACME will double this return (thereby providing a 50% return). The Smith, Barney & Howe consultants estimated a lower rate of return than did your internal analyst, and they believed there would be a 30 percent chance of doubling their estimated return. Power Energy historically has experienced growth in sales averaging 10% annually. It experienced record growth of 15% five years ago. Last year's growth was 8%.

### **II. Strategic**

Power Energy has been the market leader for over two decades. It dominates the market with 30% share. The company enjoys strong name recognition among the public. The current management team is responsible for moving this company to the top of its market.

The company has been involved in the risky field of off-shore oil drilling and exploration, and has made significant profits. A recent problem, however, resulted in the company receiving a fine and being responsible for some clean-up costs.

### **III. Labor**

Power Energy's labor force consists primarily of semi-skilled workers and engineers. The company has had the reputation of offering job security and generous compensation and benefit packages.



**Company C**  
**“Quality Tool & Die”**

|           |                                        |
|-----------|----------------------------------------|
| Industry: | Industrial Products                    |
| Products: | Tool & Die for heavy manufacturing     |
| Location: | Midville, Indiana                      |
| Size:     | \$50.2 million in sales; 175 employees |
| Age:      | Established 17 years ago               |

**I. Financial**

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 8% annually over the next 10 years. This analyst believes the chance of you actually getting this return is 60 percent. Further, the analyst estimates that there is a 20 percent chance either way that ACME will double this return (thereby providing a 16% return) or will have a zero return. The analysis indicates further that there is a near certain probability that you will suffer a loss during the first year, and that you would not achieve any return until after that time. The Smith, Barney & Howe consultants agree with your analyst’s conclusions. Growth in sales has been averaging around 6% annually.

**II. Strategic**

Quality Tool & Die is in a mature industry with very little change forecasted for the foreseeable future. They have managed to maintain their 12% market share in an environment which is expected to remain in a competitive equilibrium in the near future. Their management team is solid and respectable. They have not been known to make any major mistakes, nor have they contributed major innovations to their industry.

**III. Labor**

Their labor force is unionized, composed mostly of unskilled workers employed in assembly line jobs who receive their training on-the-job. The company has managed to keep the relationship with the unions relatively trouble-free, but the newly elected union leadership is known to have an aggressive and confrontational attitude toward management. The company’s labor turnover has been low.

## ACME Inc.: Group Decision-Making for Investments

### Instructions

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There are a number of key factors that you should consider carefully in evaluating these companies. First, ACME prefers to acquire firms that will maximize wealth, over the long term. Which of these companies has the most promising future? Therefore you should consider the potential return on your investment. A second consideration is the likelihood of you actually getting that return, in the long run. That is, how precise is the projection and what is the probability that your actual return will be significantly different than the best estimate? Third, you should also consider the growth potential of each company’s market. You would prefer to invest in a company that competes in a growing market. A fourth consideration is the quality of the company’s management team. ACME takes a “hands-off” approach with its subsidiaries. Therefore, you prefer to invest in companies whose management team can achieve the profitability you desire. Finally, you should judge each company’s general strategy and business policies. Do they seem like policies that will lead the company to profitability in the future?

In order to help you evaluate these companies, your in-house financial analyst has researched each company. Further, you have retained the consulting services of Smith, Barney & Howe, a highly respected and successful investment consulting firm, also to analyze these three companies. The results appear in the reports contained in your information packets. You should review all of this information, and based upon it, come to a conclusion about which of these three companies would be the right acquisition for ACME.

The Chair of the Board wants each of you individually to submit your personal recommendation, whether or not it agrees with the team recommendation. After you have studied the material and recorded your personal recommendation, you will decide as a team which of the three companies ACME should acquire. You are to rank order the three companies from most to least desirable. **There must be consensus agreement on the top ranked company.**

**Company A**  
**“Whiz-Bang Electronics”**

|           |                                          |
|-----------|------------------------------------------|
| Industry: | Industrial Electronics                   |
| Products: | Electronic manufacturing control devices |
| Location: | Metropol, California                     |
| Size:     | \$50 million in sales; 200 employees     |
| Age:      | Established 5 years ago                  |

### **I. Financial**

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 15% annually over the next 10 years. Further, the analyst estimates that there is a 15 percent chance that ACME will have a zero return. The Smith, Barney & Howe consultants concur with the conclusions of your in-house analyst. Both analyses agree that there is a near certain probability that ACME will suffer a loss during the first year, and that you would not achieve any return until after that time. This company’s growth in sales has been halting, hovering around 5% annually from the beginning.

### **II. Strategic**

Whiz-Bang Electronics is young, and was founded by a group whose management experience was limited. The inexperience of the management team led to some early mistakes in marketing and distribution such that customer awareness of the products is low, and so are perceptions of service. Furthermore, the pricing structure is not suitable for their target customers. As a result the company has been a market laggard, averaging only a 6% market share. The company leadership has been addressing these issues head-on.

### **III. Labor**

Whiz-Bang Electronics has very high labor costs. It spends a lot of money on employee development, such as providing on-site fitness facilities. The company’s recruiting processes are drawn-out, and these expenditures represent a very large chunk of the company’s operating budget.

## **Company B** **“Power Energy”**

|           |                                        |
|-----------|----------------------------------------|
| Industry: | Energy                                 |
| Products: | Power for heavy manufacturing          |
| Location: | Bigtown, Texas                         |
| Size:     | \$50.5 million in sales; 225 employees |
| Age:      | Established 25 years ago               |

### **I. Financial**

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 25% annually over the next 10 years. This analyst believes the chances of you actually getting this return is 70 percent. Further, the analyst estimates that there is a 15 percent chance that ACME will double this return (thereby providing a 50% return). The Smith, Barney & Howe consultants estimated a lower rate of return than did your internal analyst, and they believed there would be a 30 percent chance of doubling their estimated return. Power Energy historically has experienced growth in sales averaging 10% annually. It experienced record growth of 15% five years ago. The best estimates indicate flat growth in the overall market over the near future.

### **II. Strategic**

Power Energy has been the market leader for over two decades. It dominates the market with 30% share. The company enjoys strong name recognition among the public. The current management team is responsible for moving this company to the top of its market.

The company has been involved in off-shore oil drilling and exploration, and has made significant profits. One concern is that a number of foreign companies, whose off-shore explorations are subsidized by their governments, are poised to enter Power Energy's market.

### **III. Labor**

Power Energy's labor force consists primarily of semi-skilled workers and engineers. The company has had the reputation of offering job security and generous compensation and benefit packages.

**Company C**  
**“Quality Tool & Die”**

|           |                                        |
|-----------|----------------------------------------|
| Industry: | Industrial Products                    |
| Products: | Tool & Die for heavy manufacturing     |
| Location: | Midville, Indiana                      |
| Size:     | \$50.2 million in sales; 175 employees |
| Age:      | Established 17 years ago               |

**I. Financial**

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 8% annually over the next 10 years. This analyst believes the chance of you actually getting this return is 60 percent. Further, the analyst estimates that there is a 20 percent chance either way that ACME will double this return (thereby providing a 16% return) or will have a zero return. The analysis indicates further that there is a near certain probability that you will suffer a loss during the first year, and that you would not achieve any return until after that time. The Smith, Barney & Howe consultants agree with your analyst's conclusions. Growth in sales has been averaging around 6% annually.

**II. Strategic**

Quality Tool & Die is in a mature industry with very little change forecasted for the foreseeable future. They have managed to maintain their 12% market share in an environment which is expected to remain in a competitive equilibrium in the near future. Their management team is solid and respectable. They have not been known to make any major mistakes, nor have they contributed major innovations to their industry.

**III. Labor**

Their labor force is unionized, composed mostly of unskilled workers employed in assembly line jobs who receive their training on-the-job. The company has managed to keep the relationship with the unions relatively trouble-free, but the newly elected union leadership is known to have an aggressive and confrontational attitude toward management. The company's labor turnover has been low.

## ACME Inc.: Group Decision-Making for Investments

### Instructions

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There are a number of key factors that you should consider carefully in evaluating these companies. First, ACME prefers to acquire firms that will maximize wealth, over the long term. Which of these companies has the most promising future? Therefore you should consider the potential return on your investment. A second consideration is the likelihood of you actually getting that return, in the long run. That is, how precise is the projection and what is the probability that your actual return will be significantly different than the best estimate? Third, you should also consider the growth potential of each company’s market. You would prefer to invest in a company that competes in a growing market. A fourth consideration is the quality of the company’s management team. ACME takes a “hands-off” approach with its subsidiaries. Therefore, you prefer to invest in companies whose management team can achieve the profitability you desire. Finally, you should judge each company’s general strategy and business policies. Do they seem like policies that will lead the company to profitability in the future?

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The Chair of the Board wants each of you individually to submit your personal recommendation, whether or not it agrees with the team recommendation. After you have studied the material and recorded your personal recommendation, you will decide as a team which of the three companies ACME should acquire. You are to rank order the three companies from most to least desirable. **There must be consensus agreement on the top ranked company.**

**Company A**  
**“Whiz-Bang Electronics”**

|           |                                          |
|-----------|------------------------------------------|
| Industry: | Industrial Electronics                   |
| Products: | Electronic manufacturing control devices |
| Location: | Metropol, California                     |
| Size:     | \$50 million in sales; 200 employees     |
| Age:      | Established 5 years ago                  |

### **I. Financial**

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 15% annually over the next 10 years. Further, the analyst estimates that there is a 15 percent chance that ACME will have a zero return. The Smith, Barney & Howe consultants concur with the conclusions of your in-house analyst. Both analyses agree that there is a near certain probability that ACME will suffer a loss during the first year, and that you would not achieve any return until after that time. This company’s growth in sales has been halting, hovering around 5% annually from the beginning.

### **II. Strategic**

Whiz-Bang Electronics is young, and was founded by a group whose management experience was limited. The inexperience of the management team led to some early mistakes in marketing and distribution such that customer awareness of the products is low, and so are perceptions of service. Furthermore, the pricing structure not suitable for their target customers. As a result the company has been a market laggard, averaging only a 6% market share. The company leadership has been addressing these issues head-on.

### **III. Labor**

Whiz-Bang Electronics has very high labor costs. It spends a lot of money on employee development, such as on-site fitness facilities. The company’s recruiting processes are drawn-out, and these expenditures represent a very large chunk of the company’s operating budget.

## **Company B** **“Power Energy”**

|           |                                        |
|-----------|----------------------------------------|
| Industry: | Energy                                 |
| Products: | Power for heavy manufacturing          |
| Location: | Bigtown, Texas                         |
| Size:     | \$50.5 million in sales; 225 employees |
| Age:      | Established 25 years ago               |

### **I. Financial**

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 25% annually over the next 10 years. This analyst believes the chances of you actually getting this return is 70 percent. Further, the analyst estimates that there is a 15 percent chance either way that ACME will double this return (thereby providing a 50% return) or will have a zero return. The Smith, Barney & Howe consultants estimated a lower rate of return than did your internal analyst, and they believed there would be a 30 percent chance of doubling their estimated return. Power Energy historically has experienced growth in sales averaging 10% annually. It experienced record growth of 15% five years ago.

### **II. Strategic**

Power Energy has been the market leader for over two decades. It dominates the market with 30% share. The company enjoys strong name recognition among the public. The current management team is responsible for moving this company to the top of its market 15-20 years ago. Growing concern for the environment, especially related to energy consumption, have started to mandate changes in the way that energy companies deliver product to their customers. The company has made significant profits in off-shore oil drilling and exploration, despite recent problems.

### **III. Labor**

Power Energy’s labor force consists primarily of semi-skilled workers and engineers. The company has had the reputation of offering job security and generous compensation and benefit packages.



**Company C**  
**“Quality Tool & Die”**

|           |                                        |
|-----------|----------------------------------------|
| Industry: | Industrial Products                    |
| Products: | Tool & Die for heavy manufacturing     |
| Location: | Midville, Indiana                      |
| Size:     | \$50.2 million in sales; 175 employees |
| Age:      | Established 17 years ago               |

**I. Financial**

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**II. Strategic**

Quality Tool & Die is in a mature industry with very little change forecasted for the foreseeable future. They have managed to maintain their 12% market share in an environment which is expected to remain in a competitive equilibrium in the near future. Their management team is solid and respectable. They have not been known to make any major mistakes, nor have they contributed major innovations to their industry.

**III. Labor**

Their labor force is unionized, composed mostly of unskilled workers employed in assembly line jobs who receive their training on-the-job. The company has managed to keep the relationship with the unions relatively trouble-free, but a the newly elected union leadership is known to have an aggressive and confrontational attitude toward management. The company’s labor turnover has been low.

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Company A
“Whiz-Bang Electronics”

| | |
|-----------|--|
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| Products: | Electronic manufacturing control devices |
| Location: | Metropol, California |
| Size: | \$50 million in sales; 200 employees |
| Age: | Established 5 years ago |

I. Financial

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 15% annually over the next 10 years. This analyst believes the chances of you actually getting this return is 70 percent. Further, the analyst estimates that there is a 15 percent chance that ACME will either double this return (thereby providing a 30% return) or will have a zero return. The Smith, Barney & Howe consultants concur with the conclusions of your in-house analyst. In fact, SBH believes that there is an 80 percent chance of your obtaining the projected return. Both your internal financial analyst and the SBH consultants agree, however, that there is a near certain probability that ACME will suffer a loss during the first year, and that you would not achieve any return until after that time. This company’s growth in sales has been positive, hovering around 5% annually from the beginning, but early projections indicate an increase to 8% for the next fiscal year. Further, this market is expected to grow in the foreseeable future.

II. Strategic

Whiz-Bang Electronics is young, and was founded by a group of bright and talented entrepreneurs whose management experience was limited, at the start. The company has an innovative and promising product line. The inexperience of the management team led to some early mistakes in marketing and distribution such that customer awareness of the products is low. As a result the company has only a 6% market share and low customer perceptions of service. Furthermore, Whiz-Bang Electronics’ pricing structure is not suitable for its target customers. The company leadership team has been actively developing their professional managerial skills through workshops and close work with experienced consultants. Industry watchers have noted that this group seems to be making more effective decisions, which are probably responsible for the recent sales growth.

III. Labor

Whiz-Bang Electronics has very high labor costs. It spends a lot of money on employee development. They offer training in a variety of business-related skills ranging from communication to accounting principles. The company’s recruiting processes are drawn-

out, but very thorough and careful. Recruiting expenses represent a very large chunk of the company's operating budget. They provide fitness facilities and on-site child care for all employees.

Company B “Power Energy”

| | |
|-----------|--|
| Industry: | Energy |
| Products: | Power for heavy manufacturing |
| Location: | Bigtown, Texas |
| Size: | \$50.5 million in sales; 225 employees |
| Age: | Established 25 years ago |

I. Financial

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 25% annually over the next 10 years. This analyst believes the chances of you actually getting this return is 70 percent. Further, the analyst estimates that there is a 15 percent chance that ACME will either double this return (thereby providing a 50% return) or have a zero return. The Smith, Barney & Howe consultants disagree with the conclusions of your in-house analyst, however. They believe that the rate of return will be lower. In fact, SBH estimates the rate of return will only be 5%, and that the chance of you getting that return will be 40 percent. Further, SBH expects a 30% chance either way that the return could double (thereby providing a 10% return) or that it could be zero. Power Energy historically has experienced growth in sales averaging 10% annually. It experienced record growth of 15% five years ago. The growth figures since then have been 12%, 10%, 9.3%, and 8%. The best estimates indicate flat growth in the overall market over the near future.

II. Strategic

Power Energy has a 30% share of the market. The company also enjoys strong name recognition among the public. The current management team is responsible for moving this company to the top of its market, 20 years ago. Their management style has evolved to a “maintenance” strategy, and some in the industry view them as being out of touch with current trends in their markets. Growing concern for the environment, especially related to energy consumption, have started to mandate changes in the way that energy companies deliver product to their customers. Companies able to offer innovations that reduce negative environmental impact will almost certainly merge to the market forefront soon.

The company has been involved in off-shore oil drilling and exploration, and has made significant profits. A recent fine and responsibility for some clean-up costs, however has resulted in a 6% reduction in bottom line profits over the next 2 years. One concern is that a number of foreign companies, whose off-shore explorations are subsidized by their governments, are poised to enter Power Energy’s market.

III. Labor

Power Energy's labor force consists primarily of semi-skilled workers and engineers who think of this company as offering them lifetime employment. The company is also known for its generous compensation and benefits packages.

Company C
“Quality Tool & Die”

| | |
|-----------|--|
| Industry: | Industrial Products |
| Products: | Tool & Die for heavy manufacturing |
| Location: | Midville, Indiana |
| Size: | \$50.2 million in sales; 175 employees |
| Age: | Established 17 years ago |

I. Financial

Your internal financial analyst estimates that the internal rate of return (i.e., the return on your investment) will be 8% annually over the next 10 years. This analyst believes the chance of you actually getting this return is 60 percent. Further, the analyst estimates that there is a 20 percent chance either way that ACME will double this return (thereby providing a 16% return) or will have a zero return. The analysis indicates further that there is a near certain probability that you will suffer a loss during the first year, and that you would not achieve any return until after that time. The Smith, Barney & Howe consultants agree with your analyst’s conclusions. Growth in sales has been averaging around 6% annually.

II. Strategic

Quality Tool & Die is in a mature industry with very little change forecasted for the foreseeable future. They have managed to maintain their 12% market share in an environment which is expected to remain in a competitive equilibrium in the near future. Their management team is solid and respectable. They have not been known to make any major mistakes, nor have they contributed major innovations to their industry.

III. Labor

Their labor force is unionized, composed mostly of unskilled workers employed in assembly line jobs who receive their training on-the-job. The company has managed to keep the relationship with the unions relatively trouble-free, but a the newly elected union leadership is known to have an aggressive and confrontational attitude toward management. The company’s labor turnover has been low.

**ACME Investments Task
Information Checklist**

Your Name _____ **Date** _____ **Transcript#** _____

Use this form to identify the specific pieces of information brought up during discussion of the ACME Investments task. Please fill in the blank with the transcript line number(s) where the information appears. At the same time, mark the corresponding information code onto the transcript.

There are three sets of forms -- one for each of the three companies. Within the forms for Companies A and B, the information is grouped according to whether it is shared or unique; shared information appears first, partially shared information second, unique information third. The information about Company C was all shared.

If a comment from the discussion transcript refers to more than one company, the relevant piece of information should be marked for all the companies mentioned (for example, if someone compares the rate of return between companies, that piece of information about rate of return should be checked off for each company mentioned). Further, you will find that several pieces of information are sometimes mentioned within the same comment. When this happens, each piece of information should be counted separately.

If you find that a particular comment does not fit easily into a category, do not try to force it. Please make a note of the difficulty, and move on.

Company A -- "Whiz Bang Electronics"

Line number(s)

Background Information (all shared)

- _____ 1. In electronics industry/manufactures electronic controls
- _____ 2. Located in Metropol, California
- _____ 3. Size is \$50 million in sales; 200 employees
- _____ 4. Established 5 years ago

Completely Shared Information

- _____ 5. Internal analyst expects 15% IRR
- _____ 6. SBH concurs with internal analyst conclusions
- _____ 7. Company is young/mgmt has limited experience
- _____ 8. Sales growth hovering around 5%
- _____ 9. Early mistakes in marketing and distribution
- _____ 10. Low customer awareness of product
- _____ 11. Company had 6% market share
- _____ 12. Company has high labor costs/spends a lot on employee development
- _____ 13. Company has drawn-out recruiting processes
- _____ 14. Company provides fitness facilities

Partially Shared Information (B1-B3)

- _____ 15. Internal analyst expects 15 percent chance of 30% IRR
(i.e., double estimated return)
- _____ 16. Near certain probability of first year loss.
- _____ 17. Halting sales growth
- _____ 18. Low customer perceptions of service

Company A (cont.)

- _____ 19. Pricing structure may not be suitable

- 20. Company has been market laggard
- 21. Company leadership addressing problems head on
- 22. Employee expenditures take a large chunk of company budget

Unique Information (minority only)

- 23. Internal analyst expects 70 percent chance of 15% IRR
- 24. Internal analyst expects fifteen percent chance of 0 IRR “
- 25. SBH expects 80 percent chance of 15% IRR
- 26. Early projection indicate 8% increase in sales growth for next year (i.e., positive sales growth)
- 27. Market expected to grow in near future
- 28. Founded by bright & talented entrepreneurs
- 29. Innovative and promising product line
- 30. Management team actively developing professional managerial skills (i.e., participating in workshops and working with consultants)
- 31. Industry watchers note the group is making more effective decisions/ more effective decisions probably responsible for recent sales increase
- 32. Company offers employees training in business-related skills
- 33. Company as thorough and careful recruiting process
- 34. Company provides on-site child care

Company B -- "Power Energy"

Line number(s)

Background Information (all shared)

- _____ 1. In energy industry/provides power for heavy manufacturing
- _____ 2. Located in Bigtown, Texas
- _____ 3. Size is \$50.5 million in sales; 225 employees
- _____ 4. Established 25 years ago

Completely Shared Information

- _____ 5. Internal analyst estimates 25% IRR
- _____ 6. Company historically has 10% sales growth/record growth of 15% five years ago
- _____ 7. Company involved in off-shore drilling and exploration
- _____ 8. Company has 30% market share
- _____ 9. Management team moved company to top of market
- _____ 10. Semi-skilled labor force

Partially Shared Information (B1-B3)

- _____ 11. Internal analyst estimates 70 percent chance of return 25% IRR
- _____ 12. Internal analyst estimates fifteen percent chance of 50% IRR
- _____ 13. Company has made significant profits in off-shore drilling
- _____ 14. Company dominates market/ leader for 2 decades
- _____ 15. Company has strong name recognition
- _____ 16. Management team's reputation well respected
- _____ 17. SBH expects 30 percent chance of getting 10% IRR
(i.e., double estimated return)

Company B (cont.)

- _____ 18. Reputation for job security

19. Generous compensation benefits

Unique Information (B1-B3)

20. Last year's growth was 8% (B1)

21. Off-shore drilling and exploration are risky (B1)

22. Company's recent problem has resulted in fines & clean-up costs. (B1)

23. Estimates indicate flat growth in the market (B2)

24. Foreign competition poised to enter market (B2)

25. Foreign competitors have government subsidy (B2)

26. Company has had recent problem (B3)

27. Management team moved company to top of market 15-20 years ago. (B3)

28. Growing concern for environment mandating changes in energy companies (B3)

29. Internal analyst estimates fifteen percent chance of 0 IRR (B3)

Unique Information (A)

30. SBH disagrees with the internal analyst

31. SBH estimates a 5% IRR

32. SBH estimates 40 percent chance of 5% IRR

33. SBH expects 30 percent chance of getting 0 IRR.

34. Growth figures for last few years have been 12%, 10%, 9%, 3% (i.e., declining sales growth)

35. Fine & clean-up costs result in 6% reduction in bottom line profits

Company B (cont.)

36. Management team style has evolved to "maintenance" strategy/
some view management team as out of touch

37. Companies with reduced negative environment impact

will emerge as leaders

38. Employees see company as offering lifetime employment

Company C -- "Quality Tool & Die"

Line number(s)

All Information is Shared

- _____ 1. Makes tool & die for heavy manufacturing
- _____ 2. Located in Midville, Indiana
- _____ 3. Size is \$50.2 million in sales; 175 employees
- _____ 4. Established 17 years ago
- _____ 5. Internal analyst estimates 8% IRR
- _____ 6. Internal analyst estimates 60 percent chance of getting 8% IRR
- _____ 7. Internal analyst estimates 20 percent chance of getting 16 % IRR
(i.e., double estimated return)
- _____ 8. Internal analyst estimates 20 percent chance of getting 0 IRR
- _____ 9. SBH agrees with conclusions of internal analyst.
- _____ 10. Near certain probability of first year loss
- _____ 11. Sales growth of 6%
- _____ 12. Company in mature industry
- _____ 13. Little industry change forecasted
- _____ 14. 12% market share
- _____ 15. Market in equilibrium
- _____ 16. Solid and respectable management team
- _____ 17. Management team made no major mistakes
- _____ 18. Management team made no major innovations
- _____ 19. Unionized labor force/ new union leadership aggressive & confrontational
- _____ 20. Unskilled assembly line workers
- _____ 21. Trouble-free relationships with unions
- _____ 22. On-the-job training
- _____ 23. Low turnover/ good labor supply

Problem Situation

College administrators across the country have become increasingly concerned with the rising number of college age students infected with the AIDS virus. It is estimated that one in 500 college students is HIV positive.

The administration at the University has requested that a task force be formed to address this issue and formulate a comprehensive program. However, a variety of attempts here and at other universities have met with limited success, partially due to the lack of student input. I am going to read a portion of a letter sent to a campus newspaper by a student at a major university. This letter was shared, by that university's President, at a national meeting of higher education administrators.

The letter read as follows:

"The doctor said he wasn't trying to scare me. It seemed like a lifetime had passed by since he had said, 'You've tested positive for HIV, the AIDS virus'. How could I...how can I not be scared? My mind keeps saying, 'The test has to be wrong'. Four tests now; it isn't wrong. I have become a victim. I am only 19. It is hard to face people and know they are thinking, 'I'm glad I'm not you'. I use to think that too, when I watched the news stories and heard about people like Magic Johnson and Kimberly Begalis. I've told my friends; I've told them to be careful, but I know they're not. I wish I had been."

This letter has prompted discussions among students, parents, faculty-staff, administrators, and community action groups at many colleges and universities across the country. It was the driving force for the creation of this task force. The question that is being addressed is why is there such a difference between 'what students know' and 'what students do'. At many institutions most programs have focused on AIDS awareness seminars, advertisements in student newspapers, the installation of condom machines in dormitories, and free HIV testing. Many campuses openly discuss with students 'risky behavior'. However, apparently none of these programs have effected large scale changes in behavior among our college students.

~1 ~

INSTRUCTION SUMMARY

Preliminary Instructions:

Research interested in how groups use information to make decisions.
Group members rarely have identical information about choices, the information given to each member before discussion may not be entirely identical to the information received by other group members.
Assume information in descriptions is true.

FTF: explanation of videotaping/release Computer: explanation of software

Judge instructions: "There is not sufficient information to choose any one company over the other two. We are asking you to use the available information and decide which of the three companies you would prefer to invest money."

Solve instructions: "One of these companies has more positive attributes than the other two companies. We would like you to read over the materials carefully and to decide which company you think is the best company to invest in."

Participants will individually read and review materials for 15 minutes. Then will complete a private, pre discussion questionnaire:

Judge: Participants will be asked to rank order the three companies and will be asked to provide a rationale for their ranking.

Solve: Participants will be asked to indicate in which company they think is best to invest and to provide a rationale for their choice.

Memory: experimenters collect group members company descriptions before group discussion.

Assign subjects into groups using the chair method. (FTF different colored chairs for each group in large room)

Groups given up to 20 minutes to reach decision, but can end discussion whenever they reach unanimous agreement.

Judge: Groups will be asked to rank order the three companies and will be asked to provide a rationale.

Solve: Groups will be asked to indicate in which company they think is best to invest and to provide a rationale.

Post-discussion questionnaire: sufficiency of available information, questions re: task, medium, interaction

THE ALPHA COMPANY

Alpha earned \$6.4 billion in 1990. It is a diversified health care, animal health, consumer products and chemical company. Drug sales accounted for half of the company's earnings. Currently, drugs have the highest profit margins of any product category. However, legislature is pending that may increase governmental control over insurance reimbursements of drugs to drug companies, which would greatly reduce profit margins. Alpha expects to have a 20% increase in its earnings over the next 5 years. It has an "AA - very good" debt rating, signifying that it has low debt. (The best debt rating is AAA excellent; the worst is BBB.) The current CEO at Alpha has been in his position for 3 years. Alpha's current ratio of managers to workers is 1:15, which is lower than the national average. The company has an average employee turnover rate, the average length of employment at Alpha is 8.1 years. The national average is 5.2 years. Its aggressive research and development spending in the 1980's is paying off. It developed 9 promising drugs during that time. One of these drugs is an antidepressant that will be used for treating bulimia and obesity. Sales for this drug are expected to reach \$1 billion in 1995. Alpha is also planning on selling its less profitable chemical companies to invest more money in the research and development of pharmaceuticals.

THE ALPHA COMPANY (cont'd)

The United States and Canada account for 95% of the company's sales. Alpha is planning to expand its operations to Europe. The European drug regulations are less strict than American drug regulations. The company, however, has received some bad press on one of its drugs for fears that it may make one prone to acts of violence or suicide. However, these allegations have not yet been proven. Three claims have been brought (as of July 1991) against Alpha for its dysfunctional heart valves. The compensation paid to each has ranged from \$500,000 to \$1,000,000.

BETA INCORPORATED

Beta Incorporated earned 4.4 billion in 1990. It is the leading U.S. household products marketer with dominant market shares in detergents, soaps, disposable diapers and shampoo. The company also has a sizable food business which has significant market positions in coffee, vegetable oils, peanut butter and orange juice. Household and food products have relatively small profit margins, but have a high and stable volume of sales. Beta Inc. expects to have a 12% increase in its earnings over the next 5 years. It has an "A - good" debt rating, signifying that it has relatively low debt. (The best debt rating is AAA excellent; the worst is BBB.) The current CEO at Beta has been in his position for 2 years. Beta's current ratio of managers to workers is 1:8, which is the national average. The company has a relatively low turnover rate, the average length of employment at Beta is 7.3 years. The national average is 5.2 years. The goal of Beta Inc's management is to expand European markets and joint ventures in Korea and China. The company expects foreign markets to account for 20% of its income by 1995. Beta Inc. plans to expand both its U.S. and foreign food business. It also plans to increase its research and development spending on new low calorie food products, which is a quickly growing market in the U.S. It has also developed a cholesterol free, fat substitute which could also be a major product breakthrough, given the current health conscious trend in the U.S. This fat-free substitute could be used in the place of any

BETA INCORPORATED (cont'd)

fat in products from tv dinners to desserts to snack foods to dairy products. It is very likely that it will be approved by the U.S. Food & Drug Administration. A comprehensive research study has shown that most consumers have very positive attitudes toward the company and trust the company's products. They report being very willing to try any new product launched by the company. Beta Inc. spends more money on advertising than any other company in the United States. Each of the company's products gets better advertising exposure than its competitors.

GAMMA CORPORATION

Gamma earned \$9 billion in 1990. It is the leading and most profitable cigarette manufacturer worldwide. It has the largest selling brand in the world. Cigarettes have one of the highest profit margins of any product category (aside from pharmaceuticals). However, federal taxes on cigarettes and liquor are expected to increase 10% in the next 5 years. Cigarette sales accounted for 60% of the Gamma's profits. It is also the largest food marketer in the U.S. and owns the nation's second largest brewer. Gamma expects to have an 18% increase in its earnings over the next 5 years. It has an "AAA - excellent" debt rating, signifying that it has no debt. (The best debt rating is AAA - excellent; the worst is *BBB*.) The current CEO at Gamma has been in his position for 6 years. Gamma's current ratio of managers to workers is 1:12, which is lower than the national average. The company has a low turnover rate, the average length of employment at Gamma is 5.3 years. The national average is 5.2 years. Gamma already has an excellent foreign presence. It owns several international food companies including Europe's largest and the world's third largest maker of coffee and chocolate. Money for research and development in the last several years has spent on the research and development of new markets, not new products. This trend is expected to continue. Worldwide consumption of cigarettes grew 2% in 1990 and is expected to continue, particularly in Asian and Eastern European countries. Gamma plans to continue investing in its Eastern

GAMMA CORPORATION

European and Asian markets. Its exports of cigarettes and food products to Japan and Russia increased 20% in 1990 and are expected to increase 25% each year for the next five years. The company also wants to develop markets in Hungary, Czechoslovakia, China, and Malaysia. However, domestic consumption of cigarettes fell 2% in 1990 and the trend is expected to continue. Current suit of the cigarette companies by the relatives of a woman who smoked for 30 years and eventually died of lung cancer is pending in the U.S. No decision has been reached yet.

ALPHA COMPANY

SHARED

S1: Alpha expects to have a 20% increase in its earnings over the next 5 years.

S2: Currently, drugs have the highest profit margins of any product category.

S3: The United States and Canada account for 95% of the company's sales. The company currently has plans for European expansion. Drug regulations are less strict in Europe than they are in the U . S .

S4: Alpha is also planning on selling its less profitable chemical companies to invest more money in the research and development of pharmaceuticals.

S5: It has an "AA - very good" debt rating, signifying that it has low debt. (The best debt rating is AAA - excellent; the worst is BBB.)

S6: Its aggressive research and development spending in the 1980's is paying off. It developed 9 promising drugs during that time. one of these drugs is an antidepressant that will be used for treating bulimia and obesity. Sales are expected to reach \$1 billion in 1995.

UNSHARED

U1: The average length of employment at Alpha is 8.1 years.

U2: Ratio of managers to workers is 1:15, which is lower than the national average.

U3: Current CEO has been in position for 3 years.

U4: Legislature is pending that may increase governmental control over insurance reimbursements of drugs to drug companies, which would greatly reduce their profit margins.

U5: The company, however, has received some bad press on one of its drugs for fears that it may make one prone to acts of violence or suicide. However, these allegations have not yet been proven.

U6: Three claims have been brought (as of July 1991) against Alpha for its dysfunctional heart valves. The compensation paid to each has ranged from \$500,000 to \$1,000,000.

BETA INCORPORATED

SHARED

S1: Beta expects to have a 12% increase in its earnings over the next five years.

S2: Household products have relatively small profit margins, but have a high and stable volume of sales.

S3: Management's goal is to expand European markets and joint ventures in Korea and China. The company expects foreign markets to account for 20% of its income by 1995.

S4: Beta plans to expand both its U.S. and foreign food business.

S5: It has an "A - good" debt rating, signifying that it has relatively low debt. (The best debt rating is AAA - excellent; the worst is BBB.)

S6: It plans to increase its research and development spending on new low calorie food products, which is a quickly growing market

UNSHARED

U1: The average length of employment at Beta is 7.3 years.

U2: Ratio of managers to workers is 1:8, which is equal to the national average.

U3: Current CEO has been in position for 2 years.

U4: A comprehensive research study has shown that most consumers have very positive attitudes toward the company and trust the company's products. They report being very willing to try any new product launched by the company.

U5: The company spends more money on advertising than any other company in the United States. Each of the company's products gets better advertising exposure than its competitors.

U6: It has also developed a cholesterol-free, fat substitute which could also be a major product breakthrough, given the current health conscious trend in the U.S. This fat-free substitute can be used in the place of any fat in products from tv dinners to desserts to snack foods. It is very likely that it will be approved by the U.S. Food & Drug Administration.

GAMMA

SHARED

S1: Gamma expects to have a 18% increase in its earnings over the next 5 years.

S2: Cigarettes have one of the highest profit margins of any product category (aside from pharmaceuticals). Cigarette sales accounted for 60% of the company's profits.

S3: The company already has an excellent foreign presence. It owns several international food companies including the largest European and third largest world coffee and chocolate manufacturer.

S4: Worldwide consumption of cigarettes grew 2% in 1990 and is expected to continue, particularly in Asian and Eastern European countries. The company plans to continue investing in its Eastern European and Asian markets. Its exports of cigarettes and food products to Japan and Russia increased 20% in 1990 and are expected to increase 25% each year for the next five years. The company also wants to develop markets in Hungary, Czechoslovakia, Thailand, China, and Malaysia.

S5: Gamma has an "AAA - excellent" debt rating, signifying that it has no debt. (The best debt rating is AAA - excellent; the worst is BBB.)

S6: Money for research and development in the last several years has spent on the research and development of new markets, not new products. This trend is expected to continue.

UNSHARED

U1: The average length of employment at Gamma is 5.3 years.

U2: Ratio of managers to workers is 1:15, which is much lower than the national average.

U3: Current CEO has been in position for 6 years.

U4: However, domestic consumption of cigarettes fell 2% in 1990 and the trend is expected to continue.

U5: Federal taxes on cigarettes and liquor are expected to increase 10% in the next 5 years.

U6: A current suit of the cigarette companies by the relatives of a woman who smoked for 30 years and eventually died of lung cancer is pending. No decision has been reached yet.

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Alpha earned \$6.4 billion in 1990. It is a diversified health care, animal health, consumer products and chemical company. Drug sales accounted for half of the company's earnings. Currently, drugs have the highest profit margins of any product category. Alpha expects to have a 20% increase in its earnings over the next 5 years. It has an "AA - very good" debt rating, signifying that it has low debt. (The best debt rating is AAA excellent; the worst is BBB.) Alpha's current ratio of managers to workers is 1:15, which is lower than the national average. Its aggressive research and development spending in the 1980's is paying off. It developed 9 promising drugs during that time. One of these drugs is an antidepressant that will be used for treating bulimia and obesity. Sales for this drug are expected to reach \$1 billion in 1995. Alpha is also planning on selling its less profitable chemical companies to invest more money in the research and development of pharmaceuticals. The United States and Canada account for 95% of the company's sales. Alpha is planning to expand its operations to Europe. The European drug regulations are less strict than American drug regulations. The company, however, has received some bad press on one of its drugs for fears that it may make one prone to acts of violence or suicide. However, these allegations have not yet been proven.

BETA INCORPORATED

Beta Incorporated earned 4.4 billion in 1990. It is the leading U.S. household products marketer with dominant market shares in detergents, soaps, disposable diapers and shampoo. The company also has a sizable food business which has significant positions in coffee, vegetable oils, peanut butter and orange juice. Household and food products have relatively small profit margins, but have a high and stable volume of sales. Beta Inc. expects to have a 12% increase in its earnings over the next 5 years. It has an "A - good" debt rating, signifying that it has relatively low debt. (The best debt rating is AAA - excellent; the worst is BBB.) Beta's current ratio of managers to workers is 1:8, which is the national average. Beta Inc. plans to expand both its U.S. and foreign food business. It plans to increase its research and development spending on new low calorie food products, which is a quickly growing market in the U. S. The goal of Beta Inc's management is to expand European markets and joint ventures in Korea and China. The company expects foreign markets to account for 20% of its income by 1995. Beta Inc. spends more money on advertising than any other company in the United States. Each of the company's products gets better advertising exposure than its competitors.

