ROI Impact Study
for
Virtual Industries

A Study of

The Leadership Accountability Institute's

Leadership Training Program

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ROI INSTITUTE ™

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General Information

Objectives of Impact Study

The impact study was designed to evaluate the success of the Leadership Training Program. The study had three specific objectives:

- To assess the specific impact of the Leadership Training Program in measurable business contributions to the extent possible, up to and including the calculation of the return on investment for Virtual Industries.
- To determine the extent to which participants applied on the job, what they learned during the training.
- To identify specific barriers to successful application on the job in the Virtual Industries job environment.

These objectives were met through the implementation of a comprehensive data collection and analysis process.

Overview of the Leadership Training Program

Needs Assessment

Virtual Industries decided to take advantage of a window of opportunity prior to the plant shutdown to train a small group associates in leadership and management skills. The Management Training Review Task Force had previously determined a need for this type of skill building program for supervisory and management staff. The organization recognized a need to alter the predominant method of autocratic, dictatorial style of management to the leadership style required to create an empowered, self directed work force. Most of the supervisory staff had modeled themselves after the former style since they had been exposed to it as a worker.

Several different functional areas were asked to submit the names of five candidates who they considered "up and comers" that would be contributing significantly to the future of the Nuclear Business Unit. They were considered the role models or leaders within their respective departments. The individuals that participated varied from new first line supervisors to director level. For some participants, the ideas and concepts were new. For others, they were a reinforcement of ideas and concepts previously learned but not always consistently practiced.

The time frame between the decision to offer this program and the start of the program did not allow for sufficient time to properly communicate expectations and explain the time demands of the training. This made it more difficult for some of the participants to be positively predisposed towards the training and to properly plan for the workload required. Some participants were informed to participate in the training at the last minute with no discussion regarding expectations.

Training

The Leadership Program was conducted in 7 sessions, with each session lasting four hours and delivered one day a week for seven weeks. An orientation session was also conducted prior to session one. The program included thirty five (35) participants from various segments of the plant. All of the attendees were in a supervisory capacity when selected to participate in the training. Employees attended the training sessions on Virtual Industries time. Class began on June and concluded in August.

The Leadership Program is designed to improve the essential skills of creativity, delegation and accountability, communication, problem analysis and decision making, time management, planning and motivation. Emphasis is placed on balancing the human relations side of management with results.

The time spaced format allows for real-world, application of concepts between sessions as well as a forum to report back on results achieved. Each session contains practical application projects that correspond to the participants' responsibilities, so the projects completed during the program will result in improved performance.

During the program, each participant completes a one year management plan, writes useful performance standards for each key result area under their responsibility, and identifies opportunities for profitable actions and cost savings in their company. These projects require follow-up action to initiate actual cost savings and improvements in the work setting. This positive form of accountability ensures long-lasting and measurable results.

Independent Resource

The ROI Institute has a superior track record for measuring the impact of learning on organizations. Dr. Jack Phillips and his organization have built a distinguished practice and had become recognized as world leaders in accountability and measurement. The ROI Institute is a team of uniquely skilled professionals experienced in assessment, measurement, and evaluation. The Institutes products and services have helped clients around the world establish measurement systems and measure the business impact and return on investment of training, human resources, and performance improvement programs. Among the capabilities and accomplishments of the Institute are:

- Maintains the world's largest database of ROI studies, which numbers over 300.
- The proprietary Phillips ROI Methodology™ has been utilized and endorsed by several foreign governments.
- Offers the only ROI Certification™ process in existence.
- Client list includes worldwide corporations such as: Honda, AT&T, Genentech, CIBC, DHL, Coca Cola, Intel, Microsoft, Federal Express, Motorola, Xerox and Shell, and leading government organizations.
- Established the ROI Network™ — a professional association exclusive to practitioners of the ROI Process and other measurement and evaluation processes.

Dr. Jack Phillips and his associates have published over two-dozen books on the topic of evaluation and measurement beginning with the first book in 1982. Some of the titles include:

Return on Investment in Training and Performance Improvement Programs, 2nd Edition, Jack J. Phillips, Butterworth-Heinemann, Burlington, MA, 2003.

How to Measure Training Results, Jack J. Phillips and Ron Drew Stone, McGraw-Hill, NY, NY 2002

The Bottomline on ROI, Patricia P. Phillips, CEP Press Atlanta, GA, 2002.

In Action: Measuring ROI in the Public Sector, Patricia P. Phillips, (Editor), American Society for Training and Development, Alexandria, VA, 2002.

The Project Management Scorecard, Jack J. Phillips, Lynne Snead, Tim Bothell, Butterworth-Heinemann Burlington, MA, 2002.   The Human Resources Scorecard, Jack J. Phillips, Ron Stone, Patricia P. Phillips, Butterworth-Heinemann, Burlington, MA 2001.

The Consultant's Scorecard, Jack J. Phillips, McGraw-Hill, New York, NY, 2000.

In Action: Implementing Evaluation Systems and Processes, Jack J. Phillips, (Editor), American Society for Training and Development, Alexandria, VA, 1998.

Handbook of Training and Evaluation and Measurement Methods (3rd Edition), Jack J. Phillips, Gulf Publishing, Houston, TX, 1997.

The ROI Institute offers a variety of products, services, and support systems to assist clients in establishing measurement systems and evaluating training and performance improvement programs.

Model for Impact Study

Trends

All across the globe, organizations are becoming more interested in measuring the impact of training and development and organizational change programs. Four major trends are driving these actions:

- Training programs are increasingly becoming more expensive to develop and deliver. Expensive programs often require more thorough evaluations of their contribution.
- The importance of training in meeting strategic objectives within an organization places the process at a level where accountability is necessary. The Leadership Program is positioned as an important tool in accomplishing Virtual Industries strategic direction. Consequently, it must be subjected to an accountability review.
- There is a definite trend toward measurement in organizations in regulated and non-regulated industries. Organizations are implementing additional measures to gauge success and monitor progress. Training and development is no exception to this trend. The training process must be measured, monitored, and evaluated.
- Senior management, in an attempt to manage resources efficiently in organizations, have brought closer scrutiny to the training and development process and are often requiring accountability for significant training expenditures.

Collectively, these trends are driving the need for more accountability and evaluation in training and development in the most progressive organizations.

Levels of Evaluation

It is helpful and instructive to view the evaluation of training and development using a framework of evaluation levels. As shown in **Figure 1**, an evaluation can be conducted at five different levels.

Level	Questions
1. Reaction & Planned Action	What are participants' reaction to the program and what do they plan to do with the material?
2. Learning	What skills, knowledge, or attitudes have changed and by how much?
3. Job Applications	Did participants apply on-the-job what they learned?
4. Business Results	Did the on-the-job application produce measurable results?
5. Return on Investment	Did the monetary value of the results exceed the cost for the program?

Figure 1 Evaluation Levels

At level 1, participant feedback is obtained to judge the participant's reaction to the effectiveness and success of the training program. Participant reaction questionnaires are typically completed at the end of the program. Level 1 evaluations are administered at the end of each Leadership Program Historically, LAI has been a leader in improving training through the consistent implementation of high quality level 1 evaluations.

At level 2, measures of learning that take place during training are examined to determine the extent to which skills, knowledge, and attitudes change as a result of the program. Learning was assessed by The Leadership Accountability Institute (LAI) instructors during the program. In the professional opinion of the ROI Institute, the LAI method of assessment is among the most thorough in the training industry. Lecture is minimized so that participants can accomplish considerable skill practice during sessions. Highly qualified LAI instructors constantly employ proven techniques to critique performance and guide improvements. This is the first and most important step of learning transfer and it is a key factor in the success of any training program.