GAMMA CORPORATION

Gamma earned \$9 billion in 1990. It is the leading and most-profitable cigarette manufacturer worldwide. It has the largest selling brand in the world. Cigarettes have one of the highest profit margins of any product category (aside from pharmaceuticals). However, federal taxes on cigarettes and liquor are expected to increase 10% in the next 5 years. Cigarette sales accounted for 60% of the Gamma's profits. It is also the largest food marketer in the U.S. and owns the nation's second largest brewer. Gamma expects to have a 18% increase in its earnings over the next 5 years. It has an "AAA - excellent" debt rating, signifying that it has no debt. (The best debt rating is AAA excellent; the worst is BBB.) Gamma's current ratio of managers to workers is 1:12, which is lower than the national average. Gamma already has an excellent foreign presence. It owns several international food companies including Europe's largest and the world's third largest maker of coffee and chocolate. Money for research and development in the last several years has been spent on the research and development of new markets, not new products. This trend is expected to continue. Gamma plans to continue investing in its Eastern European and Asian markets. Worldwide consumption of cigarettes grew 2% in 1990 and is expected to continue, particularly in Asian and Eastern European countries. Its exports of cigarettes and food products to Japan and Russia increased 20% in 1990 and are expected to increase 25% each year for the next five years. The company also wants to develop markets in Hungary, Czechoslovakia, China, and Malaysia.

THE ALPHA COMPANY

Alpha earned \$6.4 billion in 1990. It is a diversified health care, animal health, consumer products and chemical company. Drug sales accounted for half of the company's earnings. Currently, drugs have the highest profit margins of any product category. Alpha expects to have a 20% increase in its earnings over the next 5 years. It has an "AA - very good" debt rating, signifying that it has low debt. (The best debt rating is AAA - excellent; the worst is BBB.) The current CEO at Alpha has been in his position for 3 years. Its aggressive research and development spending in the 1980's is paying off. It developed 9 promising drugs during that time. One of these drugs is an antidepressant that will be used for treating bulimia and obesity. Sales for this drug are expected to reach \$1 billion in 1995. Alpha is also planning on selling its less profitable chemical companies to invest more money in the research and development of pharmaceuticals. The United States and Canada account for 95% of the company's sales. Alpha is planning to expand its operations to Europe. The European drug regulations are less strict than American drug regulations. Three claims have been brought (as of July 1991) against Alpha for its dysfunctional heart valves. The compensation paid to each has ranged from \$500,000 to \$1,000,000.

BETA INCORPORATED

Beta Incorporated earned 4.4 billion in 1990. It is the leading U.S. household products marketer with dominant market shares in detergents, soaps, disposable diapers and shampoo. The company also has a sizable food business which has significant market positions in coffee, vegetable oils, peanut butter and orange juice. Household and food products have relatively small profit margins, but have a high and stable volume of sales. Beta Inc. expects to have a 12% increase in its earnings over the next 5 years. It has an "A - good" debt rating, signifying that it has relatively low debt. (The best debt rating is AAA excellent; the lowest is BBB.) The current CEO at Beta has been in his position for 2 years. Beta Inc. plans to expand both its U.S. and foreign food business. It also plans to increase its research and development spending on new low calorie food products, which is a quickly growing market in the U. S. It has also developed a cholesterolfree, fat substitute which could also be a major product breakthrough, given the current health conscious trend in the U.S. This fat-free substitute can be used in the place of any fat in products from tv dinners to desserts to snack foods to dairy products. It is very likely that it will be approved by the U.S. Food & Drug Administration. The goal of Beta Inc's management is to expand European markets and joint ventures in Korea and China. The company expects foreign markets to account for 20% of its income by 1995.

GAMMA CORPORATION

Gamma earned \$9 billion in 1990. It is the leading and most profitable cigarette manufacturer worldwide. It has the largest selling brand in the world. Cigarettes have one of the highest profit margins of any product category (aside from pharmaceuticals). Cigarette sales accounted for 60% of the Gamma's profits. It is also the largest food marketer in the U.S. and owns the nation's second largest brewer. Gamma expects to have an 18% increase in its earnings over the next 5 years. Gamma has an "AAA - excellent" debt rating, signifying that it has no debt. (The best debt rating is AAA - excellent; the worst is BBB.) The current CEO at Gamma has at Gamma for 6 years. Gamma already has an excellent foreign presence. It owns several international food companies including Europe's largest and the world's third largest maker of coffee and chocolate. Money for research and development in the last several years has been spent on the research and development of new markets, not new products. This trend is expected to continue. Worldwide consumption of cigarettes grew 2% in 1990 and is expected to continue, particularly in Asian and Eastern European countries. Gamma plans to continue investing in its Eastern European and Asian markets. Its exports of cigarettes and food products to Japan and Russia increased 20% in 1990 and are expected to increase 25% each year for the next five years. The company also wants to develop markets in Hungary, Czechoslovakia, China, and Malaysia. A current suit of the cigarette companies by the relatives of a woman who smoked for 30 years and eventually died of lung cancer is pending in the U.S. No decision has been reached yet.

Date/Time

GROUP

After you've read all three profiles. Please rank order the three companies on this sheet. Give a one to the company that you would prefer to invest in most; a two to the company that you would prefer to invest in second most; and a three to the company that you would least prefer to invest in. Please write down a rationale for your rank order (i.e. Why did you order them that way.) Please write legibly and in complete sentences. (Continue on the back if necessary)

THE ALPHA COMPANY

BETA INCORPORATED

GAMMA CORPORATION

Rationale:

Rank:

Rank:

Rank:

FTF, JUDGE, MEMORY
(111)

INSTRUCTIONS

Thank you for coming to the experiment today. Has everyone signed the attendance sheet and the video release form?

This experiment is about how groups use information to make decisions. In today's experiment, you will be reading descriptions about three different companies and will be asked to make a decision about them. First, you will work individually. Then you will work together as a group to reach a group decision. We will videotape each group discussion. Your names will not be associated with the tapes. The videotapes will only be used by members of the research team and only for research purposes. Does anyone have any questions about the taping? (ANSWER ANY QUESTIONS - COLLECT VIDEO RELEASE FORMS)

We will now hand out the company profiles. Please read each company profile carefully. We are also handing out an index card with a number and letter on it. This will be your ID card. Please hold onto it throughout the experiment.

Your task for the next fifteen minutes is to read the available information about three companies and to rank order them based on which company you would prefer to invest in most, second most and least. Please assume that when all of the information in all of the company profiles is considered, no company is clearly a better investment than the other two. The company profiles are based on true information about three American companies. Please assume that all information in each description is true about each company. You will not have these descriptions for the group

FTF, JUDGE, MEMORY (111)

decision task, so please read each profile and consider all information about each company carefully.

After you've read all three profiles carefully, please rank order the three companies on this sheet. Give a one to the company that you would prefer to invest in most; a two to the company that you would prefer to invest in second most; and a three to the company that you would least prefer to invest in. After that, please write down a rationale as to why you ranked the companies the way you did. Please write legibly and in complete sentences.

Also- please do not write on the profiles since we will be using them for other sessions. If you need scratch paper, just let one of us know.

Again, you will have fifteen minutes to complete this part of the experiment. I will announce when there are 10 minutes and 5 minutes left. You may begin.

(AFTER FIFTEEN MINUTES, COLLECT RANK ORDER SHEETS/COMPANY DESCRIPTIONS)

Okay, now we will be dividing you into groups. (DIVIDE INTO GROUPS ON THE BASIS OF THE COLOR OF THEIR SEATS). Please take your index cards with you.

(MOVE TO APPROPRIATE ROOMS)

You each have a letter on your ID card which is your member letter for the experiment. Please sit in the seat that corresponds to the letter on the card.

(PUT A IN CHAIR WITH "A" IN FRONT, ETC.)

Your task in the group discussion is to review all of the available information and to decide on a rank order preference:

FTF, JUDGE, MEMORY (111)

which one you, as a group, would prefer to invest in most, second most and least. Often different people in a group have different information about different aspects relating to a group decision. Each of you may or may not have had all of the available information about the three companies in your company profiles. Please consider all of the information from all of the company profiles in your group decision. Again, assume that all information in the company descriptions was true. Remember no company was clearly a better investment than the other two when all of the information in all of the company profiles is considered.

You must reach a consensus with the other group members concerning your rank order preference about which company to invest in. To reach a consensus, all three group members have to be in agreement about the rank order of the three companies. Please continue your group discussion until all three of you agree on the rank order preference of the three companies.

After you've reached a consensus, please rank order the three companies on this sheet. You will be the group recorder (GIVE MEMBER A THE GROUP RECORDER SHEET). Give a one to the company that you, as a group, would prefer to invest in most; a two to the company that you would prefer to invest in second most; and a three to the company that you would least prefer to invest in. After that, please write down a rationale as to why you ordered the companies as you did. Please write legibly and in complete sentences.

You have twenty minutes to reach a decision about your group's

preference. Please knock on that door (POINT TO DOOR) when you have reached your decision and written down your rationale.

After I start the video camera, you may begin. (START VIDEO, AUDIO, AND TIMER). OK, you may begin.

WAIT OUTSIDE YOUR ROOM UNTIL YOU HEAR KNOCK. NOTE TIME ON TIMER AND WRITE IT DOWN. GO INTO ROOM AT 20 MINUTES IF NO KNOCK.)

(COLLECT ALL MATERIALS.) Please fill out this questionnaire.

Please do not talk while you are filling out the questionnaire.

MAKE SURE THAT YOU HAND OUT THE QUESTIONNAIRE TO THE RIGHT PERSON BY CHECKING THEIR INDEX CARD ID. MAKE SURE THAT THE CORRECT GROUP NUMBER IS ON THE TOP OF THE QUESTIONNAIRE. HANG AROUND. AFTER THEY ARE DONE WITH THE QUESTIONNAIRE, GIVE THEM DEBRIEFING SHEET, THANK THEM FOR COMING, AND DISMISS THEM. DON'T TELL THEM ABOUT THE HP.

THE AUTOMATIC POST OFFICE

(1-1/2 hours)

You are employees of a new company of 30 people with an idea for a new integrated product. It is a stand alone, unmanned post office that is similar in concept to a bank automatic teller machine, in that it offers some of the services that you can get in the manned post office and it is open 24 hours a day, 7 days a week.

You would like to develop a working prototype to present to the postal authorities at the end of 12 months.

You are now to spend an hour and a half beginning to put together a plan for what this post office would do --what services would be offered and in general how it would work (meaning what kinds of equipment you would include, what other people would have to be involved to service the place).

Consider the cost of the facility as well as arguments to the post office about the benefits for having it.

Make sure you do not suggest anything for which a prototype could not be built in a year.

An hour and a half is clearly not enough time to do this whole design. Do as much as you can, and in the course of doing this:

make notes about ideas you have thought of, and things you would like to investigate before you meet again, if you were going to meet again on this.

As output of this meeting, we would like you to write your ideas in sentences or phrases in a brief form that could be understood by someone who knew in general what you were doing but wasn't at the meeting.

ELIMINATION-BY-ASPECT TASK

EL GUSTO COMPANY

SITE SELECTION

The El Gusto Company, a subsidiary of Food Inc., is undergoing expansion. They are in the process of selecting sites for 15 new Mexican restaurants to be constructed in the Northeastern cities during the next year.

The El Gusto management has decided that seven factors are very important in deciding where a Mexican restaurant of the type they have should be located:

1. traffic density on the near-by roads
2. competitive situation in the Mexican restaurant segment.
3. parking facilities
4. retail sales in the surrounding community.
5. .population density within a 5 mile radius of the restaurant.
6. unemployment in the area
7. population growth in the area.

The management has studied these seven factors and has determined their order of importance as well as the cutoff limits for each factor. The following shows the ranking of the factors by the order of importance. (1=most important, 7=least important).

| | |
|-----------------------|------|
| area retail sales | -- 4 |
| competitive situation | -- 2 |
| unemployment rate | -- 6 |
| traffic density | -- 1 |
| population growth | -- 7 |
| population density | -- 5 |
| parking facilities | -- 3 |

The minimum required values, or cutoff limits, for factors on a 100 point basis are:

| | |
|-----------------------|-------|
| area retail sales | -- 24 |
| competitive situation | -- 25 |
| unemployment rate | -- 13 |
| traffic density | -- 18 |
| population growth | -- 18 |
| population density | -- 18 |
| parking facilities | -- 21 |

The El Gusto management hired a consulting firm to evaluate six potential restaurant sites in suburban Philadelphia. The El Gusto management requested that the consulting firm score each site on each factor on a 100 point basis. The results of the scoring are shown in the Information Packet.

The El Gusto management wanted to select one of these sites for construction. Given the importance ranking and cutoff points for the factors, the objective of the management was to choose the best site. Which site did they select.

ELIMINATION-BY-ASPECT TASK -- EL GUSTO COMPANY

Data Used for the Task:

| | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 |
|------------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|
| 4. Retail Sales (Min: 24) | 30 | 34 | 38 | 23 | 26 | 19 |
| 2. Competit. (Min: 25) | 37 | 32 | 25 | 22 | 28 | 18 |
| 6. Unemploy. (Min: 13) | 13 | 18 | 12 | 16 | 15 | 17 |
| 1. Traffic (Min: 18) | 29 | 19 | 18 | 32 | 24 | 16 |
| 7. Pop. Growth (Min: 18) | 16 | 15 | 17 | 22 | 16 | 30 |
| 5. Pop. Density (Min: 18) | 19 | 17 | 21 | 15 | 24 | 12 |
| 3. Parking Fac. (Min: 21) | 17 | 28 | 30 | 19 | 25 | 34 |
| Order: | 4th Best | 3rd Best | 2nd Best | 5th Best | Best (1st) | 6th Best |

Rules:

Best Site: The best site is the one that gets eliminated last, when we start eliminating the sites by looking at the attributes in their order of importance, starting from the most important, and eliminating sites that do not meet the cutoff.

2nd Best Site: The site that gets eliminated one before last.

3rd Best Site: The fourth site that gets eliminated.

4th Best Site: The third site that gets eliminated.

5th Best Site: The second site that gets eliminated.

6th Best Site: The first site that gets eliminated.

Background to the Study

The United States has a well-established custom of wealthy families and corporations donating large sums of money to establish charitable foundations. An example is the Ford Foundation. Typically, a foundation will have a charter that specifies the programs that its board may fund. However, these guidelines are usually very broad, and board members have wide latitude in allocating funds. Furthermore, though foundations fund many community projects, there is a tremendous demand for support from a diverse range of groups in the community and many requests must be left unfunded. The usual policy of a foundation is to select a board that reflects the variety of opinions and values in the community which it serves. In so doing, the foundation hopes that it can spread its funds in an equitable manner among worthwhile programs.

There has been almost no study of how the different values of individual board members influence a foundation's allocation of funds. A person who is a member of a local foundation has requested that the University help in discovering how the interplay of different individual preference patterns impacts foundation's decision-making. Knowledge of the interaction that occurs in a group faced with allocating funds to community projects is felt to be very useful in helping this local foundation go about its work.

To assist in the requested study, we have created a situation very similar to the one in which this real foundation operates. We are involving students like yourself in operating in this simulated decision-making environment. The decisions that you will be making in this study are typical of those faced by many foundations. The applicants for support supply few details and to decide whom to support you must rely very much upon your personal judgment rather than an accumulation of facts accompanied by a financial analysis. The potential projects will vary greatly in their appeal to you. You will prefer some programs to others. Also, you will find that you and your colleagues have quite different inclinations, but you must reconcile your differences to reach a conclusion.

The results of this study will be supplied to the board member of the requesting foundation. You can make a contribution to knowledge about this segment of our society by undertaking your role in this study conscientiously and earnestly. Participate to the best of your ability. Thank you.

SECTION II

Personal Trust Foundation

Your name: _____

Background

Uncle Sylvester is dead. He had lived a most productive life and accumulated a small fortune. As you were his favorite, you have been made the sole trustee of your uncle's estate. Your uncle had considerable respect for your personal values, and he had directed that, on his death, you would decide how to allocate the funds that he had placed into the Personal Trust Foundation. This is the opportunity of a lifetime. You alone will decide how to spend the money. Just imagine, you can help those people or projects that are closest to your heart.

The Foundation's goal is to fund projects in the community in which your uncle worked and lived most of his life. You are required to select programs that you consider are deserving of a donation from your uncle's foundation. Because he was a man who never sought publicity, your uncle has specified that you should not be influenced by the extent to which a program will honor him or preserve the public's memory of him. Although many factors may influence the decisions regarding which programs to fund or not to fund, the most critical factor is the degree to which a program agrees with your personal values.

Directions

You must evaluate competing requests for funding and make judgments about their relative merit. Many programs have merit, but limited resources require that you select the programs that you prefer to fund. You have discretionary funds available, and a number of projects are requesting access to these funds. Your job is to select those that should receive support.

There are five discretionary funds and the competing projects requesting these funds are listed on the following pages. Read each summary sheet, complete your selections, then go to the next summary sheet until you have finished. Complete the sheets one at a time and in the sequential order in which they are presented to you. Do not go back and change your selections on any prior sheets. Your goal in selecting projects for funding is to choose those programs that agree with your personal values.

Begin when you are ready.

REMEMBER

YOUR PERSONAL VALUES DETERMINE HOW YOU ALLOCATE THE MONEY

Personal Trust Foundation #1: \$10,000

You have \$10,000 to allocate from this fund. Proposals received from various organizations for projects are listed below. Each project is in need of \$10,000, but can benefit from any contribution that you might make. The greater the contribution that you make to a particular project the more likely it is that the chosen project will succeed.

Proposed Project

Recommended
level of Funding

| | |
|--|---------------------|
| 1. To investigate the adaptation of peregrine falcons to urban areas within the community. | \$ _____ |
| 2. To run a series of seminars on financial planning for small businesses in the community | \$ _____ |
| 3. To pay the traveling costs of the community's chamber orchestra to perform in other communities within the United States. | \$ _____ |
| 4. To implement the community's reading and verbal skills development program for illiterate adults. | \$ _____ |
| 5. To fund a study into the impact of Health Maintenance Organizations (HMOs) on the community's health costs. | \$ _____ |
| 6. To fund a community program promoting the value of family life. | \$ _____ |
| TOTAL FUNDS ALLOCATED | \$ _____ 10,000 |

Personal Trust Foundation #2: \$100,000

You have \$100,000 to allocate from this fund. Proposals received from various organizations for projects are listed below. Each project is in need of \$100,000, but can benefit from any contribution that you might make. The greater the contribution that you make to a particular project, the more likely it is that the chosen project will succeed.

Proposed Project

Recommended
level of Funding

| | |
|---|-----------------------|
| 1. To establish a tax incentive program that would attract new, prosperous businesses to the community. | \$ _____ |
| 2. To restore a historic home and its gardens. | \$ _____ |
| 3. To assist in the purchase of housing to accommodate the parents of terminally ill children who are patients at the community hospital. | \$ _____ |
| 4. To establish a computer-based record of information about residents in the community prior to 1900. | \$ _____ |
| 5. To provide entertainment for and support excursions by senior citizens residing in homes for the aged. | \$ _____ |
| 6. To undertake a study of efficiency in the government of the community. | \$ _____ |
| TOTAL FUNDS ALLOCATED | \$ <u>100,000</u> |

Personal Trust Foundation #3: \$500,000

You have \$500,000 to allocate from this fund. Proposals received from various organizations for projects are listed below. Each project is in need of \$100,000, but can benefit from any contribution that you might make. The greater the contribution that you make to a particular project, the more likely it is that the chosen project will succeed.

| <u>Proposed Project</u> | <u>Recommended level of Funding</u> |
|--|---|
| 1. To purchase a new computer system for the county government in order to hold local taxes constant. | \$ _____ |
| 2. To purchase additional volumes for the community's library system. | \$ _____ |
| 3. To create a tourist bureau to develop advertising and other methods of attracting tourism into the community. | \$ _____ |
| 4. To establish a community arts program featuring art, music, and dance programs for children and adults. | \$ _____ |
| 5. To establish an additional shelter for the homeless in the community. | \$ _____ |
| 6. To purchase art for display in the community's art gallery. | \$ _____ |
| TOTAL FUNDS ALLOCATED | \$ <u>500,000</u> |

Personal Trust Foundation #4: \$1,000,000

You have \$1,000,000 to allocate from this fund. Proposals received from various organizations for projects are listed below. Each project is in need of \$1,000,000, but can benefit from any contribution that you might make. The greater the contribution that you make to a particular project, the more likely it is that the chosen project will succeed.

Proposed Project

Recommended
level of Funding

| | |
|--|-------------------------|
| 1. To develop a legalized off-track betting system for the purpose of increasing community revenue so that personal property taxes may be reduced. | \$ _____ |
| 2. To construct bike paths and jogging trails throughout the community park system. | \$ _____ |
| 3. To fund the teaching of traditional arts and crafts in local high schools and community colleges. | \$ _____ |
| 4. To excavate an archaeological site in the community and classify the findings. | \$ _____ |
| 5. To develop and operate a consulting service to assist local inventors and entrepreneurs to develop and market new products and services. | \$ _____ |
| 6. To build a retreat for use by all religious groups in the community. | \$ _____ |
| TOTAL FUNDS ALLOCATED | \$ <u>1,000,000</u> |

Personal Trust Foundation #5: \$10,000,000

You have \$10,000,000 to allocate from this fund. Proposals received from various organizations for projects are listed below. Each project is in need of \$10,000,000, but can benefit from any contribution that you might make. The greater the contribution that you make to a particular project, the more likely it is that the chosen project will succeed.

| <u>Proposed Project</u> | <u>Recommended level of Funding</u> |
|--|-------------------------------------|
| 1. To create an endowment fund for the School of Philosophy at the university in the community. | \$ _____ |
| 2. To establish a crime laboratory for the purpose of investigating all aspects of community crime, including frequency, causes, effects, and outcomes of crime for offenders, victims, and the public at large. | \$ _____ |
| 3. To renovate and expand community government facilities, including the court house, police headquarters, and administrative offices - where no renovation has occurred for over 10 years. | \$ _____ |
| 4. To construct an arboretum for growth and display of regional and exotic flora and plant life. | \$ _____ |
| 5. To provide emergency financial, medical, food, and shelter assistance to families whose homes and possessions are lost due to fire, flooding, severe wind, earthquake, or other natural disasters. | \$ _____ |
| 6. To provide subsidized medical care for low-income families living in the community. | \$ _____ |
| TOTAL FUNDS ALLOCATED | \$ <u>10,000,000</u> |

SECTION 111
Personal Trust Foundation
Group Decision

Uncle Sylvester considered that it was an onerous task for one person to make so many decisions. Thus, he established some funds where a group of people would take responsibility for the allocation of money to the projects requesting support. He created a Board of the Personal Trust Foundation to select programs that would be supported.

You are now a member of the Board of the Personal Trust Foundation. Uncle Sylvester selected the board prior to his demise. He appointed people with personal values and judgment he respected. Therefore, you are free to exercise your own biases and preferences in making your recommendations.

You will undertake two tasks in this section. It is important that you make a decision each task as a group. You should work together and try to take advantage of your diverse talents and resources. You should make a decision that is acceptable to all members of the group.

Please list the names of the people in your group below.

GROUP MEMBERS:

Group Task A

Personal Trust Foundation #3 \$500,000

The Board has \$500,000 to allocate from this fund. Proposals received from various organizations for projects are listed below. Each project is in need of \$500,000, but can benefit from any contribution that the Board might make. The greater the contribution that the Board makes to a particular project, the more likely it is that the chosen project will succeed.

Starting time: _____

Proposed Project

1. To purchase a new government computer system in order to increase the efficiency of property tax collection and other record keeping activities of the community. \$ _____
 2. For the purchase of additional volumes for the community's library system. \$ _____
 3. To create a tourist bureau to develop advertising and other methods of attracting tourism into the community. \$ _____
 4. To establish a community arts program featuring art, music, and dance programs for children and adults. \$ _____
 5. To establish an additional shelter for the homeless in the community. \$ _____
 6. To purchase art for display in the community's art gallery. \$ _____
- TOTAL FUNDS ALLOCATED \$ 500,000

Ending time: _____

FINAL SECTION

Personal Trust Foundation

Your Name: _____

Instructions

Sometimes, after a group meeting, individuals re-examine their values and choices. As a result of the board meeting, what are your personal views as to which projects you would fund? Reconsider how you would allocate funds among the projects listed below.

You have \$500,000 to allocate from this fund. Proposals received from various organizations for projects are listed below. Each project is in need of \$500,000, but can benefit from any contribution that you might make. The greater the contribution that you make to a particular project, the more likely it is that the chosen project will succeed.

| <u>Proposed project</u> | <u>Recommended level of Funding</u> |
|--|---|
| 1. To purchase a new government computer system in order to increase the efficiency of property tax collection and other record keeping activities of the community. | \$ _____ |
| 2. For the purchase of additional volumes for the community's library system. | \$ _____ |
| 3. To create a tourist bureau to develop advertising and other methods of attracting tourism into the community. | \$ _____ |
| 4. To establish a community arts program featuring art, music, and dance programs for children and adults. | \$ _____ |
| 5. To establish an additional shelter for the homeless in the community. | \$ _____ |
| 6. To purchase art for display in the community's art gallery. | \$ _____ |
| TOTAL FUNDS ALLOCATED | \$ <u>500,000</u> |

SCENARIO

Today you are about to enter the Great Indiana Paper Airplane Competition. Your team will compete for cash prizes by designing and executing a strategy to score the most prizes. Points are scored by building and flying airplanes in a 5 minute period. Teamwork and an efficient team strategy are the keys to winning.

You will have up to 3 hours to do the following:

- 1) **Learning to Fly**
 - * Learn how to assemble the plane
 - * Practice assembly under the 5 minute competition time limit (Do as well as you can to get the most out of it!)

- 2) **Designing Your Team Strategy**
 - * You have up to 90 minutes to design your strategy
 - * Your Strategy describes the procedure your team will use to assemble and fly planes in the Final Competition.

- 3) **The Final Competition**
 - * Few minutes to set-up
 - * In 5 minutes, make and fly as many planes, scoring as many points, as possible.

Rules:

- Rule 1:** Planes must meet the minimum design specifications.

- Rule 2:** Assembly strategy must not violate certain restrictions.

- Rule 3:** Must strictly apply the strategy your team designed during the final competition.

Prizes: Cash prizes range from \$35 to \$140 for the 4 teams with the top scores. Prizes are to be awarded at the end of the semester.

Scoring: Total team score = 10 pts. per flight + 5 pts. for hitting target.
(No points are awarded for partially or improperly assembled planes, or planes flown after the 5 minute mark. The Judges will determine and

record all points -- their ruling is final and should not be questioned or disputed.)

RULES FOR AIRPLANES AND AIRPLANE ASSEMBLY

Airplane Design Specifications

Any plane will count if it meets the following minimum specifications:

- * at least 2 pieces of paper (1 outer shell, 1 inner plane)
- * at least 3 pieces of tape (1 inner plane spine, 2 underside of wings)
- * shape of intended plane as observed by judge while in flight
- * planes must fly and stay intact

Airplane Assembly Procedure

Any assembly procedure is ok as long as it does not violate the following:

- * each plane may only be counted once
- * planes must be flown from no closer than the throwing line
- * tables, target and throwing line must remain as set up
- * must begin competition with unfolded paper and tape on dispenser
- * no props may be used by flier(s) to throw, or to deflect plane's flight

Final Written Strategy

The final written strategy must specifically:

- * Describe any changes from:
 - Airplane Assembly Instructions
 - Individual procedure used in the Practice Competition
- * Describe in detail:
 - What does each person do?
 - Where is each person located?
 - How paper will move between people?
 - Other aspects of how the group or individuals will work over the entire 5 minute period?

During Strategy Making and Set-up

- * must stay seated during entire strategy making session
- * no production-style (for speed or flight) practice allowed, either individually or in group (though one may try out steps or demonstrate for others)

FINAL STRATEGY RECORD

* Record all aspects of your final strategy. Be specific. Make sure you note any changes from:

- 1) the Practice Competition procedure (each person completely building and flying their own planes), and
- 2) the Airplane Assembly Instructions procedure (building the plane in 17 sequential steps).

What does each person do? (by personal ID number)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Where is each person? (place each person's ID number in positions around the table, and use arrows to show paper movement)

Other aspects of how the group or individuals will work?

Background to the Study

Many universities and other organizations in the United States sponsor a variety of special programs that attract large numbers of applicants. An important problem these organizations face is how to decide among the many people who are interested in their programs. For instance, the University of Minnesota sponsors a variety of internship programs in businesses around the area. These programs are highly sought after by students, and the competition for them is high. How is a university to be **fair** to all applicants in deciding which applicants will be accepted and which ones will be rejected?

In such situations, most organizations try to be as objective as possible, and use quantifiable **criteria** wherever they can. Criteria such as previous grade-point averages and aptitude and ability test scores make it easier to compare individual applicants. However, sometimes organizations rely on numeric information about applicants without any real evidence that the numeric criteria they are using really do result in the best choices. And, where competition is really keen, subjective judgment usually enters at some point as well.

This study is designed to further our understanding of the way people go about making decisions in this type of admissions situation. For this study, we have created a situation very similar to an actual admissions decision. We are involving students like yourself in operating in this simulated decision-making environment. **The decisions that you will be making in this study are typical of those faced by organizations that sponsor special programs like the one used for this study.** The applicants to the program in this study have varied qualifications, and you may find that some criteria for admission are more important to you than others.

By your participation in this study, you can make a contribution to our knowledge of how best to design admissions policies for these types of programs. Please participate to the best of your ability, and take your role in this study with the conscientiousness and earnestness that it deserves. Thank you.

SECTION II

The International Studies Institute

Four leading universities, including the University of Minnesota, are participating in the development of the International Studies Institute, a special college curriculum for academically successful students interested in applying traditional majors, such as economics, management, liberal arts, or computer science, in international settings. Students in the International Studies Institute will specialize in applying their chosen field in a specific country or region of the world. They will spend their sophomore and junior years at a university in a foreign country. They will take courses offered by that school as well as courses offered by professors from the University of Minnesota and other participating schools who will visit the foreign school. They will return to their American school for their senior year. Courses taken at the foreign school will be coordinated so that students will be able to fulfill all their requirements in time to graduate in four years. They will get intimate exposure to the ways of thinking and working in another culture, and they will also get a degree in their field from a world-class American university. It is hoped that graduates of the Institute will find employment in foreign embassies, international government, and international business.

If the Institute is to be successful, it must attract a strong class of students who will do a good job of representing the U.S. at the foreign universities. To apply for admission, all students must have a Grade Point Average of at least 2.80. Therefore, the applicants are known to perform well academically. However, it is felt that the students will have good social skills and represent a cross section of America, in order to give foreign countries an idea of the diversity of our country's people .

This study will help in designing an admissions policy for the International Studies Institute.

International Collegiate Success (ICSUCCESS)

Dr. George Jackson and Dr. Susan Scott, two educational psychologists from the University of Illinois, have studied the relationship between background and personality test scores and success in international studies programs. They can predict "International Collegiate Success" based on applicant sex, prior travel abroad, and the results of four personality tests, --although some of these factors predict success better than others. International Collegiate Success (which we will abbreviate as ICSUCCESS) is their name for a rating of the student's overall success in adapting to and taking advantage of educational opportunities in foreign countries. It is defined as a combination of grade point average, social adjustment, and success of adapting to the foreign culture as measured in the student's junior year. They have developed a mathematical method of combining these three assessments into an overall ICSUCCESS score that ranges from 8 (the lowest score) to 40 (the highest score, which indicates a high degree of success).

Based on a study of eight international studies programs similar to the proposed International Institute, Drs. Jackson and Scott have identified four personality tests which, along with applicant sex and prior travel abroad, predict ICSUCCESS with a good degree of accuracy:

1. Expectations for Social Success (the anticipation of being well-liked and having friends in different social groups)
2. Self Concept (the degree to which the student is confident and satisfied with their own intellectual and interpersonal skills)
3. Expectations for Independence (the anticipation of being free to try new things and to say exactly what one thinks)
4. Attitude about Premarital Sex (beliefs about the acceptability of sexual intercourse under various circumstances).

Overview of this Study

Of course, applying such scores in making practical decisions is much more difficult than using them in academic research. This study in which you are participating is one of a series designed to determine whether persons acquainted with collegiate life--students, professors, academic administrators--can use such information in making recommendations about college admissions. In this task two goals will be emphasized: (a) to make accurate admission decisions that select those students with the greatest likelihood of ICSuccess; and (b) to choose students who will represent the university and our country well in foreign settings and give people of other nations an idea of our diversity.

In this study we will ask you to make judgments about whether or not various college applicants should be admitted to the International Studies Institute based on their scores on the six selection variables. You should use your own knowledge of university life and what enables students to be successful in interpreting these test scores.

The study is divided into five sections. You have already completed section one--the background materials. In this second section, we are providing you with the background and test scores of a number of individuals who have been admitted to international studies programs already and ask you to predict their International Collegiate Success scores. Following each prediction you make, you will see the actual collegiate success score the individual attained in the program. The purpose of this section is to let you get the hang of using the background and test scores and see how they relate to collegiate success. It is basically a training period.

In the third section, we will give you a set of background and test scores for a set of potential applicants and ask you to decide which of them should be admitted to the Institute. Your decision should be based on their prospects of collegiate success.

In the fourth section, you will work with other people to determine which of a set of applicants should be admitted to the institute. More information on the fourth part will be given later.

The last section consists of brief questionnaires in which we ask you several questions about the experiment.

INSTRUCTIONS FOR SECTION II

We would like you to predict prospective applicants' collegiate success scores. For each applicant you will be given the following information:

- (1) Applicant Sex: male or female
- (2) Expectations for Social Success: test score (0-100 points)
- (3) Self Concept: test score (0-100 points)
- (4) Expectations for Independence: test score (0-100 points)
- (5) Attitudes about Premarital Sex: test score (0-100 points)
- (6) Prior Travel Abroad: yes or no

For the four personality tests, the higher the score the higher the expectations. For example, a person scoring high on Expectations for Social Success would anticipate having a full and varied social life. A person scoring high on Self Concept has a strong degree of confidence in ability to deal with intellectual and interpersonal situations. A person scoring high on Expectations for Independence would want freedom to explore new ideas and ways of life. A person scoring high on Attitude toward Premarital Sex would feel that sexual intercourse was acceptable in a wide range of contexts and relationships with others. In line with standard practice, all of the scores have been set up on 0 (low) to 100 (high) scale, so that they can be easily understood and compared.

For each applicant you will receive information with that person's scores listed on it. Here is an example:

| <u>Applicant</u> | <u>Gender</u> | <u>Social Success</u> | <u>Self Concept</u> | <u>Independence</u> | <u>Premarital Sex</u> | <u>Prior Travel Abroad</u> |
|------------------|---------------|-----------------------|---------------------|---------------------|-----------------------|----------------------------|
| 121 | M | 83 | 56 | 72 | 37 | Yes |

Using this information, make an estimate of the applicant's International Collegiate Success score, and write down that estimate on the scratch paper provided. Once you have written down the estimate, turn the card and look at the correct answer. Then go onto the next card, make an estimate of International Collegiate Success and then look at the correct answer. Go through each applicant in this manner until you are finished. Try to improve the accuracy of your estimates as you go through the applicants.

The scores you will receive are actual scores for people admitted to various international studies programs. The names of the applicants have been eliminated for purposes of confidentiality. For each applicant your job is to predict the applicant's International Collegiate Success score. This score can range from 8 to 40 and represents a combination of GPA, social adjustment, and expectations for being successful in a career at the international level.

At this time please ask any questions you might have. If you don't have any questions, then begin going through the applicants.

SECTION III

Your name: _____

INSTRUCTIONS

In this section you will again be given information about a group of applicants. For each applicant your job is to:

1. predict the applicant's International Collegiate Success score. This score can range from 8 to 40 and represents a combination of GPA, social adjustment, and expectations for a successful career at the international level.
2. decide whether the applicant should be:
 - a. Admitted to the International Studies Institute
 - b. Put on a "Waiting List" and admitted if not enough applicants from category (a) accept admission, or
 - c. Rejected.

As in Section II, background information and personality scores for each applicant will be given to you and your job is to predict the applicant's IC Success Score. However, in this section no information will be given to you about how the applicants actually performed in the international studies program. These applicants are drawn from the same sample as those in the previous section. Therefore, the relationships between test scores and IC Success will be consistent with what you have learned.

There are no pre-established criteria for admission, wait-listing, or rejection of applicants, and you are not limited in the number that you may admit to the program .

You should be guided by two goals when you make your decisions:

- To make accurate admission decisions that select those students with the greatest likelihood of academic success, and
- To admit students who will represent the university and our nation well in foreign settings.

This requires you to combine your own common sense with what you learn about the scores, if you are to make good decisions.

Do you have any questions? If not, then you can begin.

SECTION III

| <u>Applicant</u> | <u>Gender</u> | <u>Social Success</u> | <u>Self Concept</u> | <u>Independence</u> | <u>Premarital Sex</u> | <u>Travel Abroad</u> | <u>Colleg. Success</u> | A=Admit W=Wait R=Reject |
|------------------|---------------|---------------------------|-------------------------|---------------------|---------------------------|--------------------------|----------------------------|-------------------------------|
| 1 | Male | 70 | 48 | 17 | 59 | No | _____ | _____ |
| 2 | Male | 95 | 60 | 50 | 89 | No | _____ | _____ |
| 3 | Male | 12 | 84 | 17 | 61 | Yes | _____ | _____ |
| 4 | Female | 94 | 82 | 33 | 79 | No | _____ | _____ |
| 5 | Female | 80 | 12 | 73 | 91 | Yes | _____ | _____ |
| 6 | Male | 87 | 53 | 42 | 85 | Yes | _____ | _____ |
| 7 | Male | 52 | 50 | 17 | 63 | Yes | _____ | _____ |
| 8 | Male | 63 | 30 | 14 | 55 | Yes | _____ | _____ |
| 9 | Male | 85 | 22 | 53 | 93 | Yes | _____ | _____ |
| 10 | Male | 81 | 38 | 22 | 71 | Yes | _____ | _____ |
| 11 | Male | 70 | 78 | 14 | 52 | Yes | _____ | _____ |
| 12 | Female | 63 | 82 | 6 | 38 | No | _____ | _____ |
| 13 | Female | 80 | 75 | 20 | 61 | Yes | _____ | _____ |
| 14 | Male | 5 | 86 | 12 | 57 | Yes | _____ | _____ |
| 15 | Female | 81 | 34 | 40 | 81 | No | _____ | _____ |

| <u>Applicant</u> | <u>Gender</u> | <u>Social Success</u> | <u>Self Concept</u> | <u>Independence</u> | <u>Premarital Sex</u> | <u>Travel Abroad</u> | <u>Colleg. Success</u> | A=Admit W=Wait R=Reject |
|------------------|---------------|---------------------------|-------------------------|---------------------|---------------------------|--------------------------|----------------------------|-------------------------------|
| 16 | Female | 78 | 77 | 22 | 66 | Yes | | |
| 17 | Female | 93 | 37 | 42 | 75 | Yes | | |
| 18 | Female | 73 | 35 | 21 | 65 | No | | |
| 19 | Male | 42 | 75 | 53 | 91 | No | | |
| 20 | Female | 64 | 39 | 25 | 56 | Yes | | |
| 21 | Male | 85 | 58 | 64 | 93 | No | | |
| 22 | Male | 93 | 74 | 24 | 69 | Yes | | |
| 23 | Male | 65 | 30 | 35 | 70 | No | | |
| 24 | Male | 83 | 75 | 24 | 67 | Yes | | |
| 25 | Male | 67 | 79 | 13 | 56 | No | | |
| 26 | Male | 77 | 74 | 22 | 66 | No | | |
| 27 | Male | 70 | 32 | 40 | 77 | Yes | | |
| 28 | Female | 05 | 36 | 12 | 52 | Yes | | |
| 29 | Male | 64 | 27 | 17 | 60 | Yes | | |
| 30 | Female | 85 | 28 | 60 | 94 | Yes | | |

SECTION IV

Please list the names of the people in your group below.

GROUP MEMBERS: _____

Instructions

You have each worked individually on making estimates of ICSuccess and admission decisions. However, many admissions decisions are made not by individuals, but by groups. So we would like to have you try to apply the supplemental policy in a group setting. You will be given a set of sixteen applicants, along with the test scores. Working as a group, please decide whether the applicants should be admitted, wait-listed, or rejected. And we will also add an additional restriction, which reflects the reality of limited resources in international programs: Only three of the sixteen applicants can ultimately be admitted to the Institute if it is to stay within their budgets. Of course, not every student who is admitted will ultimately enroll in the program; so one student will be assigned to the wait list to take the place of those who were accepted, but don't come. You must **choose three out of the sixteen for admission and one more for the wait list; this means rejecting twelve.**

It is important that you make these decisions as a group. You should work together and try to take advantage of your diverse talents and resources. Please write your decisions for each of the sixteen applicants on the form that you have been given.

Remember, you should be guided by two goals when you make your decisions:

- To make accurate admission decisions that select those students with the greatest likelihood of IC Success, and
- To admit students who will represent the university and our nation well in foreign settings.

This requires you to combine your own common sense with what you learn about the scores, if you are to make good decisions.

SECTION IV¹

| <u>Applicant</u> | <u>Gender</u> | <u>Social Success</u> | <u>Self Concept</u> | <u>independence</u> | <u>Premarital Sex</u> | <u>Travel Abroad</u> | <u>Colleg. Success</u> | A=Admit W=Wait R=Reject |
|------------------|---------------|-----------------------|---------------------|---------------------|-----------------------|----------------------|------------------------|-------------------------------|
| A | Female | 90 | 71 | 32 | 74 | Yes | _____ | _____ |
| B | Female | 10 | 87 | 10 | 50 | No | _____ | _____ |
| C | Female | 85 | 59 | 30 | 73 | Yes | _____ | _____ |
| D | Male | 98 | 62 | 50 | 87 | Yes | _____ | _____ |
| E | Female | 78 | 77 | 22 | 66 | Yes | _____ | _____ |
| F | Male | 73 | 46 | 27 | 70 | No | _____ | _____ |
| G | Male | 93 | 57 | 40 | 83 | No | _____ | _____ |
| H | Female | 85 | 69 | 36 | 79 | Yes | _____ | _____ |
| I | Male | 55 | 83 | 12 | 59 | Yes | _____ | _____ |
| J | Female | 75 | 73 | 49 | 87 | No | _____ | _____ |
| K | Male | 87 | 53 | 42 | 85 | No | _____ | _____ |
| L | Male | 86 | 67 | 24 | 69 | Yes | _____ | _____ |
| M | Male | 55 | 83 | 13 | 46 | No | _____ | _____ |
| N | Female | 80 | 70 | 22 | 67 | No | _____ | _____ |
| O | Female | 98 | 50 | 59 | 91 | Yes | _____ | _____ |
| P | Female | 07 | 85 | 16 | 60 | Yes | _____ | _____ |

Directions: Admit three
Wait-list one
Reject twelve

Remember: Your group must agree on both your admissions decisions and predicted success scores for all sixteen applicants.

¹This section is a modification of the earlier version: the modified version calls for fewer group decision points.

A LEGISLATIVE DILEMMA

Source: Valacich, J.S., Mennecke, B.E., Watcher, R., & Wheeler, B.C., "Testing the Task-Media Fit Hypothesis: Understanding When Tasks Don't Fit," *forthcoming in the Twenty-Seventh Annual Hawaii International Conference on Systems Science*, January, 1994.

BACKGROUND

The Indiana legislature has almost completed its budgeting for the next year. All that remains is \$1.8 million for special programs. Six programs are vigorously competing for these funds. As an influential member of the legislature, you must decide which programs to fund.

Each of the six programs needs \$1 million in funding to reach its goals. Funding amounts lower than \$1 million may be helpful, but may be so inadequate as to be of no value. The Governor has publicly said that he wants one of the proposals fully funded and believes any funding less than \$500,000 for a program would be ineffective. Based on these statements, the Governor may not sign allocations of less than \$500,000 and will require at least one program to be fully funded.

You are to select programs which you consider deserving of public money. Although many factors may influence the decisions regarding which programs to fund or not to fund, the most critical factor is the degree to which a program agrees with your *personal values*.

DIRECTIONS

You must evaluate the competing requests for funding and make judgements about their relative merit. Many programs have merit, but limited resources require that you select the programs which you prefer to fund. Your job is to select those programs that should receive support. Your goal in selecting these programs is to choose those programs that agree with your *personal values*.

PROPOSAL SUMMARIES

Drug, Sex Education, & Contraceptive Programs (6-12) \$1,000,000

This program is designed to invest in the future by developing a drug and sex education curriculum for grades 6-12. It will include making contraceptives available to grades 6-12 without parental consent. Proponents of this project believe that society could greatly reduce the enormous social costs of drug abuse (crime, prisons, lost worker productivity, etc.) and unwanted pregnancies by educating young children and by continuing the educational process. Smaller and more limited programs in the past have not produced the anticipated results. Opponents argue that this is not the mission for primary and secondary education and that these personal and moral concerns belong to the choice of each family.

Appeal Funding for Death Row Inmates \$1,000,000

This program is designed to provide legal appeal funds for death row inmates who's cases have special circumstances. These circumstances include the finding of new evidence since their conviction or civil liberty problems with their case. Proponents argue that the state must exhaust all important issues of justice before killing a person. Opponents argue that such judicial process errors are very rare and not an important social concern.

Toxic Waste Cleanup \$1,000,000

This program is designed to cleanup an environmental hazard that threatens the local water supply of an Indianapolis suburb. The company charged with creating the problem and the state have had a five year legal battle over who should pay and the lawsuit is unlikely to be resolved in the next 4 years. A state funded cleanup would qualify for matching federal money (\$1 state = \$1 federal). Proponents of this project argue that the water supply for a large area could become contaminated if this project is not funded soon and fear this is driving away potential business investment in the state. An underfunded cleanup is unlikely to eliminate the problem. Opponents argue that the seriousness of the threat is overestimated and that the company should be held responsible.

Abortion Subsidies for Low Income \$1,000,000

This program is designed to pay for an abortion if a woman cannot afford it. Proponents of the project argue that the cycle of poverty and its enormous social costs (welfare, childcare, medical) are perpetuated when poor women cannot choose to end an unwanted pregnancy. As a concession, proponents are willing to include a 24 hour waiting period. Inadequate funding for the project is unlikely to attain the project's objectives. Opponents argue that their tax dollars should not be used for this purpose.

Housing for the Homeless Center

\$1,000,000

This program is designed to renovate a vacant downtown warehouse to provide shelter for the city's homeless. Proponents of this project argue that over 40 people died last year from exposure and inadequate food. A local company has agreed to use part of the warehouse to employ some of the center's residents (1 year trial period), thus, they argue the homeless center would be partially self-sustaining. The resident's work would enable them to stay in the center and reduce the city's welfare expenses. The project requires significant renovations to the warehouse and work area for the project to proceed as planned. Opponents argue that the project will not work and will become a burden on tax payers.

Job Training for Displaced Workers

\$1,000,000

This program is designed to provide job training for workers who have been laid off from a plant closing. The program would provide tuition and childcare for workers to attend technical schools. Proponents argue that such training is essential for the survival of many small towns. Opponents view the program as another form of welfare and believe that our economy already has ample ways for workers to find other jobs.

Record how you think the money should be allocated in the column below:

| Proposed Project (descriptions on next page) | Recommended level of Funding |
|--|-------------------------------------|
| 1. Drug, sex education, and contraceptive programs for grades 6-12 | _____ |
| Toxic waste cleanup | _____ |
| 2. Housing for the homeless | _____ |
| 3. Abortion subsidies for low income | _____ |
| 4. Appeal funding for death row inmates | _____ |
| 5. Job training for displaced workers | _____ |
| 6. | _____ |
| Total Funds Allocated (Max 1.8 M) | _____ |

THE LIBRARY PROBLEM

Don't you hate it when you go to the library to do a report and the one key book or magazine you need has been stolen or torn up? Campus libraries have been plagued with books being mutilated, articles cut out, pages ripped away, and other materials being stolen. The question put to you today is:

What can be done to help reduce these problems for the libraries?

Be specific, complete and concise - yet you need to provide enough information so that someone else can fully understand your idea without requiring further explanation.

SCENARIO

Max Corporation is one of the largest importers of sporting goods in the U.S. It has several affiliated distributors in major cities across the country. It also exports US-made sporting goods to several countries.

Yonsoo Corporation is one of the largest manufacture-exporters of sporting goods in Korea, and have had profitable dealings with companies abroad for many years.

In their first meeting on Dec. 11, 1988, Max Corp. and Yonsoo Corp. reached an agreement on an exclusive sales contract for golf gloves. They agreed to have the next meeting in the beginning of June, 1989 to finalize about price, quantity, shipments, etc.

Since the first meeting Max Corporation presented the following specification for their first order which is to be placed at the second meeting.

Specification

Elegant: Cabretta leather, high quality, two holes on back and palm finger, ball marker snap button, wide Velcro band back - \$108.00 each unit.

Stylish: Cabretta leather, low quality, two holes on back and palm finger, ball marker snap button, wide Velcro band back - \$95.00 each unit.

Plain: Calf leather single hole on back and palm finger, wide Velcro band back - \$70.00 each unit.

Size: Small/Medium/Medium-Large/Large/XLarge (U.S. sizes)

Colors: To be assorted over light blue, light yellow, bone and pearl white.

Unit: 1 dozen

You are participating as a representatives from Max Corporation in the second meeting to negotiate the golf glove deal. Do your best to obtain your corporation's goal.

The attached are the agreement of the first meeting and the second meeting goal and proposal of Max Corporation.

ASSUMPTIONS

1. Sales volume is equal to order quantity.
2. Elasticity of sales volume to price is 1. (Thus dollar sales remain constant even if price changes.)
3. Sales (Volume) changes directly in proportion to changes in unit advertising.

Therefore the only variable that can control sales is unit advertising.

MEETING GOALS (MAX)

1. Try to make the price down as much as a half of unit advertising of each style.
2. Keep unit profit/unit price at least 20% for elegant, 15% for stylish, and 12.5% for plain.
3. Regarding the exclusive sales right contract, make the following clear:
 - "Date of first shipment" is date of arrival at dock of Los Angeles.
 - How to implement the escalator clause; what if prices of materials are going down? It should be reflected in the product price.

AGREEMENT

A. Regarding First Order

The detailed matters about the first order will be further discussed by correspondence and at the next meeting which will be held in the beginning of June, 1989, in Claremont, California, U.S.A.

B. Exclusive Sales Contract

As exclusive sales contract has been entered into on the eleventh day of December in the year of nineteen hundred and eighty eight between Messrs. Yonsoo Corporation C.P.O. Box 8919, Seoul, Korea (hereinafter to be referred as Party A) and Messrs. Max Corporation of 130 E. 9th Street, Claremont, CA 91711, U.S.A. (hereinafter to be referred as Party B), agreeing to the following terms and conditions:

1. Party A grants to Party B the right of sole distributorship for golf gloves produced by Party A in the territories of the U.S.A.
2. Party B will work to the best of their ability to introduce and establish the largest possible sales.
3. Party B shall buy from Party A an amount of not less than U.S. dollars one million per year from the date of first shipment.
4. Party A will quote to Party B the most reasonable prices at all times but Party A can invoke an escalator clause in quoting prices in times when the prices of materials are rising. In other words, Party A will quote a price which is based on a "Cost plus" basis.
5. All prices shall be net prices, C&F/US ports. Whatever price Party B receives from its customers over and above the net price is for the account of Party B.
6. Party A shall not offer its golf gloves to the United States either through its branch or under any other organization and likewise Party B shall not import such golf gloves from any other Korean exporter of such item.
7. This contract shall be valid for 2 years from the date of first shipment and can be renewed on an yearly basis if such intention is conveyed to the other party at least

three months before the expiry of the contract in writing and mutually agreed.

8. This contract is made and typed in two copies, being given to each party.

LINEAR TASK

MEGAFOOD CORPORATION

SITE SELECTION

The Megafood Corporation, a holding company for fast food restaurants, is undergoing rapid expansion. They are in the process of selecting sites for 100 new outlets to be constructed throughout the United States in the next year.

The Megafood management has decided that seven factors are very important in deciding where a fast food restaurant of the type they have should be located:

1. traffic density on the near-by roads.
2. population density within a 5 mile radius of the restaurant.
3. competitive situation in the fast food restaurant segments.
4. retail sales in the surrounding community.
5. average income per family within a 5 mile radius.
6. estimated cost of the land and building for a restaurant.
7. population growth in the community.

The management has studied these seven factors and has determined their relative importance in deciding where to locate a restaurant. In order to operationalize their analysis, the Megafood management distributed weights to each factor on a 10 point scale. The following lists the weights given to the 7 factors:

- | | |
|--------------------------|-------|
| 1. traffic density | -- 4 |
| 2. population density | -- 2 |
| 3. competitive situation | -- 1 |
| 4. area retail sales | -- 1 |
| 5. family income | -- 1 |
| 6. land & building costs | -- .5 |

The Megafood Corporation hired a consulting firm to evaluate six potential restaurant sites in downtown Chicago. The Megafood management requested that the consulting firm score each site on each factor on a 100 point basis, and then multiply the scores with the weights given for the factors. The results of these calculation (i.e., weighted scores) are shown in the Information Packet.

The Megafood management wanted to select one of these sites for construction. Given the weighted scores, their objective was to choose the site that overall performed the best. Which site did they select.

**DECISION RULES FOR DETERMINING THE
QUALITY OF ALTERNATIVE SET**

LINEAR TASK -- MEGAFOOD

Data used for the Task

| | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 |
|---------------|-------------|----------|------------|-----------|------------|------------|
| Traffic dens | 50 | 80 | 60 | 100 | 40 | 70 |
| Pop. Density | 30 | 30 | 50 | 20 | 50 | 20 |
| Compet. Sit. | 10 | 25 | 20 | 10 | 20 | 15 |
| Retail Sales | 25 | 20 | 15 | 10 | 20 | 10 |
| Family Income | 10 | 15 | 15 | 15 | 20 | 25 |
| Land & Bldg | 12.2 | 10 | 5 | 10 | 7.5 | 5 |
| Pop. Growth | <u>12.5</u> | <u>5</u> | <u>7.5</u> | <u>10</u> | <u>7.5</u> | <u>7.5</u> |
| Sums: | 150 | 185 | 172.5 | 175 | 165 | 152.5 |

| | | | | | | |
|---------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|
| ORDER: | 6TH BEST | BEST (1ST) | 3RD BEST | 2ND BEST | 4TH BEST | 5TH BEST |
|---------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|

Rules:

Best Site: The highest overall sum

2nd Best Site: The second highest overall sum

3rd Best Site: The third highest overall sum

4th Best Site: The fourth highest overall sum

5th Best Site: The fifth highest overall sum

6th Best Site: The sixth highest overall sum

BACKGROUND

You have been appointed to serve on the Board of Directors of Palo Verde Vintners Inc. (PVVI). PVVI is the third largest winemaker in the United States with an annual wine production of about 2.7 million gallons. About 40% of PVVI's profit comes from sales in international markets. In 1987, net profit after tax was \$234.5 million.

Your appointment is for a one-year term. During your tenure as Director you will be responsible, along with other members of the Board, for formulating corporate strategy and dealing with strategic problems. Your basic objectives are to work together as a group and make the best possible decisions jointly. The fundamental goal of the Board is to make PVVI a strong and vital force in the domestic and international markets.

The Board meets every quarter during the fiscal year, hence you will meet a total of four times during your tenure. Each meeting will represent the quarterly meeting of the Board of Directors or PVVI. You will use your business skills and creativity to deal with the problems confronting PVVI. The CEO will evaluate the performance of the Board based on your creativity (number of decision alternatives generated) and competence (quality of final decision).

Welcome aboard PVVI. Hope your tenure as a Director is a successful and rewarding one.

THE ISSUE OF IMAGE (TASK 1)

Appendix D

Greg Chandler had a lot of things on his mind as he was driving through the early morning traffic to his office in Los Angeles. He glanced nervously at his watch. It was 7 am. The smog was just beginning to engulf the city and its highways. Chandler sighed - he knew it was going to be a long day. Being the CEO of the third largest winery in the U.S. had its rewards, like the Rolls Royce he was driving, the solid gold Rolex watch on his wrist and his palatial beach house in Malibu. But affluence had its price. He was away from his family more often than he wanted, drank too much coffee and had perpetual worry lines around his eyes.

But today Chandler had reason to be concerned. He had met with his European Sales Manager in New York yesterday. The meeting was not a pleasant one. Pierre Salinger, Sales Manager for West Europe and Margret Johnson, the vice-president of Sales and Marketing at PVVI were present at the meeting.

"Greg, I've got some good news and some bad news. The good news is that our North American sales for the second quarter have exceeded our projections by 12%. The bad news is that our worldwide figures are off. A major part of this decline is due to the continued slump in our European market."

"Well Maggie, this is second time this year that we haven't been able to meet our targets in Europe. I'm worried and so is the Board. Before I recommend a course of action to the Board, I'd like to hear Pierre's view."

"Oui, oui...," said Pierre, with a touch of Parisian accent. He had been with PVVI longer than any other Sales Manager. His knowledge of wines and the wine market was legendary. Although Pierre was based in Paris he was responsible for sales and marketing in West Germany, the United Kingdom and France.

"Sales in France has been hit the most," said Pierre pointing to the chart. He then paused for a moment.

The reason is quite simple - the image of American wines in France is very poor. Even our best wine -- PVVI Premium Cabernet Sauvignon is not served in French restaurants," continued Pierre.

"It can't be a problem of quality - many internationally acclaimed wine critics have rated PVVI's wines on par with the world's best wines," said Chandler.

"I think its more a question of perceived quality," said Johnson.

"That's right. In fact, we seem to have the same problem with our image in Germany and England too," said Pierre.

"Ever since we expanded to Europe, we've been plagued with this image of a poor quality winemaker. Lets examine our European operations closely and see why this problem persists and what we can do to improve the situation," said Chandler.

EUROPEAN OPERATIONS

PVVI's first foray into the European market was in 1979. A sales Office was opened in the United Kingdom to coordinate sales and distribution. Sales were slow at first, but started picking up by the early Eighties. In 1984 sales in Europe reached a peak of 750,000 gallons. But since then sales have declined and in the second quarter of 1988, sales were down to 230,000 gallons.

In 1979, European wine critics praised the flavor and bouquet of California wines in general and PVVI wines in particular. PVVI's product line included a variety of white wines - Pinot Blanc, PVVI Chablis, PVVI Rhine and the famed Sauterne Chateau Verde. Its offering of red wines was rather limited - a classic Pinot Noir and the peerless PVVI Premium Cabernet Sauvignon.

In 1984, PVVI shipped about 10,000 gallons of Cabernet Sauvignon made from grapes that were not fully ripe. The result was wine that was dull, listless and not properly balanced. This incident was a turning point for PVVI. European critics classified PVVI as a firm that was not to be trusted. The French were quick to point out that nobody could produce Cabernet Sauvignon as well as the French. Within a period of five years PVVI had slipped from being a critically acclaimed winemaker to one not interested in quality.

Ever since the 1984 incident, PVVI has been very careful in evaluating the quality of its exports. In fact that incident was a single isolated mistake in an otherwise unblemished history. However, the reputation of the firm had been shattered. In the wine industry reputation was a critical factor for succeeding in business.

In 1985, the British government declared that wines not made in France could not carry a French label. Consequently PVVI had to rename many of its wines. For example PVVI Pinot Noir had to be renamed PVVI Red Wine, and PVVI Pinot Blanc had to be renamed PVVI White Wine. Experts predicted that this name change would also affect sales. Customers were less inclined to buy a wine that did not sound exotic. The following year, sales in the United Kingdom reached a record low.

In West Germany, customers seemed to feel that patronizing a foreign firm would affect the local winemakers. There was a strong lobby made up of winemakers in Rhine Valley that lobbied for protection against foreign competition. Although legislation was not passed, the lobby strengthened the desire of German buyers to support their domestic firms.

Recently, competition from other countries has also increased. Australia has emerged a winner with such products as Penfolds Grange Hermitage Bin 95 (considered by many to be Australia's best wine), Wirra Wirra and Koala Ridge. Although Australian wines are not superior in quality to American wines, they have a better image. Australian winemakers use a lot of bin numbers in their labels that are intended to denote quality. However, it creates a mystique in the minds of customers and conjures up pictures of adventures Down Under. Lesser known producers from Chile, Brazil and Argentina have also capitalized on the "exotic" image to sell their wines in Europe.

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"Well, that brings us up-to-date on the European situation," said Chandler to the Board. "And if I understand the situation correctly, its really not a problem of quality, but one of image...?"

You as the Board of Directors of PVVI have heard this critical problem of image that has plagued the firm' wines in Europe. You are to explore the various courses of action open to the firm. However, you are to recommend only one course of action to the CEO Greg Chandler. This should be the best alternative for the firm and its stakeholders.

PRODUCT LINE EXPANSION (TASK 2)

Appendix E

The quarterly Board meeting was a week away. The Board met on the last day of every third month at the Los Angeles headquarters of PVVI. This month's agenda included a product review of PVVI's product lines. There had been talk of diversification at the last meeting but no decision was made.

PVVI's product line consisted of red, white, rose, and dessert wines. In European markets only the red and white wines are sold, in South American, North American and Asian markets the entire offering is available. The reason for limiting sales in Europe to only two basic lines is because of intense competition in the dessert wine category and the lack of interest in rose' wines.

Aged in small oak casks of 50-gallon capacity, the red wines are the pride of PVVI. The flagship red wine of PVVI is the PVVI Premium Cabernet Sauvignon. This wine is made from the most treasured grapes of the Bordeaux region replanted in the Napa Valley. It has been critically acclaimed by wine critics all over the world for its "aristocratic vigor and subtle elegance." Other red wines include Pinot Noir, a best-seller in European markets and PVVI Burgundy, a classic, full bodied wine blended from several vines. PVVI's competitors - Paul Masson and Ernst & Julio Gallo carry a wider range of red wines including Gamay Beaujolais, a soft, dry wine and Rubion, an original from Paul Masson. Except for the PVVI Premium Cabernet Sauvignon, which retails for about \$25 per bottle, the other wines are under \$5.

PVVI has a larger selection of white wines. In recent times the sales of PVVI's white wines have increased tremendously in North and South America. This increase reflects an overall rise in the consumption of white wine both domestically and internationally. The best selling white wine among PVVI's large offering is the PVVI Chablis, an extra-dry, crisp wine, with a retail price of about \$6. Other favorites include PVVI Sauterne Chateau Verde, a delicate wine with the natural sweetness of Semillon grapes, and Pinot Blanc, a deliciously dry and fruity varietal white wine. Recently PVVI also introduced two new white wines PVVI Rhine and PVVI Rhine Castle. All of PVVI's white wines are low priced "stock wines" - fast selling wines, considered to be a good value for the money. However, they cannot be classified as premium wines.

PVVI introduced rose' wines to the market in 1980. They only have two rose' wines - Vine Rose' Sec, a dry, soft wine made from Grenache grapes and PVVI Chateau Rose', a pink wine with an elegant bouquet. The Vin Rose' Sec retails for about \$8 per bottle while the PVVI Chateau Rose' retails for about \$6 per bottle. The rose" wines have been a disappointment to PVVI. They did not receive the critical acclaim that PVVI's red and white wines had received. The reaction of buyers has been rather cool towards the two rose' wines offered by PVVI. In 1985, the Board discussed the issue of eliminating its rose' line of wines. However, they decided to wait for a few more quarters before taking any action.

In 1986, PVVI introduced a new line of aperitif and dessert wines. These wines have been a success in both the North and South American markets. The wines retail for about \$15 - 25 per bottle. PVVI Super Premium Madeira is the most expensive wine made by PVVI. It retails for about \$25 and was the number one import in South America. This rare wine has a unique flavor - nutty, rich and moderately sweet. Another favorite is, Roya Muscatel, the golden amber dessert wine of ancient Persia. This wine is aged patiently in small oak casks and retails for about \$20 per bottle. Other wines in this category include, PVVI Port, a medium sweet Port wine, aged a little longer than usual and Pale Dry PVVI Sherry, an extra dry, light sherry with a pleasant bouquet. These wines retail for \$12 and \$10 respectively.

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"Well, that's our product line," said Juan Valdez, vice-president of Production. "We have some excess capacity, if we need to expand our product line." Juan had been with PVVI for almost twenty years and his views were held in high regard by Greg and the Board.

"Paul Masson has recently launched a new line of coolers that seems to be doing very well," said Greg.

"Ernst & Julio Gallo have the best selling domestic sparkling wine - Andre. It had a 45 percent market share in 1987 and retails for about \$4."

"You know ... some of the French and Italian wineries also make excellent brandies. We've always been slow to diversify, but this may be the right time to do it. We have the resources and the expertise. The question is, what products can we add to our existing product lines," said Greg.

You as the Board of Directors have to decide what new products PVVI should produce. You are to explore the various courses of action open to the firm. However, you are to recommend only one course of action to the CEO Greg Chandler. This should be the best alternative for the firm and its stakeholders.

TAKEOVER THREAT (TASK 3)

Appendix F

The Los Angeles headquarters of PVVI was buzzing with activity. The rumors of the last few weeks were indeed true. Corporate raider Kirk Rustmeyer had expressed an interest in acquiring PVVI, but the Board and CEO Greg Chandler had believed that Rustmeyer's interest in PVVI was transitory. But this morning, Rustmeyer had called Chandler to inform him that he would present the Board with a formal proposal aimed at taking over the firm.

When Chandler had taken over PVVI, it was a large regional winemaker with vineyards in California's Napa Valley. PVVI was founded by an immigrant from Italy - Fernando Fellici in 1860. After Fernando's death, his sons ran the winery for almost a century. In 1963, PVVI went public. The CEO at that time was Antonio "Tony" Fellici, a direct descendent of the founder. Tony was 65 years old in 1963 and was planning to retire. After his retirement his son, Fredrico "Rick" Fellici took over as CEO of PVVI. Under Rick's guidance, PVVI grew from a small local vintner to a large regional winemaker with a large share of the Western and Southwestern markets.

In 1979, sixteen years after he took over as CEO of PVVI, Rick died in an unfortunate accident when his private airplane crashed off the coast of Maine. At that time Greg Chandler was vice-president of Production at the Napa Valley facility. The Board elected Greg as the new CEO, and for the first time in over a hundred years leadership of PVVI passed outside the Fellici family. Chandler had a Ph.D in Oenology from the University of California at Davis, the world's premier institution for the study of wine making.

He had an excellent understanding of wines, wine making and vine cultivation. He was an aggressive leader and maintained the same focus on quality that his predecessors had. However, his knowledge of other areas, although sufficient, was not exhaustive. He relied on his functional vice-presidents to make decisions in their own areas. Basically, Chandler's style of management had worked well and the firm had grown into a large, multinational firm with significant interests in twenty one countries.

PVVI was the third largest winemaker in the United States and was considered a leader in product innovation. However, the threat of a takeover was not totally unexpected. The management of PVVI had followed the founder's principle of "Death, than debt" to the letter. All growth at PVVI was financed internally, and there was no long term debt of any kind. The lack of long term debt and the excess cash made PVVI vulnerable to a takeover.

Just before Rustmeyer made his offer to the Board, PVVI's stock was trading at \$63.50 per share. When his offer to the Board became public the price soared to \$71.25 per share. Rustmeyer had 11% of PVVI's stock and had indicated that if his offer was not accepted by the Board, he would directly pursue the major institutional stockholders.

Although the Fellici family controlled about 26% of the stock and was behind Chandler, it was possible that Rustmeyer could woo enough institutional investors to challenge PVVI's management. Chandler had no doubts that if Rustmeyer took over the firm, he and his management team would be out of a job. On the other hand, Rustmeyer's offer of \$70.00 per share was a generous one and would result in a substantial gain for PVVI's shareholders.

The top managers at PVVI were concerned about Rustmeyer's intentions in making the purchase offer. His limited partnership -Rustmeyer and Singleton, was based in Waco, Texas and was instrumental in the takeover of firms that were much larger in size. As Rustmeyer often used to say about his firm, "Its not the size that matters, but what you do with it." His motivation was not in managing firms but in the thrill of acquiring them. Frequently, after taking over firms he would lose interest in them, strip them of their assets and dissolve them.

It was two hours since he had talked with Kirk Rustmeyer and Chandler was scheduled to meet with the Board at 3 PM. Time was of the essence because, Rustmeyer had informed him that his offer would expire by the end of the next business day. After that it would be an all out war for control of PVVI.

There was a knock on his door, and two of Chandler's most trusted associates walked in. The first was Charlotte Kennedy, Legal Advisor to PVVI and the second was David Kleindorfer, vice-president for Finance.

"Hi Charlie, Dave...have a seat."

After they were seated Chandler began talking in his precise, clipped style.

"Well I guess by now you must have heard about the offer. The question is how are we going to handle it. The deadline is 5 PM tomorrow...so I don't have much time to decide. But before I make up my mind, I'd like to hear your views."

"I think we ought to fight," said Charlie with the trace of a Southern drawl. "This is one firm that Rustmeyer is not going to takeover. We have the Fellici family's support on this issue. They have always stated that they will defend against any unfriendly takeover attempts."

"Yeah, that's right. I just got off the phone with Doc Fellici. He said the family is behind us on this one," said Chandler.

"Some of our large stockholders - pension funds and institutional investors have been calling me all morning," said David. "They indicated that if it came to a question of voting they would have to support Rustmeyer because of their obligations to their own investors. If this becomes a proxy fight - its going to be a close one."

"I'd like to avoid a proxy fight, if at all possible," said Chandler.

"Our employees don't like the idea of being managed by Rustmeyer either. He has a reputation for ruthlessness. I hear that he can't tolerate unions and doesn't have any problems cutting jobs or closing down plants," said Charlie. "Besides he is a corporate raider not a winemaker."

Although he wanted to fight for the firm that he had managed for nearly nine years, Chandler was not really sure whether it was the best course of action for the firm and its shareholders. It was a question of his own survival versus the interests of all the stakeholders in PVVI

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It is 3:30 PM and you as the Board have just heard the CEO's analysis of the situation. Assume that the firm wants to reject the offer. The issue facing the Board is how to best fight this threat of a takeover. You are to explore the various courses of action open to the firm. However, you are to recommend only one course of action to the CEO Greg Chandler. This should be the best alternative to the firm and its stakeholders.

GEOGRAPHIC DIVERSIFICATION (TASK 4)

Appendix G

PVVI had grown from a small regional vintner to the third largest winemaker in the U.S. with international involvements in twenty one countries. In 1987 PVVI had 32,515 employees on its payroll; of these, 7,800 were located overseas. However, compared to its competitors - Ernst & Julio and Paul Masson - PVVI's international operations are rather limited. Its entire vine cultivation and wine production facilities are located in the Napa Valley in California. PVVI exports wine to countries in Europe, South America, Canada and Asia. However, the firm has considered expanding its geographic base to other countries as well.

The form of PVVI's international involvement has also been limited to exporting. While this strategy has the advantage of low risk, returns are also limited. PVVI's CEO, Greg Chandler and the Board of directors have considered several alternative strategies for increasing the international involvement of the firm. However, until recently, the Board was reluctant to invest overseas. But with increasing domestic competition and eroding market share overseas PVVI has begun to explore other avenues for growth.

Geographic expansion

PVVI had hired an international market research firm to evaluate the opportunities in several countries. Although PVVI was exporting to many of these nations, the market research firm was asked to evaluate them for various forms of international involvement including licensing, joint ventures and direct foreign investment. A summary of results from the report is provided below.

Excellent opportunities for vine cultivation and wine production exist in several countries in the Southern Hemisphere. Notable among them are Argentina, Chile, Brazil, South Africa, Australia and New Zealand.

Argentina is the largest producer of wine among the countries of the Southern Hemisphere; it also has a large domestic market and the per-capita wine consumption of 20 gallons is the highest in the region. Moreover availability of low cost meat made the steak-and-wine dinner an Argentinean tradition. This also accounts for the large consumption of red wine in the country. Argentinean consumers are very cost conscious and low priced wines seem to fare well in this market. Till now, PVVI has mainly exported its wines to Argentina. However, potential for joint ventures and foreign direct investment exist. PVVI also needs to consider the political turmoil and economic difficulties facing Argentina in making its decision.

Chile produces the highest quality wines among the nations of the Southern Hemisphere. Chile's excellent environment for viticulture produces some of the finest grapes in the world. Laws for producing quality wines are enforced strictly by the Chilean government. However, the government has

occasionally used prohibition as a weapon to deal with the problem of alcoholism. Moreover, the political and economic climate in Chile is not conducive to American investment. PVVI may be able to source high quality wines from Chilean producers at reasonable prices. Joint ventures with wine making cooperatives in Chile can also prove to be fruitful liaisons.

Another Latin American country that offers promise for PVVI's expansion program is Brazil. Brazilian consumers purchase the largest quantity of imported wines of all the countries in the region. Also, several U.S. and foreign firms have collaborated successfully with Brazilian winemakers to produce high quality wines. For example, Almaden has joint venture in Rio Grande do Sul to produce premium wines. The bottling and packaging for this venture is provided by Moet & Chandon. However, Brazilian wines are as yet not well known in international circles. Also, the per capita consumption of wine in Brazil is very low. In addition the huge international debt of \$110 billion has forced the Brazilian government to enforce strict exchange controls, that may hinder expatriation of income.

Another important wine producer in the Southern Hemisphere is South Africa. All South African winegrowers must be members of the KWV - the Cooperative Winegrowers Association - and are subject to its rules. However there has been tremendous dissension within the KWV between small, subsistence viculturists and large premium vineyards. Wine consumption is highest among the country's white population. The political price of investing in South Africa may be very high. Several nations ban wines made in South Africa and PVVI's involvement with South Africa may trigger a boycott of its wines in the U.S. However, the relative economic prosperity of the nation and the possibility of helping black workers by providing them equal pay for equal work must also be considered.

Another country mentioned in the report is Australia. Australia has emerged as one of the leading winemaking nations of the world. Penfolds Grange Hermitage Bin 95, is considered to be Australia's best wine and retails for \$40 (when one can find it!). There are over 550 wineries in Australia, about half of them are less than ten years old and many of them were started with foreign collaboration. Hence, opportunities for joint ventures abound for foreign firms. However, some wine critics have labeled Australian wines as being, "dull, listless and flat." also in 1987, the grape crop was quite small due to the disastrous weather and this pushed grape prices to a record high. Such fluctuations in yield and price are not uncommon in the Australian market. With the country's rising inflation, the cost of necessary imports such as corks and aging barrels have also been increasing. The local market for wines is also limited.

The last nation mentioned in the report was New Zealand. It's domestic market is small, and its per capita consumption of 3 gallons is the lowest among western nations. Imports fare better in New Zealand than they do in Australia. Writes an editor of a wine magazine, "Whereas New Zealanders tend to believe that anything imported is better, Australians have a much greater faith and loyalty to their...wine." However, New Zealand, with its excellent climate and prosperous economy, is considered by many to have the best potential for vine cultivation and wine making. Wines from New Zealand have not yet scored big in international markets, but the encouragement given by the

government and the natural desire of the domestic producers to expand may change that situation in the near future.

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Having read this report, you as the Board of Directors of PVVI can assume that PVVI has to expand overseas if it is to emerge a winner. The key question is to decide where PVVI should expand to and what kind of diversification strategy should it adopt. You are to explore the various courses of action open to the firm. However, you are to recommend only one course of action to the CEO Greg Chandler. This should be the best alternative for the firm and its stakeholders.

APPENDIX C

Version of task for baseline groups

PARASOL ASSEMBLY PROBLEM

Visualize a sub-assembly situation in which seven persons (men and women), working in a circle, assemble a part of a domestic vacuum cleaner. The article enters the circle at one point, and each person adds his/her pieces and pushes the unit to the next worker who adds his/her elements. When the unit leaves the circle, it is a completed part product. This work arrangement is diagrammed in Exhibit 1 (attached).

Suppose there are four such parasol sub-assembly stations, each supervised by a foreman. Suppose further that Station A assembles 85 units per day; Station B, 80 per day; Station C, 60 per day and Station D, 50 units. It is a fact that Station D previously assembled 60 units. The foreman was dissatisfied with the production and reprimanded the group. Following the reprimand production fell to 50 units per day.

The assembly work is simple and requires a minimum of training for each step. The aptitude requirement is primarily good finger dexterity. The materials for each assembly position are located in bins which are kept supplied by material handlers. Thus each worker has his/her essential materials at his/her elbow. The job has been analyzed by experts so that the positions are of equal difficulty. Pay is based on hourly rates.

The total factory production is dependent upon receiving the required number of assembled units from these four stations. The production is now so low that the factory production as a whole had to slow down. The desired quota is 300 parts per shift for the four stations combined.

We are concerned with Station C producing at the rate of 60 units. The work piles up at the position of Joe Brown. The unit must pass through him (position 3), and he always has several piled up waiting for him. Foremen on non-production jobs are not willing to accept Joe as a transfer. Joe is a man of 60 with 30 years of service in the company. Emphasis on improving production has brought his deficiencies to light.

EXERCISE:

*What can be done to BEST solve the most important problem(s) behind declining productivity in the case?

Identify no more than FOUR solutions. PRIORITIZE the four solutions from best to worst.

APPENDIX D

Version of task for baseline groups

PARASOL ASSEMBLY PROBLEM

Visualize a sub-assembly situation in which seven persons (men and women), working in a circle, assemble a part of a domestic vacuum cleaner. The article enters the circle at one point, and each person adds his/her pieces and pushes the unit to the next worker who adds his/her elements. When the unit leaves the circle, it is a completed part of the product. This work arrangement is diagrammed in Exhibit 1 (attached).