At level 3, on-the-job behavior change is monitored and measured. At this level, the evaluation focuses on what specific on-the-job applications have been identified that are directly linked to the program. This impact study provides a comprehensive evaluation of results by focusing on levels 3 through 5.

At level 4, the specific business impact of the training program is measured. Key performance measures directly linked to the training are monitored to show the business impact of the program. Prior to the impact study, no attempts were made to measure business impact.

At level 5, return on investment (ROI), the monetary benefits of the program are compared to the costs of the program. Level 4 business impact data is converted to dollar values to calculate the ROI. This is the ultimate evaluation, as the true worth of the program is determined by comparing benefits to the investment.

ROI Process

To understand the ROI process it is helpful to examine the key steps involved in developing the ROI. **Figure 2** illustrates the process and highlights the issues addressed in the study. The first step is the collection of baseline data and then follow-up data is collected after a program has been conducted. A variety of post-program data collection methods are available.

Perhaps the most important step in the model focuses on the issue of isolating the effects of training. In every organizational situation, a variety of factors influence the output measures of organizational or business impact. Training is only one of many influences which will drive a particular measure. One or more strategies must be selected to isolate the effects of training.
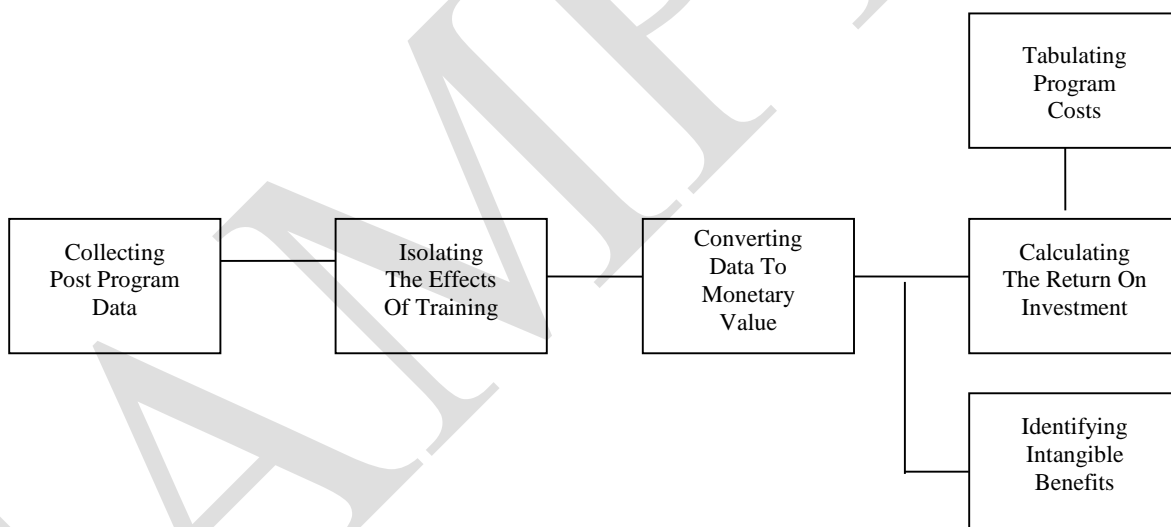
Figure 2 ROI Model

The next step in the ROI model is converting data to monetary values. Output measures must be converted to dollar values so they can be compared to the cost of the program to develop the ROI. Another essential step is to tabulate the program costs to determine the specific investment. All fully loaded costs are included which are related directly or indirectly to the training program. This includes participant salaries and benefits while away from work to attend the training.

Finally, the costs and benefits come together in an equation for the ROI. Net benefits (the program benefits minus costs), are divided by the total investment in the training program. This provides an ROI formula comparable to ROI calculations for other investments which typically show the net earnings divided by the average investment. A final step lists intangible benefits which are very important but not translated into monetary values for the program benefits. In this study, intangible benefits are identified and reported as well as the tangible results.

Collectively, this model provides a framework to measure the return on investment in any type of training and development program and is the model used in this study. The key decisions involving the application of the ROI model involve selecting specific methods to collect data, isolate the effects of training, and convert data to monetary values. These are the three most difficult and critical steps in the process and are described in more detail in the next sections.

Data Collection Methods

In this impact study, two methods were used to collect data. The Action Plan was implemented during the training to identify areas for individual improvement, to link achievements to department level contributions and to convert the contributions to monetary values. Participants were required to use the process to track progress and collect actual performance data for a six month period after the last training session. A follow-up Questionnaire was used to determine the extent to which participants have utilized the training and have achieved on-the-job success. The Questionnaire is shown in **Appendix A** and the Action Plan format is shown in **Appendix B**. The questionnaire included numerous questions to determine job application and business impact. The questionnaire also included a series of questions to capture the savings from the Money Savings Project which was an inherent part of the Leadership Program.

Isolating the Effects of Training

While there are several strategies available to isolate the effects of training, some of the methods were not appropriate in this situation. Due to the difficulty of implementation, control groups were not made available by management for this impact study. Trend line data was not useful because the specific performance measures being tracked were not available as a measure from the business unit. While other potential methods could be applied, it was agreed that input directly from the participants would be the most appropriate. Therefore the Action Plan and the Questionnaire became important tools to determine the success of the Leadership Program for Virtual Industries.

Although subjective, participant estimates of training impact are a reliable indicator when appropriate steps are taken to collect the data. The participants are the closest individuals to the performance improvement and are often aware of the other influences which impact the performance measures. In studies where participant estimates have been compared to the differences obtained from control group experiments, participant estimates have been found to be extremely reliable. Therefore, for this study, participants were asked to indicate the degree to which a specific improvement was caused by the training program. The Action Plan in **Appendix B** was the tool used to capture this data. The Action Plan was also used to capture the confidence level that the participants had in their estimates.

Conversion of Data to Monetary Value

While there are many ways in which data can be converted to monetary values, the primary strategy used in this study is to ask participants to make estimates and calculations based on the improvements in their work units. In many cases, the Action Plans indicated that participants used accepted standards and conversion factors to arrive at monetary values. In other cases, the ROI Institute had to make adjustments to ensure the reliability of the data. Some of the Action Plans were not thorough and while the data was not usable for the purposes of calculating a ROI, there were still indications that performance improvements had occurred.

Data Collection Strategy

Issues

An effective data collection strategy was designed to meet all three objectives of this study. The Action Plans and the Questionnaire are utilized to ensure that adequate, quality input is obtained for the evaluation.

In both data collection methods, the focus was on impact and not process. Consequently, very little effort was made to collect input on the actual training delivery processes and mechanisms, although some data was collected. Most of the emphasis is on the impact of the program, which is obtained with levels 3 and 4 data collection.

To remain objective, data was only collected from people who experienced the training. Although data from the instruction team and others may be very objective and helpful, it is essential that input is free from any perceived bias. These steps helped to ensure that the process was unbiased, objective, and contained minimum error.

Timing of Data Collection

Another important issue to address in the study is the timing of the data collection. Although the Leadership Program is designed to have a long-term impact, the specific improvements from training programs are difficult to capture if assessed years after the program is completed. Although the connection may exist, it is very difficult for the participants to make the connection between a training program and an Action Plan item or other specific improvement. Also, for longer periods of time, additional variables will influence output measures, thus complicating the cause and effect relationship between training and improvement. The training for Virtual Industries was time spaced (one session a week for seven weeks) and this provided opportunities for job application on an ongoing basis. Because of the above factors, it was decided to measure the success of the training during a six month time frame after the last training session. Participant input was limited to six months.