Suppose there are four such parasol sub-assembly stations, each supervised by a foreman. Suppose further that Station A assembles 85 units per day; Station B, 80 per day; Station C, 60 per day and Station D, 50 units. It is a fact that Station D previously assembled 60 units. The foreman was dissatisfied with the production and reprimand the group. Following the reprimand production fell to 50 units per day.

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EXERCISE:

*What are the most important problem(s) behind declining productivity in the case? Identify no more than FOUR problems. PRIORITIZE the four problems in order of importance.

THE PARKING PROBLEM

You have probably tried to find a place to park around campus and know that it is not always easy. Even if you don't have a car on campus, you probably have witnessed such problems. This is especially true when you are late for class, an appointment or a ball game. The question put forth to you today is:

What can be done to help reduce the parking problem?

Be specific, complete and concise - yet you need to provide enough information so that someone else can fully understand your idea without requiring further explanation.

Disclaimer: This scenerio is fictitious. Any resemblance to real organizations is purely coincidental.

To: Undergraduate Business Policy Committee
√ **Dr. R.U. Crazy**, Associate Dean of the Business School
M.I. Nuts, Business Student Council President
Dr. I.N. Exess, Chairperson, Business School Faculty Council
Dr. M.C. Mallet, University Vice President for Undergraduate
Instruction
From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Business School Policy Recommendation(s)

The Undergraduate Business Policy Committee is charged with setting policies for the School of Business (SOB). We have recently received several complaints about the effects of some current policies. These include complaints related to limited SOB physical resources, a shortage of classrooms, quality of instruction, overcrowding in classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising SOB policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests that you represent.

The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: Dr. R.U. Crazy, Associate Dean of the Business School

Your job in this meeting is to assume the role of the **Associate Dean** of the Business School.

You work closely with the Dean on important policy matters and are responsible for managing many of the Business School physical and personnel resources. This position has responsibilities which are similar to those of a vice-president of a corporation.

In working with the school's financial matters, you allocate the financial resources assigned to the Business School through the budget (See the Budget Table below), work to keep costs within budgetary constraints, and seek policies to maintain school revenues (from tuition and the state legislature) at current levels (See the Tuition Revenue Table below).

BUDGET TABLE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 | Proj. 1991 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|------------|
| Salaries & Wages | 4,918,910 | 5,672,921 | 6,523,320 | 6,848,949 | 7,214,923 | 7,300,000 |
| Fixed | 1,538,162 | 1,612,910 | 1,654,832 | 1,698,321 | 1,708,293 | 1,700,000 |
| Total | 6,457,072 | 7,285,831 | 8,178,152 | 8,547,270 | 8,923,216 | 9,000,000 |
| Increase Over Last Year | | 12.8% | 12.2% | 4.5% | 4.4% | 0.9% |
| Inflation | | 4.1% | 3.8% | 3.5% | 3.1% | 3.0% |

BUSINESS SCHOOL TUITION REVENUE TABLE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|-------------|-------------|-------------|-------------|-------------|
| In-State | \$1,084,608 | \$1,275,072 | \$1,692,072 | \$1,872,012 | \$1,994,448 |
| Out of state | 1,271,832 | 1,777,152 | 2,420,244 | 2,957,640 | 3,802,572 |
| Total | \$2,356,440 | \$3,052,224 | \$4,112,316 | \$4,829,652 | \$5,797,020 |

You are aware of the instruction costs for various types of teachers (see the Cost Per Teaching Hour Table below). You also have information about the number of students in the Business School and the teachers by category within the school (see the Business School Enrollment & Teachers Table below).

In general, the Dean has been quite satisfied with the results of the current policies and has not perceived that any major problems exist. Since some schools in the university actually had a budget cut, the Dean is very pleased to be able to maintain next year's budget at about the same level.

COST PER TEACHING HOUR BY TYPE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | \$6,524 | \$6,592 | \$6,870 | \$6,991 | \$7,012 |
| Junior Professor | 3,195 | 3,812 | 4,105 | 4,341 | 4,688 |
| Adjunct Faculty | 1,081 | 1,129 | 1,170 | 1,192 | 1,248 |
| Associate Instructors | 987 | 1,014 | 1,054 | 1,070 | 1,105 |

Senior Professors: Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees

Junior Professors: Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry

Adjunct Faculty: Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.

Associate Instructors: Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

BUSINESS SCHOOL ENROLLMENT AND TEACHERS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Enrollment | 2,152 | 2,544 | 2,837 | 3,143 | 3,479 |
| Senior Professors | 51 | 54 | 57 | 52 | 54 |
| Junior Professors | 85 | 84 | 91 | 92 | 95 |
| Part-time Instructors | 17 | 19 | 23 | 22 | 26 |
| Associate Instructors | 142 | 131 | 136 | 120 | 114 |
| Total Instructors | 295 | 288 | 311 | 289 | 289 |

Finally, you know that the alumni believe it is very important that the Business School maintain its image as a prestigious and quality institution. This influences the placement of graduates and the future marketability of their degrees (some of the ratings for the Business School are in the table below).

BUSINESSWEEK ANNUAL RATING OF BUSINESS SCHOOL (10 point scale)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------------|---------|---------|---------|---------|---------|
| Reputation | 8.6 | 8.7 | 8.8 | 8.5 | 8.6 |
| Graduate Placement | 7.2 | 8.2 | 7.5 | 7.9 | 7.8 |
| Overall | 8.3 | 8.6 | 8.4 | 8.4 | 8.3 |

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To: Undergraduate Business Policy Committee
Dr. R.U. Crazy, Associate Dean of the Business School
√ **M.I. Nuts**, Business Student Council President
Dr. I.N. Exess, Chairperson, Business School Faculty Council
Dr. M.C. Mallet, University Vice President for Undergraduate
Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Business School Policy Recommendation(s)

The Undergraduate Business Policy Committee is charged with setting policies for the School of Business (SOB). We have recently received several complaints about the effects of some current policies. These include complaints related to limited SOB physical resources, a shortage of classrooms, quality of instruction, overcrowding in classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising SOB policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests that you represent.

The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: M.I. Nuts, Business Student Council President

Your job in this meeting is to assume the role of the **Business School Student Council President**.

As a representative of the population of business students at the University, you know that many students are concerned about current and potential future tuition costs (see Tuition Rates Table below) and availability of computer resources (see Computers Table below). In addition, students have also expressed a desire to see more relevant, real world, issues taught in the classroom.

TUITION RATES

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 56 | 58 | 71 | 73 | 74 |
| Out-of-State | 197 | 208 | 237 | 245 | 257 |

RATIO OF LAB COMPUTERS TO STUDENTS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------------|---------|---------|---------|---------|---------|
| Computers:Students | 1:33 | 1:32 | 1:30 | 1:29 | 1:26 |

Because of the student body's concern about the future of the Business School, you and your associates have conducted significant research on the issues and therefore possess information that may be relevant to the policy meeting. For instance, you have information about the number of students admitted to the Business School from in-state and out-of-state (see the Sources of Admissions Table below), the number of students who enter the university to major in business, and the number that actually graduate in business (see Business School Admissions and Graduations Table below), and teaching evaluations (see the Student Evaluation of Instructors Table Below).

SOURCES OF BUSINESS SCHOOL ADMISSIONS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 1,614 | 1,832 | 1,986 | 2,137 | 2,246 |
| Out-of-State | 538 | 712 | 851 | 1,006 | 1,233 |
| Total | 2,152 | 2,544 | 2,837 | 3,143 | 3,479 |

BUSINESS SCHOOL ADMISSIONS AND GRADUATIONS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 1,454 | 1,719 | 1,953 | 2,340 | 2,710 |
| Admits | 1,119 | 1,322 | 1,425 | 1,634 | 1,945 |
| Graduates | 1,032 | 1,221 | 1,412 | 1,508 | 1,534 |

STUDENTS' EVALUATIONS OF INSTRUCTORS

10 Point Scale

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 8.0 | 8.1 | 7.4 | 7.2 | 7.1 |
| Junior Professors | 7.8 | 8.2 | 7.5 | 6.8 | 6.5 |
| Adjunct Faculty | 7.7 | 7.6 | 7.4 | 7.1 | 7.1 |
| Associate Instructors | 6.5 | 6.8 | 6.3 | 6.7 | 6.4 |

Senior Professors: Faculty with a Ph.D. who do research, teach, consult with industry, and serve on committees

Junior Professors: Faculty with a Ph.D. who do research, teach, and serve on committees, and do some work with industry

Adjunct Faculty: Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.

Associate Instructors: Doctoral & M.B.A. students. Teach undergraduate courses part-time & take graduate classes part-time.

You also possess other information that may be relevant to the policy meeting such as industry demand data for majors from the various departments in the Business School (see Industry Demand Table below).

INDUSTRY DEMAND FOR BUSINESS MAJORS

(10 point scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92(P) | 1992-93(P) |
|---------------------|---------|---------|---------|------------|------------|
| Accounting | 7 | 7 | 9 | 8 | 7 |
| Finance | 7 | 6 | 4 | 3 | 4 |
| Information Systems | 7 | 7 | 8 | 8 | 8 |
| Market | 6 | 7 | 6 | 6 | 5 |
| Management | 6 | 6 | 5 | 6 | 5 |

(P)=projected

One final concern is that some students want more learning of what they call "real world" job skills. Several recent graduates have said that they wished they had received more practical instruction and less theory while attending school.

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To: Undergraduate Business Policy Committee
Dr. R.U. Crazy, Associate Dean of the Business School
M.I. Nuts, Business Student Council President
√ **Dr. I.N. Exess**, Chairperson, Business School Faculty Council
Dr. M.C. Mallet, University Vice President for Undergraduate
Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
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Role: Dr. I.N. Exess, Chairperson, Business School Faculty Council

Your job in this meeting is to assume the role of the **Chairperson of the Business School Faculty Council**.

You are responsible for representing the concerns of faculty from within the School of Business. You are aware that faculty are concerned about large class sizes and how this influences their teaching and ability to perform their other responsibilities, especially research and publication in scientific journals. In addition, at a recent faculty meeting, you noted that a number of faculty voiced strong opposition to a proposal to increase teaching responsibilities beyond current levels. Some faculty are concerned about the faculty turnover rate (see Faculty Resignations table).

AVERAGE NUMBER STUDENTS TAUGHT PER INSTRUCTOR

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 116 | 158 | 197 | 216 | 232 |
| Junior Professors | 274 | 293 | 343 | 398 | 419 |
| Adjunct Faculty | 485 | 602 | 665 | 707 | 767 |
| Associate Instructors | 89 | 112 | 135 | 179 | 193 |

SENIOR & JUNIOR FACULTY RESIGNATIONS

(Does not include retirements and transfers)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|------------|---------|---------|---------|---------|---------|
| Professors | 8 | 17 | 16 | 10 | 14 |

You have information that may be relevant to the policy meeting. For instance, in cooperation with the Registrar's Office, you have collected data defining the sources of instruction for Business School courses (see Sources of Classroom Instruction below) as well as data describing the number of credit hours taught in the Business School (see Table below).

AVERAGE NUMBER CREDIT HOURS TAUGHT PER INSTRUCTOR

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 12.4 | 14.8 | 16.0 | 16.6 | 16.6 |
| Junior Professors | 22.8 | 23.1 | 25.1 | 28.4 | 28.6 |
| Adjunct Faculty | 18.2 | 21.0 | 22.4 | 22.8 | 23.0 |
| Associate Instructors | 7.4 | 8.4 | 9.2 | 11.4 | 11.6 |

SOURCES OF CLASSROOM INSTRUCTION

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 27% | 26% | 26% | 24% | 24% |
| Junior Professors | 28% | 26% | 23% | 21% | 20% |
| Adjunct Faculty | 5% | 7% | 9% | 8% | 9% |
| Associate Instructors | 40% | 41% | 42% | 47% | 47% |

Senior Professors: Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees

Junior Professors: Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry

Adjunct Faculty: Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.

Associate Instructors: Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

TOTAL RESEARCH PUBLICATIONS IN SCIENTIFIC JOURNALS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 47 | 46 | 46 | 43 | 41 |
| Junior Professors | 98 | 102 | 105 | 101 | 104 |
| Adjunct Faculty | N/A | N/A | N/A | N/A | N/A |
| Associate Instructors | 21 | 34 | 41 | 36 | 28 |

You also know that the reputation of the school as a prestigious and quality institution is very important to the school's alumni. One other concern is that some faculty believe some Business School students are not adequately equipped in the basic math and writing skills necessary for business courses.

BUSINESSWEAK ANNUAL RATING OF BUSINESS SCHOOL (10 point scale)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-------------|---------|---------|---------|---------|---------|
| Research | 8.3 | 8.6 | 9.0 | 9.5 | 9.3 |
| Instruction | 8.9 | 8.7 | 8.2 | 7.8 | 7.4 |
| Overall | 8.3 | 8.6 | 8.4 | 8.4 | 8.3 |

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To: Undergraduate Business Policy Committee
Dr. R.U. Crazy, Associate Dean of the Business School
M.I. Nuts, Business Student Council President
Dr. I.N. Exess, Chairperson, Business School Faculty Council
√ **Dr. M.C. Mallet,** University Vice President for Undergraduate
Instruction
From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Business School Policy Recommendation(s)

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With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising SOB policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests that you represent.

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Role: Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

You are to assume the role of the **University Vice President for Undergraduate Instruction**.

As the University Vice President for Undergraduate Instruction, you are responsible for representing the administration of the University and the Board of Regents. This position has responsibilities which are similar to those of a vice-president of a corporation. In this regard, you are responsible for developing and enacting policies and strategies which affect undergraduate students in various university divisions.

You know that the university has an important mandate from the state legislature to structure policies so that a priority is given to in-state residents in allocating state tax revenues for education (see the Sources of University-wide Enrollment Table below). In addition, any policy changes should not negatively impact the university position on Federal Equal Opportunity regulations which mandate that all students should have a very fair opportunity to attend the university. This is of particular concern since the Business School unsuccessfully attempted to curb enrollment four years earlier by raising entrance requirements.

SOURCES OF UNIVERSITY-WIDE ENROLLMENT

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 18,287 | 18,710 | 18,557 | 18,197 | 17,847 |
| Out-of-State | 6,096 | 7,272 | 7,952 | 8,566 | 9,798 |
| Total | 24,382 | 25,982 | 26,509 | 26,763 | 27,645 |

You also possess other pieces of information that may be relevant to the policy meeting. For instance, data about the quality of teaching across the university has been collected for this meeting (see the Average Student Teaching Evaluation by School Table below). In addition, data about the utilization of classroom resources has been collected (see the Business School Classroom Utilization Table below).

AVERAGE STUDENT TEACHING EVALUATION BY SCHOOL
(10 point scale)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------|---------|---------|---------|---------|---------|
| Arts & Sciences | 8.1 | 8.3 | 8.2 | 8.4 | 8.3 |
| Business | 7.3 | 7.6 | 7.0 | 6.9 | 6.7 |
| Education | 6.8 | 6.8 | 6.9 | 7.1 | 7.0 |

BUSINESS SCHOOL CLASSROOM UTILIZATION
1989-1990

| | Morning | Afternoon | Evening |
|-----------|---------|-----------|---------|
| Monday | 95% | 85% | 18% |
| Tuesday | 98% | 87% | 12% |
| Wednesday | 94% | 89% | 19% |
| Thursday | 97% | 88% | 5% |
| Friday | 45% | 21% | 0% |
| Saturday | 5% | 0% | 0% |

Finally, you have heard some complaints about the completion rate for degrees for the professional schools (see the Admission and Graduation for Professional Schools Table below). You have also heard that a very influential employer of the Business School's graduates has expressed a concern suggesting that some recent graduates seemed to have poorly developed critical thinking and problem solving skills.

ADMISSION AND GRADUATION FOR PROFESSIONAL SCHOOLS
UNIVERSITY WIDE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 11,120 | 11,716 | 12,091 | 11,546 | 12,141 |
| Admitted | 8,558 | 9,010 | 8,822 | 8,062 | 8,714 |
| Graduates | 7,893 | 8,322 | 8,741 | 7,440 | 6,872 |

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To: Undergraduate Business Policy Committee
Ö **Dr. R.U. Crazy**, Associate Dean of the Business School
M.I. Nuts, Business Student Council President
P.R. DuStinks, University Alumni Association Vice-President
Dr. I.N. Exess, Chairperson, Business School Faculty Council
Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

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Role: Dr. R.U. Crazy, Associate Dean of the Business School

Your job in this meeting is to assume the role of the **Associate Dean** of the Business School.

You work closely with the Dean on important policy matters and are responsible for managing many of the Business School physical and personnel resources. This position has responsibilities which are similar to those of a vice-president of a corporation.

In working with the school's financial matters, you allocate the financial resources assigned to the Business School through the budget (See the Budget Table below), work to keep costs within budgetary constraints, and seek policies to maintain school revenues (from tuition and the state legislature) at current levels (See the Tuition Revenue Table below).

BUDGET TABLE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 | Projected 1991 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|----------------|
| Salaries & Wages | 4,918,910 | 5,672,921 | 6,523,320 | 6,848,949 | 7,214,923 | 7,300,000 |
| Fixed | 1,538,162 | 1,612,910 | 1,654,832 | 1,698,321 | 1,708,293 | 1,700,000 |
| Total | 6,457,072 | 7,285,831 | 8,178,152 | 8,547,270 | 8,923,216 | 9,000,000 |
| Increase Over Last Year | | 12.8% | 12.2% | 4.5% | 4.4% | 0.9% |
| Inflation | | 4.1% | 3.8% | 3.5% | 3.1% | 3.0% |

BUSINESS SCHOOL TUITION REVENUE TABLE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|-------------|-------------|-------------|-------------|-------------|
| In-State | \$1,084,608 | \$1,275,072 | \$1,692,072 | \$1,872,012 | \$1,994,448 |
| Out of state | 1,271,832 | 1,777,152 | 2,420,244 | 2,957,640 | 3,802,572 |
| Total | \$2,356,440 | \$3,052,224 | \$4,112,316 | \$4,829,652 | \$5,797,020 |

You are aware of the instruction costs for various types of teachers (see the Cost Per Teaching Hour Table below). You also have information about the number of students in the Business School and the teachers by category within the school (see the Business School Enrollment & Teachers Table below).

COST PER TEACHING HOUR BY TYPE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--|---------|---------|---------|---------|---------|
|--|---------|---------|---------|---------|---------|

| | | | | | |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | \$6,524 | \$6,592 | \$6,870 | \$6,991 | \$7,012 |
| Junior Professor | 3,195 | 3,812 | 4,105 | 4,341 | 4,688 |
| Adjunct Faculty | 1,081 | 1,129 | 1,170 | 1,192 | 1,248 |
| Associate Instructors | 987 | 1,014 | 1,054 | 1,070 | 1,105 |

Senior Professors: Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees

Junior Professors: Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry

Adjunct Faculty: Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.

Associate Instructors: Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

BUSINESS SCHOOL ENROLLMENT AND TEACHERS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Enrollment | 2,152 | 2,544 | 2,837 | 3,143 | 3,479 |
| Senior Professors | 51 | 54 | 57 | 52 | 54 |
| Junior Professors | 85 | 84 | 91 | 92 | 95 |
| Adjunct Faculty | 17 | 19 | 23 | 22 | 26 |
| Associate Instructors | 142 | 131 | 136 | 120 | 114 |
| Total Instructors | 295 | 288 | 311 | 289 | 289 |

In general, the Dean has been quite satisfied with the results of the current policies and has not perceived that any major problems exist. Since some schools in the university actually had a budget cut, the Dean is very pleased to be able to maintain next year's budget at about the same level.

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To: Undergraduate Business Policy Committee
Dr. R.U. Crazy, Associate Dean of the Business School
Ö **M.I. Nuts**, Business Student Council President
P.R. DuStinks, University Alumni Association Vice-President
Dr. I.N. Exess, Chairperson, Business School Faculty Council
Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson

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Role: M.I. Nuts, Business Student Council President

Your job in this meeting is to assume the role of the **Business School Student Council President**.

As a representative of the population of business students at the University, you know that many students are concerned about current and potential future tuition costs (see Tuition Rates Table below) and availability of computer resource (see Computers Table below). In addition, students have also expressed a desire to see more relevant, real world, issues taught in the classroom.

TUITION RATES

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 56 | 58 | 71 | 73 | 74 |
| Out-of-State | 197 | 208 | 237 | 245 | 257 |

RATIO OF LAB COMPUTERS TO STUDENTS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--|---------|---------|---------|---------|---------|
| | 1:33 | 1:32 | 1:30 | 1:29 | 1:26 |

Because of the student body's concern about the future of the Business School, you and your associates have conducted significant research on the issues and therefore possess information that may be relevant to the policy meeting. For instance, you have information about the number of business students admitted to the Business School from in-state and out-of-state (see the Sources of Admissions Table below), the number of students who enter the university to major in business and the number that actually graduate in business (see Business School Admissions and Graduations Table below), and teaching evaluations (see the Student Evaluation of Instructors Table Below), .

SOURCES OF BUSINESS SCHOOL ADMISSIONS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 1,614 | 1,832 | 1,986 | 2,137 | 2,246 |
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| Graduates | 1,032 | 1,221 | 1,412 | 1,508 | 1,534 |

STUDENTS' EVALUATIONS OF INSTRUCTORS
10 Point Scale

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 8.0 | 8.1 | 7.4 | 7.2 | 7.1 |
| Junior Professors | 7.8 | 8.2 | 7.5 | 6.8 | 6.5 |
| Adjunct Faculty | 7.7 | 7.6 | 7.4 | 7.1 | 7.1 |
| Associate Instructors | 6.5 | 6.8 | 6.3 | 6.7 | 6.4 |

- Senior Professors:** Faculty with a Ph.D. who do research, teach, consult with industry, and serve on committees
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One final concern is that some students want more learning of what they call "real world" job skills.

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M.I. Nuts, Business Student Council President
Ö **P.R. DuStinks**, University Alumni Association Vice-President
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From: Dr. Polly Wannacracker, Academic Policy Chairperson

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Role: P.R. DuStinks, Business Vice-President of the University Alumni Association

Your job in this meeting is to assume the role of the **University Alumni Association Vice-President**.

As a representative of the University alumni, you are responsible for representing the concerns of former university students. One issue that has recently been brought to your attention is the type of instruction provided at the university. For instance, at a recent alumni party, several recent graduates said that they wished they had received more practical instruction and less theory while attending school. In addition, most alumni believe it is very important that the Business School maintain its image as a prestigious & quality institution. They know this influences the placement of graduates and the future marketability of their degrees (the ratings for the Business School are in the table below).

BUSINESSWEAK ANNUAL RATING OF BUSINESS SCHOOL
(10 point scale)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------------|---------|---------|---------|---------|---------|
| Reputation | 8.6 | 8.7 | 8.8 | 8.5 | 8.6 |
| Research | 8.3 | 8.6 | 9.0 | 9.5 | 9.3 |
| Instruction | 8.9 | 8.7 | 8.2 | 7.8 | 7.4 |
| Graduate Placement | 7.2 | 8.2 | 7.5 | 7.9 | 7.8 |
| Overall | 8.3 | 8.6 | 8.4 | 8.4 | 8.3 |

You also possess other information that may be relevant to the policy meeting such as industry demand data for majors from the various departments in the Business School (see Industry Demand Table below).

INDUSTRY DEMAND FOR BUSINESS MAJORS
(10 point scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92(P) | 1992-93(P) |
|---------------------|---------|---------|---------|------------|------------|
| Accounting | 7 | 7 | 9 | 8 | 7 |
| Finance | 7 | 6 | 4 | 3 | 4 |
| Information Systems | 7 | 7 | 8 | 8 | 8 |
| Market | 6 | 7 | 6 | 6 | 5 |
| Management | 6 | 6 | 5 | 6 | 5 |

(P)=projected

Finally, a very influential employer of the school's graduates expressed a concern that some recent graduates seemed to have poorly developed critical thinking and problem solving skills.

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To: Undergraduate Business Policy Committee
Dr. R.U. Crazy, Associate Dean of the Business School
M.I. Nuts, Business Student Council President
P.R. DuStinks, University Alumni Association Vice-President
Ö **Dr. I.N. Exess**, Chairperson, Business School Faculty Council
Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson

Re: 5 Year Business School Policy Recommendation(s)

The Undergraduate Business Policy Committee is charged with setting policies for the School of Business (SOB). We have recently received several complaints about the effects of some current policies. These include complaints related to limited SOB physical resources, a shortage of classrooms, quality of instruction, overcrowding in classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising SOB policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests that you represent.

The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: Dr. I.N. Exess, Chairperson, Business School Faculty Council

Your job in this meeting is to assume the role of the **Chairperson of the Business School Faculty Council**.

You are responsible for representing the concerns of faculty from within the School of Business. You are aware that faculty are concerned about large class sizes and how this influences their teaching and ability to perform their other responsibilities, especially research and publication in scientific journals. In addition, at a recent faculty meeting, you noted that a number of faculty voiced strong opposition to a proposal to increase teaching responsibilities beyond current levels. Some faculty are concerned about the faculty turnover rate (see Faculty Resignations table).

AVERAGE NUMBER STUDENTS TAUGHT PER INSTRUCTOR

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 116 | 158 | 197 | 216 | 232 |
| Junior Professors | 274 | 293 | 343 | 398 | 419 |
| Adjunct Faculty | 485 | 602 | 665 | 707 | 767 |
| Associate Instructors | 89 | 112 | 135 | 179 | 193 |

AVERAGE NUMBER CREDIT HOURS TAUGHT PER INSTRUCTOR

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 12.4 | 14.8 | 16.0 | 16.6 | 16.6 |
| Junior Professors | 22.8 | 23.1 | 25.1 | 28.4 | 28.6 |
| Adjunct Faculty | 18.2 | 21.0 | 22.4 | 22.8 | 23.0 |
| Associate Instructors | 7.4 | 8.4 | 9.2 | 11.4 | 11.6 |

You also have information that may be relevant to the policy meeting. For instance, in cooperation with the Registrar's Office, you have collected data defining the sources of instruction for Business School courses (see Sources of Classroom Instruction below) as well as data describing the number of students and the courses taught in the Business School (see Table below).

SOURCES OF CLASSROOM INSTRUCTION

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 27% | 26% | 26% | 24% | 24% |
| Junior Professors | 28% | 26% | 23% | 21% | 20% |
| Adjunct Faculty | 5% | 7% | 9% | 8% | 9% |
| Associate Instructors | 40% | 41% | 42% | 47% | 47% |

Senior Professors: Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees

Junior Professors: Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry

Adjunct Faculty: Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.

Associate Instructors: Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

TOTAL RESEARCH PUBLICATIONS IN SCIENTIFIC JOURNALS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 47 | 46 | 46 | 43 | 41 |
| Junior Professors | 98 | 102 | 105 | 101 | 104 |
| Adjunct Faculty | N/A | N/A | N/A | N/A | N/A |
| Associate Instructors | 21 | 34 | 41 | 36 | 28 |

SENIOR & JUNIOR FACULTY RESIGNATIONS

(Does not include retirements and transfers)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|------------|---------|---------|---------|---------|---------|
| Professors | 8 | 17 | 16 | 10 | 14 |

One other concern is that some faculty believe some Business School students are not adequately equipped in the basic math and writing skills necessary for business courses.

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To: Undergraduate Business Policy Committee
Dr. R.U. Crazy, Associate Dean of the Business School
M.I. Nuts, Business Student Council President
P.R. DuStinks, University Alumni Association Vice-President
Dr. I.N. Exess, Chairperson, Business School Faculty Council
Ö **Dr. M.C. Mallet**, University Vice President for Undergraduate Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson

Re: 5 Year Business School Policy Recommendation(s)

The Undergraduate Business Policy Committee is charged with setting policies for the School of Business (SOB). We have recently received several complaints about the effects of some current policies. These include complaints related to limited SOB physical resources, a shortage of classrooms, quality of instruction, overcrowding in classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising SOB policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests that you represent.

The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

You are to assume the role of the **University Vice President for Undergraduate Instruction**.

As the University Vice President for Undergraduate Instruction, you are responsible for representing the Administration of the University and of the Board of Regents. This position has responsibilities which are similar to those of a vice-president of a corporation. In this regard, you are responsible for developing and enacting policies and strategies which affect undergraduate students in various university divisions.

You know that the university has an important legislative mandate to structure policies so that a priority is given to in-state residents in allocating state tax revenues for education (see the Sources of University-wide Enrollment Table below). In addition, any policy changes should not negatively impact the university position on Federal Equal Opportunity regulations which mandate that all students should have a very fair opportunity to attend the university. This is of particular concern since the Business School unsuccessfully attempted to curb enrollment four years earlier by raising entrance requirements.

SOURCES OF UNIVERSITY-WIDE ENROLLMENT

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 18,287 | 18,710 | 18,557 | 18,197 | 17,847 |
| Out-of-State | 6,096 | 7,272 | 7,952 | 8,566 | 9,798 |
| Total | 24,382 | 25,982 | 26,509 | 26,763 | 27,645 |

You also possess other pieces of information that may be relevant to the policy meeting. For instance, data about the quality of teaching across the university has been collected for this meeting (see the Average Student Teaching Evaluation by School Table below). In addition, data about the utilization of classroom resources has been collected (see the Business School Classroom Utilization Table below).

AVERAGE STUDENT TEACHING EVALUATION BY SCHOOL
(10 point scale)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------|---------|---------|---------|---------|---------|
| Arts & Sciences | 8.1 | 8.3 | 8.2 | 8.4 | 8.3 |
| Business | 7.3 | 7.6 | 7.0 | 6.9 | 6.7 |
| Education | 6.8 | 6.8 | 6.9 | 7.1 | 7.0 |

BUSINESS SCHOOL CLASSROOM UTILIZATION
1989-1990

| | Morning | Afternoon | Evening |
|-----------|---------|-----------|---------|
| Monday | 95% | 85% | 18% |
| Tuesday | 98% | 87% | 12% |
| Wednesday | 94% | 89% | 19% |
| Thursday | 97% | 88% | 5% |
| Friday | 45% | 21% | 0% |
| Saturday | 5% | 0% | 0% |

You have also heard some complaints about the completion rate for degrees for the professional schools (see the Admission and Graduation for Professional Schools Table below).

ADMISSION AND GRADUATION FOR PROFESSIONAL SCHOOLS
UNIVERSITY WIDE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 11,120 | 11,716 | 12,091 | 11,546 | 12,141 |
| Admitted | 8,558 | 9,010 | 8,822 | 8,062 | 8,714 |
| Graduates | 7,893 | 8,322 | 8,741 | 7,440 | 6,872 |

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To: Undergraduate Commerce Faculty Policy Committee
√ **Dr. R.U. Crazy, Associate Dean of the Commerce Faculty**
M.I. Nuts, Commerce Student Council President
Dr. I.N. Excess, Chairperson, Commerce Faculty Association
Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Faculty of Commerce Policy Recommendation(s)

The Undergraduate Commerce Faculty Policy Committee is charged with setting policies for the Faculty of Commerce (FOC). We have recently received several complaints about the effects of some current policies. These include complaints related to limited FOC physical resources, a shortage of classrooms, quality of instruction, overcrowding in the classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising FOC policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests you represent.

The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: Dr. R.U. Crazy, Associate Dean of the Commerce Faculty

Your job in this meeting is to assume the role of the **Associate Dean** of the Commerce Faculty.

You work closely with the Dean on important policy matters and are responsible for managing many of the Commerce Faculty physical and personnel resources. This position has responsibilities which are similar to those of a vice-president of a corporation.

In working with the school's financial matters, you allocate the financial resources assigned to the Commerce Faculty through the budget (See the Budget Table below), work to keep costs within budgetary constraints, and seek policies to maintain school revenues (from tuition and the provincial legislature) at current levels (See the Tuition Revenue Table below).

BUDGET TABLE

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 | Projected 1994 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|----------------|
| Salaries & Wages | 4,918,910 | 5,672,921 | 6,523,320 | 6,848,949 | 7,214,923 | 7,300,000 |
| Fixed | 1,538,162 | 1,612,910 | 1,654,832 | 1,698,321 | 1,708,293 | 1,700,000 |
| Total | 6,547,072 | 7,285,831 | 8,178,152 | 8,547,270 | 8,923,216 | 9,000,000 |
| Increase Over Last Year | | 12.8% | 12.2% | 4.5% | 4.4% | 0.9% |
| Inflation | | 4.1% | 3.8% | 3.5% | 3.1% | 3.0% |

COMMERCE FACULTY TUITION REVENUE TABLE

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|------------------------|-------------|-------------|-------------|-------------|-------------|
| Canadian Students | \$1,084,608 | \$1,275,072 | \$1,692,072 | \$1,872,012 | \$1,994,448 |
| International Students | 1,271,832 | 1,777,152 | 2,420,244 | 2,957,640 | 3,802,572 |
| Total | 2,356,440 | 3,052,224 | 4,112,316 | 4,829,652 | 5,797,020 |

You are aware of the instruction costs for various types of teachers (see the Cost Per Full Course Table below). You also have information about the number of students in the Commerce Faculty and the teachers by category within the school (see the Commerce Faculty Enrollment & Teachers Table below).

In general, the Dean has been quite satisfied with the results of the current policies and has not perceived that any major problems exist. Since some schools in the university actually had a budget cut, the Dean is very pleased to be able to maintain next year's budget at about the same level.

COST PER FULL COURSE BY TYPE

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|----------|----------|----------|----------|----------|
| Senior Professors | \$39,144 | \$39,552 | \$41,220 | \$41,946 | \$42,072 |
| Junior Professors | 19,170 | 22,872 | 24,630 | 26,046 | 28,128 |
| Sessional Faculty | 6,486 | 6,744 | 7,020 | 7,152 | 7,488 |
| Graduate Assistant Instructors | 5,922 | 6,084 | 6,324 | 6,420 | 6,630 |

- Senior Professors:** Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees.
- Junior Professors:** Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry.
- Sessional Faculty:** Faculty with a Masters Degree and work experience hired for teaching. No administrative responsibilities.
- Graduate Assistant Instructors:** Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

COMMERCE FACULTY ENROLLMENT AND TEACHERS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Enrollment | 2,557 | 2,863 | 3,206 | 3,598 | 3,887 |
| Senior Professors | 51 | 54 | 57 | 52 | 54 |
| Junior Professors | 85 | 84 | 91 | 92 | 95 |
| Sessional Faculty | 17 | 19 | 23 | 22 | 26 |
| Graduate Assistant Instructors | 142 | 131 | 136 | 120 | 114 |
| Total Instructors | 295 | 288 | 311 | 289 | 289 |

Finally, you know that the alumni believe it is very important that the Commerce Faculty maintain its image as a prestigious and quality institution. This influences the placement of graduates and the future marketability of their degrees (some of the ratings for the Commerce Faculty are in the table below).

FINANCIAL PEST ANNUAL RATING OF THE COMMERCE FACULTY
(10 Point Scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------|---------|---------|---------|---------|---------|
| Reputation | 8.6 | 8.7 | 8.8 | 8.5 | 8.6 |
| Graduate Placement | 7.2 | 8.2 | 7.5 | 7.9 | 7.8 |
| Overall | 8.3 | 8.6 | 8.4 | 8.4 | 8.3 |

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To: Undergraduate Commerce Faculty Policy Committee
Dr. R.U. Crazy, Associate Dean of the Commerce Faculty
√ **M.I. Nuts, Commerce Student Council President**
Dr. I.N. Excess, Chairperson, Commerce Faculty Association
Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Faculty of Commerce Policy Recommendation(s)

The Undergraduate Commerce Faculty Policy Committee is charged with setting policies for the Faculty of Commerce (FOC). We have recently received several complaints about the effects of some current policies. These include complaints related to limited FOC physical resources, a shortage of classrooms, quality of instruction, overcrowding in the classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising FOC policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests you represent.

The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: M.I. Nuts, Commerce Student Council President

Your job in this meeting is to assume the role of the **Commerce Student Council President**.

As a representative of the population of commerce students at the University, you know that many students are concerned about current and potential future tuition costs (see Tuition Rates Table below) and availability of computer resources (see Computers Table below). In addition, students have also expressed a desire to see more relevant, real world issues taught in the classroom.

TUITION RATES PER FULL COURSE

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|------------------------|---------|---------|---------|---------|---------|
| Canadian Students | 336 | 348 | 426 | 438 | 444 |
| International Students | 1182 | 1248 | 1422 | 1470 | 1542 |

RATIO OF LAB COMPUTERS TO STUDENTS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|---------------------|---------|---------|---------|---------|---------|
| Computers: Students | 1:33 | 1:32 | 1:30 | 1:29 | 1:26 |

Because of the student body's concern about the future of the Commerce Faculty, you and your associates have conducted significant research on the issues and therefore possess information that may be relevant to the policy meeting. For instance, you have information about the number of commerce students enrolled in the Commerce Faculty from Canada and from other countries (see the Sources of Enrollments Table below), the number of students who enter the university to major in commerce and the number that actually graduate in commerce (see Commerce Faculty Admissions and Graduations Table below), and teaching evaluations (see the Student Evaluation of Instructors Table Below).

SOURCE OF COMMERCE FACULTY ENROLLMENTS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|------------------------|---------|---------|---------|---------|---------|
| Canadian Students | 1,841 | 2,004 | 2,180 | 2,339 | 2,529 |
| International Students | 716 | 859 | 1,026 | 1,259 | 1,358 |
| Total | 2,557 | 2,863 | 3,206 | 3,598 | 3,887 |

COMMERCE FACULTY ADMISSIONS AND GRADUATIONS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 1,454 | 1,719 | 1,953 | 2,340 | 2,710 |
| Admissions | 1,322 | 1,425 | 1,634 | 1,945 | 1,935 |
| Graduates | 1,032 | 1,221 | 1,412 | 1,534 | 1,532 |

STUDENTS' EVALUATIONS OF INSTRUCTORS

10 Point Scale

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Senior Professors | 8.0 | 8.1 | 7.4 | 7.2 | 7.1 |
| Junior Professors | 7.8 | 8.2 | 7.5 | 6.8 | 6.5 |
| Sessional Faculty | 7.7 | 7.6 | 7.4 | 7.1 | 7.1 |
| Graduate Assistant Instructors | 6.5 | 6.8 | 6.3 | 6.7 | 7.4 |

- Senior Professors:** Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees.
- Junior Professors:** Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry.
- Sessional Faculty:** Faculty with a Masters Degree and work experience hired for teaching. No administrative responsibilities.
- Graduate Assistant Instructors:** Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

You also possess other information that may be relevant to the policy meeting such as industry demand for majors from the various areas in the Commerce Faculty (see Industry Demand Table below).