A standard practice in program evaluation is to capture the annual benefits after the program has been conducted and compare them to the cost of the program. This, in essence, limits the benefits in an ROI calculation to the impact of a program for one year of improvements. While in some cases this could slightly overstate the results, the ROI Institute's experience shows that it usually understates them. In the case of the Leadership Program, it is highly probable that this practice understates the results. The skill transfer techniques used by LAI instructors are among the most effective in the training industry to build confidence and skill that contributes to long lasting effects. Even though this long lasting effect likely occurs for the Leadership Program, the cause and effect complications mentioned above require that the one year standard be followed. It also represents a conservative approach since the benefits that might be obtained in subsequent years are not used in the calculation.

This decision does not imply these programs are not having a long-term impact at Virtual Industries. Some individuals responded that these programs actually have shaped their thinking and behavior for the remainder of their career with Virtual Industries. However, for the purpose of this study, the benefits were limited to a more manageable and realistic time frame of one year.

Questionnaire, Action Plan and Money Savings Project

The most common follow-up method, questionnaires, provide a rich source of information concerning the extent to which participants have applied what they have learned in the program and the success they have achieved with the application. Overall, 35 individuals participated the training and were identified to receive a questionnaire. The questionnaire was designed and administered by the ROI Institute. It was mailed to graduates six months after the last training session and data was collected over a six month period. Participants were asked to return their completed Action Plans to the Institute, along with the completed questionnaire. The Institute provided the Action Plan format and process to the instruction team prior to the beginning of the training. Participants completed their plans throughout the training with guidance from the instruction team. In addition, the Leadership Program has a Money Savings Project built in as part of the course design. All participants were asked to complete this project. **Table 1** shows a breakdown of the participants who received and returned the questionnaire, Action Plan and Money Savings Project. The database is not a statistically valid sample from which to make conclusions about similar populations who might be participants in a future training program. However, the results are reflective of what this group of participants accomplished.

Data Collection Document	# Provided or Mailed	# Participants Responding	Percent Returned
Action Plan Documents	*35*	*8*	*23%*
Questionnaires	*35*	*23*	*66%*
Money Savings Project	*35*	*6*	*17%*

Table 1 Response Profile

The questionnaire focused on the impact of training and the barriers to successful implementation as well as potential changes that might be necessary. **Table 2** shows the key areas addressed in the participant questionnaire.

■ Success of Training Objectives	■ Accomplishments/Impact
■ Relevance to Job	■ Barriers to Implementation
■ Usefulness of the Training	■ Supervisor Support
■ Knowledge/Skills Increase	■ Business Measures Linked to Training
■ Actions Taken	■ Recommended Changes

Table 2 Key Areas Addressed in the Participant Questionnaire

Because of the need to have business impact data, the Action Plan process can provide significant detail to gauge the actual impact of the training as it was applied. The Action Plan is also a useful tool to keep employees focused on changing their behavior in the work setting. **Appendix B** shows a series of Action Plan questions asked of participants to capture impact data.

Results - Application of Knowledge and Skills

To assure confidentiality, the Questionnaire was sent out from an external resource the ROI Institute. The Institute has conducted over 400 ROI impact studies. Their experience has shown that by ensuring anonymous feedback, participants provide more valid data. They are under no pressure to exaggerate the data to impress superiors. The Questionnaires and Action Plans were also returned to the Institute. Then this report was developed and presented to the Leadership Accountability Institute for presentation to the management of Virtual Industries.

Responses to the Questionnaires provided a very good source of data because of the number of write in comments and quality of data supplied. The return rate of completed Questionnaires (66%) is acceptable, but the return of Action Plans (23%) is disappointing. Also, only 17% of the Money Savings Projects were completed. **Appendix A** presents a copy of the Questionnaire along with a summary of the data. All quantitative data are shown for each question or item. Approximately eighty percent of the comments provided are listed, representing a cross section of the scope and meaning of the full array of the comments.

When employees received the Follow-up Questionnaire, they were also asked to return their completed Action Plans. They had been working on the Action Plans since the first week of the training and for a six month period after the training. The data on several of the Action Plans was of very good quality and provided substantial information to use in calculating the ROI. Many of the remaining Action Plans indicated that performance improvements had occurred, but there was insufficient data to calculate a monetary value. These improvements are reported as intangible benefits. **Appendix C** includes a consolidation of results from the Action Plans and Money Savings Projects.

Because the main thrust of this study is to determine the business impact of the Leadership Program, every attempt was made to uncover specific business results linked to the training. The impact of the training is presented below beginning with skills/knowledge application. Each participant was asked to select the three (3) skills they have used most on-the-job since taking the Leadership Program. Twenty two (22) skills addressed by the training were explored. The skills/behaviors reported to be used most by the 18 respondents are listed below in **Table 3**:

# of Responses	Skill/Behavior
6	Communication
6	Delegating
5	Decision making and problem solving
4	Listening to others points of view
3	Developing creative input from others
3	Motivation techniques

Table 3   Skills Used Most as a Result of the Leadership Program

While the above influences are subjective, there is some indication that respondents do see a connection between the training and the application of skills in the work setting. They are also consistent with the responses on the Action Plans.

Six skill areas were influenced from a *significant* to a *very significant* extent. They are:

% Responding   *Skill/Behavior Influenced "Significantly" to "Very Significantly"*

- 47.1%   I involve employees in creative meetings in order to develop their decision-making potential.
- 35.3%   I keep faith with associates, report facts honestly, and listen sincerely.
- 35.3%   As I communicate decisions to my employees, I clarify the total picture, the reasons for the decision, the desired results and their part in implementation.
- 35.3%   I see things from the other person's point of view.
- 29.4%   I speak pleasantly and courteously with regard for feelings of others
- 23.6%   I listen with empathy.

At least 41% of the respondents also indicated *significant change* in the four skill areas as follows:

% Responding   *Skill/Behavior Influenced "Significantly"*

- 47.1%   I set an example that influences improvement, progress and achievement by people.
- 47.1%   I evaluate my decisions by predetermining their possible impact on people and things.
- 41.2%   I make special effort to maintain communication effectiveness.
- 41.2%   I provide realistic and fair rewards for meritorious job performance.

Results - Business Impact

As previously stated, two instruments were used to determine business impact. Follow-up Questionnaires were mailed to participants six months after the training was completed. Among other job application and business impact questions it included a series of questions to capture savings from the Money Savings Project. Action Plans were implemented as an inherent part of the training. The action planning process began during session one and ended six months after the training was completed. Business performance data then, was collected during the six month period after the training was completed.

Questionnaire Responses

Item #10 of the questionnaire demonstrates that twenty five percent of the respondents feel the training had a significant influence on some measures in their work unit. The bar chart in **Figure 3** illustrates that productivity, efficiency, customer response time, customer satisfaction, and employee satisfaction were influenced the greatest by the training.

It is puzzling that item "H" Employee Turnover and item "I" Employee Absenteeism were viewed as "not applicable" by 31% and 25% respectively. All of these respondents indicated that they were in supervisory positions. Many studies have shown that supervisors do influence turnover and absenteeism. Even in the Nuclear Power Industry and the Information Systems Industry where it is a sellers (job applicant) market, supervisors can have a great influence.

10. Indicate the extent to which you think your application of knowledge and skills learned from this course has had a positive influence on the following measures in your own work or your work unit.

Measure	Mean
A. Productivity	4.00
B. Quality	3.44
C. Cost Control	3.27
D. Efficiency	3.87
E. Customer Response-Time	3.56
F. Cycle Time	2.44
G. Sales	1.19
H. Employee Turnover	2.44
I. Employee Absenteeism	2.31
J. Employee Satisfaction	3.47
K. Employee Complaints	3.06
L. Customer Satisfaction	3.56
M. Customer Complaints	3.31
N. Other	na
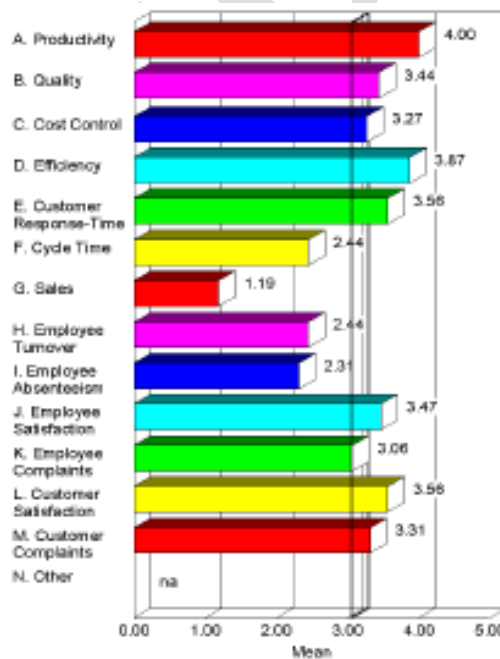
Figure 3: Training's Influence on Business Measures

Scale used for Question # 10

| 0	1	2	3	4	5
Not Applicable	Applies, But No Influence	Some Influence	Moderate Influence	Significant Influence	Very Significant Influence

Participants were asked in question #7 to identify specific accomplishments/improvements linked to the training. Some of the comments are listed below with the complete listing in **Appendix A**.

Typical comments to question #7 are:
- Increased output of work unit, more effective appraisals, increased employee morale, better organization skills, more use of action plans by me and work unit.
- Increased output - Time management.
- I have learned to survive in this fear and shame-based environment.
- Mostly improved customer satisfaction by enlisting customers in problem resolution to customer issues.
- Procedure improvement effort was sped up by prioritization strategy from technicians.
- Customer satisfaction is improved, especially recognition by outside stakeholders.
- I have more personal time to focus on issues as a result of more effective delegation.
- Due to use of "Planning Process" I was able to complete an RF07 project ahead of schedule. Implemented changes in work processes through the LAI problem solving process.
- I use my Planner 25% of the time as opposed to 0% before the Leadership program. I keep up with voice, electronic mail and APPO. But still have room for improvement in the corrective action arena. Adopted a "just do it" attitude. Capture job performance examples on my team members for annual performance reviews, capturing average of one per week.

Based on responses to the questionnaire, 81% of the respondents would recommend the Leadership Program to others, and 69% responded that it was a good investment for Virtual Industries. Question #13 asked participants, "Do you think the Leadership Program represented a good investment for your employer?"
Figure 4 below illustrates the response.
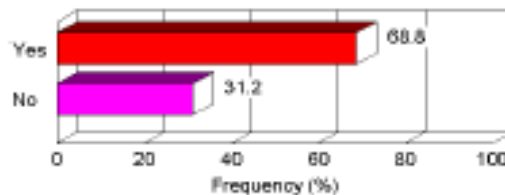
Figure 4: Perception of Training Investment

Comments to question #13 are listed below. See **Appendix A**, question #13 for a listing of all responses.

"Yes" comments to question #13 are:
- Developed relationships and common perspective with other supervisors/managers.
- This is an entry level training program. Only those at that level may benefit.
- Just the action plan and money saving idea from me paid for the course.
- Yes, however, the senior management team must passionately model the behaviors, not their opposites!
- Yes, but the whirlwind the NBU is in right now provides little opportunity for application of the Leadership principles. TOO MUCH is changing right now.
- It was a great asset for me to aid in my own stakeholder management.
- It provides instruction in a set of basic skills needed by all management.
- Although my projects identified during the course have not yet resulted in a positive return, I think that my organization is performing more effectively.

"No" comments to question #13 are:
- The company did not provide any follow through.
- Techniques not promoted by current management expectations.
- Right elements yet pace of work, length of hours does not lend itself currently to high impact.
- The wrong people attended.
- The program needs to be updated to provide a better tool. Is it a training tool or money saving project?
- Timing was bad, people were worn out and didn't have the energy to devote to implementing these skills.

When asked, "to what extent has the Leadership Program enabled you to spend more time leading/managing and less time doing the work," 37.5% of the respondents checked to a "significant" and "very significant" extent. When asked how the process to capture the return on investment could be improved, the following responses were provided.

- With reorganizations and job changes, hard to do.
- To solicit two additional ideas from work unit for money savings ideas.
- The problems at the NBU were due to the extent of senior management commitment.
- My employer needs to provide follow-up sessions to demonstrate their willingness to support learning.
- Develop a template for Leadership program graduates to use in identifying improvements as they are discovered. Establish a more global baseline for items to be measured and to compare future trends to the baseline.
- Don't stress on the dollar value. Train the leaders to be better leaders, the money will come back.
- Devote more class time to working on actions and how we are incorporating the skills in our daily activities.
- This questionnaire is very easy to complete. Our problem is that most of us are constantly in information overload.

Action Plan and Money Savings Project Responses

Participants were provided with an orientation to the action planning process during the training. A blank copy of the Action Plan is included in **Appendix B**. Each individual was asked to establish objectives and improvement measures that were linked to the training program. They also estimated their current performance in the improvement area and set a target for improvement. As the training progressed, they were asked to establish action steps to achieve their target performance. During the six months following the training, each person was to measure their improvement and place a dollar value on the measure and the improvement. **Table 4** shows a series of questions from the analysis section of the action plan that were designed to capture business impact data. During the training, participants received instructions from the instructor on establishing measures and dollar values for a unit of improvement. A consolidation of all participant responses that were used to capture the impact data for the training program's monetary benefits are shown in **Appendix C**. The results of the money savings project are also included in this appendix.

The low response rate of returned Action Plans (23%) and the low percentage completing their money savings projects (17%) may be influenced by the significant change occurring in the XYZ Business Unit. Several respondents indicated that the timing was bad, significant change was occurring and the company did not provide any follow through. Even though the low

return rate prevented an analysis of the full impact of the training, the results demonstrate that the program achieved an impressive return on investment.

Table 4 Analysis Section of Action Plan

Monetary data taken from the analysis section of the Action Plans and from the Money Savings projects were used to calculate the ROI. The example in **Table 5**, taken from item #3 in **Appendix C**, illustrates how the benefits were calculated.

Key Influence	Unit of Measure	Reported Value of One Unit	Monthly Change Reported in Measure	% of Change Caused by the Program	Confidence Level Reported	Total Monthly Program Benefit	Annualized Program Benefit
Reduction in preparation time for work week work orders by employees.	Time savings.	$18 per hour	$288.00 (16 man-hours improvement in processing time)	70%	100%	$201.60	$2218.00

Table 5 Adjustments to Data - Calculation

From the illustration in **Table 6** above, the annualized benefit is determined as follows:

Value of One Unit: $18.00 per hour
Monthly Change: $18.00 x 16 hours monthly = $288.00
Factor for Training Impact: $288.00 x 70% = $201.60
Confidence Level: $201.60 x 100% = $201.60 monthly benefit
Annualized Impact: $201.60 x 11 months = $2218.00

Eleven months is used for the annual benefit calculation to account for unproductive time occurring due to vacation and holidays. Some adjustments use twelve months where justified by the nature of the savings. When adjustments to all eight data items are made as illustrated above, the total benefit, or annualized impact of the training is $319,706.00 While most of the influences listed on participant Action Plans are estimates, most actually apply to hard data items such as time savings and cost savings that are easily estimated by participants. These improvements indicate that these employees see a connection between the learning, the application of skills and important measures at the Nuclear Business Unit. The adjustments to the data made by the ROI Institute also result in a more credible estimate.