INDUSTRY DEMAND FOR BUSINESS MAJORS

(10 Point Scale)

| | 1991-92 | 1992-93 | 1993-94 | 1994-95 (P) | 1995-96 (P) |
|---------------------|---------|---------|---------|-------------|-------------|
| Accounting | 7 | 7 | 9 | 8 | 7 |
| Finance | 7 | 6 | 4 | 3 | 4 |
| Information Systems | 7 | 7 | 8 | 8 | 8 |
| Marketing | 6 | 7 | 6 | 6 | 5 |
| General Management | 6 | 6 | 5 | 6 | 5 |

(P) = projected

One final concern is that some students want more learning of what they call "real world" job skills. Several recent graduates have said that they wished they had received more practical instruction and less theory while attending university.

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To: Undergraduate Commerce Faculty Policy Committee
Dr. R.U. Crazy, Associate Dean of the Commerce Faculty
M.I. Nuts, Commerce Student Council President
√ **Dr. I.N. Excess, Chairperson, Commerce Faculty Association**
Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Faculty of Commerce Policy Recommendation(s)

The Undergraduate Commerce Faculty Policy Committee is charged with setting policies for the Faculty of Commerce (FOC). We have recently received several complaints about the effects of some current policies. These include complaints related to limited FOC physical resources, a shortage of classrooms, quality of instruction, overcrowding in the classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising FOC policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests you represent.

The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: Dr. I.N. Excess, Chairperson, Commerce Faculty Association

Your job in this meeting is to assume the role of the **Chairperson of the Commerce Faculty Association**.

You are responsible for representing the concerns of the faculty from within the Faculty of Commerce. You are aware that faculty are concerned about large class sizes and how this influences their teaching and their ability to perform their other responsibilities, especially research and publication in scientific journals. In addition, at a recent faculty meeting, you noted that a number of faculty voiced strong opposition to a proposal to increase teaching responsibilities beyond current levels. Some faculty are concerned about the faculty turnover rate (see Faculty Resignations table).

You also have information that may be relevant to the policy meeting. For instance, in cooperation with the Registrar's Office, you have collected data defining the sources of instruction for Commerce Faculty courses (see Sources of Classroom Instruction Table below) as well as data describing the number of students and courses taught in the Commerce Faculty (see Tables below).

AVERAGE NUMBER OF STUDENTS TAUGHT PER INSTRUCTOR

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Senior Professors | 116 | 158 | 197 | 216 | 232 |
| Junior Professors | 274 | 293 | 343 | 398 | 419 |
| Sessional Faculty | 485 | 602 | 665 | 707 | 767 |
| Graduate Assistant Instructors | 89 | 112 | 135 | 179 | 193 |

- Senior Professors:** Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees.
- Junior Professors:** Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry.
- Sessional Faculty:** Faculty with a Masters Degree and work experience hired for teaching. No administrative responsibilities.
- Graduate Assistant Instructors:** Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

SENIOR & JUNIOR FACULTY RESIGNATIONS

(Does not include retirements and transfers)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|------------|---------|---------|---------|---------|---------|
| Professors | 8 | 17 | 16 | 10 | 14 |

AVERAGE NUMBER OF FULL COURSES TAUGHT PER INSTRUCTOR

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Senior Professors | 2.1 | 2.5 | 2.7 | 2.8 | 2.8 |
| Junior Professors | 3.8 | 3.9 | 4.2 | 4.7 | 4.8 |
| Sessional Faculty | 3.0 | 3.5 | 3.7 | 3.8 | 3.8 |
| Graduate Assistant Instructors | 1.2 | 1.4 | 1.5 | 1.9 | 1.9 |

SOURCES OF CLASSROOM INSTRUCTION

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Senior Professors | 27% | 26% | 26% | 24% | 24% |
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| Sessional Faculty | 5% | 7% | 9% | 8% | 9% |
| Graduate Assistant Instructors | 40% | 41% | 42% | 47% | 47% |

TOTAL RESEARCH PUBLICATIONS IN SCIENTIFIC JOURNALS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Senior Professors | 47 | 46 | 46 | 43 | 41 |
| Junior Professors | 98 | 102 | 105 | 101 | 104 |
| Sessional Faculty | N/A | N/A | N/A | N/A | N/A |
| Graduate Assistant Instructors | 21 | 34 | 41 | 36 | 28 |

You also know that the reputation of the school as a prestigious and quality institution is very important to the school's alumni. One other concern is that some faculty members believe that some Commerce Faculty students are not adequately equipped in the basic math and writing skills necessary for commerce courses.

FINANCIAL PEST ANNUAL RATING OF THE COMMERCE FACULTY
(10 Point Scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|-------------|---------|---------|---------|---------|---------|
| Research | 8.3 | 8.6 | 9.0 | 9.5 | 9.3 |
| Instruction | 8.9 | 8.7 | 8.2 | 7.8 | 7.4 |
| Overall | 8.3 | 8.6 | 8.4 | 8.4 | 8.3 |

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To: Undergraduate Commerce Faculty Policy Committee
Dr. R.U. Crazy, Associate Dean of the Commerce Faculty
M.I. Nuts, Commerce Student Council President
Dr. I.N. Excess, Chairperson, Commerce Faculty Association
√ **Dr. M.C. Mallet, University Vice President for Undergraduate Instruction**

From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Faculty of Commerce Policy Recommendation(s)

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The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

Your job in this meeting is to assume the role of the **University Vice President for Undergraduate Instruction**.

As the University Vice President for Undergraduate Instruction, you are responsible for representing the Administration of the University and of the Board of Governors. This position has responsibilities which are similar to those of a vice-president of a corporation. In this regard, you are responsible for developing and enacting policies and strategies which affect undergraduate students in various university divisions.

You know that the university has an important legislative mandate to structure policies so that priority is given to Canadian students in allocating provincial tax revenues for education (see Sources of University-wide Enrollment Table below). In addition, any policy changes should be consistent with the Canadian Charter of Rights and Freedoms. Among other things, the Charter stipulates that no one should be discriminated against on the basis of their race or gender by an agent of government. (The university is considered to be an agent of government.) Policies inconsistent with the Charter are those that have the net impact of systematically discriminating against women, visible minorities, or aboriginal peoples. For example, raising admission standards to reduce enrollment may systematically discriminate against aboriginal peoples, if they have not benefited from previous educational opportunities equivalent to applicants from other groups.

SOURCES OF UNIVERSITY-WIDE ENROLLMENT

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|------------------------|---------|---------|---------|---------|---------|
| Canadian Students | 18,287 | 18,710 | 18,557 | 18,197 | 17,847 |
| International Students | 6,096 | 7,272 | 7,952 | 8,566 | 9,798 |
| Total | 24,382 | 25,982 | 26,509 | 26,763 | 27,645 |

You also possess other pieces of information that may be relevant to the policy meeting. For instance, data about the quality of teaching across the university has been collected for this meeting (see the Average Student Teaching Evaluation by School Table below). In addition, data about the utilization of classroom resources has been collected (see the Commerce Faculty Classroom Utilization Table below).

AVERAGE STUDENT TEACHING EVALUATION BY SCHOOL
(10 Point Scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|-----------------|---------|---------|---------|---------|---------|
| Arts & Sciences | 8.1 | 8.3 | 8.2 | 8.4 | 8.3 |
| Commerce | 7.3 | 7.6 | 7.0 | 6.9 | 6.7 |
| Education | 6.8 | 6.8 | 6.9 | 7.1 | 7.0 |

COMMERCE FACULTY CLASSROOM UTILIZATION
1992-1993

| | Morning | Afternoon | Evening |
|-----------|---------|-----------|---------|
| Monday | 95% | 85% | 18% |
| Tuesday | 98% | 87% | 12% |
| Wednesday | 94% | 89% | 19% |
| Thursday | 97% | 88% | 5% |
| Friday | 45% | 21% | 0% |
| Saturday | 5% | 0% | 0% |

Finally, you have heard some complaints about the completion rate for degrees for the professional schools (see the Admission and Graduation for Professional Schools Table below). You have also heard that a very influential employer of the Commerce Faculty's graduates has expressed a concern suggesting that some recent graduates seemed to have poorly developed critical thinking and problem solving skills.

ADMISSION AND GRADUATION FOR PROFESSIONAL SCHOOLS
UNIVERSITY WIDE

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 11,120 | 11,716 | 12,091 | 11,546 | 12,141 |
| Admitted | 8,558 | 9,010 | 8,822 | 8,062 | 8,714 |
| Graduates | 7,893 | 8,322 | 8,741 | 7,440 | 6,872 |

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To: Undergraduate Commerce Faculty Policy Committee
√ **Dr. R.U. Crazy, Associate Dean of the Commerce Faculty**
M.I. Nuts, Commerce Student Council President
P.R. DuStinks, University Alumni Association Vice-President
Dr. I.N. Excess, Chairperson, Commerce Faculty Association
Dr. M.C. Mallet, University Vice President for Undergraduate
Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Faculty of Commerce Policy Recommendation(s)

The Undergraduate Commerce Faculty Policy Committee is charged with setting policies for the Faculty of Commerce (FOC). We have recently received several complaints about the effects of some current policies. These include complaints related to limited FOC physical resources, a shortage of classrooms, quality of instruction, overcrowding in the classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising FOC policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests you represent.

The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: Dr. R.U. Crazy, Associate Dean of the Commerce Faculty

Your job in this meeting is to assume the role of the **Associate Dean** of the Commerce Faculty.

You work closely with the Dean on important policy matters and are responsible for managing many of the Commerce Faculty physical and personnel resources. This position has responsibilities which are similar to those of a vice-president of a corporation.

In working with the school's financial matters, you allocate the financial resources assigned to the Commerce Faculty through the budget (See the Budget Table below), work to keep costs within budgetary constraints, and seek policies to maintain school revenues (from tuition and the provincial legislature) at current levels (See the Tuition Revenue Table below).

BUDGET TABLE

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 | Projected 1994 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|----------------|
| Salaries & Wages | 4,918,910 | 5,672,921 | 6,523,320 | 6,848,949 | 7,214,923 | 7,300,000 |
| Fixed | 1,538,162 | 1,612,910 | 1,654,832 | 1,698,321 | 1,708,293 | 1,700,000 |
| Total | 6,547,072 | 7,285,831 | 8,178,152 | 8,547,270 | 8,923,216 | 9,000,000 |
| Increase Over Last Year | | 12.8% | 12.2% | 4.5% | 4.4% | 0.9% |
| Inflation | | 4.1% | 3.8% | 3.5% | 3.1% | 3.0% |

COMMERCE FACULTY TUITION REVENUE TABLE

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|------------------------|-------------|-------------|-------------|-------------|-------------|
| Canadian Students | \$1,084,608 | \$1,275,072 | \$1,692,072 | \$1,872,012 | \$1,994,448 |
| International Students | 1,271,832 | 1,777,152 | 2,420,244 | 2,957,640 | 3,802,572 |
| Total | 2,356,440 | 3,052,224 | 4,112,316 | 4,829,652 | 5,797,020 |

You are aware of the instruction costs for various types of teachers (see the Cost Per Full Course Table below). You also have information about the number of students in the Commerce Faculty and the teachers by category within the school (see the Commerce Faculty Enrollment & Teachers Table below).

COST PER FULL COURSE BY TYPE

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|----------|----------|----------|----------|----------|
| Senior Professors | \$39,144 | \$39,552 | \$41,220 | \$41,946 | \$42,072 |
| Junior Professors | 19,170 | 22,872 | 24,630 | 26,046 | 28,128 |
| Sessional Faculty | 6,486 | 6,744 | 7,020 | 7,152 | 7,488 |
| Graduate Assistant Instructors | 5,922 | 6,084 | 6,324 | 6,420 | 6,630 |

- Senior Professors:** Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees.
- Junior Professors:** Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry.
- Sessional Faculty:** Faculty with a Masters Degree and work experience hired for teaching. No administrative responsibilities.
- Graduate Assistant Instructors:** Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

COMMERCE FACULTY ENROLLMENT AND TEACHERS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Enrollment | 2,557 | 2,863 | 3,206 | 3,598 | 3,887 |
| Senior Professors | 51 | 54 | 57 | 52 | 54 |
| Junior Professors | 85 | 84 | 91 | 92 | 95 |
| Sessional Faculty | 17 | 19 | 23 | 22 | 26 |
| Graduate Assistant Instructors | 142 | 131 | 136 | 120 | 114 |
| Total Instructors | 295 | 288 | 311 | 289 | 289 |

In general, the Dean has been quite satisfied with the results of the current policies and has not perceived that any major problems exist. Since some schools in the university actually had a budget cut, the Dean is very pleased to be able to maintain next year's budget at about the same level.

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To: Undergraduate Commerce Faculty Policy Committee
Dr. R.U. Crazy, Associate Dean of the Commerce Faculty
√ **M.I. Nuts, Commerce Student Council President**
P.R. DuStinks, University Alumni Association Vice-President
Dr. I.N. Excess, Chairperson, Commerce Faculty Association
Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Faculty of Commerce Policy Recommendation(s)

The Undergraduate Commerce Faculty Policy Committee is charged with setting policies for the Faculty of Commerce (FOC). We have recently received several complaints about the effects of some current policies. These include complaints related to limited FOC physical resources, a shortage of classrooms, quality of instruction, overcrowding in the classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising FOC policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests you represent.

The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: M.I. Nuts, Commerce Student Council President

Your job in this meeting is to assume the role of the **Commerce Student Council President**.

As a representative of the population of commerce students at the University, you know that many students are concerned about current and potential future tuition costs (see Tuition Rates Table below) and availability of computer resources (see Computers Table below). In addition, students have also expressed a desire to see more relevant, real world issues taught in the classroom.

TUITION RATES PER FULL COURSE

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|------------------------|---------|---------|---------|---------|---------|
| Canadian Students | 336 | 348 | 426 | 438 | 444 |
| International Students | 1182 | 1248 | 1422 | 1470 | 1542 |

RATIO OF LAB COMPUTERS TO STUDENTS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|---------------------|---------|---------|---------|---------|---------|
| Computers: Students | 1:33 | 1:32 | 1:30 | 1:29 | 1:26 |

Because of the student body's concern about the future of the Commerce Faculty, you and your associates have conducted significant research on the issues and therefore possess information that may be relevant to the policy meeting. For instance, you have information about the number of commerce students enrolled in the Commerce Faculty from Canada and from other countries (see the Sources of Enrollments Table below), the number of students who enter the university to major in commerce and the number that actually graduate in commerce (see Commerce Faculty Admissions and Graduations Table below), and teaching evaluations (see the Student Evaluation of Instructors Table Below).

SOURCE OF COMMERCE FACULTY ENROLLMENTS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|------------------------|---------|---------|---------|---------|---------|
| Canadian Students | 1,841 | 2,004 | 2,180 | 2,339 | 2,529 |
| International Students | 716 | 859 | 1,026 | 1,259 | 1,358 |
| Total | 2,557 | 2,863 | 3,206 | 3,598 | 3,887 |

COMMERCE FACULTY ADMISSIONS AND GRADUATIONS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 1,454 | 1,719 | 1,953 | 2,340 | 2,710 |
| Admissions | 1,322 | 1,425 | 1,634 | 1,945 | 1,935 |
| Graduates | 1,032 | 1,221 | 1,412 | 1,534 | 1,532 |

STUDENTS' EVALUATIONS OF INSTRUCTORS

10 Point Scale

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Senior Professors | 8.0 | 8.1 | 7.4 | 7.2 | 7.1 |
| Junior Professors | 7.8 | 8.2 | 7.5 | 6.8 | 6.5 |
| Sessional Faculty | 7.7 | 7.6 | 7.4 | 7.1 | 7.1 |
| Graduate Assistant Instructors | 6.5 | 6.8 | 6.3 | 6.7 | 7.4 |

- Senior Professors:** Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees.
- Junior Professors:** Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry.
- Sessional Faculty:** Faculty with a Masters Degree and work experience hired for teaching. No administrative responsibilities.
- Graduate Assistant Instructors:** Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

One final concern is that some students want more learning of what they call "real world" job skills.

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To: Undergraduate Commerce Faculty Policy Committee
Dr. R.U. Crazy, Associate Dean of the Commerce Faculty
M.I. Nuts, Commerce Student Council President
√ **P.R. DuStinks, University Alumni Association Vice-
President**
Dr. I.N. Excess, Chairperson, Commerce Faculty
Association
Dr. M.C. Mallet, University Vice President for Undergraduate
Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
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With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising FOC policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests you represent.

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Role: P.R. DuStinks, Commerce Vice-President of the University Alumni Association

Your job in this meeting is to assume the role of the **University Alumni Association Vice President**.

As a representative of the University alumni, you are responsible for representing the concerns of former university students. One issue that has recently been brought to your attention is the type of instruction provided at the university. For instance, at a recent alumni party, several recent graduates said that they wished they had received more practical instruction and less theory while attending school. In addition, they believe that the Commerce Faculty maintain its image as a prestigious & quality institution. They know this influences the placement of graduates and the future marketability of their degrees (the ratings for the Commerce School are in the table below).

FINANCIAL PEST ANNUAL RATING OF THE COMMERCE FACULTY
(10 Point Scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------|---------|---------|---------|---------|---------|
| Reputation | 8.6 | 8.7 | 8.8 | 8.5 | 8.6 |
| Research | 8.3 | 8.6 | 9.0 | 9.5 | 9.3 |
| Instruction | 8.9 | 8.7 | 8.2 | 7.8 | 7.4 |
| Graduate Placement | 7.2 | 8.2 | 7.5 | 7.9 | 7.8 |
| Overall | 8.3 | 8.6 | 8.4 | 8.4 | 8.3 |

You also possess other information that may be relevant to the policy meeting such as industry demand data for majors from the various departments in the Commerce Faculty (see industry Demand Table below).

INDUSTRY DEMAND FOR BUSINESS MAJORS
(10 Point Scale)

| | 1991-92 | 1992-93 | 1993-94 | 1994-95 (P) | 1995-96 (P) |
|---------------------|---------|---------|---------|-------------|-------------|
| Accounting | 7 | 7 | 9 | 8 | 7 |
| Finance | 7 | 6 | 4 | 3 | 4 |
| Information Systems | 7 | 7 | 8 | 8 | 8 |
| Marketing | 6 | 7 | 6 | 6 | 5 |
| General Management | 6 | 6 | 5 | 6 | 5 |

(P) = projected

Finally, a very influential employer of the faculty's graduates expressed a concern that some recent graduates seemed to have poorly developed critical thinking and problem solving skills.

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To: Undergraduate Commerce Faculty Policy Committee
Dr. R.U. Crazy, Associate Dean of the Commerce Faculty
M.I. Nuts, Commerce Student Council President
P.R. DuStinks, University Alumni Association Vice-President
√ **Dr. I.N. Excess, Chairperson, Commerce Faculty Association**
Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Faculty of Commerce Policy Recommendation(s)

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With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising FOC policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests you represent.

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Role: Dr. I.N. Excess, Chairperson, Commerce Faculty Association

Your job in this meeting is to assume the role of the **Chairperson of the Commerce Faculty Association**.

You are responsible for representing the concerns of the faculty from within the Faculty of Commerce. You are aware that faculty are concerned about large class sizes and how this influences their teaching and their ability to perform their other responsibilities, especially research and publication in scientific journals. In addition, at a recent faculty meeting, you noted that a number of faculty voiced strong opposition to a proposal to increase teaching responsibilities beyond current levels. Some faculty are concerned about the faculty turnover rate (see Faculty Resignations table).

You also have information that may be relevant to the policy meeting. For instance, in cooperation with the Registrar's Office, you have collected data defining the sources of instruction for Commerce Faculty courses (see Sources of Classroom Instruction Table below) as well as data describing the number of students and the courses taught in the Commerce Faculty (see Tables below).

AVERAGE NUMBER OF STUDENTS TAUGHT PER INSTRUCTOR

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Senior Professors | 116 | 158 | 197 | 216 | 232 |
| Junior Professors | 274 | 293 | 343 | 398 | 419 |
| Sessional Faculty | 485 | 602 | 665 | 707 | 767 |
| Graduate Assistant Instructors | 89 | 112 | 135 | 179 | 193 |

AVERAGE NUMBER OF FULL COURSES TAUGHT PER INSTRUCTOR

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Senior Professors | 2.1 | 2.5 | 2.7 | 2.8 | 2.8 |
| Junior Professors | 3.8 | 3.9 | 4.2 | 4.7 | 4.8 |
| Sessional Faculty | 3.0 | 3.5 | 3.7 | 3.8 | 3.8 |
| Graduate Assistant Instructors | 1.2 | 1.4 | 1.5 | 1.9 | 1.9 |

SOURCES OF CLASSROOM INSTRUCTION

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Senior Professors | 27% | 26% | 26% | 24% | 24% |
| Junior Professors | 28% | 26% | 23% | 21% | 20% |
| Sessional Faculty | 5% | 7% | 9% | 8% | 9% |
| Graduate Assistant Instructors | 40% | 41% | 42% | 47% | 47% |

| | |
|--|---|
| Senior Professors: | Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees. |
| Junior Professors: | Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry. |
| Sessional Faculty: | Faculty with a Masters Degree and work experience hired for teaching. No administrative responsibilities. |
| Graduate Assistant Instructors: | Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time. |

TOTAL RESEARCH PUBLICATIONS IN SCIENTIFIC JOURNALS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------------------|---------|---------|---------|---------|---------|
| Senior Professors | 47 | 46 | 46 | 43 | 41 |
| Junior Professors | 98 | 102 | 105 | 101 | 104 |
| Sessional Faculty | N/A | N/A | N/A | N/A | N/A |
| Graduate Assistant Instructors | 21 | 34 | 41 | 36 | 28 |

SENIOR & JUNIOR FACULTY RESIGNATIONS

(Does not include retirements and transfers)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|------------|---------|---------|---------|---------|---------|
| Professors | 8 | 17 | 16 | 10 | 14 |

One other concern is that some faculty believe that some Commerce Faculty students are not adequately equipped in the basic math and writing skills necessary for commerce courses.

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To: Undergraduate Commerce Faculty Policy Committee
Dr. R.U. Crazy, Associate Dean of the Commerce Faculty
M.I. Nuts, Commerce Student Council President
P.R. DuStinks, University Alumni Association Vice-President
Dr. I.N. Excess, Chairperson, Commerce Faculty Association
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From: Dr. Polly Wannacracker, Academic Policy Chairperson
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The following pages contain information relevant to the case. Do not pass or show these forms to other participants.

Role: Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

Your job in this meeting is to assume the role of the **University Vice President for Undergraduate Instruction**.

As the University Vice President for Undergraduate Instruction, you are responsible for representing the Administration of the University and of the Board of Governors. This position has responsibilities which are similar to those of a vice-president of a corporation. In this regard, you are responsible for developing and enacting policies and strategies which affect undergraduate students in various university divisions.

You know that the university has an important legislative mandate to structure policies so that priority is given to Canadian students in allocating provincial tax revenues for education (see Sources of University-wide Enrollment Table below). In addition, any policy changes should be consistent with the Canadian Charter of Rights and Freedoms. Among other things, the Charter stipulates that no one should be discriminated against on the basis of their race or gender by an agent of government. (The university is considered to be an agent of government.) Policies inconsistent with the Charter are those that have the net impact of systematically discriminating against women, visible minorities, or aboriginal peoples. For example, raising admission standards to reduce enrollment may systematically discriminate against aboriginal peoples, if they have not benefited from previous educational opportunities equivalent to applicants from other groups.

SOURCES OF UNIVERSITY-WIDE ENROLLMENT

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|------------------------|---------|---------|---------|---------|---------|
| Canadian Students | 18,287 | 18,710 | 18,557 | 18,197 | 17,847 |
| International Students | 6,096 | 7,272 | 7,952 | 8,566 | 9,798 |
| Total | 24,382 | 25,982 | 26,509 | 26,763 | 27,645 |

You also possess other pieces of information that may be relevant to the policy meeting. For instance, data about the quality of teaching across the university has been collected for this meeting (see the Average Student Teaching Evaluation by School Table below). In addition, data about the utilization of classroom resources has been collected (see the Commerce Faculty Classroom Utilization Table below).

AVERAGE STUDENT TEACHING EVALUATION BY SCHOOL
(10 Point Scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|-----------------|---------|---------|---------|---------|---------|
| Arts & Sciences | 8.1 | 8.3 | 8.2 | 8.4 | 8.3 |
| Commerce | 7.3 | 7.6 | 7.0 | 6.9 | 6.7 |
| Education | 6.8 | 6.8 | 6.9 | 7.1 | 7.0 |

COMMERCE FACULTY CLASSROOM UTILIZATION
1992-1993

| | Morning | Afternoon | Evening |
|-----------|---------|-----------|---------|
| Monday | 95% | 85% | 18% |
| Tuesday | 98% | 87% | 12% |
| Wednesday | 94% | 89% | 19% |
| Thursday | 97% | 88% | 5% |
| Friday | 45% | 21% | 0% |
| Saturday | 5% | 0% | 0% |

You have also heard some complaints about the completion rate for degrees for the professional schools (see the Admission and Graduation for Professional Schools Table below).

ADMISSION AND GRADUATION FOR PROFESSIONAL SCHOOLS
UNIVERSITY WIDE

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 11,120 | 11,716 | 12,091 | 11,546 | 12,141 |
| Admitted | 8,558 | 9,010 | 8,822 | 8,062 | 8,714 |
| Graduates | 7,893 | 8,322 | 8,741 | 7,440 | 6,872 |

IUB Informed Consent Statement

You are invited to participate in a study designed to find out how groups and individuals make decisions. Some students will be using a group support system (GSS) and some will work on the problem individually. We hope to learn how to help people make decisions. Please understand that participation in this activity may not fully satisfy your experimental requirements.

If you decide to participate, you will be asked to solve a common business problem and then make a recommendation. You may also be asked to complete a questionnaire at the end of the session. Your total time in this experiment should be between two and two and a half hours. Participation in this experiment is one way to fulfill the K201 research requirement (the K201 syllabus describes the other ways). This experiment poses no known risks to its participants.

The information from this experiment will be kept confidential. All records of this experiment will be safely stored in a secure cabinet and no one will have access to this information except the researchers. No reference will be made in any written reports that could link you to the study. Only aggregate results will be reported. By signing this form you agree to allow the researchers to videotape this experiment. The video tapes will be used for research purposes and will allow the researchers to better understand how groups make decisions. The tapes are the property of the researchers and will only be viewed by the researchers and their graduate student assistants. The tapes will be kept for up to three years as part of an ongoing research program.

If you have any questions at any time about the study or the procedures, you may contact Brad Wheeler (855-3487) or Brian Mennecke (855-9703). You will be given a copy of this form to keep upon your request. Your participation in this experiment is voluntary. Your decision whether or not to participate will not affect your future relations with your instructors in any way. If you decide to participate, you are free to discontinue participation at any time without affecting such relationships. If you do withdraw prior to the completion of the study, your videotape will be erased and you will not receive any course credit for participation.

You may withdraw at any time without prejudice after signing this form. If you choose to discontinue participation your data will be erased from the experiment. If you do decide to participate, we ask that you not discuss with your fellow students any aspect of this experiment. It is in the best interest of scientific inquiry not to discuss the experiment, as such discussion may lead to possible distortions of the data and may in effect cause the entire experiment to be abandoned. Thank you.

I understand the above and agree to participate in this experiment.

Subject's signature _____ Date _____

Subject's Student ID #: _____ - _____ - _____

Investigator's signature _____ Date _____

Disclaimer: This scenerio is fictitious. Any resemblance to real organizations is purely coincidental.

To: Chairperson, Undergraduate Business Policy Committee
From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Business School Policy Recommendation(s)

The Undergraduate Business Policy Committee is charged with setting policies for the School of Business (SOB). We have recently received several complaints about the effects of some current policies. These include complaints related to limited SOB physical resources, a shortage of classrooms, quality of instruction, overcrowding in classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each member brings to the meeting. You should identify the real problems (if there are any) that should be addressed through revising SOB policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. You should carefully consider how any proposed policy changes might affect the interests that each of the committee members represents.

The following pages contain information relevant to the case. You should consider each individual's viewpoint and knowledge and formulate a policy to address the situation described above and on the following pages. A form is provided on the last page on which you can place your responses.

Please refrain from discussing this case with others after leaving today as this may limit your chances for winning the cash awards.

Dr. R.U. Crazy, Associate Dean of the Business School

The **Associate Dean** of the Business School works closely with the Dean on important policy matters and are responsible for managing many of the Business School physical and personnel resources. This position has responsibilities which are similar to those of a vice-president of a corporation.

In working with the school's financial matters, this person allocates the financial resources assigned to the Business School through the budget (See the Budget Table below), works to keep costs within budgetary constraints, and seeks policies to maintain school revenues (from tuition and the state legislature) at current levels (See the Tuition Revenue Table below).

BUDGET TABLE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 | Projected 1991 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|----------------|
| Salaries & Wages | 4,918,910 | 5,672,921 | 6,523,320 | 6,848,949 | 7,214,923 | 7,300,000 |
| Fixed | 1,538,162 | 1,612,910 | 1,654,832 | 1,698,321 | 1,708,293 | 1,700,000 |
| Total | 6,457,072 | 7,285,831 | 8,178,152 | 8,547,270 | 8,923,216 | 9,000,000 |
| Increase Over Last Year | | 12.8% | 12.2% | 4.5% | 4.4% | 0.9% |
| Inflation | | 4.1% | 3.8% | 3.5% | 3.1% | 3.0% |

BUSINESS SCHOOL TUITION REVENUE TABLE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|-------------|-------------|-------------|-------------|-------------|
| In-State | \$1,084,608 | \$1,275,072 | \$1,692,072 | \$1,872,012 | \$1,994,448 |
| Out of state | 1,271,832 | 1,777,152 | 2,420,244 | 2,957,640 | 3,802,572 |
| Total | \$2,356,440 | \$3,052,224 | \$4,112,316 | \$4,829,652 | \$5,797,020 |

This person is aware of the instruction costs for various types of teachers (see the Cost Per Teaching Hour Table below). This person also has information about the number of students in the Business School and the teachers by category within the school (see the Business School Enrollment & Teachers Table below).

COST PER TEACHING HOUR BY TYPE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | \$6,524 | \$6,592 | \$6,870 | \$6,991 | \$7,012 |
| Junior Professor | 3,195 | 3,812 | 4,105 | 4,341 | 4,688 |
| Adjunct Faculty | 1,081 | 1,129 | 1,170 | 1,192 | 1,248 |
| Associate Instructors | 987 | 1,014 | 1,054 | 1,070 | 1,105 |

Senior Professors: Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees

Junior Professors: Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry

Adjunct Faculty: Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.

Associate Instructors: Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

BUSINESS SCHOOL ENROLLMENT AND TEACHERS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Enrollment | 2,152 | 2,544 | 2,837 | 3,143 | 3,479 |
| Senior Professors | 51 | 54 | 57 | 52 | 54 |
| Junior Professors | 85 | 84 | 91 | 92 | 95 |
| Part-time Instructors | 17 | 19 | 23 | 22 | 26 |
| Associate Instructors | 142 | 131 | 136 | 120 | 114 |
| Total Instructors | 295 | 288 | 311 | 289 | 289 |

In general, the Dean has been quite satisfied with the results of the current policies and has not perceived that any major problems exist. Since some schools in the university actually had a budget cut, the Dean is very pleased to be able to maintain next year's budget at about the same level.

The **Business School Student Council President** is a representative of the population of business students at the University. This person knows that many students are concerned about current and potential future tuition costs (see Tuition Rates Table below) and the availability of computer resource (see Computers Table below). In addition, students have also expressed a desire to see more relevant, real world, issues taught in the classroom.

TUITION RATES

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 56 | 58 | 71 | 73 | 74 |
| Out-of-State | 197 | 208 | 237 | 245 | 257 |

RATIO OF LAB COMPUTERS TO STUDENTS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| Out-of-State | 1:33 | 1:32 | 1:30 | 1:29 | 1:26 |

Because of the student body's concern about the future of the Business School, This individual and his associates have conducted significant research on the issues and therefore they possess information that may be relevant to the policy meeting. For instance, they have information about the number of business students admitted to the Business School from in-state and out-of-state (see the Sources of Admissions Table below), the number of students who enter the university to major in business and the number that actually graduate in business (see Business School Admissions and Graduations Table below), and teaching evaluations (see the Student Evaluation of Instructors Table Below), .

SOURCES OF BUSINESS SCHOOL ADMISSIONS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 1,614 | 1,832 | 1,986 | 2,137 | 2,246 |
| Out-of-State | 538 | 712 | 851 | 1,006 | 1,233 |
| Total | 2,152 | 2,544 | 2,837 | 3,143 | 3,479 |

BUSINESS SCHOOL ADMISSIONS AND GRADUATIONS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 1,454 | 1,719 | 1,953 | 2,340 | 2,710 |
| Admits | 1,119 | 1,322 | 1,425 | 1,634 | 1,945 |
| Graduates | 1,032 | 1,221 | 1,412 | 1,508 | 1,534 |

STUDENTS' EVALUATIONS OF INSTRUCTORS 10 Point Scale

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 8.0 | 8.1 | 7.4 | 7.2 | 7.1 |
| Junior Professors | 7.8 | 8.2 | 7.5 | 6.8 | 6.5 |
| Adjunct Faculty | 7.7 | 7.6 | 7.4 | 7.1 | 7.1 |
| Associate Instructors | 6.5 | 6.8 | 6.3 | 6.7 | 6.4 |

Senior Professors: Faculty with a Ph.D. who do research, teach, consult with industry, and serve on committees
Junior Professors: Faculty with a Ph.D. who do research, teach, and serve on committees, and do some work with industry
Adjunct Faculty: Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.
Associate Instructors: Doctoral & M.B.A. students. Teach undergraduate courses part-time & take graduate classes part-time.

One final concern that this person has is that some students want more learning of what they call "real world" job skills.

P.R. DuStinks, Business Vice-President of the University Alumni Association

The **University Alumni Association Vice-President** is a representative of the University alumni who is responsible for representing the concerns of former university students. One issue that has recently been brought to his attention is the type of instruction provided at the university. For instance, at a recent alumni party, several recent graduates told him that they wished they had received more practical instruction and less theory while attending school. In addition, most alumni believe it is very important that the Business School maintain its image as a prestigious & quality institution. They know this influences the placement of graduates and the future marketability of their degrees (the ratings for the Business School are in the table below).

BUSINESSWEAK ANNUAL RATING OF BUSINESS SCHOOL
(10 point scale)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------------|---------|---------|---------|---------|---------|
| Reputation | 8.6 | 8.7 | 8.8 | 8.5 | 8.6 |
| Research | 8.3 | 8.6 | 9.0 | 9.5 | 9.3 |
| Instruction | 8.9 | 8.7 | 8.2 | 7.8 | 7.4 |
| Graduate Placement | 7.2 | 8.2 | 7.5 | 7.9 | 7.8 |
| Overall | 8.3 | 8.6 | 8.4 | 8.4 | 8.3 |

This person also possesses other information that may be relevant to the policy meeting such as industry demand data for majors from the various departments in the Business School (see Industry Demand Table below).

INDUSTRY DEMAND FOR BUSINESS MAJORS

(10 point scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92(P) | 1992-93(P) |
|---------------------|---------|---------|---------|------------|------------|
| Accounting | 7 | 7 | 9 | 8 | 7 |
| Finance | 7 | 6 | 4 | 3 | 4 |
| Information Systems | 7 | 7 | 8 | 8 | 8 |
| Market | 6 | 7 | 6 | 6 | 5 |
| Management | 6 | 6 | 5 | 6 | 5 |

(P)=projected

Finally, a very influential employer of IU graduates expressed a concern that some recent graduates seemed to have poorly developed critical thinking and problem solving skills.

The **Chairperson of the Business School Faculty Council** is responsible for representing the concerns of faculty from within the School of Business. This person is aware that faculty are concerned about large class sizes and how this influences their teaching and ability to perform their other responsibilities, especially research and publication in scientific journals. In addition, at a recent faculty meeting, you noted that a number of faculty voiced strong opposition to a proposal to increase teaching responsibilities beyond current levels. Some faculty are concerned about the faculty turnover rate (see Faculty Resignations table).

AVERAGE NUMBER STUDENTS TAUGHT PER INSTRUCTOR

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 116 | 158 | 197 | 216 | 232 |
| Junior Professors | 274 | 293 | 343 | 398 | 419 |
| Adjunct Faculty | 485 | 602 | 665 | 707 | 767 |
| Associate Instructors | 89 | 112 | 135 | 179 | 193 |

AVERAGE NUMBER CREDIT HOURS TAUGHT PER INSTRUCTOR

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 12.4 | 14.8 | 16.0 | 16.6 | 16.6 |
| Junior Professors | 22.8 | 23.1 | 25.1 | 28.4 | 28.6 |
| Adjunct Faculty | 18.2 | 21.0 | 22.4 | 22.8 | 23.0 |
| Associate Instructors | 7.4 | 8.4 | 9.2 | 11.4 | 11.6 |

This individual also has information that may be relevant to the policy meeting. For instance, in cooperation with the Registrar's Office, this individual collected data defining the sources of instruction for Business School courses (see Sources of Classroom Instruction below) as well as data describing the number of students and the courses taught in the Business School (see Table below).

SOURCES OF CLASSROOM INSTRUCTION

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 27% | 26% | 26% | 24% | 24% |
| Junior Professors | 28% | 26% | 23% | 21% | 20% |
| Adjunct Faculty | 5% | 7% | 9% | 8% | 9% |
| Associate Instructors | 40% | 41% | 42% | 47% | 47% |

Senior Professors: Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees

Junior Professors: Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry

Adjunct Faculty: Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.

Associate Instructors: Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

TOTAL RESEARCH PUBLICATIONS IN SCIENTIFIC JOURNALS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 47 | 46 | 46 | 43 | 41 |
| Junior Professors | 98 | 102 | 105 | 101 | 104 |
| Adjunct Faculty | N/A | N/A | N/A | N/A | N/A |
| Associate Instructors | 21 | 34 | 41 | 36 | 28 |

SENIOR & JUNIOR FACULTY RESIGNATIONS

(Does not include retirements and transfers)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|------------|---------|---------|---------|---------|---------|
| Professors | 8 | 17 | 16 | 10 | 14 |

One other concern this person has is that some faculty believe some Business School students are not adequately equipped in the basic math and writing skills necessary for business courses.

The **University Vice President for Undergraduate Instruction** is responsible for representing the Administration of the University and the Board of Regents. This position has responsibilities which are similar to those of a vice-president of a corporation. In this regard, she is responsible for developing and enacting policies and strategies which affect undergraduate students in various university divisions.

This individual knows that the university has an important legislative mandate to structure policies so that a priority is given to in-state residents in allocating state tax revenues for education (see the Sources of University-wide Enrollment Table below). In addition, any policy changes should not negatively impact the university position on Federal Equal Opportunity regulations which mandate that all students should have a very fair opportunity to attend the university. This is of particular concern since the Business School unsuccessfully attempted to curb enrollment four years earlier by raising entrance requirements.

SOURCES OF UNIVERSITY-WIDE ENROLLMENT

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 18,287 | 18,710 | 18,557 | 18,197 | 17,847 |
| Out-of-State | 6,096 | 7,272 | 7,952 | 8,566 | 9,798 |
| Total | 24,382 | 25,982 | 26,509 | 26,763 | 27,645 |

This individual also possesses other pieces of information that may be relevant to the policy meeting. For instance, data about the quality of teaching across the university has been collected for this meeting (see the Average Student Teaching Evaluation by School Table below). In addition, data about the utilization of classroom resources has been collected (see the Business School Classroom Utilization Table below).

AVERAGE STUDENT TEACHING EVALUATION BY SCHOOL (10 point scale)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------|---------|---------|---------|---------|---------|
| Arts & Sciences | 8.1 | 8.3 | 8.2 | 8.4 | 8.3 |
| Business | 7.3 | 7.6 | 7.0 | 6.9 | 6.7 |
| Education | 6.8 | 6.8 | 6.9 | 7.1 | 7.0 |

BUSINESS SCHOOL CLASSROOM UTILIZATION
1989-1990

| | Morning | Afternoon | Evening |
|-----------|---------|-----------|---------|
| Monday | 95% | 85% | 18% |
| Tuesday | 98% | 87% | 12% |
| Wednesday | 94% | 89% | 19% |
| Thursday | 97% | 88% | 5% |
| Friday | 45% | 21% | 0% |
| Saturday | 5% | 0% | 0% |

This individual has also heard some complaints about the completion rate for degrees for the professional schools (see the Admission and Graduation for Professional Schools Table below).

ADMISSION AND GRADUATION FOR PROFESSIONAL SCHOOLS
UNIVERSITY WIDE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 11,120 | 11,716 | 12,091 | 11,546 | 12,141 |
| Admitted | 8,558 | 9,010 | 8,822 | 8,062 | 8,714 |
| Graduates | 7,893 | 8,322 | 8,741 | 7,440 | 6,872 |

TO: Polly Wannacraker
FROM: Chairmanm, Undergraduate Business Policy Committee
RE: Policy change to be initiated

I believe the problem in this situation is:

My exact recommendation to address this situation is the following:

Signed (Your Name)

Time You Finished: _____

Please remember that it is in your best interest not to discuss this case with other students.

Your AI will be notified about your completion shortly after spring break. The cash awards will likely be announced via e-mail shortly after spring break.

Thank you again for your participation. When you are finished, please leave this form on the table and close the doors as you depart.

The School of Business Task
(University of Arizona Variation)

Robert O. Briggs BBRIGGS@bpa.arizona.edu
Morgan Shepherd
Bruce Reinig
Jerome Yen

MIS Department
University of Arizona
Tucson, Arizona 87721

This task is moderate-ambiguity variation of the Mennecke & Wheeler hidden-profile School of Business task. This file contains a facilitation script, information packets for each of five roles, a list of symptoms the group might identify, and a rubric for evaluating the quality of solutions. Research using this variation of the task first appeared in the proceedings of the 28th Annual Hawaii International Conference on Systems Sciences, 1995 (HICSS 28).

Script for Experiment

Robert O. Briggs
Morgan Shepherd
Bruce Reinig
Jerome Yen

Date: _____

Time: _____

Facilitator: _____

Hello. My name is <facilitator name>. These are my colleagues, <helper names>. Let me start by thanking each of you for coming. We need your help, and we appreciate your taking the time to come today.

Usually I'd just talk to you, but today I am going to read from this script. There'll be a lot of people like yourselves helping us with this experiment, and for the sake of science we have to make sure that everyone starts with exactly the same information.

Welcome to the University of Arizona GroupSystem room. This room is the product of theories and technologies that allow a group such as yours to solve problems much more quickly than a conventional meeting would allow. We conduct research comparing these technologies to each other. Today, you will be using one of these technologies.

We really appreciate your coming to help us today. Your efforts will guide us as we direct the future development of this technology. Your work today is very important to us.

Today, you five will work together as a team to solve problems in an imaginary School of Business and Public Administration.

You five will be the policy making committee, and, as a committee, you will be authorized to change or create any university policy that you think will help solve one or more of the problems your team finds.

You'll each have a different role, a different point of view, and you'll each have different information. You'll have to share your information with the rest of the group in order to solve the problems. The others won't even know what your problems are until you tell them.

At the end of today's session you will write a recommendation to the Provost, who has agreed in writing to implement all of your recommendations. Your

committee has been given complete power to solve the problems you identify. Remember that your goal is to identify and solve the problems of the School of Business and Public Administration.

We're going to give each of you a packet of information now. You'll have 10 minutes to review it. Feel free to ask any questions that come up while you read.

[PASS OUT PACKETS]

Has everybody finished reading the packet?

Any questions?

Today you are going to write a recommendation to the Provost telling her what specific actions you have decided the university must take to solve its problems.

As a first step in this process, you must work as a group to identify the problems.

Perhaps the easiest way to begin would be for each of you to tell me what your role is, and to tell me about the problems in the School of Business as you see them.

We want to be sure that all the problems come out in this discussion, because in a few minutes you will work as a team to find solutions to these problems.

While we're discussing the problems, <helper name> will play secretary and write down the problems that you identify. We'll start at this end. What is your role, and what problems do you see with the School of Business?

[Researcher listens and elicits the following problems from each role:]

Associate Dean:

No more money *How's the budget situation?*
Senior Faculty Quitting *Any problems with the faculty?*

Student:

Tuition is high *What about tuition?*
Not enough computers *How are the student computer labs?*
 Classes too big *Any comment on class size?*
Not enough classes offered *Can you get the classes you need?*
Too Many raw TAs *How are the instructors?*

Alumni President:

Reputation Declining *How is the university's reputation?*
No demand for majors *How is the job market?*
Poor quality graduates *Are graduates prepared for jobs?*
 Thinking skills *Thinking skills?*
 Comm skills *Communication skills?*
 No Practical exp *Practical experience?*

V.P Undergrad Affairs:

No more classrooms *How is the classroom situation?*
Admission standards too low *What about admission standards?*
Graduation rate too high *How is your graduation rate?*
Minorities under represented *How is affirmative action going?*

Faculty Rep:

Classes too big *Are your classes OK?*
 Overwork and burnout *So big classes are tough?*
 Resignations *Are faculty leaving because of this?*
 Reduced research *Is it hurting your research?*
 Reduced grants *Do you have time for grants?*
 Poor teaching *Does it hurt your teaching?*
 Students Ill prepared *How are the incoming students?*
 Math *Are their math skills OK?*
 Problem-solving *How about problem solving-skills?*

While <helper> prints out the list of problems that you've identified, we need to start thinking about solutions to those problems.

You will be using electronic brainstorming, a tool that helps groups solve problems quickly. Research shows that the more solutions you generate, the more likely you are to generate good solutions. Brainstorming is a way to generate a lot of solutions in a very short time.

The process is simple. Imagine each of you started with blank sheet of paper. When I said go, each of you would write one solution on the piece of paper. Then you would throw your paper on a pile in the middle of the room, and grab another paper from the pile.

Then you would read the solution that someone else had written on that piece of paper. You would then respond in one of three ways:

[ENUMERATE ON YOUR FINGERS]

Expand on the solution, adding details.

Argue with the solution.

Or, you might be inspired to a completely new solution.

In either case, you would again toss your paper on the pile, grab one of the other papers, and continue along in this fashion until you ran out of solutions.

[Prompt <Helper> to start EBS]

Now Electronic brainstorming works exactly the same way, except you have an electronic page. You will type a solution, and press the F9 key to send your solution to the group. You will get back another page with someone else's solution on it.

You will then respond to that solution in one of three ways:

[ENUMERATE ON FINGERS]

Expand on the solution, adding details

Argue with the solution

Generate a completely new solution

In either case, you will press the F9 key to send your solution to the group. You will get back another electronic page, respond to what you read, and continue in this fashion until you run out of solutions.

Your goal is to identify as many different solutions as possible in a short amount of time. So we urge you to concentrate on generating new solutions. Try NOT to repeat yourself. State your case and move on; don't get bogged down arguing the same point over and over again. And don't worry, there will be time for verbal discussion later. Right now your goal is to generate as many different solutions as possible. You will have forty minutes to generate your solutions.

Everything you type in electronic brainstorming will be anonymous. No one will be able to tell who said what. This makes it possible for you to concentrate on generating solutions, without worrying about personalities and politics.

Are there any questions at this point?

< Helper>, pass out the problem list

<Helper> has just given each of you the list of problems that you identified. Look for solutions that solve as many of these problems as possible. You can refer to the list of problems as you work.

[Ask for Graph Demo]

To make things a little more interesting for you, we're going to give you a way of keeping track of how many solutions you have generated. If you look at the front screen, you will see a graph. As you contribute solutions, this graph will display your productivity. The more solutions you contribute, the higher it will go. Your goal is to generate as many unique solutions

as possible, and this graph will keep you posted about how you are doing. Keep an eye on it as you work.

Now, do you see the line at the middle of the graph? Most groups generate about that many solutions during a problem solving session like this one. In effect, we've put you in competition with the rest of the world. So, try to push the graph above this line by generating as many different solutions as you can during this 40 minute brainstorming session.

The background color of the graph will give you an additional bit of information. If the background is black it means that no solutions are coming in. When few solutions are coming in, the background turns gray. When you are producing more solutions than the average group, the background turns blue. Try to keep the background blue, by generating as many unique solutions as quickly as you can.

Any questions? OK, let's begin. Remember to watch the graph.

OK, let's begin.

[At the end of forty minutes]

OK, Your time is up. Why don't you finish writing the solution you are working on, and press f9 to send it to the group, then we will move on to the final phase of your process, the recommendations.

[Wait for typing to stop]

Before we move on, we want to give you a short questionnaire where you will be able to tell us about how the session has gone so far. Your thoughtful and honest responses will help us shape the future directions of this technology.

By the way, please don't let it bother you if you see that we ask the same question several different ways. We have to do that in case it turns out that we asked one of the questions badly.

When you finish your questionnaire we will move on to the last part of the task,

[Hand out surveys]

[Tell <helper> to print out brainstorming session for subjects to use in recommendations]

Thanks for your feedback on the survey. It will be a big help to us.

Just before we move to the last part of the experiment, we need your cooperation in one more important way when you leave. People will ask you what happened here, but please don't tell them anything about the technology or the questionnaire until the end of the semester. That would spoil our results with the rest of the people who are helping us learn about this technology. It would give us inaccurate results.

If future participants come in here knowing what we are trying to find out, it will bias our results. For instance, suppose we were testing to see if this treatment would get you to raise your left hand. One of two things might happen; the participants might decide they like us, and want us to get good results. So they would be raising their left hands all the time. Then we would go off thinking that our technology is great, when in fact it might not be. Or the participants might decide they don't like us, and they want us to have bad results. So they would sit there and NEVER raise their left hand. Then we would go off thinking that our technology is horrible, when in fact it might not be.

So please just tell them that you got to use a brand new, cutting edge technology, and that it was an interesting experience. If they press, tell them that in the interests of science you must wait until finals

week to give them the details. It will drive them nuts, but you will be retaining the value of the effort you made here today. If they keep pressing you, tell them the left-hand story.

Ok, we're going to shift gears. We're going to have you move across the hall to a conference room to hammer out your recommendations to the Provost. You will be working as a team to recommend a set of solutions that everybody can live with, and that solve as many problems as possible. Please select your recommendations based on two criterion: Feasibility, and the number of problems they can solve. The more feasible, or practical a solution is, and the more problems the solution solves, the better quality it is. Solve as many problems as you can, but solve the biggest problems first.

Vague solutions are difficult to understand, so be as specific as you can. Recommend the best solutions you can to the Provost.

Some solutions may be good for your area, but very bad for another area. Try to choose policies that not only benefit your individual position, but benefit the school as a whole.

Write your recommendations on a piece of paper and give them to me when you are done.

The vice-president will be the scribe for your group. You will write down the solutions that the group recommends.

<helper> will take you across the hall to the conference room. In a few moments we'll bring you a print-out of your electronic brainstorming session. When you are finished, just return your recommendations to me, and call it a day. Thanks for coming.

Disclaimer: This scenario is fictitious. Any resemblance to real organizations is purely coincidental.

To: Associate Dean, School of Business and Public Administration

From: Provost

Re: 5 Year Business School Policy Recommendation(s)

Your committee, the Undergraduate Policy Committee, is charged with setting policies for the School of Business and Public Administration (BPA). We have been receiving complaints about problems in the BPA: limited BPA physical resources, a shortage of classrooms, low quality instruction, overcrowding in classes, students who are ill prepared, limited computer resources, and others. While I believe that the bulk of these complaints may be unfounded, I'd like your committee look into it, determine what problems exist, and set whatever policies are necessary to correct the problems you identify. You have complete authority to make policy changes.

Each of you is uniquely qualified to contribute to this effort. Each of you represents an important interest group within our university community. Please work together, giving one another the benefit of your knowledge, your experience, and your perspective. Each of you should carefully consider how any proposed policy changes might affect the interests that you represent. Together you should seek solutions that accommodate everyone's needs. After deliberating on this issue, please submit a concise written statement of your recommendations to me. I will see that they are implemented.

I have complete confidence in your ability to complete this important task. Be bold, be creative, and be direct.

Associate Dean of the Business School

You are the associate dean of the School of Business and Public Administration.

You work closely with the Dean on important policy matters, and are responsible for many BPA resources, including personnel, classrooms, and budgets, among other things. This position has responsibilities which are similar to those of a vice-president of a corporation.

You decide how to spend the BPA's money (See the Budget Table below). You work hard to keep costs within budget limits, and try maintain school revenues (from tuition and the state legislature) at current levels (See the Tuition Revenue Table below).

BUDGET TABLE
School of Business and Public Administration

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 | Projected 1993-94 |
|----------------------------|-----------|-----------|-----------|-----------|-----------|----------------------|
| Salaries | 4,918,910 | 5,672,921 | 6,523,320 | 6,848,949 | 7,214,923 | 7,300,000 |
| Fixed Costs | 1,538,162 | 1,612,910 | 1,654,832 | 1,698,321 | 1,708,293 | 1,710,000 |
| Total | 6,457,072 | 7,285,831 | 8,178,152 | 8,547,270 | 8,923,216 | 9,010,000 |
| Increase Over Last Year | | 12.8% | 12.2% | 4.5% | 4.4% | 0.97% |
| Inflation | | 4.1% | 3.8% | 3.5% | 3.1% | 3.0% |

TUITION REVENUE TABLE
BUSINESS AND PUBLIC ADMINISTRATION SCHOOL

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------|-----------|-----------|-----------|-----------|-----------|
| In-State | 1,084,608 | 1,275,072 | 1,692,072 | 1,872,012 | 1,994,448 |
| Out-of-state | 1,271,832 | 1,777,152 | 2,420,244 | 2,957,640 | 3,802,572 |
| Total | 2,356,440 | 3,052,224 | 4,112,316 | 4,829,652 | 5,797,020 |

Because you handle the budgets, you are aware of how much you have to pay the different types of instructors that work for the BPA (see the Cost Per Hour Of Instruction Table below). You also know how many students are enrolled in the Business School, and how many instructors of each type are in the school (see the Business School Enrollment & Teachers Table below).

COST PER TEACHING HOUR BY TYPE OF INSTRUCTOR
School of Business and Public Administration

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------|---------|---------|---------|---------|---------|
| Senior Professors | 6,524 | 6,592 | 6,870 | 6,991 | 7,012 |
| Junior Professors | 3,195 | 3,812 | 4,105 | 4,341 | 4,688 |
| Adjunct Faculty | 1,081 | 1,129 | 1,170 | 1,192 | 1,248 |
| Teaching Assistant | 987 | 1,014 | 1,054 | 1,070 | 1,105 |

Senior Professors: Tenured faculty with a Ph.D. who do research, teach, and serve on many administration and graduate committees. They also occasionally consult with industry about problems within their domain of expertise.

Tenured faculty must spend a good deal of effort looking for grant money, because most of the graduate studies program and all of the research is funded by grants. Anything special beyond the bare bones university infrastructure is funded by research grants. For example, 90% of the student computing labs are from grant money. All senior faculty work to get grants, but only about 5% of them get grants big enough to provide extra resources to the undergraduate program. Grant writing is an unpredictable endeavor.

Tenured faculty can not be fired except for extreme moral turpitude.

Junior Professors: Un-tenured faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry. Untenured faculty must spend a great deal of effort doing and publishing research because their tenure depends on getting published. If they don't get tenure within 6 years, they get fired.

Adjunct Faculty: Part-time un-tenured faculty with Masters degree and work experience hired only to teach classes. No administrative responsibilities, but adjuncts typically have a primary job outside the university.

Teaching Assistant: Doctoral or Master students. Teach undergraduate courses part-time and take graduate classes. Most assistant positions are funded by grant money.

ENROLLMENT AND TEACHERS
SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------|---------|---------|---------|---------|---------|
| Enrollment | 2,152 | 2,544 | 2,837 | 3,143 | 3,579 |
| Senior Professors | 57 | 55 | 53 | 52 | 49 |
| Junior Professors | 81 | 84 | 91 | 92 | 95 |
| Adjunct Faculty | 17 | 19 | 23 | 24 | 28 |
| Teaching Assistant | 142 | 131 | 127 | 120 | 114 |
| Total | 297 | 289 | 294 | 287 | 286 |

In general, the Dean, your boss, has been quite satisfied with the results of the current policies and has not perceived that any major problems exist. Since some schools in the university actually had a budget cut, the Dean is very pleased to be able to maintain next year's budget at about the same level.

However, you are aware of two important problems. First, you know for certain that under current policies you will absolutely have no extra money in the near future. You must make due with the budget as it stands, and you will be lucky if you don't get substantial cuts.

Second, Many senior faculty in the School of Business have resigned in recent years. This concerns you because they do so much more than just teaching classes. They bring in grants, they bring in interesting research, and they create the rich environment the students need for a high-quality education. Students tend to like the adjuncts because of their real-world experience. Adjuncts, however, do not have a long-term commitment to the university. They tend to be modestly successful people without a great deal of power or drive. They are just picking up a few extra dollars by teaching a few classes. They come in, they teach, they leave.

You are getting lots of pressure from the students, the alumni, and the faculty, but so far you haven't been able to make people understand that there just isn't any more money. Also you have not found out why so many senior faculty are leaving, and you are quite concerned.

Because the other members of the committee are so diverse, you are fairly sure they do not yet understand the real problems faced by the university, and you think it is very important to explain your position to them.

Disclaimer: This scenario is fictitious. Any resemblance to real organizations is purely coincidental.

To: President, Business Student Council

From: Provost

Re: 5 Year Business School Policy Recommendation(s)

Your committee, the Undergraduate Policy Committee, is charged with setting policies for the School of Business and Public Administration (BPA). We have been receiving complaints about problems in the BPA: limited BPA physical resources, a shortage of classrooms, low quality instruction, overcrowding in classes, students who are ill prepared, limited computer resources, and others. While I believe that the bulk of these complaints may be unfounded, I'd like your committee look into it, determine what problems exist, and set whatever policies are necessary to correct the problems you identify. You have complete authority to make policy changes.

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I have complete confidence in your ability to complete this important task. Be bold, be creative, and be direct.

Business Student Council President

You are the president of the Business Student Council. You represent the interests of the undergraduate business students.

You and your fellow students are worried about possible increases in tuition (see Tuition Rates Table below). You believe that tuition is already too high, and that if tuitions are raised significantly, many students will have to drop out or slow down their degree programs because they will have to work more hours to pay for school.

You also feel annoyed because there are always hour-long lines of students waiting to use the student computer labs.

In addition, you and your fellow students are tired of having so many of your courses taught by raw graduate assistants instead of real professors. The graduate students don't seem to have the depth of experience to give you relevant, real world, issues in the classroom. They tend to lecture from a text and then quiz you for fact retention. Students want to leave the program with real-world job skills.

It is very difficult to get the classes you need because there aren't enough sections offered, and when you do get them, they are so big that it is hard to get any personal attention from the instructor. Not that most of the instructors are worth the attention they might give.

Because of the student body's concern about the future of the BPA School, the Business Student Council, of which you are president, has conducted significant information that may be relevant to the policy meeting. You have information about the number of in-state and out-of-state students enrolled in the BPA (see the BPA Student Admissions Table below). You've calculated the percentage of BPA freshmen that actually graduate (see the BPA Graduation Rates Table below). You've also compiled an extensive student evaluation of the instruction staff (see the Student Evaluation of Instructors Table Below).

TUITION RATES: Dollars per Unit School of Business and Public Administration

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 56 | 58 | 71 | 73 | 74 |
| Out-of-State | 197 | 208 | 237 | 245 | 257 |

RATIO OF LAB COMPUTERS TO STUDENTS

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--|---------|---------|---------|---------|---------|
| | 1:33 | 1:32 | 1:30 | 1:29 | 1:26 |

STUDENT ADMISSIONS
School of Business and Public Administration

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------|--------------|--------------|--------------|--------------|--------------|
| In-State | 1,614 | 1,832 | 1,986 | 2,137 | 2,246 |
| Out-of-State | 538 | 712 | 851 | 1,006 | 1,233 |
| Total | 2,152 | 2,544 | 2,837 | 3,143 | 3,479 |

ADMISSIONS AND GRADUATIONS
School of Business and Public Administration

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1982-93 |
|----------------|-----------|-----------|-----------|-----------|-----------|
| Applications | 1,454 | 1,719 | 1,953 | 2,340 | 2,710 |
| Admits | 1,119 | 1,322 | 1,425 | 1,634 | 1,945 |
| Admission rate | .76 | .77 | .72 | .69 | .71 |
| Graduates | 1,032 | 1,221 | 1,412 | 1,508 | 1,534 |

STUDENTS' EVALUATIONS OF INSTRUCTORS
10 Point Scale

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 | |
|--------------------|---------|---------|---------|---------|---------|-----|
| Senior Prof. | 8.0 | 8.1 | 7.4 | 7.2 | 7.1 | |
| Junior Prof. | 7.8 | 8.2 | 7.5 | 6.8 | 6.5 | |
| Adjunct Faculty | 7.7 | 7.6 | 7.4 | 7.1 | 7.1 | |
| Teaching Assistant | | 6.5 | 6.8 | 6.3 | 6.7 | 6.4 |

Senior Professors: Tenured faculty with a Ph.D. who do research, teach, and serve on many administration and graduate committees. They also occasionally consult with industry about problems within their domain of expertise.

Tenured faculty must spend a good deal of effort looking for grant money, because most of the graduate studies program and all of the research is funded by grants. Anything special beyond the bare bones university infrastructure is funded by research grants. For example, 90% of the student computing labs are from grant money. All senior faculty work to get grants, but only about 5% of them get grants big enough to provide extra resources to the undergraduate program. Grant writing is an unpredictable endeavor.

Tenured faculty can not be fired except for extreme moral turpitude.

Junior Professors: Un-tenured faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry. Untenured faculty must spend a great deal of effort doing and publishing research because their tenure depends on getting published. If they don't get tenure within 6 years, they get fired.

Adjunct Faculty: Part-time un-tenured faculty with Masters degree and work experience hired only to teach classes. No administrative responsibilities, but adjuncts typically have a primary job outside the university. They are just picking up a few dollars by teaching a few classes.

Teaching Assistant: Doctoral or Master students. Teach undergraduate courses part-time and take graduate classes. Most assistant positions are funded by grant money.

Your group has tried repeatedly to explain to the dean and other administration officials that the students just don't have any more money. You've written editorials in the student paper about the shortage of classes and the large class sizes. You don't know what to do about all the raw TA's, but you still feel shortchanged.

Because the other members of the committee are so diverse, you are fairly sure they do not yet understand the real problems faced by the university, and you think it is very important to explain your position to them.

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To: President, University Business Alumni Association

From: Provost

Re: 5 Year Business School Policy Recommendation(s)

Your committee, the Undergraduate Policy Committee, is charged with setting policies for the School of Business and Public Administration (BPA). We have been receiving complaints about problems in the BPA: limited BPA physical resources, a shortage of classrooms, low quality instruction, overcrowding in classes, students who are ill prepared, limited computer resources, and others. While I believe that the bulk of these complaints may be unfounded, I'd like your committee look into it, determine what problems exist, and set whatever policies are necessary to correct the problems you identify. You have complete authority to make policy changes.

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I have complete confidence in your ability to complete this important task. Be bold, be creative, and be direct.

President, University Business Alumni Association

You are the President of the University Business Alumni Association. You represent the interests and concerns of former university students. You are primarily concerned that the reputation of the university should continue to grow. Your career is affected by the way people perceive the university from which you graduated.

Furthermore, you want to hire people from your university, and you want them to be well prepared. You want them to have the reputation "You plug them in, and they work."

The School of Business and Public Administration depends on alumni contacts for research grants and for outright donations of equipment and money. About 10% of the student computer labs came from alumni donations. Most of the new classroom space in the last 10 years has also been funded through alumni donations. If the reputation of the university begins to slip, the alumni donations will drop quickly.

At a recent alumni party, several recent graduates said that they wished they had received more practical instruction and less theory while attending school. In addition, most alumni believe it is very important that the Business School maintain its image as a prestigious & quality institution. They know this influences the placement of graduates and the future marketability of their degrees (the ratings for the Business School are in the table below).

BUSINESS WEEK ANNUAL RATING
School of Business and Public Administration
(10 point scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--------------------|---------|---------|---------|---------|---------|
| Reputation | 8.6 | 8.5 | 8.3 | 7.9 | 7.8 |
| Research | 9.3 | 9.5 | 9.0 | 8.7 | 8.6 |
| Instruction | 8.9 | 8.2 | 8.0 | 7.8 | 7.4 |
| Graduate Placement | 8.2 | 8.3 | 7.5 | 7.1 | 6.9 |
| Overall | 8.7 | 8.6 | 8.5 | 7.6 | 7.4 |

Another issue came up recently that makes you think the School of Business ought to rethink it's whole strategy: industry demand for business majors is dropping (see Industry Demand Table below).

Finally, several very influential employers of the school's graduates expressed a concern that recent graduates seemed to have poorly developed critical thinking and problem solving skills, and seemed to have very poor written and oral communication skills. They find they are having to spend more time and money training recent graduates than they used to.

You believe that the School of Business and Public Administration must take immediate steps to improve both the quality of its product and its reputation in the business community.

INDUSTRY DEMAND FOR BUSINESS AND PUBLIC ADMINISTRATION MAJORS
(10 point scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|---------------------|---------|---------|---------|---------|---------|
| Accounting 9 | 8 | 7 | 8 | 7 | |
| Finance | 8 | 7 | 5 | 4 | 3 |
| Information Systems | 8 | 8 | 7 | 6 | 7 |
| Marketing 8 | 7 | 7 | 6 | 6 | |
| Management | 8 | 8 | 7 | 6 | 6 |

Your organization has tried repeatedly to convince various administrators that the reputation of the university is in serious decline, and that above all else, the university must regain its reputation as a first rate institution. They must also raise the quality of their graduates. Because the other members of the committee are so diverse, you are fairly sure they do not yet understand the real problems faced by the university, and you think it is very important to explain your position to them.

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To: Chairperson, Faculty Council, School of Business and Public Administration

From: Provost

Re: 5 Year Business School Policy Recommendation(s)

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Chairperson, Faculty Council, School of Business and Public Administration

You are the Chair for the Faculty Council in the School of Business and Public Administration. The Faculty Council is made up of all Senior and Junior faculty. It does not include adjuncts or graduate teaching assistants. You represent the concerns of the BPA faculty.

You and your colleagues have a serious problem with large and still growing class sizes. Because classes are so large, you can not teach high-quality courses. You spend all your time grading assignments and you don't have time to give students the personal attention they need to become first rate. The time drain of very large classes keeps you from your other work. After all, you are expected to do much more than teach. You must constantly conduct research and publish your results in scientific journals. It is part of the university mission to push back the frontiers of knowledge, not to just teach what is already known. Further, the large classes prevent you finding grants which fund the research, and the grants pay for a great deal of what makes a university great. Besides that, you must participate in all kinds of fairly important administrative committee work, like curriculum development, peer evaluations, and scientific review boards. All of these committees are critical to the success of the university as a whole. Large class sizes mean that nothing gets done with excellence.

Now the administration is proposing to increase teaching schedules beyond current loads. At a recent faculty senate meeting your colleagues expressed anger, even despair at this new plan. Over the last five years many senior faculty have felt so overloaded and burned out that they resigned from what was once considered the best academic job in a 10-state region higher faculty turnover rates (see Faculty Resignations table). More people are considering resignations. If the class loads become any greater you will probably leave yourself. You are tired of compromising quality and tired of 12-hour days, 6 days a week.

AVERAGE NUMBER STUDENTS TAUGHT PER INSTRUCTOR
School of Business and Public Administration

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1982-93 |
|--------------------|---------|---------|---------|---------|---------|
| Senior Professors | 116 | 158 | 197 | 216 | 232 |
| Junior Professors | 274 | 293 | 343 | 398 | 419 |
| Adjunct Faculty | 485 | 602 | 665 | 707 | 767 |
| Teaching Assistant | 89 | 112 | 135 | 179 | 193 |

AVERAGE NUMBER CREDIT HOURS TAUGHT PER INSTRUCTOR
School of Business and Public Administration

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|--|---------|---------|---------|---------|---------|
|--|---------|---------|---------|---------|---------|

| | | | | | |
|---------------------|------|------|------|------|------|
| Senior Professors | 12.4 | 14.8 | 16.0 | 16.6 | 16.6 |
| Junior Professors | 22.8 | 23.1 | 25.1 | 28.4 | 28.6 |
| Adjunct Faculty | 18.2 | 21.0 | 22.4 | 22.8 | 23.0 |
| Teaching Assistants | 7.4 | 8.4 | 9.2 | 11.4 | 11.6 |

You also have information that may be relevant to the policy meeting. For instance, in cooperation with the Registrar's Office, you have collected data defining the sources of instruction for BPA courses (see Sources of Classroom Instruction below) as well as data describing the number of students and the courses taught in the Business and Public Administration School (see Classroom Instruction Table below).

CLASSROOM INSTRUCTION
School of Business and Public Administration

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|---------------------|---------|---------|---------|---------|---------|
| Senior Professors | 27% | 26% | 26% | 24% | 24% |
| Junior Professors | 28% | 26% | 23% | 21% | 20% |
| Adjunct Faculty | 5% | 7% | 9% | 8% | 9% |
| Teaching Assistants | 40% | 41% | 42% | 47% | 47% |

Senior Professors: Tenured faculty with a Ph.D. who do research, teach, and serve on many administration and graduate committees. They also occasionally consult with industry about problems within their domain of expertise.

Tenured faculty must spend a good deal of effort looking for grant money, because most of the graduate studies program and all of the research is funded by grants. Anything special beyond the bare bones university infrastructure is funded by research grants. For example, 90% of the student computing labs are from grant money. All senior faculty work to get grants, but only about 5% of them get grants big enough to provide extra resources to the undergraduate program. Grant writing is an unpredictable endeavor.

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Teaching Assistant: Doctoral or Master students. Teach undergraduate courses part-time and take graduate classes. Most assistant positions are funded by grant money.

TOTAL RESEARCH PUBLICATIONS IN SCIENTIFIC JOURNALS
School of Business and Public Administration

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|---------------------|---------|---------|---------|---------|---------|
| Senior Professors | 47 | 46 | 44 | 41 | 39 |
| Junior Professors | 98 | 102 | 105 | 101 | 104 |
| Adjunct Faculty | N/A | N/A | N/A | N/A | N/A |
| Teaching Assistants | 21 | 34 | 41 | 36 | 28 |

SENIOR & JUNIOR FACULTY RESIGNATIONS
School of Business and Public Administration

(Does not include retirements and transfers)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 | |
|------------|---------|---------|---------|---------|---------|----|
| Professors | | 8 | 10 | 16 | 11 | 19 |

Finally, the faculty are very concerned that the students at all levels appear to be ill prepared to tackle their course work. Many students arrive in the courses with poor math skills, poor verbal communication skills, and poor thinking and problem-solving skills. This problem is only increasing the already tough load faced by the instructors, because now, in addition to covering the course material, they must also do remedial work with the students. The result is a lower quality course over all.

You have tried on a number of occasions to explain to the administration that faculty members have been pushed beyond the limit. They simply don't have any more time or strength, and they are dropping away from the university at an alarming rate. You also wish people really understood what a problem it creates when the students arrive in class without the basic skills required for academic success.

Because the other members of the committee are so diverse, you are fairly sure they do not yet understand the real problems faced by the university, and you think it is very important to explain your position to them.

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To: Vice President, University Undergraduate Instruction

From: Provost

Re: 5 Year Business School Policy Recommendation(s)

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I have complete confidence in your ability to complete this important task. Be bold, be creative, and be direct.

University Vice President for Undergraduate Instruction

You are to assume the role of the University Vice President for Undergraduate Instruction. You represent interests of the Administration of the university and of the Board of Regents. This position has responsibilities which are similar to those of a vice-president of a corporation. You develop and enact policies and strategies which affect undergraduate students in various university divisions.

You know that the university has an important legislative mandate to give priority to in-state residents when allocating state tax revenues for education (see University-wide Enrollment Table below). The cost of teaching students is about four times the amount the in-state students pay in tuition.

You are the champion of affirmative action in your university, and people keep suggesting policies that might exclude students from traditionally under-represented ethnic groups. Your staff actively seeks well qualified students from historically under-represented, historically poor ethnic groups. You attract them to your campus with scholarships and tuition waivers. Your staff works with high schools to identify bright minority kids and get them into special university-funded tutorial classes. Every year the average SAT scores of the minority students you have recruited has been at least as high as the general campus population. You believe these kids are entitled to a good education, and that any policy changes must not threaten this successful affirmative action program. All students should have a very fair opportunity to attend the university.

You also possess other pieces of information that may be relevant to the policy meeting. For instance, data about the quality of teaching across the university has been collected for this meeting (see the Average Student Teaching Evaluation by School Table below). Faculty evaluations have been dropping quickly, and you don't know why. You are concerned.

In addition, you have data about the utilization of classrooms (see the Business and Public Administration School Classroom Utilization Table below). Your classrooms are booked nearly full the time. You are running out of places to hold classes. In a number of past trials you have found that students simply will not enroll in Friday evening and weekend classes, even if those are the only classes available.

Four years ago the School of Business Administration tried to limit enrollment with a modest increase in entrance requirements, but enrollment continues to climb.

UNIVERSITY-WIDE ENROLLMENT

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|----------|---------|---------|---------|---------|---------|
| In-State | 18,287 | 18,710 | 18,557 | 18,197 | 17,847 |

| | | | | | |
|--------------|--------|--------|--------|--------|--------|
| Out-of-State | 6,096 | 7,272 | 7,952 | 8,566 | 9,798 |
| Total | 24,382 | 25,982 | 26,509 | 26,763 | 27,645 |

AVERAGE STUDENT TEACHING EVALUATION BY SCHOOL
(10 point scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92 | 1992-93 |
|----------------|---------|---------|---------|---------|---------|
| Arts & Science | 8.1 | 8.3 | 8.2 | 8.4 | 8.3 |
| Business | 7.3 | 7.6 | 7.0 | 6.9 | 6.7 |
| Education | 6.8 | 6.8 | 6.9 | 7.1 | 7.0 |

CLASSROOM UTILIZATION (1992-93)
School of Business and Public Administration

| | Morning | Afternoon | Evening | |
|------------|---------|-----------|---------|-----|
| Monday | 95% | | 90% | 55% |
| Tuesday | 98% | | 92% | 52% |
| Wednesday | 94% | | 90% | 55% |
| Thursday | 97% | | 95% | 47% |
| Friday 93% | | 96% | | 0% |
| Saturday | 20% | | 5% | 0% |

You are also getting pressure from the Board of Regents about the admission and graduation policies in the BPA. (see the Admission and Graduation for Professional Schools Table below).

You know for a fact that your university is admitting a much higher percentage of applicants than other similar universities around the country. You also know that a much higher percentage of the students who attend your university wind up graduating with a degree. The Regents believe that this means your admission standards are too lax and your graduation standards are too low.

ADMISSION AND GRADUATION FOR PROFESSIONAL SCHOOLS
UNIVERSITY WIDE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 | |
|--------------|---------|---------|---------|---------|---------|-------|
| Applications | 11,120 | 11,716 | 12,091 | 11,546 | 12,141 | |
| Admitted | | 8,558 | 9,010 | 8,822 | 8,062 | 8,714 |

You have tried repeatedly to tell university administrators, alumni, and faculty how important it is that historically under-represented populations must be brought into the student body. Further, for the last ten years it has been nearly impossible to get more classroom space. Alumni occasionally donate money for new classrooms, but all in all, your campus is bursting at the seams with no relief in sight. And you really want people to give serious thought to the low entrance requirements and the lax graduation standards.

Because the other members of the committee are so diverse, you are fairly sure they do not yet understand the real problems faced by the university, and you think it is very important to explain your position to them.

Symptoms each role can identify:

Associate Dean:

- No more money
- Senior Faculty Quitting

Student:

- Tuition is high
- Not enough computers
- Classes too big
- Not enough classes offered
- To many raw TAs

Alumni President:

- Reputation declining
- No demand for majors
- Poor quality graduates
 - Thinking skills
 - Communication Skills
 - No practical experience

V.P. Undergraduate Affairs:

- No more classrooms
- Admission Standards too low
- Graduation requirements lax
- Minorities under-represented

Faculty Representative:

- Classes too big
 - Overwork and burnout
 - Resignations
 - Reduced Research
 - Reduced Grants
 - Poor teaching
- Students Ill prepared
 - Math skills
 - Problem solving skills

Scoring Solutions to the School of Business Task

During the Solution-Generation phase of the School of Business task the participants are to think of as many solutions as possible. Any comment that embodies a possible action for solving one or more of the problems can be counted as a solution, regardless of quality. The reasoning is that bad ideas may trigger good ideas, so even bad solutions are useful for moving the group forward.

However, at some point it becomes desirable to evaluate whether a treatment is affecting the quality of ideas generated. We used a holistic scoring method drawn from the education literature. Two independent raters assign a score from 1 to 4 to each solution. The scores are summed for the total quality score. If the raters are more than one point different in their ratings, a third rater chooses the score. The rubric for assigning a score to a solution is as follows:

A solution can be considered a four if it is easily implemented and if it solves the major problems completely.