Action Plans were returned by only eight of the 35 participants even though 12 of those responding to the questionnaire say they completed a plan. Complete Action Plans with useful monetary data were provided by three of the 35 participants. Completed Money Savings projects were returned by five participants. The estimates provided by these eight participants were adjusted twice as outlined above based on isolating the impact as a result of the training and confidence level of the respondent.

The approach used to determine the ROI calculation is based on a very conservative assumption that the other 27 participants had little or no specific dollar value returns since they did not provide monetary data. This does not imply that there was no benefit from these participants.

Program Costs

Cost Components

When the return on investment is developed, a tabulation of the costs for each program is necessary. A fully loaded cost profile was used in this study. This approach accounts for all of the costs of training so that senior management will fully understand the total costs of the Leadership Program The listing of the cost elements considered in this analysis is contained in **Table 6.**

The LAI Course ®	
Virtual Industries Administration Support Costs	$ 430.59
Tuition for the Leadership Training Program	34,000.00
Participant Salaries and Benefits (35 participants at $1,485)	51,961.96
Materials	172.90
Lunch	2,800.00
Evaluation for Return on Investment	3,000.00
Total Cost of Training Program	$ 92,365.00
$2,639 per participant	

Table 6 Cost Categories

The development costs for the course were minimal. Since the Leadership Program has been refined over the years to meet the needs of varied audiences, Virtual Industries management chose to implement the course as a developmental tool for supervisors and the organization. Some administrative costs were incurred to coordinate the training and are captured. The delivery of the training covers expenses for instructor fees, training materials, and refreshments. The evaluation costs were also tabulated. This includes all costs to conduct the impact study, including data collection and analysis and the development of the management report. The process of tabulating costs reveals a total program cost of $92,365 or $2,639 per participant.

ROI Calculation

The ultimate challenge of this impact study is to calculate the return on investment (ROI). To show the actual return, the benefits from the three Action Plans, and five Money Savings Projects, calculated in **Appendix C**, are compared to the cost of the program in order to calculate the estimated ROI.

The total program benefits from of the Leadership Program are $319,706.00   The cost of the program is $92,365.00 using fully loaded costs. The ROI becomes:

$$ROI \quad = \quad \frac{\text{Net Benefits}}{\text{Costs}} \quad = \quad \frac{\$319,706 - \$92,365}{\$92,365} \quad = \quad 246\%$$

This yields an ROI of 246% for Virtual Industries. Although the values are based on estimates, the values do come from the participants and adjustments have been made to make the estimates more conservative. Thus, this positive ROI should represent an indication of the success of the Leadership Program in terms of its return to the Virtual Industries. The fact that such a small number of action plans and Cost Savings Projects can yield enough data to result in a return on investment is manifested by the nature of the participants job level. Supervisory actions in the work setting have a large sphere of influence and can easily impact the results achieved by others.

Because the ROI Institute takes a very conservative approach to calculate the ROI, the participants who did not return monetary data are not included in the benefits portion of the above ROI calculation. The possible reasons participants did not return Action Plans or provide monetary data is discussed in the section, "Action Plan and Money Savings Project Responses" on page 11 of this report.

It is the professional opinion of the ROI Institute that this group of participants achieved a return on investment in excess of 246%. However, the organization's culture and the rapid change environment may have been strong influencing factors in deterring the accountability of tracking and reporting the monetary benefits from the course. It seems that the position level, education and experience of these participants suggests that, if willing, and given the time, they should be able to easily develop action plans and determine monetary benefits from achievements in the work setting.

ROI Interpretation

When developing the actual ROI, a conservative approach is always taken. If monetary benefits have a subjective component, they are adjusted downward. If program costs contain estimates, they are adjusted upward. This conservative approach builds credibility and makes the result more reliable.

Estimating the return on investment for a training program can be a very difficult process. The exact value will never be known, just as the impact of a safety program at a nuclear station will never be known precisely. However, the process used in calculating the ROI is a generally accepted technique for measuring training programs.

The participants provided the information voluntarily and the questionnaire was anonymous. There was no pressure to provide a certain type of data. In addition, four adjustments have been made to produce more conservative estimates.

1. The ROI calculation of 246% uses only the three Action Plans and five Money Savings Projects that provided usable monetary data. The other participants who did not return Action Plans and those returned with only intangible data were not included in this calculation. They are included only in the cost component of the formula.

2. Only the benefits captured in the first year are utilized, although there are clearly second and third year benefits.

3. The value of Action Plan Improvements and Money Savings Projects is reduced to reflect the percentage that participants link directly to the program as illustrated in **Table 5**.

4. The value is further reduced by the confidence level that the individual places on the estimate as illustrated in **Table 5**.

With these adjustments and considerations outlined above, it is highly probable that the ROI of 246% for Virtual Industries is understated.

The formula used for the ROI is the same basic calculation used to evaluate other investments such as investments in equipment and facilities. Thus, the target rates used for other investments could be compared to percentages in this study. However, because this process is not precise, a different target rate is often suggested. For most organizations involved in calculating return on investments in training programs, a target rate of 25% is established. Thus, if a program is not generating at least a 25% return on investment in the first year, it would be considered to be an undesirable investment. Applying this standard, the ROI of 246% achieved by the participants of the Leadership Program far exceeds requirements.

Results - Intangible Benefits

Intangible benefits are those benefits that cannot be assigned a dollar value or an assigned value is questionable. Even though these benefits are not used in the ROI calculation, they are often important to the goals of the organization. Many positive comments from participants and action plan reporting indicate the following intangibles.

- Just the Action Plan and Money Saving Idea from me paid for the course.
- Increased delegation, improved communication
- Improved communication skills with my employees and peers.
- Listening with empathy, looking more for causes rather than symptoms. Delegation.
- Increased delegation and creative empowerment to partners within and outside my supervisory scope.
- Improved communications and recognition of people and time management.
- While not a supervisor at this time, I use improved communication and solicit participation in decision making from groups that I have led.
- Being aware that I need to continue to improve my listening skills when dealing with subordinates and peers.
- More focus on getting more input from technicians. Better communication skills on field observations.
- Planning and improved delegation has achieved increased production and maintained high quality work.
- Increased participation by team members in problem identification and resolution.
- Improved meeting conversation and idea generation. Improved ability to delegate instead of doing all myself. Improved consensus making.
- Increased output of work unit, more effective appraisals, increased employee morale, better organization skills, more use of action plans by me and work unit.
- Increased output. Time management.
- Mostly improved customer satisfaction by enlisting customers in problem resolution to customer issues.
- Procedure improvement effort was sped up by prioritization strategy from technicians.
- Customer satisfaction is improved, especially recognition by outside stakeholders.
- I have more personal time to focus on issues as a result of more effective delegation.
- I hope that I have a better relationship with my employees. This does not have a specific measure in short term but should help in the long term.

Participant Recommendations and Barriers to Application

Positive Comments

Numerous positive comments were made by participants. A few of these are presented below:

- Developed relationships and common perspective with other supervisors/managers.
- Excellent class giving the supervisor more positive skills to increase work unit productivity.
- The course allowed you the time to actually write down and focus on your problem areas.
- Several techniques for creative input and brainstorming.
- It provides instruction in a set of basic skills needed by all management.
- Good coverage of core elements of leadership.
- Although my projects identified during the course have not yet resulted in a positive return, I think that my organization is performing more effectively.
- The instructor found a way to make the class as effective as possible. I would relish the opportunity to work in a place where the Leadership principles were applied.
- The Leadership program and the employer need to become partners in ensuring the employer gets the most return on investment. Also, the employer, at all levels and in all departments need to provide the support to foster the principles of this training.
- I have held supervisory/managerial positions in 12 of the 27 years I have been in the utility business. I wish I had the training when I got into job.

Concerns and Suggestions from Participants

When asked for suggestions about the course, participants provided numerous comments.
A sampling is provided below with the full listing in **Appendix A**:

The Leadership Program:
- This is an entry level training program. Only those at that level may benefit.
- The wrong people attended.
- The program needs to be updated to provide a better tool. Is it a training tool or money savings project?
- It is the same as the LAI.
- Program needs to have more in class group projects: Team building exercises, leadership exercises. Should limit class participation.
- Need more practical exercises.
- It is very time demanding. Individuals with high collateral duties may have problems with the time demand.
- Too much time wasted on developing ROI project. In my case, intervening occurrences have precluded any significant development until next year. Capturing ROI information is not a relative priority when compared to other business related items. I think Leadership program is a super idea, but we need to de-emphasize the ROI part for the individual and provide more in-class time to review/discuss the skills and behaviors of successful leadership.

Virtual Industries:
- The company did not provide for any follow through.
- Techniques not promoted by current management expectations.
- The senior management team must passionately model the behaviors, not their opposites.
- The whirlwind that NBU is in right now provides little opportunity for application of the Leadership principles. Too much is changing right now.
- Timing was bad, people were worn out and didn't have the energy to devote to implementing these skills.
- The problems at the NBU were due to the extent of senior management commitment.

- My employer needs to provide follow-up sessions to reinforce principles and demonstrate their willingness to support learning.
- The Leadership program and the employer need to become partners in ensuring the employer gets the most return on investment. Also, the employer, at all levels and in all departments needs to provide the support to foster the principles of this training.

Barriers to Performance

When asked in question #9 about barriers to job application of skills learned, the participants responded to the question as noted below.

Percentage of participants selecting	*Number of participants selecting*	*Item*
33.3%	4	I did not have enough time
25.0%	3	My work environment does not support these skills
25.0%	3	I have no opportunity to use the skills
8.3%	1	This material does not apply to my job situation
0.0%	0	My supervisor does not support this type of course

Write-in comments to question #9 are as indicated below:
- Senior management emphasizes solving the crisis of the day to the point of interrupting well organized action plans.
- Work environment is still authoritarian - focused on negative aspects of performance. Encouragement to develop "soft skills" is lip service - not embraced by all.
- They give them "lip service" at best. All they are concerned with are short term, cost cutting measures. Which in the end, will yield no real return on investment.
- Since taking the Leadership program, the organization I work for has become very short sighted, only focusing on day-to-day challenges, with little or no focus on long term goals. This is very frustrating to me.
- The pace of work and change is best described as "incredible".
- I try to engage in planning process, or creative process, therefore, but I find it difficult to gain support organizationally when I try to use these skills.
- The culture combined with an over committed work load has a negative impact on personnel. Many associates believe we have too many initiatives underway at one time.

The response to this question indicates that there are significant barriers deterring the application of the training in the work setting. Overall, the work environment is viewed as non-supportive when supervisors apply the skills learned during the program. It may be difficult to sustain improvements in this setting.

Conclusions and Recommendations

Conclusions

The training delivered by The Leadership Accountability Institute. has made a contribution to the goals of the Virtual Industries. Participant reaction has been very favorable. The business contribution of the course has been closely scrutinized, using a very conservative approach. Many intangibles emerged. In the final analysis, it has well exceeded the ROI standard for training programs. There is sufficient evidence that the learning in the classroom contributed to the job application of new skills/behaviors which in turn is responsible for a bottom line contribution to Virtual Industries.

Conclusion A. Participants gave the course very high marks for improvements in communication, delegation skills, listening skills, decision making and problem solving skills, obtaining willing cooperation from others through motivation techniques, and developing creative input from others.

Conclusion B. The training was perceived to have a significant degree of linkage to the business measures listed in question #10. Productivity, customer response time, efficiency and employee satisfaction were the measures indicated as being the most affected by the training.

Conclusion C. A significant amount of change is occurring within Virtual Industries, but a significant number of respondents view the management style as unchanged or inflexible.

Conclusion D. While at least one supervisor influenced a 50% reduction in turnover, 36% of the respondents view this area as "not applicable" to their job. It is unclear if they view it as "not applicable" because they feel powerless to influence a positive work environment, or because of the job market demand for nuclear personnel, or for other reasons.

Conclusion E. Indications from this study suggest the possibility that the application of skills acquired during training are not being optimized when participants return to the work setting.

Recommendations

The following recommendations are made to help improve the effectiveness of the training and to support the training process at Virtual Industries. They address the issues identified by respondents to the Questionnaire and other issues identified through the analysis of the data.

Recommendation 1. Pre-training communication. For future training of supervisors, consider implementing pre-training communication from senior management that addresses expectations and emphasis regarding the training and follow-up application in the work setting.

Recommendation 2. Virtual Industries management should examine the training process. Examine the training process internal to Virtual Industries to determine if employees are held accountable to implement acquired skills when they return to the work setting. As Conclusion E. suggests, there may be a sense of "business as usual" when some employees return to the work setting after a training experience. An organization undergoing change such as Virtual Industries should consider this a high priority area in order to support the transformation process.

Recommendation 3. Reinforce and recognize results achieved. Virtual Industries senior management, if pleased with this training effort and the involvement of their supervisors, should reinforce and recognize the results achieved.

Recommendation 4. Address areas of concern. Virtual Industries senior management should address any areas of concern such as barriers to performance noted on page 18 of this report, which may have surfaced through the training or that were identified through this impact study.

Recommendation 5. Share results of impact study. Virtual Industries senior management should share the results of this ROI impact study with the participants in the Leadership Program and others as appropriate.

Appendix A: Questionnaire - Data Tabulation and Summary

Impact Questionnaire for

The Leadership Accountability Institute's

Leadership Training Program

To be Completed
Six Months after the
Last Session of the Training

Instructions

1. Please complete this questionnaire as promptly as possible and return it to the address shown on the last page. To provide responses, you will need to reflect on the Leadership Training Program and think about specific ways in which you have applied what you learned from each session. It may be helpful to review the materials from each session.

2. Please take your time as you provide responses. Accurate and complete responses are very important. You should be able to provide thorough responses in about 30 minutes.

3. You will need your action plan as you respond to several items on the questionnaire. Please review the action plan and make sure that each page is accurate and complete. Attach a copy of the action plan to the questionnaire when it is returned.

4. Please be objective in providing responses. In no way will your name be linked to your input. Your questionnaire and action plan will be viewed only by a representative from an outside firm, The ROI Institute. Specific responses or comments related to any individual will not be communicated to either Virtual Industries or The Leadership Accountability Institute.

5. Your responses will help determine the impact of this program. In exchange for your participation in this evaluation, a copy of a report summarizing the success of the entire class will be distributed to you within one month. Please make sure that your input is included with all of your classmates.

6. Should you need clarification or more information, please contact your training unit at Virtual Industries or a representative from The ROI Institute.