A three might be easily implementable, and would ease the problem a lot, but would not completely eliminate it. OR A three may be difficult to implement, but would completely solve the major problems.

A two would be very difficult and would ease the problem a lot but would not completely eliminate it, or it might be easily doable, but only have minor, marginal improvement on the problems.

A one is a solution that can not be done or has no impact on the problem.

Manual Instructions Product Mix Experiment

General Information

Introduction

This is an experiment in group decision-making. During this session your group will be asked to make a production decision for a hypothetical firm (Smalltown Pill Company) which is in the business of producing pills. The reason for selecting a pill company is simply to create a context in which the problem can be discussed. The information that you will be given about this firm is not to be taken as representing a real company nor as representative of a pharmaceutical company.

The amount of money you earn for this experiment will depend on the final decision made by your group. If your group follows the rules of the experiment, each of you will be paid 1% of the "profit" which is greater than \$1500 of the hypothetical firm in cash. If the group determined "profit" of the Smalltown Pill Company is \$1600, then each of you would receive $(1600 - 1500) * .01 = \$1.00$. Unless you cannot agree on a decision, most groups will make more than that. Depending on the group decision, you might earn a considerable amount of money. You will be paid in cash at the end of the experiment.

In order to gain any useful information from this set of experiments, it is necessary that all groups follow the same experimental rules. Therefore, if there is a violation of the experimental rules by any member of your group, the experiment will be terminated and no payment will be made.

Overview of the Problem

The Smalltown Pill Company can manufacture five different types of pills. The costs of ingredients and the market value of the different pills varies substantially from month to month, making it necessary for an operating committee to periodically determine the most profitable product mix (a product mix is the number of each different type of pill which will be manufactured).

In this task, you and the members of your group are to be the Operating Committee for Smalltown Pill Company. As such, during the rest of the instruction your group will be referred to as the Operating Committee. You have been selected to be on the Operating Committee because of your specialized knowledge concerning the profitability of one of the pill types. This knowledge is summarized in your Specific Information Sheet. Your job as a group is to determine the product mix which will create the most profit for the company (and, therefore, the biggest cash payout to the members of the Operating Committee). The Operating Committee will utilize the decision support technology provided to make its decision. You may also use the pencil and paper provided.

As individuals, the information you have about your pill type MAY not currently be known to the other members of the Operating Committee. You may share your information with the other members of the Operating Committee and discuss the solution of the problem. You may share information, but within the confines of the following restrictions: you may only share and discuss the information orally; you may not share with others your Specific Information Sheet or other papers, etc. Any deviation from this will be considered a violation of the experimental rules.

Production Rules

The Smalltown Pill Company's production floor has 18 rooms for producing pills. Several rules regarding the product mix have been determined by the Board of Directors based on the reports of their Strategic Planning Subcommittee. These rules are company policy and must be followed by the Operating Committee in determining the company's product mix:

- Rule 1: Each room can only be used for one type of pill.
- Rule 2: No pill type can utilize more than six rooms.
- Rule 3: Each pill type must use a least one room.
- Rule 4: Pill Type A and Pill Type B must have the same number of rooms.

If the Operating Committee accepts a final product mix which does not adhere to the above listed rules, the Committee will be so informed by the experimental investigator and allowed to continue the experiment. No payment will be made for a decision which does not adhere to company policy.

Profit Generated by a Product Mix

Profit varies by type of pill, and by the number of rooms dedicated to the production of the pill. To find the profit contribution from one pill type, the profit generated by that pill is found by looking in the row of the Specific Information Sheet which has the same number of rooms as you intend to allocate to that pill. For example, if you intend to allocate four rooms to a pill, the profit generated is found by looking in the fourth row of the Specific Information Sheet.

The TOTAL PROFIT generated by a particular product mix can be calculated by summing the profit contributions generated by the five pill types. Different product mixes generate larger or smaller profit for the Smalltown Pill Company. Determining a profitable product mix will be a joint effort by all the members of the Operating Committee, as each one has some of the necessary information. By trying different mixes and calculating the profit generated by each one, the Operating Committee will be able to discover which mixes are more profitable than others.

Rules of the Committee

As a group, the Operating Committee must come to an unanimous decision regarding the product mix. The group will discuss the information they have and possible solutions to the problem. You may use the flip chart to record any information you wish. At any point, a member of your group may call for a vote to determine the product mix which may be chosen by the group. Each member of the group will then vote for one of the current proposals, as previously discussed in the example problem.

If the vote is unanimous to accept a product mix, the experiment is over. Remember that you are to try to maximize the "profit" generated for the Smalltown Pill Company. Each member of the committee will be paid in cash 1% of the correct calculation of the profit greater than \$1500 based on the product mix unanimously approved by the committee. If the vote is not unanimous, the group will return to discussing and proposing possible product mixes. If the committee does not come to a unanimous decision with 60 minutes, the experiment will be terminated with no decision and no money will be paid out to the committee.

Research Concerns

Use only oral discussion and the flip chart to share information and to discuss product mixes. Do not use other ways of communicating. To insure that the experiment proceeds correctly, according to the experimental rules, a researcher will remain in the room during the experiment. If the rules of the experiment are violated in any way, the experiment will be stopped immediately and the participants dismissed without money payment.

After the experiment is over, each member of the group will fill out a post-experimental questionnaire about your reactions to the task, the technology, and the group. This questionnaire must be filled out to receive the money payment.

For the integrity of this experiment to remain intact, it is important that you do not discuss any part of this experiment with others who have not already participated. Additional information may influence their decisions and contaminate our research. Thank you for your cooperation in this experimental testing of the PLEXSYS Group Support software, developed by the MIS Department.

Do you have any questions? After this point, I will not participate, except to answer questions about the functioning of the software.

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To: Undergraduate Business Policy Committee
√ **Dr. R.U. Crazy**, Associate Dean of the Business School
M.I. Nuts, Business Student Council President
P.R. DuStinks, University Alumni Association Vice-President
Dr. I.N. Exess, Chairperson, Business School Faculty Council
Dr. M.C. Mallet, University Vice President for Undergraduate
Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Business School Policy Recommendation(s)

The Undergraduate Business Policy Committee is charged with setting policies for the School of Business (SOB). We have recently received several complaints about the effects of some current policies. These include complaints related to limited SOB physical resources, a shortage of classrooms, quality of instruction, overcrowding in classes, quality of students, limited computer resources, and others. While it is possible that the current policies may have some undesirable effects, I believe that the bulk of these complaints may be unfounded.

With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising SOB policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests that you represent.

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Role: Dr. R.U. Crazy, Associate Dean of the Business School

Your job in this meeting is to assume the role of the **Associate Dean** of the Business School.

You work closely with the Dean on important policy matters and are responsible for managing many of the Business School physical and personnel resources. This position has responsibilities which are similar to those of a vice-president of a corporation.

In working with the school's financial matters, you allocate the financial resources assigned to the Business School through the budget (See the Budget Table below), work to keep costs within budgetary constraints, and seek policies to maintain school revenues (from tuition and the state legislature) at current levels (See the Tuition Revenue Table below).

BUDGET TABLE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 | Projected 1991 |
|-------------------------|-----------|-----------|-----------|-----------|-----------|----------------|
| Salaries & Wages | 4,918,910 | 5,672,921 | 6,523,320 | 6,848,949 | 7,214,923 | 7,300,000 |
| Fixed | 1,538,162 | 1,612,910 | 1,654,832 | 1,698,321 | 1,708,293 | 1,700,000 |
| Total | 6,457,072 | 7,285,831 | 8,178,152 | 8,547,270 | 8,923,216 | 9,000,000 |
| Increase Over Last Year | | 12.8% | 12.2% | 4.5% | 4.4% | 0.9% |
| Inflation | | 4.1% | 3.8% | 3.5% | 3.1% | 3.0% |

BUSINESS SCHOOL TUITION REVENUE TABLE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|-------------|-------------|-------------|-------------|-------------|
| In-State | \$1,084,608 | \$1,275,072 | \$1,692,072 | \$1,872,012 | \$1,994,448 |
| Out of state | 1,271,832 | 1,777,152 | 2,420,244 | 2,957,640 | 3,802,572 |
| Total | \$2,356,440 | \$3,052,224 | \$4,112,316 | \$4,829,652 | \$5,797,020 |

You are aware of the instruction costs for various types of teachers (see the Cost Per Teaching Hour Table below). You also have information about the number of students in the Business School and the teachers by category within the school (see the Business School Enrollment & Teachers Table below).

COST PER TEACHING HOUR BY TYPE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | \$6,524 | \$6,592 | \$6,870 | \$6,991 | \$7,012 |
| Junior Professor | 3,195 | 3,812 | 4,105 | 4,341 | 4,688 |
| Adjunct Faculty | 1,081 | 1,129 | 1,170 | 1,192 | 1,248 |
| Associate Instructors | 987 | 1,014 | 1,054 | 1,070 | 1,105 |

Senior Professors: Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees

Junior Professors: Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry

Adjunct Faculty: Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.

Associate Instructors: Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

BUSINESS SCHOOL ENROLLMENT AND TEACHERS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Enrollment | 2,152 | 2,544 | 2,837 | 3,143 | 3,479 |
| Senior Professors | 51 | 54 | 57 | 52 | 54 |
| Junior Professors | 85 | 84 | 91 | 92 | 95 |
| Adjunct Faculty | 17 | 19 | 23 | 22 | 26 |
| Associate Instructors | 142 | 131 | 136 | 120 | 114 |
| Total Instructors | 295 | 288 | 311 | 289 | 289 |

In general, the Dean has been quite satisfied with the results of the current policies and has not perceived that any major problems exist. Since some schools in the university actually had a budget cut, the Dean is very pleased to be able to maintain next year's budget at about the same level.

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To: Undergraduate Business Policy Committee
Dr. R.U. Crazy, Associate Dean of the Business School
√ **M.I. Nuts**, Business Student Council President
P.R. DuStinks, University Alumni Association Vice-President
Dr. I.N. Exess, Chairperson, Business School Faculty Council
Dr. M.C. Mallet, University Vice President for Undergraduate
Instruction

From: Dr. Polly Wannacracker, Academic Policy Chairperson
Re: 5 Year Business School Policy Recommendation(s)

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With this in mind, your committee's task is to evaluate all of the information that each of you bring to the meeting. You should identify the real problems (if there are any) that should be addressed through revising SOB policy. After deliberating on this issue, you should submit a concise written statement of your recommendations to me. Each of you should carefully consider how any proposed policy changes might affect the interests that you represent.

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Role: M.I. Nuts, Business Student Council President

Your job in this meeting is to assume the role of the **Business School Student Council President**.

As a representative of the population of business students at the University, you know that many students are concerned about current and potential future tuition costs (see Tuition Rates Table below) and availability of computer resource (see Computers Table below). In addition, students have also expressed a desire to see more relevant, real world, issues taught in the classroom.

TUITION RATES

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 56 | 58 | 71 | 73 | 74 |
| Out-of-State | 197 | 208 | 237 | 245 | 257 |

RATIO OF LAB COMPUTERS TO STUDENTS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--|---------|---------|---------|---------|---------|
| | 1:33 | 1:32 | 1:30 | 1:29 | 1:26 |

Because of the student body's concern about the future of the Business School, you and your associates have conducted significant research on the issues and therefore possess information that may be relevant to the policy meeting. For instance, you have information about the number of business students admitted to the Business School from in-state and out-of-state (see the Sources of Admissions Table below), the number of students who enter the university to major in business and the number that actually graduate in business (see Business School Admissions and Graduations Table below), and teaching evaluations (see the Student Evaluation of Instructors Table Below), .

SOURCES OF BUSINESS SCHOOL ADMISSIONS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 1,614 | 1,832 | 1,986 | 2,137 | 2,246 |
| Out-of-State | 538 | 712 | 851 | 1,006 | 1,233 |
| Total | 2,152 | 2,544 | 2,837 | 3,143 | 3,479 |

BUSINESS SCHOOL ADMISSIONS AND GRADUATIONS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 1,454 | 1,719 | 1,953 | 2,340 | 2,710 |
| Admits | 1,119 | 1,322 | 1,425 | 1,634 | 1,945 |
| Graduates | 1,032 | 1,221 | 1,412 | 1,508 | 1,534 |

STUDENTS' EVALUATIONS OF INSTRUCTORS

10 Point Scale

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 8.0 | 8.1 | 7.4 | 7.2 | 7.1 |
| Junior Professors | 7.8 | 8.2 | 7.5 | 6.8 | 6.5 |
| Adjunct Faculty | 7.7 | 7.6 | 7.4 | 7.1 | 7.1 |
| Associate Instructors | 6.5 | 6.8 | 6.3 | 6.7 | 6.4 |

Senior Professors:

Faculty with a Ph.D. who do research, teach, consult with industry, and serve on committees

Junior Professors:

Faculty with a Ph.D. who do research, teach, and serve on committees, and do some work with

industry

Adjunct Faculty:

Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.

Associate Instructors:

Doctoral & M.B.A. students. Teach undergraduate courses part-time & take graduate classes part-time.

One final concern is that some students want more learning of what they call "real world" job skills.

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To: Undergraduate Business Policy Committee
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Role: P.R. DuStinks, Business Vice-President of the University Alumni Association

Your job in this meeting is to assume the role of the **University Alumni Association Vice-President**.

As a representative of the University alumni, you are responsible for representing the concerns of former university students. One issue that has recently been brought to your attention is the type of instruction provided at the university. For instance, at a recent alumni party, several recent graduates said that they wished they had received more practical instruction and less theory while attending school. In addition, most alumni believe it is very important that the Business School maintain its image as a prestigious & quality institution. They know this influences the placement of graduates and the future marketability of their degrees (the ratings for the Business School are in the table below).

BUSINESSWEAK ANNUAL RATING OF BUSINESS SCHOOL
(10 point scale)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------------|---------|---------|---------|---------|---------|
| Reputation | 8.6 | 8.7 | 8.8 | 8.5 | 8.6 |
| Research | 8.3 | 8.6 | 9.0 | 9.5 | 9.3 |
| Instruction | 8.9 | 8.7 | 8.2 | 7.8 | 7.4 |
| Graduate Placement | 7.2 | 8.2 | 7.5 | 7.9 | 7.8 |
| Overall | 8.3 | 8.6 | 8.4 | 8.4 | 8.3 |

You also possess other information that may be relevant to the policy meeting such as industry demand data for majors from the various departments in the Business School (see Industry Demand Table below).

INDUSTRY DEMAND FOR BUSINESS MAJORS
(10 point scale)

| | 1988-89 | 1989-90 | 1990-91 | 1991-92(P) | 1992-93(P) |
|---------------------|---------|---------|---------|------------|------------|
| Accounting | 7 | 7 | 9 | 8 | 7 |
| Finance | 7 | 6 | 4 | 3 | 4 |
| Information Systems | 7 | 7 | 8 | 8 | 8 |
| Market | 6 | 7 | 6 | 6 | 5 |
| Management | 6 | 6 | 5 | 6 | 5 |

(P)=projected

Finally, a very influential employer of the school's graduates expressed a concern that some recent graduates seemed to have poorly developed critical thinking and problem solving skills.

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Role: Dr. I.N. Exess, Chairperson, Business School Faculty Council

Your job in this meeting is to assume the role of the **Chairperson of the Business School Faculty Council**.

You are responsible for representing the concerns of faculty from within the School of Business. You are aware that faculty are concerned about large class sizes and how this influences their teaching and ability to perform their other responsibilities, especially research and publication in scientific journals. In addition, at a recent faculty meeting, you noted that a number of faculty voiced strong opposition to a proposal to increase teaching responsibilities beyond current levels. Some faculty are concerned about the faculty turnover rate (see Faculty Resignations table).

AVERAGE NUMBER STUDENTS TAUGHT PER INSTRUCTOR

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 116 | 158 | 197 | 216 | 232 |
| Junior Professors | 274 | 293 | 343 | 398 | 419 |
| Adjunct Faculty | 485 | 602 | 665 | 707 | 767 |
| Associate Instructors | 89 | 112 | 135 | 179 | 193 |

AVERAGE NUMBER CREDIT HOURS TAUGHT PER INSTRUCTOR

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 12.4 | 14.8 | 16.0 | 16.6 | 16.6 |
| Junior Professors | 22.8 | 23.1 | 25.1 | 28.4 | 28.6 |
| Adjunct Faculty | 18.2 | 21.0 | 22.4 | 22.8 | 23.0 |
| Associate Instructors | 7.4 | 8.4 | 9.2 | 11.4 | 11.6 |

You also have information that may be relevant to the policy meeting. For instance, in cooperation with the Registrar's Office, you have collected data defining the sources of instruction for Business School courses (see Sources of Classroom Instruction below) as well as data describing the number of students and the courses taught in the Business School (see Table below).

SOURCES OF CLASSROOM INSTRUCTION

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 27% | 26% | 26% | 24% | 24% |
| Junior Professors | 28% | 26% | 23% | 21% | 20% |
| Adjunct Faculty | 5% | 7% | 9% | 8% | 9% |
| Associate Instructors | 40% | 41% | 42% | 47% | 47% |

Senior Professors: Faculty with a Ph.D. who do research, teach, consult with industry, and serve on many administration/graduate committees

Junior Professors: Faculty with a Ph.D. who do research, teach, serve on committees, and sometimes do work with industry

Adjunct Faculty: Faculty with Masters degree and work experience hired for teaching. No administrative responsibilities.

Associate Instructors: Doctoral and M.B.A. students. Teach undergraduate courses part-time and take graduate classes part-time.

TOTAL RESEARCH PUBLICATIONS IN SCIENTIFIC JOURNALS

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------------|---------|---------|---------|---------|---------|
| Senior Professors | 47 | 46 | 46 | 43 | 41 |
| Junior Professors | 98 | 102 | 105 | 101 | 104 |
| Adjunct Faculty | N/A | N/A | N/A | N/A | N/A |
| Associate Instructors | 21 | 34 | 41 | 36 | 28 |

SENIOR & JUNIOR FACULTY RESIGNATIONS

(Does not include retirements and transfers)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|------------|---------|---------|---------|---------|---------|
| Professors | 8 | 17 | 16 | 10 | 14 |

One other concern is that some faculty believe some Business School students are not adequately equipped in the basic math and writing skills necessary for business courses.

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Role: Dr. M.C. Mallet, University Vice President for Undergraduate Instruction

You are to assume the role of the **University Vice President for Undergraduate Instruction**.

As the University Vice President for Undergraduate Instruction, you are responsible for representing the Administration of the University and of the Board of Regents. This position has responsibilities which are similar to those of a vice-president of a corporation. In this regard, you are responsible for developing and enacting policies and strategies which affect undergraduate students in various university divisions.

You know that the university has an important legislative mandate to structure policies so that a priority is given to in-state residents in allocating state tax revenues for education (see the Sources of University-wide Enrollment Table below). In addition, any policy changes should not negatively impact the university position on Federal Equal Opportunity regulations which mandate that all students should have a very fair opportunity to attend the university. This is of particular concern since the Business School unsuccessfully attempted to curb enrollment four years earlier by raising entrance requirements.

SOURCES OF UNIVERSITY-WIDE ENROLLMENT

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| In-State | 18,287 | 18,710 | 18,557 | 18,197 | 17,847 |
| Out-of-State | 6,096 | 7,272 | 7,952 | 8,566 | 9,798 |
| Total | 24,382 | 25,982 | 26,509 | 26,763 | 27,645 |

You also possess other pieces of information that may be relevant to the policy meeting. For instance, data about the quality of teaching across the university has been collected for this meeting (see the Average Student Teaching Evaluation by School Table below). In addition, data about the utilization of classroom resources has been collected (see the Business School Classroom Utilization Table below).

AVERAGE STUDENT TEACHING EVALUATION BY SCHOOL
(10 point scale)

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|-----------------|---------|---------|---------|---------|---------|
| Arts & Sciences | 8.1 | 8.3 | 8.2 | 8.4 | 8.3 |
| Business | 7.3 | 7.6 | 7.0 | 6.9 | 6.7 |
| Education | 6.8 | 6.8 | 6.9 | 7.1 | 7.0 |

BUSINESS SCHOOL CLASSROOM UTILIZATION
1989-1990

| | Morning | Afternoon | Evening |
|-----------|---------|-----------|---------|
| Monday | 95% | 85% | 18% |
| Tuesday | 98% | 87% | 12% |
| Wednesday | 94% | 89% | 19% |
| Thursday | 97% | 88% | 5% |
| Friday | 45% | 21% | 0% |
| Saturday | 5% | 0% | 0% |

You have also heard some complaints about the completion rate for degrees for the professional schools (see the Admission and Graduation for Professional Schools Table below).

ADMISSION AND GRADUATION FOR PROFESSIONAL SCHOOLS
UNIVERSITY WIDE

| | 1985-86 | 1986-87 | 1987-88 | 1988-89 | 1989-90 |
|--------------|---------|---------|---------|---------|---------|
| Applications | 11,120 | 11,716 | 12,091 | 11,546 | 12,141 |
| Admitted | 8,558 | 9,010 | 8,822 | 8,062 | 8,714 |
| Graduates | 7,893 | 8,322 | 8,741 | 7,440 | 6,872 |

PRODUCT MIX EXPERIMENT

BACKGROUND

During this experiment your group will be asked to make a production decision for a hypothetical firm (Sweettooth Candy Company) which is in the business of producing bulk candy. The reason for selecting a candy company is simply to create a context in which the problem can be discussed. The information that you will be given about this firm neither describes a real company nor is it representative of a real candy company.

The amount of money you earn for this experiment will depend on the final decision of your group. If your group carefully follows the rules of the experiment each of you will be paid \$2 for completing the tasks plus 8.5% of the amount of profit of Sweettooth Candy Company in cash. For example, suppose the profit of the company is \$68; each member of your group would then receive $\$2 + \$68 \cdot 0.085 = \$7.78$. Here, you receive \$2 for completing the tasks according to the rules, plus \$5.78 which is 8.5% of \$68 (company profit). If your group cannot agree over a decision the company profit will be set equal to zero. You will be paid in cash at the conclusion of the experiment.

THE SWEETTOOTH CANDY COMPANY

The Sweettooth Candy Company is in the bulk candy business and produces 5 types of candy - Almond, Pecan, Mixed, Bitter, Fruit. Each type of candy is produced in TWO different flavors - Almond1, Almond2; Pecan1, Pecan2; Mixed1, Mixed2; Bitter1, Bitter2; Fruit1, Fruit2.

The Company has FIVE divisions, with each division being responsible for BOTH flavors of ONE type of candy. Referring to the figure below, Almond1 and Almond2 are produced by the Almond division, Pecan1 and Pecan2 are produced by the Pecan division, etc. Each division is run by a manager.

The Sweettooth Candy Company
Corporate Committee (of all 5 managers)

| ManagerA | ManagerP | ManagerM | ManagerB | ManagerF |
|-------------|------------|------------|-------------|------------|
| Almond Div. | Pecan Div. | Mixed Div. | Bitter Div. | Fruit Div. |
| Almond1 | Pecan1 | Mixed1 | Bitter1 | Fruit1 |
| Almond2 | Pecan2 | Mixed2 | Bitter2 | Fruit2 |

The five division managers are all members of the Corporate Committee that has overall responsibility for the operation of the Sweettooth Candy Company. Thus, each manager has a dual role

- 1) Member of the Corporate Committee that runs the company.
- 2) Manager of his/her particular division. You are the manager of the _____ division.

INGREDIENTS REQUIRED AND AMOUNTS AVAILABLE

All the candy made by Sweetooth Candy Company contains Milk and Cocoa. Thus, Milk and Cocoa are used by all the Divisions.

All divisions use two common ingredients - Milk and Cocoa.

Each division also uses a unique ingredient in addition to Milk and Cocoa. This unique ingredient, WHICH IS DIFFERENT FOR EACH DIVISION, will be called an ADDITIVE. For example, the Almond1 and Almond2 division uses Almond essence and the Pecan1 and Pecan2 division uses Pecan nuts.

Each division also uses a unique ingredient - an ADDITIVE.
Note that this additive is NOT transferable among divisions.

Milk and Cocoa available to Corporate Committee.

270 TONS of MILK available to Corporate Committee

187 Tons of COCOA available to Corporate Committee

ADDITIVE available to YOUR division.

The amount of ADDITIVE available to your division, which is the ____ division, is _____ TONS.

THE EXPERIMENT IN WHICH YOU WILL PARTICIPATE

The Corporate Committee is responsible for the distribution of the MILK and COCOA available to the divisions. It has to decide exactly how much MILK and how much COCOA to give to each of the five divisions.

Each of you is the manager of ONE division; you are also a member of the Corporate Committee that is responsible for overall (COMPANY) performance. The operating details of your division are given in your DIVISION information sheet.

Your job today, as a group (the Corporate Committee), is to decide how to distribute the MILK and COCOA to the five divisions, so as to make the largest profit for Sweetooth Candy Company. The Corporate Committee will make use of the GDSS and the paper pads and pencils provided to make its decision. The GDSS is available to all the members of the committee to communicate whatever they wish.

As individuals, the information you have about the products at your division MAY NOT currently be known to the other members of the Corporate Committee. You may share the information you have with the other group members and also discuss the solution under the following restriction. The only way you

can share information or insight is by using the GDSS. There are NO restrictions on what you are allowed to share or communicate.

OPERATING DETAILS

As we have already mentioned, Milk and Cocoa are used by all five divisions. The corporate office buys all the Milk and Cocoa and distributes it to the five divisions. This means that the amount of Milk & Cocoa available to the Corporate Committee has to be shared among all the 5 divisions.

Let us recall that each manager has a dual role -

1. Member of the Corporate Committee that runs the company.
2. Manager of his/her particular division.

These two roles carry different responsibilities.

1. As a Committee Member you have to decide how much MILK and COCOA the five different divisions should receive from the Corporate Committee, in order to maximize COMPANY profit. In this role you are responsible for the evaluation of the profit potential of the individual divisions.

2. As a Division Manager, you will decide exactly how many tons of each of your two flavors of candy you would like to produce. You must do this with the MILK and COCOA given to you by the Corporate Committee, and the ADDITIVE available at your division.

Profit of the Company

Your job today, as a group (the Corporate Committee), is to decide how to distribute the MILK and COCOA available to the five divisions, so as to make the largest profit for Sweettooth Candy Company. The table below give the PROFIT in dollars for 1 ton of each flavor of candy.

| | | | | | | |
|--------------|---------|---------|---------|---------|--------|--------|
| Flavor | Almond1 | Almond2 | Bitter1 | Bitter2 | Fruit1 | Fruit2 |
| \$Profit/ton | 1.73 | 1.47 | 1.20 | 2.25 | 1.50 | 2.15 |
| Flavor | Mixed1 | Mixed2 | Pecan1 | Pecan2 | | |
| \$Profit/ton | 1.75 | 1.63 | 2.30 | 1.50 | | |

The company profit is calculated simply by adding the profit from each candy type; in other words it is simply the sum of the profits of all the five divisions.

Note that 1 ton of Almond1 gives a profit of \$1.73, 1 ton of Almond2 gives a profit of \$1.47...etc. Therefore, the overall COMPANY Profit in dollars in -

$$1.73 * \text{Almond1} + 1.47 * \text{Almond2} + 1.20 * \text{Bitter1} + 2.25 * \text{Bitter2} + 1.50 * \text{Fruit1} + 2.15 * \text{Fruit2} + 1.75 * \text{Mixed1} + 1.63 * \text{Mixed2} + 2.30 * \text{Pecan1} + 1.50 * \text{Pecan2}$$

Here, Almond1 and Almond2 stand for the # tons of the 2 candy types made in the Almond division, Bitter1 and Bitter2 for the # tons of the 2 candy types in the Bitter division etc.,.

RULES OF THE COMMITTEE

As a group, the Corporate Committee must arrive at a unanimous decision (all committee members must agree with the decision) regarding the distribution of MILK and COCOA. The Committee may attempt to do this by proposing and evaluating different ways of distributing the available MILK and COCOA based on the information they have.

The only way you can share information or insight is by using the GDSS. There are NO restrictions on information or insights that you can share or communicate (about individual divisions, any proposals, calculations, informal polls, etc.,).

During the discussion, different ways of distributing the MILK and COCOA may be proposed and discussed.

Any proposed distribution of MILK and COCOA is acceptable only if the total amount distributed to all five divisions is not more than the amount available to the Corporate Committee.

Proposals will be voted on THREE times during the session - at the end of 20 minutes, 40 minutes and 60 minutes. When a vote is called you may submit a Proposal on the form provided. If you submit a Proposal, you will also type it into the GDSS. All the Proposals submitted will be put up on the board. Then, one of them will be chosen at random and voted upon. You will cast your vote anonymously and the total number of votes for the Proposal will be recorded. If the vote is not unanimous, a second Proposal will be chosen at random from the remaining ones, and voted upon. This will be continued till there is unanimity or all the Proposals have been considered.

If there is not a unanimous vote for any Proposal, you will continue with experiment and try to reach a decision on the next round of Proposal submission and voting.

If the vote for a Proposal to distribute MILK and COCOA is unanimous, these ingredients will be distributed accordingly. The divisional managers will record on a worksheet, the amount of MILK and COCOA given to their respective divisions.

Once the MILK and COCOA distribution has been recorded each divisional manager must submit a worksheet within 10 minutes stating how many tons of each of the two candy flavors will be produced at his/her division. During this 10 minute period you may continue group discussion under the previous rules.

The experimenter will collect the worksheets and ensure that the amounts of MILK, COCOA and ADDITIVE used are not more than what is available to each division. He will then calculate the COMPANY PROFIT using the profit equation, reproduced below.

$$1.73*\text{Almond1} + 1.47*\text{Almond2} + 1.20*\text{Bitter1} + 2.25*\text{Bitter2} + 1.50*\text{Fruit1} + 2.15*\text{Fruit2} + 1.75*\text{Mixed} + 1.63*\text{Mixed2} + 2.30*\text{Pecan1} + 1.50*\text{Pecan2}$$

After calculation of company profit, **THE EXPERIMENT IS OVER**. If the Committee does not make a decision by the time the third and last vote is taken (at 60 minutes), or if the final proposal is found not to be acceptable, company profit will be set equal to 0, and the experiment will be **TERMINATED**.

REMINDER REGARDING INSTRUCTIONS

The only way you can share information or insight is by using the GDSS. Do not use any other way of communicating. There are **NO** restrictions on the information or insights that you can share or communicate (about individual divisions, proposals, informal polls, calculations etc.).

To ensure that the experiment proceeds correctly, according to the experimental rules, a researcher will remain in the room during the experiment. If the rules of the experiment are violated in any way, company profit will be set equal to 0 and the experiment will be stopped immediately.

After the experiment is over, each member of your group will fill out a questionnaire about your reactions to the task, and the group.

For the integrity of this experiment to remain intact, you are requested not to discuss any part of this experiment with any others who have not participated. What you tell them may influence their decisions and contaminate our research.

Do you have any questions? After this juncture, I will not participate, except to answer questions about the GDSS.

PRODUCT MIX EXPERIMENT - INDIVIDUAL

BACKGROUND

During this experiment your group will be asked to make a production decision for a hypothetical firm (Sweettooth Candy Company) which is in the business of producing bulk candy. The reason for selecting a candy company is simply to create a context in which the problem can be discussed. The information that you will be given about this firm neither describes a real company nor is it representative of a real candy company.

The amount of money you earn for this experiment will depend on the final decision of your group. If your group carefully follows the rules of the experiment each of you will be paid \$2 for completing the tasks plus 8.5% of the amount of profit of Sweettooth Candy Company in cash. For example, suppose the profit of the company is \$68; each member of your group would then receive $\$2 + \$68 \cdot 0.085 = \$7.78$. Here, you receive \$2 for completing the tasks according to the rules, plus \$5.78 which is 8.5% of \$68 (company profit). If your group cannot agree over a decision the company profit will be set equal to 0. You will be paid in cash at the conclusion of the experiment.

THE SWEETTOOTH CANDY COMPANY

The Sweettooth Candy Company is in the bulk candy business and produces 5 types of candy - Almond, Pecan, Mixed, Bitter, Fruit. Each type of candy is produced in TWO different flavors - Almond1, Almond2; Pecan1, Pecan2; Mixed1, Mixed2; Bitter1, Bitter2; Fruit1, Fruit2.

The Company has FIVE divisions, with each division being responsible for BOTH flavors of ONE type of candy. Referring to the figure below, Almond1 and Almond2 are produced by the Almond division, Pecan1 and Pecan2 are produced by the Pecan division, etc. Each division is run by a manager.

| The Sweettooth Candy Company Chairman (You) | | | | |
|--|------------|------------|-------------|------------|
| ManagerA | ManagerP | ManagerM | ManagerB | ManagerF |
| Almond Div. | Pecan Div. | Mixed Div. | Bitter Div. | Fruit Div. |
| Almond1 | Pecan1 | Mixed1 | Bitter1 | Fruit1 |
| Almond2 | Pecan2 | Mixed2 | Bitter2 | Fruit2 |

INGREDIENTS REQUIRED AND AMOUNTS AVAILABLE

All the candy made by Sweettooth Candy Company contains Milk and Cocoa. Thus, Milk and Cocoa are used by all the Divisions.

All divisions use two common ingredients - Milk and Cocoa.

Each division also uses a unique ingredient in addition to Milk and Cocoa. This unique ingredient, WHICH IS DIFFERENT FOR EACH DIVISION, will be called and ADDITIVE. For example, the Almond1 and Almond2 division uses Almond essence and the Pecan1 and Pecan2 division uses Pecan nuts.

Each division also uses a unique ingredient - an ADDITIVE.
Note that this additive is NOT transferable among divisions.

Milk and Cocoa (tons) available to you, the Chairman.

MILK - 270
COCOA - 187

ADDITIVE available at each division (tons).

Almond - 80; Pecan - 65; Bitter - 35; Fruit - 45; Mixed - 65.

THE EXPERIMENT IN WHICH YOU WILL PARTICIPATE

As Chairman, you must allocate the MILK and COCOA available to the five divisions and also decide how many tones of each of the two products will be produced at the five divisions. You must do this so as to make the largest profit (and hence greatest payout to you) for Sweettooth Candy Company. You may use the paper pad/worksheets provided to make your decision.

The operating details of the divisions are given in DIVISION information sheets available in your folder.

Profit of the Company

The table below give the PROFIT in dollars for 1 ton of each flavor of candy.

| | | | | | | | |
|--------------|------|---------|---------|---------|---------|--------|--------|
| Flavor | | Almond1 | Almond2 | Bitter1 | Bitter2 | Fruit1 | Fruit2 |
| \$Profit/ton | 1.73 | 1.47 | 1.20 | 2.25 | 1.50 | 2.15 | |

| | | | | | |
|--------------|------|--------|--------|--------|--------|
| Flavor | | Mixed1 | Mixed2 | Pecan1 | Pecan2 |
| \$Profit/ton | 1.75 | 1.63 | 2.30 | 1.50 | |

The company profit is calculated simply by adding the profit from each candy type; in other words it is simply the sum of the profits of all the five divisions.

Note that 1 ton of Almond1 gives a profit of \$1.73, 1 ton of Almond2 gives a profit of \$1.47...etc. Therefore, the overall COMPANY Profit in dollars in -

$$1.73*Almond1 + 1.47*Almond2 + 1.20*Bitter1 + 2.25*Bitter2 + 1.50*Fruit1 + 2.15*Fruit2 + 1.75*Mixed1 + 1.63*Mixed2 + 2.30*Pecan1 + 1.50*Pecan2$$

In this equation Almond1 and Almond2 stand for the # tons of the two candy types made in the Almond divisions, Bitter1 and Bitter2 for the # tons in the Bitter division and so on.

RULES OF THE EXPERIMENT

Any proposed production plan is acceptable only if the amount of ingredients used is not more than what is available.

You will have a total of up to 60 minutes to complete the task, and you must work at least 20 minutes. When you finish you will hand in a worksheet showing exactly how many tons of each of the two products you will produce at the five divisions.

The experimenter will collect the worksheets and ensure that the amounts of MILK, COCOA and ADDITIVE used are not more than what is available to each division. He will then calculate the COMPANY PROFIT using the profit equation, reproduced below.

$$1.73*Almond1 + 1.47*Almond2 + 1.20*Bitter1 + 2.25*Bitter2 + 1.50*Fruit1 + 2.15*Fruit2 + 1.75*Mixed + 1.63*Mixed2 + 2.30*Pecan1 + 1.50*Pecan2$$

After calculation of company profit, THE EXPERIMENT IS OVER. If the Committee does not make a decision by the time the third and last vote is take (at 60 minutes), or if the final proposal is found not be acceptable, company profit will be set equal to 0, and the experiment will be TERMINATED.

REMINDER REGARDING INSTRUCTIONS

After the experiment is over, you will fill out a post-experimental questionnaire about your reactions to the task. For the integrity of this experiment to remain intact, you are requested not to discuss any part of this experiment with any others who have not participated. What you tell them may influence their decisions and contaminate our research.

Do you have any questions? After this juncture, I will not participate, except to answer questions about the conduct of the experiment.

PRODUCT MIX EXPERIMENT - CHAIRMAN

BACKGROUND

During this experiment your group will be asked to make a production decision for a hypothetical firm (Sweettooth Candy Company) which is in the business of producing bulk candy. The reason for selecting a candy company is simply to create a context in which the problem can be discussed. The information that you will be given about this firm neither describes a real company nor is it representative of a real candy company.

The amount of money you earn for this experiment will depend on the final decision of your group. If your group carefully follows the rules of the experiment each of you will be paid \$2 for completing the tasks plus 8.5% of the amount of profit of Sweettooth Candy Company in cash. For example, suppose the profit of the company is \$68; each member of your group would then receive $\$2 + \$68 \cdot 0.085 = \$7.78$. Here, you receive \$2 for completing the tasks according to the rules, plus \$5.78 which is 8.5% of \$68 (company profit). If your group cannot agree over a decision the company profit will be set equal to 0. You will be paid in cash at the conclusion of the experiment.

THE SWEETTOOTH CANDY COMPANY

The Sweettooth Candy Company is in the bulk candy business and produces 5 types of candy - Almond, Pecan, Mixed, Bitter, Fruit. Each type of candy is produced in TWO different flavors - Almond1, Almond2; Pecan1, Pecan2; Mixed1, Mixed2; Bitter1, Bitter2; Fruit1, Fruit2.

The Company has FIVE divisions, with each division being responsible for BOTH flavors of ONE type of candy. Referring to the figure below, Almond1 and Almond2 are produced by the Almond division, Pecan1 and Pecan2 are produced by the Pecan division, etc. Each division is run by a manager.