The Leadership Training Program
Impact Questionnaire

Are you currently in a supervisory or management role/capacity?   Yes **86%**   No **14%**

1. Listed below are the objectives of the Leadership Program After reflecting on this course, please indicate your degree of success in meeting these objectives. Success means you achieved the objective to the extent that learning occurred during the sessions *Please check the appropriate response beside each item:*

OBJECTIVE	Not Applicable	No Success	Very Little Success	Limited Success	Generally Successful	Completely Successful	Mean
A. Use the creative process effectively.	0.0%	5.9%	11.8%	23.5%	52.9%	5.9%	**4.41**
B. Use the planning process effectively.	0.0%	0.0%	17.6%	23.5%	52.9%	5.9%	**4.47**
C. Complete the action planning process	25.0%	6.2%	6.2%	12.5%	37.5%	12.5%	**3.69**
D. Identify and write useful performance standards.	5.9%	11.8%	5.9%	11.8%	58.8%	5.9%	**4.24**
E. Identify opportunities for profitable actions in your company/	0.0%	11.8%	5.9%	52.9%	29.4%	0.0%	**4.00**
F. Apply the time management tools.	0.0%	0.0%	5.9%	17.6%	70.6%	5.9%	**4.76**
G. Use the delegation process effectively.	0.0%	0.0%	5.9%	11.8%	76.5%	5.9%	**4.82**
H. Use the LAI approach to handling mistakes.	5.9%	5.9%	5.9%	5.9%	58.8%	17.6%	**4.59**
I. Use the problem analysis and decision making process effectively.	0.0%	11.8%	5.9%	23.5%	47.1%	11.8%	**4.41**
J. Increase your sensitivity to peoples personal and business problems.	0.0%	0.0%	0.0%	11.8%	58.8%	29.4%	**4.18**
K. Seek to understand, appreciate and respond to the diversity of associates.	0.0%	0.0%	0.0%	17.6%	52.9%	29.4%	**4.12**
L. Develop and apply programs and principles to build a more motivational atmosphere.	0.0%	11.8%	5.9%	29.4%	47.1%	5.9%	**4.29**
M. Identify specific applications of leadership principles.	0.0%	5.9%	11.8%	17.6%	64.7%	0.0%	**4.41**
N. Increase effectiveness in the performance management system.	5.9%	5.9%	23.5%	17.6%	41.2%	5.9%	**4.00**
O. Assess the results of training programs.	0.0%	17.6%	11.8%	41.2%	29.4%	0.0%	**3.82**

2. Did you develop and implement on-the-job action plans as part of the Leadership Program?

Yes   **71%**   No   **29%**

If yes, complete and return your Action Plans with this questionnaire. If not, please explain why you did not complete your Action Plans.

The following comments for question # 2 were provided by participants:.

- Changed jobs shortly after class; new job had no bearing on action plan.
- No time due to outage and reorganization.
- Returned action plan with first questionnaire.
- Too many organizational changes and role changes soon after class.
- Management did not afford adequate time and resources.
- My action plan was geared toward supervisory skill improvement. Since the Leadership program, my position has changed and I now do not supervise.
- Yes, however, this was already an existing action plan.
- Management plan was developed, emergent work for outages pulled resources and wrecked timetables. Plan is still working.
- The action plans were completed, but I was reassigned to a new position. These plans were turned over to the new people in my old position but only one was implemented (C.M. work order backlog reduction). It is still in effect and appears to be effective. The other two were not implemented.

3. Please rate, on a scale of 1-5, the relevance of each of the program elements to your job, with (1) indicating no relevance, and (5) indicating very relevant.

4.
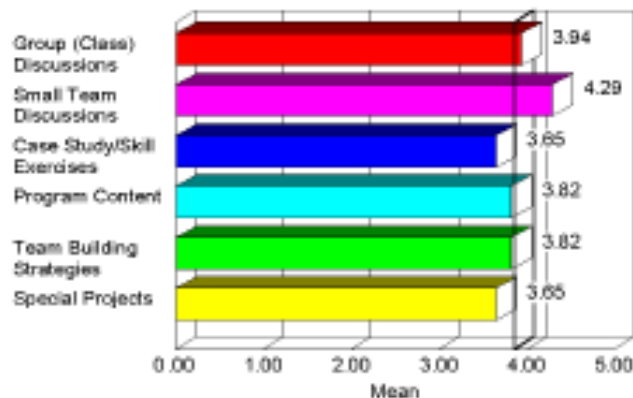
Relevance of Program Elements (1-5 Scale)

4. Please indicate the degree to which your application of the following skills or behaviors were enhanced as a result of your participation in the Leadership Training Program. *Check the appropriate response beside each item.*

Skill Area	No Opportunity to use Skill	No Change	Little Change	Some Change	Significant Change	Very Significant Change	Mean
A. Developing Creativity							
1) I hold creative meetings to develop the creative potential of my people and I involve them in active participation in solving problems.	5.9%	0.0%	47.1%	23.5%	23.5%	0.0%	**4.00**
2) I use an organized approach to creative thinking such as using check lists and the "LAI brainstorming technique".	6.2%	6.2%	18.8%	56.2%	12.5%	0.0%	**3.62**
B. Motivating							
1) I help build purpose and meaning into the job of team members.	5.9%	5.9%	0.0%	70.6%	11.8%	5.9%	**3.94**
2) I provide realistic and fair rewards for meritorious job performance.	11.8%	5.9%	11.8%	29.4%	41.2%	0.0%	**3.82**
3) I build and maintain a climate of mutual trust and respect in my area of operations.	5.9%	0.0%	11.8%	52.9%	29.4%	0.0%	**4.00**
4) I make special effort to maintain communication effectiveness	5.9%	0.0%	11.8%	41.2%	41.2%	0.0%	**4.12**
5) I set an example that influences improvement, progress and achievement by people.	5.9%	0.0%	11.8%	35.3%	47.1%	0.0%	**4.18**
C. Delegating							
1) I broaden the responsibility of my people for more important work when they achieve desired results.	17.6%	0.0%	11.8%	47.1%	23.5%	0.0%	**3.59**
2) When delegating, I communicate the results to be achieved, the area of responsibility and the scope of authority.	5.9%	0.0%	11.8%	52.9%	29.4%	0.0%	**4.00**
3) When delegating, I provide for authority and responsibility to go hand in hand.	5.9%	0.0%	5.9%	70.6%	17.6%	0.0%	**3.94**
4) I provide necessary facts and figures needed by my employees to achieve desired results on a timely basis and provide assistance as required.	5.9%	0.0%	11.8%	47.1%	35.3%	0.0%	**4.06**
D. Communicating							
1) I maintain a permissive and creative climate within which associates are motivated to express their ideas.	5.9%	0.0%	17.6%	52.9%	17.6%	5.9%	**3.94**
2) I listen with empathy.	5.9%	0.0%	0.0%	70.6%	11.8%	11.8%	**4.18**

Skill Area	No Opportunity to use Skill	No Change	Little Change	Some Change	Significant Change	Very Significant Change	Mean
3) When communicating, I take into consideration the personal make up of each individual.	5.9%	0.0%	5.9%	52.9%	35.3%	0.0%	**4.12**
4) I keep faith with associates, report facts honestly, and listen sincerely.	5.9%	5.9%	0.0%	52.9%	23.5%	11.8%	**4.18**
5) I speak pleasantly and courteously with due regard for feelings of others.	5.9%	0.0%	17.6%	47.1%	23.5%	5.9%	**4.00**
6) I see things from the other person's point of view.	5.9%	0.0%	11.8%	47.1%	23.5%	11.8%	**4.18**
E. Decision Making							
1) I look behind the symptoms to find and define the real problem.	0.0%	0.0%	23.5%	47.1%	29.4%	0.0%	**4.06**
2) I evaluate my decisions by Predetermining their possible impact on people and things.	5.9%	0.0%	11.8%	35.3%	47.1%	0.0%	**4.18**
3) I involve my employees in creative meetings in order to develop their decision making potential.	5.9%	0.0%	11.8%	35.3%	41.2%	5.9%	**4.24**
4) I use the ideas and creativity of my employees in developing alternative solutions.	11.8%	0.0%	5.9%	47.1%	35.3%	0.0%	**3.94**
5) As I communicate decisions to my employees, I clarify the total picture, the reasons for the decision, the desired results and their part in implementation.	11.8%	0.0%	11.8%	41.2%	29.4%	5.9%	**3.94**

5. Using the list above, identify the three (3) skills or abilities that you have used most as a result of the Leadership Program.