The Sweettooth Candy Company Corporate Committee (of all 5 managers)

| ManagerA | ManagerP | ManagerM | ManagerB | ManagerF |
|-------------|------------|------------|-------------|------------|
| Almond Div. | Pecan Div. | Mixed Div. | Bitter Div. | Fruit Div. |
| Almond1 | Pecan1 | Mixed1 | Bitter1 | Fruit1 |
| Almond2 | Pecan2 | Mixed2 | Bitter2 | Fruit2 |

The five division managers are all members of the Corporate Committee that has overall responsibility for the operation of the Sweettooth Candy Company. Thus, each manager has a dual role

- 1) Member of the Corporate Committee that runs the company.
- 2) Manager of his/her particular division. You are the manager of the _____ division.

INGREDIENTS REQUIRED AND AMOUNTS AVAILABLE

All the candy made by Sweettooth Candy Company contains Milk and Cocoa. Thus, Milk and Cocoa are used by all the Divisions.

All divisions use two common ingredients - Milk and Cocoa.

Each division also uses a unique ingredient in addition to Milk and Cocoa. This unique ingredient, WHICH IS DIFFERENT FOR EACH DIVISION, will be called an ADDITIVE. For example, the Almond1 and Almond2 division uses Almond essence and the Pecan1 and Pecan2 division uses Pecan nuts.

Each division also uses a unique ingredient - an ADDITIVE.
Note that this additive is NOT transferable among divisions.

Milk and Cocoa available to Corporate Committee.

270 TONS of MILK available to Corporate Committee
187 Tons of COCOA available to Corporate Committee

ADDITIVE available to YOUR division.

The amount of ADDITIVE available to your division, which is the ____ division, is _____ TONS.

THE EXPERIMENT IN WHICH YOU WILL PARTICIPATE

The Corporate Committee is responsible for the distribution of the MILK and COCOA available to the divisions. It has to decide exactly how much MILK and how much COCOA to give to each of the five divisions.

Each of you is the manager of ONE division; you are also a member of the Corporate Committee that is responsible for overall (COMPANY) performance. The operating details of your division are given in your DIVISION information sheet.

Your job today, as a group (the Corporate Committee), is to decide how to distribute the MILK and COCOA to the five divisions, so as to make the largest profit for Sweettooth Candy Company. The Corporate Committee will make use of the GDSS and the paper pads and pencils provided to make its decision. The GDSS is available to all the members of the committee to communicate whatever they wish.

As individuals, the information you have about the products at your division MAY NOT currently be known to the other members of the Corporate Committee. You may share the information you have with the other group members and also discuss the solution under the following restriction. The only way you can share information or insight is by using the GDSS. There are NO restrictions on what you are allowed to share or communicate.

OPERATING DETAILS

As we have already mentioned, Milk and Cocoa are used by all five divisions. The corporate office buys all the Milk and Cocoa and distributes it to the five divisions. This means that the amount of Milk & Cocoa available to the Corporate Committee has to be shared among all the 5 divisions.

Let us recall that each manager has a dual role -

1. Member of the Corporate Committee that runs the company.
2. Manager of his/her particular division.

These two roles carry different responsibilities.

1. As a Committee Member you have to decide how much MILK and COCOA the five different divisions should receive from the Corporate Committee, in order to maximize COMPANY profit. In this role you are responsible for the evaluation of the profit potential of the individual divisions.
2. As A Division Manager, you will decide exactly how many tons of each of your two flavors of candy you would like to produce. You must do this with the MILK and COCOA given to you by the Corporate Committee, and the ADDITIVE available at your division.

Profit of the Company

Your job today, as a group (the Corporate Committee), is to decide how to distribute the MILK and COCOA available to the five divisions, so as to make the largest profit for Sweettooth Candy Company. The table below give the PROFIT in dollars for 1 ton of each flavor of candy.

| | | | | | | |
|--------------|---------|---------|---------|---------|--------|--------|
| Flavor | Almond1 | Almond2 | Bitter1 | Bitter2 | Fruit1 | Fruit2 |
| \$Profit/ton | 1.73 | 1.47 | 1.20 | 2.25 | 1.50 | 2.15 |
| Flavor | Mixed1 | Mixed2 | Pecan1 | Pecan2 | | |
| \$Profit/ton | 1.75 | 1.63 | 2.30 | 1.50 | | |

The company profit is calculated simply by adding the profit from each candy type; in other words it is simply the sum of the profits of all the five divisions.

Note that 1 ton of Almond1 gives a profit of \$1.73, 1 ton of Almond2 gives a profit of \$1.47...etc. Therefore, the overall COMPANY Profit in dollars in -

$$1.73 * \text{Almond1} + 1.47 * \text{Almond2} + 1.20 * \text{Bitter1} + 2.25 * \text{Bitter2} + 1.50 * \text{Fruit1} + 2.15 * \text{Fruit2} + 1.75 * \text{Mixed1} + 1.63 * \text{Mixed2} + 2.30 * \text{Pecan1} + 1.50 * \text{Pecan2}$$

Here, Almond1 and Almond2 stand for the # tons of the 2 candy types made in the Almond division, Bitter1 and Bitter2 for the # tons of the 2 candy types in the Bitter division etc.,

RULES OF THE COMMITTEE

As a group, the Corporate Committee must arrive at a unanimous decision (all committee members must agree with the decision) regarding the distribution of MILK and COCOA. The Committee may attempt to do this by proposing and evaluating different ways of distributing the available MILK and COCOA based on the information they have.

The only way you can share information or insight is by using the GDSS. There are NO restrictions on information or insights that you can share or communicate (about individual divisions, any proposals, calculations, informal polls, etc.,).

During the discussion, different ways of distributing the MILK and COCOA may be proposed and discussed.

Any proposed distribution of MILK and COCOA is acceptable only if the total amount distributed to all five divisions is not more than the amount available to the Corporate Committee.

Proposals will be voted on THREE times during the session - at the end of 20 minutes, 40 minutes and 60 minutes. When a vote is called you may submit a Proposal on the form provided. If you submit a Proposal, you will also type it into the GDSS. All the Proposals submitted will be put up on the board. Then, one of them will be chosen at random and voted upon. You will cast your vote anonymously and the total number of votes for the Proposal will be recorded. If the vote is not unanimous, a second Proposal will be chosen at random from the remaining ones, and voted upon. This will be continued till there is unanimity or all the Proposals have been considered.

If there is not a unanimous vote for any Proposal, you will continue with experiment and try to reach a decision on the next round of Proposal submission and voting.

If the vote for a Proposal to distribute MILK and COCOA is unanimous, these ingredients will be distributed accordingly. The divisional managers will record on a worksheet, the amount of MILK and COCOA given to their respective divisions.

Once the MILK and COCOA distribution has been recorded each divisional manager must submit a worksheet within 10 minutes stating how many tons of each of the two candy flavors will be produced at his/her division. During this 10 minute period you may continue group discussion under the previous rules.

The experimenter will collect the worksheets and ensure that the amounts of MILK, COCOA and ADDITIVE used are not more than what is available to each division. He will then calculate the COMPANY PROFIT using the profit equation, reproduced below.

$$1.73*\text{Almond1} + 1.47*\text{Almond2} + 1.20*\text{Bitter1} + 2.25*\text{Bitter2} + 1.50*\text{Fruit1} + 2.15*\text{Fruit2} + 1.75*\text{Mixed} + 1.63*\text{Mixed2} + 2.30*\text{Pecan1} + 1.50*\text{Pecan2}$$

After calculation of company profit, THE EXPERIMENT IS OVER. If the Committee does not make a decision by the time the third and last vote is taken (at 60 minutes), or if the final proposal is found not to be acceptable, company profit will be set equal to 0, and the experiment will be TERMINATED.

REMINDER REGARDING INSTRUCTIONS

The only way you can share information or insight is by using the GDSS. Do not use any other way of communicating. There are NO restrictions on the information or insights that you can share or communicate (about individual divisions, proposals, informal polls, calculations etc.).

To ensure that the experiment proceeds correctly, according to the experimental rules, a researcher will remain in the room during the experiment. If the rules of the experiment are violated in any way, company profit will be set equal to 0 and the experiment will be stopped immediately.

After the experiment is over, each member of your group will fill out a questionnaire about your reactions to the task, and the group.

For the integrity of this experiment to remain intact, you are requested not to discuss any part of this experiment with any others who have not participated. What you tell them may influence their decisions and contaminate our research.

Do you have any questions? After this juncture, I will not participate, except to answer questions about the GDSS.

PECAN DIVISION INFORMATION SHEET

The following information describes the operation of your division in words and also in equation form. You need MILK and COCOA from the Corporate Office and an ADDITIVE to manufacture your products.

SPECIAL REQUIREMENT: You must produce at least 4 tons of P2.

MILK - distributed to your division by the Corporate Committee.

COCOA - distributed to your division by the Corporate Committee.

PECAN ADDITIVE - amount available at your division is 65 tons.

MILK AND COCOA - COMMON INGREDIENTS, shared.

The Corporate Committee (of all 5 managers) decides how much Milk and Cocoa you get. Notice from your experiment description sheet that there are 270 tons of Milk and 187 tons of Cocoa available at Corporate Office.

MILK is used in your division as described below.

4.53 ton(s) of Milk for EACH ton of PECAN1.

5.10 ton(s) of Milk for EACH ton of PECAN2.

The total amount of MILK you use is $4.53*PECAN1 + 5.10*PECAN2$

In equation form:

$4.53*PECAN1 + 5.10*PECAN2 \leq$ Tons of Milk distributed to your division by Corporate Committee.

COCOA is used in your division as described below.

4.30 ton(s) of Cocoa for EACH ton of PECAN1.

2.34 ton(s) of COCOA for EACH ton of PECAN2.

The total amount of COCOA you use is $= 4.30*PECAN1 + 2.34*PECAN2$

In equation form:

$4.30*PECAN1 + 2.34*PECAN2 \leq$ Tons of Cocoa distributed to your division by Corporate Committee.

PECAN ADDITIVE - Used ONLY by your division, 65 tons available.

5.33 ton(s) of additive for EACH ton of PECAN1.

3.80 ton(s) of additive for EACH ton of PECAN2.

The total amount of additive used is $= 5.33*PECAN1 + 3.80*PECAN2$

In equation form:

$$5.33*PECAN1 + 3.80*PECAN2 \leq 65 \text{ (Additive available)}$$

MIXED DIVISION INFORMATION SHEET

The following information describes the operation of your division in words and also in equation form. You need MILK and COCOA from the Corporate Office and an ADDITIVE to manufacture your products.

SPECIAL REQUIREMENT: You must produce no more than 8 tons of M1.

MILK - distributed to your division by the Corporate Committee.

COCOA - distributed to your division by the Corporate Committee.

MIXED ADDITIVE - amount available at your division is 65 tons.

MILK AND COCOA - COMMON INGREDIENTS, shared.

The Corporate Committee (of all 5 managers) decides how much Milk and Cocoa you get. Notice from your experiment description sheet that there are 270 tons of Milk and 187 tons of Cocoa available at Corporate Office.

MILK is used in your division as described below.

5.64 ton(s) of Milk for EACH ton of MIXED1.

6.00 ton(s) of Milk for EACH ton of MIXED2.

The total amount of MILK you use is $= 5.64 * \text{MIXED1} + 6.00 * \text{MIXED2}$

In equation form:

$5.64 * \text{MIXED1} + 6.00 * \text{MIXED2} \leq$ Tons of Milk distributed to your division by Corporate Committee.

COCOA is used in your division as described below.

4.10 ton(s) of Cocoa for EACH ton of MIXED1.

3.50 ton(s) of Cocoa for EACH ton of MIXED2.

The total amount of COCOA you use is $= 4.10 * \text{MIXED1} + 3.50 * \text{MIXED2}$

In equation form:

$4.10 * \text{MIXED1} + 3.50 * \text{MIXED2} \leq$ Tons of Cocoa distributed to your division by Corporate Committee.

MIXED ADDITIVE - Used ONLY by your division, 65 tons available.

3.60 ton(s) of additive for EACH ton of MIXED1.

5.50 ton(s) of additive for EACH ton of MIXED2.

The total amount of additive used is = $3.60 \cdot \text{MIXED1} + 5.50 \cdot \text{MIXED2}$

In equation form:

$$3.60 \cdot \text{MIXED1} + 5.50 \cdot \text{MIXED2} \leq 65 \text{ (Additive available)}$$

ALMOND DIVISION INFORMATION SHEET

The following information describes the operation of your division in words and also in equation form. You need MILK and COCOA from the Corporate Office and an ADDITIVE to manufacture your products.

SPECIAL REQUIREMENT: You must produce no more than 4.5 tons of A1.

MILK - distributed to your division by the Corporate Committee.

COCOA - distributed to your division by the Corporate Committee.

ALMOND ADDITIVE - amount available at your division is 65 tons.

MILK AND COCOA - COMMON INGREDIENTS, shared.

The Corporate Committee (of all 5 managers) decides how much Milk and Cocoa you get. Notice from your experiment description sheet that there are 270 tons of Milk and 187 tons of Cocoa available at Corporate Office.

MILK is used in your division as described below.

5.34 ton(s) of Milk for EACH ton of ALMOND1.

4.80 ton(s) of Milk for EACH ton of ALMOND2.

The total amount of MILK you use is $= 5.34 * \text{ALMOND1} + 4.80 * \text{ALMOND2}$

In equation form:

$5.34 * \text{ALMOND1} + 4.80 * \text{ALMOND2} \leq$ Tons of Milk distributed to your division by Corporate Committee.

COCOA is used in your division as described below.

3.45 ton(s) of Cocoa for EACH ton of ALMOND1.

4.30 ton(s) of Cocoa for EACH ton of ALMOND2.

The total amount of COCOA you use is $= 3.45 * \text{ALMOND1} + 4.30 * \text{ALMOND2}$

In equation form:

$3.45 * \text{ALMOND1} + 4.30 * \text{ALMOND2} \leq$ Tons of Cocoa distributed to your division by Corporate Committee.

ALMOND ADDITIVE - Used ONLY by your division, 80 tons available.

5.00 ton(s) of additive for EACH ton of ALMOND1.

6.60 ton(s) of additive for EACH ton of ALMOND2.

The total amount of additive used is = $5.00 \cdot \text{ALMOND1} + 6.60 \cdot \text{ALMOND2}$

In equation form:

$5.00 \cdot \text{ALMOND1} + 6.60 \cdot \text{ALMOND2} \leq 80$ (Additive available)

BITTER DIVISION INFORMATION SHEET

The following information describes the operation of your division in words and also in equation form. You need MILK and COCOA from the Corporate Office and an ADDITIVE to manufacture your products.

SPECIAL REQUIREMENT: NONE

MILK - distributed to your division by the Corporate Committee.

COCOA - distributed to your division by the Corporate Committee.

BITTER ADDITIVE - amount available at your division is 35 tons.

MILK AND COCOA - COMMON INGREDIENTS, shared.

The Corporate Committee (of all 5 managers) decides how much Milk and Cocoa you get. Notice from your experiment description sheet that there are 270 tons of Milk and 187 tons of Cocoa available at Corporate Office.

MILK is used in your division as described below.

5.10 ton(s) of Milk for EACH ton of BITTER1.

6.00 ton(s) of Milk for EACH ton of BITTER2.

The total amount of MILK you use is $= 5.10 \cdot \text{BITTER1} + 6.00 \cdot \text{BITTER2}$

In equation form:

$5.10 \cdot \text{BITTER1} + 6.00 \cdot \text{BITTER2} \leq$ Tons of Milk distributed to your division by Corporate Committee.

COCOA is used in your division as described below.

5.20 ton(s) of Cocoa for EACH ton of BITTER1.

3.25 ton(s) of Cocoa for EACH ton of BITTER2.

The total amount of COCOA you use is $= 5.20 \cdot \text{BITTER1} + 3.25 \cdot \text{BITTER2}$

In equation form:

$5.20 \cdot \text{BITTER1} + 3.25 \cdot \text{BITTER2} \leq$ Tons of Cocoa distributed to your division by Corporate Committee.

BITTER ADDITIVE - Used ONLY by your division, 35 tons available.

5.40 ton(s) of additive for EACH ton of BITTER1.

6.60 ton(s) of additive for EACH ton of BITTER2.

The total amount of additive used is = $5.40 \cdot \text{BITTER1} + 6.60 \cdot \text{BITTER2}$

In equation form:

$$5.40 \cdot \text{BITTER1} + 6.60 \cdot \text{BITTER2} \leq 35 \text{ (Additive available)}$$

FRUIT DIVISION INFORMATION SHEET

The following information describes the operation of your division in words and also in equation form. You need MILK and COCOA from the Corporate Office and an ADDITIVE to manufacture your products.

SPECIAL REQUIREMENT: NONE

MILK - distributed to your division by the Corporate Committee.

COCOA - distributed to your division by the Corporate Committee.

FRUIT ADDITIVE - amount available at your division is 45 tons.

MILK AND COCOA - COMMON INGREDIENTS, shared.

The Corporate Committee (of all 5 managers) decides how much Milk and Cocoa you get. Notice from your experiment description sheet that there are 270 tons of Milk and 187 tons of Cocoa available at Corporate Office.

MILK is used in your division as described below.

7.00 ton(s) of Milk for EACH ton of FRUIT1.

5.00 ton(s) of Milk for EACH ton of FRUIT2.

The total amount of MILK you use is $= 7.00*FRUIT1 + 5.00*FRUIT2$

In equation form:

$7.00*FRUIT1 + 5.00*FRUIT2 \leq$ Tons of Milk distributed to your division by Corporate Committee.

COCOA is used in your division as described below.

4.25 ton(s) of Cocoa for EACH ton of FRUIT1.

3.65 ton(s) of Cocoa for EACH ton of FRUIT2.

The total amount of COCOA you use is $= 4.25*FRUIT1 + 3.65*FRUIT2$

In equation form:

$4.25*FRUIT1 + 3.65*FRUIT2 \leq$ Tons of Cocoa distributed to your division by Corporate Committee.

FRUIT ADDITIVE - Used ONLY by your division, 45 tons available.

6.43 ton(s) of additive for EACH ton of FRUIT1.

8.00 ton(s) of additive for EACH ton of FRUIT2.

The total amount of additive used is = $6.43 \cdot \text{FRUIT1} + 8.00 \cdot \text{FRUIT2}$

In equation form:

$$6.43 \cdot \text{FRUIT1} + 8.00 \cdot \text{FRUIT2} \leq 45 \text{ (Additive available)}$$

TEA BAG PROBLEM DESCRIPTION

In the production of intermediate and final goods some organizations run into the situation of having excess production capacity or not having enough capacity. These types of situations present challenges for organizations as they must make decisions about how to best solve this problem. The tea industry is currently facing such a dilemma.

Most people know what a tea bag looks like. Many of us handle them every day. The gauze-like paper pouch contains bits of tea leaves. When placed in a teapot, hot water passes through the bag and the tea can brew. The bag permits the tea to diffuse without dispensing the leaves throughout the water. The bag can be retrieved and the strength of the tea maintained.

The tea industry has spare capacity for producing tea bags. More can be produced than is currently needed for the consumption of tea. The current demand underutilizes the resources that are presently dedicated to tea bag production. Instead of cutting back production and the number of jobs, or reallocating these resources, the industry would like to take advantage of this spare capacity to generate additional revenues.

How else might tea bags be used?

Be specific, complete and concise - yet you need to provide enough information so that someone else can fully understand your idea without requiring further explanation.

To help get you started, here is an idea:

You could put pre-measured amounts of detergent into the bags so that you wouldn't have to measure detergent for each load. Just toss them into the washer with the clothes and you're all ready to go.

THE VAN TASK

Source: J. Scudder, Indiana University

LEADER INSTRUCTIONS

The following material is the van buying problem. The original idea for this task comes from a Maier role play scenario, however, this is an intellectual version with the criteria of seniority, job requirements in terms of driving, productivity in terms of earnings, personal model preference as well as irrelevant personal background. This version's instructions are for a nominal group experiment, but it may be adapted in many ways for the type of experiment that we were discussing today.

THE TASK

You are a group of executives with a cosmetics firm who have been assigned the task of dealing with the transportation situation of a number of regional sales divisions. Due to a downturn in the economy, the company can only provide one new car per region. It is to the company's advantage to eliminate older vehicles that have been depreciated. Today, you will be making a decision about how to best manage the vehicles in Region 1. The only new resources that you can give Region 1 is one Chevrolet Lumina Van and \$1000 in repair money. Each representative has been asked to make a case for why she should be provided a new van.

Erica is 47 years old, divorced with one adult daughter, and has been with the company 17 years. She has a 2-year old Ford Van with 24,000 miles. She earned \$105,000 last year and has the smallest territory. She believes that when a new Chevrolet becomes available that she should get it because she has the most seniority and she doesn't like her present van. She prefers a Chevrolet as she had before the company supplied her with her present Ford.

Jill is 33 years old, married, has two children ages 3 and 5, and has been with the company 11 years. Jill has a small territory and earned \$75,000 last year. She has a 4-year old Dodge Van with 52,000 miles. Jill believes that she deserves a new van because her van is older and the person with the most seniority has a fairly new vehicle. She has taken excellent care of her Dodge van and has kept it looking like new. It has never had a mechanical problem. She believes that a person deserves to be rewarded for keeping a vehicle in good condition. She prefers not to drive a Ford.

Elaine is 35 years old, divorced, has a 5 year-old daughter, and has been with the company 6 years. She has an extremely large territory and made \$103,000 last year. She has a 5-year old Ford Van with 90,000 miles. Elaine believes that she deserves a new van because she has to cover the largest territory with a fairly old van. She feels that she should have a new one because she doesn't want to be stranded so far from home, as she once was on a particularly long trip to Minneapolis. She doesn't like Ford or Chevy vans.

Charlene is 28, single, and has been with the company 5 years. She has the second largest territory and made \$79,000 last year. She has a 3-year old Ford Van with 60,000 miles. Charlene believes that she deserves a new van because hers has inadequate heating and cooling. The cold air is very bad at times because a previous repair on a door was not done correctly. She thinks this is one reason that she gets so many colds. She does not care about the make of the vehicle, but she insists on good tires, good brakes, and reasonable comfort.

Beth is 25, divorced, no children, and has been with the company 3 years. She has a small territory and earned \$39,000 last year. She has a 5-year old Chevrolet Van with 120,000 miles. Beth believes that she deserves a new van because of the aggravation that she has had with her van over the past 3 years. Beth has the poorest vehicle in the crew. It was in a wreck before she got it. She has had several breakdowns over the past 3 years. She doesn't care about the make of the vehicle that she drives.

How should this vehicle situation be managed?

VINYL DISK PROBLEM DESCRIPTION

In the production of intermediate and final goods some organizations run into the situation of having excess production capacity or not having enough capacity. These types of situations present challenges for organizations as they must make decisions about how to best solve this problem. The music recording industry is currently facing such a dilemma.

Most people know what an album looks like. Many of us play albums every day. The 12 inch grooved vinyl disk has been the prevalent recording media used by the music recording industry for a number of years. Year after year the number of albums sold had risen steadily. Given the growing market, the music recording industry had steadily increased its production capabilities for vinyl disks.

However, recently the widespread acceptance of both cassette tapes and compact disks (CDs) has drastically reduced the sales of albums. Now that the demand for musical recordings on albums has dropped dramatically, the industry has excess capacity for vinyl disk production. Instead of cutting back this production and reducing the number of jobs in this area the industry would like to find additional uses for vinyl disks.

How else might vinyl disks be used?

Be specific, complete and concise - yet you need to provide enough information so that someone else can fully understand your idea without requiring further explanation.

To help get you started, here is an idea:

You could attach a polishing material to one side of the disk. Play the disk in the normal way (with the polishing side up) and polish whatever needs polishing.

Tidewater College

Tidewater College was founded by a local church in 1925 to give local residents of this rural, mountain area an opportunity to get a college education. For thirty-five years the college had taught about 450 students a year, focusing on liberal arts and teacher preparation. Then, during the 1960s, because of the baby boom, the student body increased to 1,750 students a year. Faculty teaching loads were greatly overextended, and the Old Main Building, which comprised the entire campus, began to be woefully inadequate.

The president, who clearly based his planning decisions on faith, decided that a whole new campus was in order. At the end of the spring semester, 1969, ground was broken for this new campus, which eventually included four five-story buildings in the meadow behind Old Main. The new campus was completed in August 1971, the year enrollments peaked. Unfortunately, the buildings were not financed by a local bond issue or fund-raising campaign. Therefore, to pay for the indebtedness on the new buildings, government support was obtained which promised to provide many educational and training programs, but which Tidewater was not equipped to handle.

The current situation can be described as follows:

1. Enrollment is down to 600.
2. Currently, availability of government financial support has severely diminished.
3. The college is still responsible to the government for the completion of certain educational and training programs.
4. Because of the government contracts, the college has experienced "program proliferation," and there is no coordination of the courses being offered across programs. Additionally, teachers are forced to teach courses they know little about.
5. Student morale is very low, and student vandalism has averaged about \$250 a week for several years.
6. Teacher morale is also low, since teachers must teach courses outside their areas of expertise and have not received a pay raise in four years.
7. The college is located in a mountain community of 2,000 people. The closest town is twenty miles away and has a population of 30,000 and no major industry. There is no other institution of higher learning in the region.

8. The college has a reputation in town for being poorly managed and having unruly students whom the trustees will not allow to be disciplined.
9. The last president resigned in despair.
10. The college still has a large capital debt, due to the building boom in the late 1960s.
11. Alumni contributions have hardly been tapped as a source of funds; however, the administration is not sure that the alumni would be enthusiastic about donating to the school in its present state.

The current president was appointed to the job six months ago. He knows that there are various problems facing the college. However, he does not know which are the most critical problems that need resolution through the formulation of strategies. He knows that Tidewater college has many stakeholders, each with a different set of expectations. Further, the college does not have the resources to implement strategies that satisfy expectations of all stakeholders. The dilemma is to decide which stakeholder expectations are critical and have to be managed through formulation of strategies.

He has approached researchers at the University of Minnesota to provide guidance. The researchers have now approached you as a group of consultants in order to get your valued viewpoints. Another planning group has identified six basic strategies that the College might pursue as alternatives. Each strategy attempts to satisfy certain expectations of stakeholders; the college cannot pursue all the strategies. Use your individual judgment based on your beliefs and values and select that strategy which you feel would be the most appropriate for Tidewater College to pursue. You will use the stakeholder analysis approach to choose your strategy.

Task:

You are a member of a UGA admissions committee deciding who to accept for next year. Three high school students who were initially turned down have appealed. Information about the three students is presented below. You can only accept one student.

Which do you accept?

Jane Jones

Jane scored a 500 on the SAT-verbal and a 450 on the SAT-Math. Her GPA across all her high school courses was 2.70. She isn't sure of major, but intends to get a BA, probably majoring in English. She has taken a wide range of courses in high school, but has made sure that all are regular academic courses (e.g., English, chemistry, social studies); she has avoided non-academic courses such as home economics and health. One of her courses was an advanced placement college level course in English in which she got a B. She has not participated in any extra-curricular activities. She is from a small town in rural North Carolina. Her high school has a reputation for being a high quality school with a tough grading policy. Many students from her high school have attended UGA over the past three years and they have consistently done well. She is missing a History course which is required for admission to UGA because her high school has different graduation requirements than high schools in Georgia. She has written a letter stating that she will make up the deficiency by taking an extra history course at UGA in her first year. Her high school principal has written a letter of recommendation urging you to accept her. He says that his high school has a strong academic reputation, and Jane is a good, hard working student. Her English teacher has also written a letter recommending that UGA accept her and commenting on her talent for English. She lives with her parents on a farm. Neither of them have a college education, but Jane says they are encouraging her to get a degree.

William Walker

William scored a 425 on the SAT-verbal and a 500 on the SAT-Math. His GPA across all his high school courses was 2.80. He has always enjoyed math and has done well in it, so he plans to major in math. He has satisfied all UGA course requirements for admission, but has taken two non-academic courses, both physical education courses. If you calculate his GPA on just his academic courses, his GPA falls to 2.70. He lives in Atlanta with his parents. His father is a successful businessman. His father has written a letter urging you to accept him as it is a family tradition to attend UGA. William's father, grandfather, and great-grandfather all attended UGA. His high school is a large school that sends many students to UGA. Many have done well at UGA, and many have not, which is typical of the students from many Georgia high schools. William is an athlete,

having been on his high school track team every year, but has never won a race. His physical education teacher has written a letter, a recommendation urging you to accept him. He says that William is a good worker who trains hard, and while he may not be the fastest sprinter, he is always a team player. His health teacher has also written a letter of recommendation that says William works hard and always does his best.

Ted Thompson

Ted scored a 450 on the SAT-verbal and a 450 on the SAT-math. His GPA across all his high school courses was 2.95. However, he has taken several non-academic courses (e.g., physical education, typing). If you calculate his GPA in just the academic courses, it is 2.70. However, he has taken an advanced placement college level course in Chemistry in which he got a B. He lives with his mother in a small town just outside Athens. His parents are divorced. His mother is an elementary school teacher. She got her education degree from UGA many years ago, and is currently very active in the UGA alumni association and the PTA. He intends to become a high school teacher and will therefore major in education. He has worked at several odd jobs to help his mother support the family and to save enough money to go to college so he has not had time to participate in extra-curricular activities. His high school has not sent many students to UGA, so it is difficult to tell the quality of education he has received. It may be very good, very bad, or somewhere in-between. He is missing one science course that UGA requires before admission. He has written a letter stating that he intends to take the course during the summer so he will have completed it before entering UGA in the fall. The pastor of his church has written a letter of recommendation urging you to accept him and saying that he is an honest hard working young man committed to bettering himself. He is a member of the Army reserves and his commanding officer has written a letter of recommendation urging you to accept him because he works hard and always does his best without having to be asked.

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CASE BACKGROUND

WAC makes three types of impeller used on pleasure aircraft. The process involves a high degree of skill and requires special tools. Upon request of the Lathe Department, a Method's Department person tried to develop an improved tool.

The workers did not cooperate with the method's person; however, the workers did develop an improved tool. The workers had a strong informal work arrangement, where they allowed substantial autonomy on the job. The existence of the tool is the secret of the six production workers; however, the method's person suspects a new tool exists. Consequently substantial conflict between the workers and the method's person has occurred.

WAC has a suggestion system that offers workers monetary rewards for ideas submitted which are subsequently used. The rewards are equal to one month's savings, which the workers perceive as entirely inadequate. However, management feels the rewards are adequate. WAC has profit-sharing plan whereby workers are given annual bonuses based on annual undistributed profits.

Tools developed on company time or with company equipment legally belong to the company. The improved tool will save at least \$10,000 per year in reduced tooling costs and increased efficiency. Expansion of the Lathe Department is probable because WAC is growing. The tool is being used now, and WAC is receiving the benefits of its use in terms of higher levels of production for a moderate increase in wage rate (the incentive pay).

Acceptance by the workers of any changes made at this meeting is necessary. They are valued employees whose skill and knowledge are needed for the upcoming WAC expansion. As a group they may be irreplaceable.

The situation requires WAC management to resolve the conflict over the new tool.

Case information is presented below about a problem in a manufacturing plant. Background information is presented first followed by information on the facilitator. The materials reflect the actual feelings and opinions of the participants. Please read all of the case information. After you read the information your group will be asked to make a recommendation to solve the conflict over the new tool.

WAC General Background

The Whirlwind Aircraft Corporation is a leader in the field of pleasure aircraft. It is noted for the development of the modern supercharger which is made by the Lathe Department in three shifts, two people on each shift. Strong feelings of solidarity exist among the workers in the Lathe Department. They make a base wage of \$6.15 an hour with an incentive for every unit produced above standard.

Work on the impeller involves two tool bits. During the rotation of the Lathe to make the impeller, aluminum waste melts and fuses between two tool bits. Periodically, the lathe has to be stopped so that the tool bits can be freed from the welded aluminum and then re-ground.

McBride, one of the Methods Department was asked to find a solution to the tool problem. While McBride was working on the problem word spread that one of the workers, Jones, had solved the tool problem. McBride urged the worker to submit a drawing of the new tool through the suggestion system but the advice was not taken.

McBride appealed to the foreman for help. Peterson, foreman of the Lathe Department, suggested that McBride do a favor for Jones in the hope that Jones would show him the new tool. McBride tried this but was not successful in manipulating Jones. Jones tried to throw McBride off the track by leaving a fake tool bit in the Lathe. At shift change McBride made a drawing of what he believed to be the improved tool. When Engineering made a tool according to these specifications, the tool naturally failed to do the job. The workers heard of this through the grapevine and were delighted.

McBride complained to Peterson that Jones was boasting of this trick. When Peterson talked to Jones, Jones, indicated no knowledge of what Peterson was saying and denied the existence of the new tool.

As foreman, Peterson knows the following facts: (1) WAC has a suggestion system which pays monetary rewards for ideas which the company uses. The rewards rarely exceed a couple of hundred dollars. (2) Due to expansion new workers will soon be employed by the Lathe department. (3) All WAC workers sign a statement transferring ownership of any future patent ideas over to the company if the ideas are developed on company time with company equipment. (4) If the improved tool was used on all three shifts, it could save the company as much as \$10,000 a year in reduced tooling costs and increased efficiency.

Jones the inventor of the new tool hit upon the solution one day. Jones tried to make copies of the new tool but could not. He went to a co-worker and former teacher, Latour, who was able to duplicate the tool on a small grinding wheel in the shop. Jones and Latour then shared the tool with a friend, Doret, on the third shift. All of the workers on the three shifts are using the new tool but are keeping it a closely guarded secret as far as "outsiders" are concerned, locking up the tool at the end of every shift change. Operators who use the new tool can increase efficiency by 50%. The lathe machines can be run at a higher speed. The machines do not have to be stopped for cleaning and re-grinding the old tools.

The Lathe workers feel that the new tool should not be disclosed to management because: (1) the suggestion system only provides monetary rewards based on one's months savings. (2) the tool since it increases efficiency might lead to the layoff of co-workers, (3) the quotas might be changed and the men might have to produce more before a bonus is earned, (4) the amount of money earned per unit above standard might be decreased, (5) before the new tool even some of the best Lathe workers had difficulty making the standard and (6) the Methods Department frequently takes credit for the ideas developed by the Lathe workers. The decision to keep the tool is consistent with the feelings of group loyalty and with past decisions where the Lathe workers shared other improvements.

McBride knows the workers have developed a new tool. He believes that: (1) ideas which benefit other workers should be directly submitted to Methods Department or indirectly through the suggestion system, (2) disrespectful action towards the Methods engineers should be punished by the department foreman, Peterson, or the plant superintendent and (3) since the workers have developed a new tool it should be documented and patented if possible, so that it will be available for everyone on all shifts.

Peterson, after talking with McBride and observing the men believes that a new tool has been developed and is being used by the Lathe workers. In talking with Fagan, the personnel administrator, his expert opinion is that the company can demand that the men turn over the new tool. The tool was developed on company time with company equipment. However, Dunn, the union steward has also approached Peterson and told him that the men are not obligated to participate in the suggestion system if they do not want to.

Peterson feels that the Lathe workers do good work, always on time. Should the men decide to quit, it would be hard to replace them. However, the problem of the new tool needs to be dealt with immediately. Peterson sees two courses of action. Since the men refused to turn over the new tool, he can threaten the men with sanctions such as suspension or transfer to different jobs. The men did sign a statement, when hired, agreeing to turn over any new tools developed on company time with company equipment. The second possibility is to run the problem over to Washington, an expert on tool design with Rex Engineering. He has studied the lathe in question and tool problem. He believes a tool may exist at WAC, or some other company to solve the problem. He also feels that Rex could develop such a tool. He wants \$10,000 dollars to start the project. Peterson feels his approach is reasonable given the potential cost savings associated with new tool.

Peterson has come to your group for advice. What course of action would you recommend to solve the conflicts over the new tool.

ADDITIVE-DIFFERENCE TASK

YING-YANG CORPORATION

SITE SELECTION

The Ying-Yang Corporation, a franchiser for Chinese restaurants, is expanding its operations. They are in the process of selecting sites for 25 new outlets to be constructed in the Midwest during the next year.

The Ying-Yang management has decided that seven factors are very important in deciding where a Chinese restaurant of the type they have should be located:

1. population density within a 5 mile radius of the restaurant.
2. competitive situation in the Chinese restaurant segment.
3. traffic density on the near-by roads.
4. retail sales in the surrounding community.
5. average income per family within a 5 mile radius.
6. land and building costs for a restaurant.
7. population growth in the area.

The management has studied these seven factors and has determined that they are all equally important in deciding where to locate a restaurant.

The Ying-Yang Corporation hired a consulting firm to evaluate six potential restaurant sites in suburban Indianapolis. The Ying-Yang management requested that the consulting firm score each site on each factor on a 100 point basis. The results of the scoring are shown in the Information Packet.

The Ying-Yang management wanted to select one of these sites for construction. The management evaluated the sites by pair-wise comparison (always comparing two sites at a time). Management wanted to select the site that won the last comparison by having the largest number of factors of higher value. Which site did they select.

ADDITIVE-DIFFERENCE TASK --YING-YANG CORPORATION

Data Used for the Task:

| | Site 1 | Site 2 | Site 3 | Site 4 | Site 5 | Site 6 |
|---------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|
| Pop. Density | 22 | 15 | 16 | 11 | 22 | 12 |
| Comp. Sit. | 15 | 26 | 15 | 30 | 24 | 29 |
| Traffic Dens. | 36 | 27 | 30 | 36 | 23 | 18 |
| Retail Sales | 32 | 28 | 16 | 18 | 26 | 24 |
| Family Income | 14 | 25 | 14 | 28 | 22 | 16 |
| Land & Bldg | 15 | 26 | 27 | 19 | 20 | 30 |
| Pop. Growth | 19 | 30 | 28 | 32 | 24 | 16 |
| Order: | 4th Best | 2nd Best | 6th Best | Best (1st) | 3rd Best | 5th Best |

Rules:

Best Site: The Site that has the highest number of factors of higher value when compared to each other site in a pair-wise comparison.

2nd Best Site: The site that has the least number of factors of lower value than the best site; if more than one site qualifies, then a pair-wise comparison is performed to determine which site has a higher number of factors of higher values.

3rd Best Site: The site that has the second least number of factors of lower value than the best site; if more than one site qualifies, then a pair-wise comparison is performed to determine which site has a higher number of factors of higher values.

4th Best Site: The site that has the third least number of factors of lower value than the best site; if more than one site qualifies, then a pair-wise comparison is performed to determine which site has a higher number of factors of higher values.

5th Best Site: The site that has the fourth least number of factors of lower value than the best site; if more than one site qualifies, then a pair-wise comparison is performed to determine which site has a higher number of factors of higher values.

6th Best Site: The site that has the fifth least number of factors of lower value than the best site; if more than one site qualifies, then a pair-wise comparison is performed to determine which site has a higher number of factors of higher values.