The skills selected most were:	*Number of participants selecting…*
• Communication	6
• Delegating	6
• Decision making and Problem Solving	5
• Listening to others points of view	4
• Developing creative input from others	3
• Motivation techniques	3

6. What has changed about you or your work as a result of your participation in this course? (Specific behavior change, increased delegation to employees, improved communication with employees, employee participation in decision making, etc.)

The following comments for question # 6 were provided by participants:

- Increased delegation, improved communication.
- Reorganization changed my job responsibilities, not a supervisor.
- Improved communication skills with my employees and peers.
- Listening with empathy, looking for more causes rather than symptoms, delegation.
- Increased delegation and creative empowerment to partners within and outside my supervisory scope.
- Improved communications and recognition of people and time management.
- I have a clear understanding of why the senior management team at NBU consistently produces poor results.
- While not a supervisor at this time, I use improved communication and solicit participation in decision making from groups that I have led.
- Being aware that I need to continue to improve my listening skills when dealing with subordinates and peers.
- More focus on getting more input from technicians. Better communication skills on field observations.
- Planning and improved delegation has achieved increased production and maintained high quality work.
- Increased participation by team members in problem identification and resolution.
- I tried to learn alternative measures of management. Specifically to be more in tune with others. To listen intently and to evaluate other information from experts.
- Improved meeting conversation and idea generation. Improved ability to delegate instead of doing all myself. Improved consensus decision making.
- Increased delegation to employees. Improved permissive and creative climate where employees offer their ideas. Increased concern on the impact of decisions on people and things.
- More aware of my working relationship with my peers and my people helps us communicate and work better together.

7. Please identify specific business accomplishments/improvements that you can link to the course (increased output of your work unit, customer response time improved, improved customer satisfaction, etc.). Refer to your action plan and identify specific measures which have changed.

The following comments for question # 7 were provided by participants:

- None
- My increase in communication skills (i.e. listening) was a direct increase in my customer satisfaction.
- None
- Increased output of work unit, more effective appraisals, increased employee moral, better organization skills, more use of action plans by me and work unit.
- Increased output - Time management
- I have learned to survive in this fear & shame-based environment.
- Mostly improved customer satisfaction by enlisting customers in problem resolution to customer issues.

- The Business Plan that was handed in, was a previously existing plan that I had. I explained this to the Instructor and therefore, can give little credit for this to the course.
- Position results description was viewed very favorably by supervisor
- Procedure improvement effort was sped up by prioritization strategy from technicians.
- Customer satisfaction is improved, especially recognition by outside stakeholders.
- I have more personal time to focus on issues as a result of more effective delegation.
- I hope that I have a better relationship with my employees. This does not have a specific measure in short term but should help in the long term.
- Due to use of "Planning Process" I was able to complete an RF07 project ahead of schedule. Implemented changes in work processes through the LAI problem solving process.
- I use my Planner 25% of the time as opposed to 0% before the Leadership program. I keep up with voice, electronic mail & APPO. But still have room for improvement in the corrective action arena.
- Adopted a "just do it" attitude. Capture job performance examples on my team members for annual performance reviews, capturing average of one per week.
- The Navardo Unit 2 Backlog reduction plan is helping get control of the Backlog for Navardo 1 & 2. For Plant Breeze, this is helping establish goals and processes to meet the goals.

8. Is your Money Savings Project now being implemented?
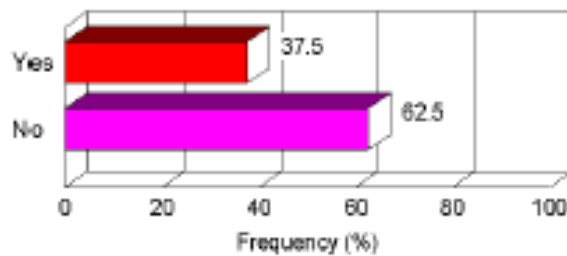
Money Savings Project (% of Respondents)

9. What barriers, if any, have you encountered that have prevented you from using skills or knowledge gained in the Leadership Program? *Check all that apply.*

Number of participants selecting…	*Item*
4	I have no opportunity to use the skills
3	I did not have enough time
3	My work environment does not support these skills
1	My supervisor does not support this type of course
0	This material does not apply to my job situation
7	Other (Please specify)

Please explain if possible.

The following comments for question # 9 were provided by participants:

- Other Answers: Senior management emphasizes solving the crisis of the day to the point of interrupting well organized action plans.
- Work environment is still authoritarian - focused on negative aspects of performance. Encouragement to develop "soft-skills" is lip service - not embraced by all.
- They give them "Lip Service" at best. All they are concerned with are short term, cost cutting measures. which in the end, will yield no real return on investment.
- Since taking the Leadership program, the organization I work for has become very short sighted, only focusing on day-to-day challenges, with little or no focus on long term goals. This is very frustrating to me.
- The pace of work & change is best described as incredible.
- To engage in planning process, or creative process, therefore, I find it difficult to gain support organizationally when I try to use these skills.
- The culture combined with an over committed work load has a negative impact on personnel. Many associates believe we have too many initiatives underway at one time.

10. Indicate the extent to which you think your application of knowledge and skills learned from this course had a positive influence on the following measures in your own work or your work unit. *Please check the appropriate response beside each item.*
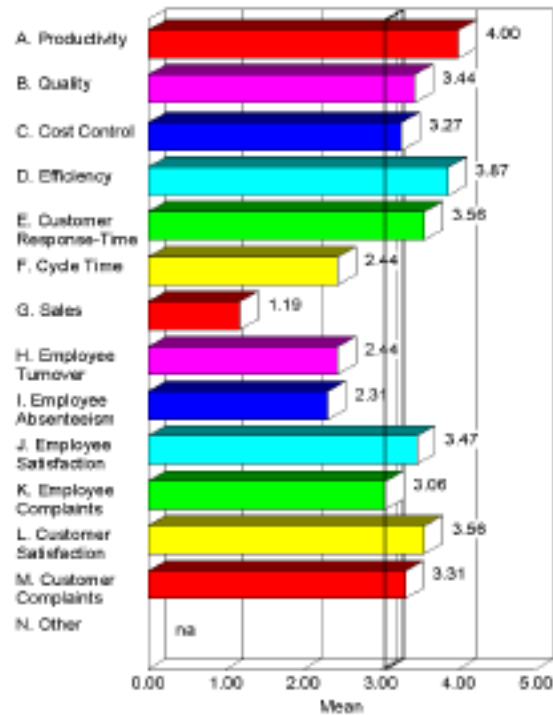
Training's Influence on the Virtual Industries Measures

Scale used for Question # 10

1	2	3	4	5
No Influence	Some Influence	Moderate Influence	Significant Influence	Very Much Influence

Please cite specific examples or provide more details:

The following comments for question # 10 were provided by participants:
- The training helped me to become more positive as well as improving my customer relationship with my stakeholders.
- Greater ownership of process by team members has reduced amount of time to provide answers to customers. Team members are empowered to take action without asking for permission to do their jobs!

11. As a leader, to what extent has the Leadership Program enabled you to enlist the willing cooperation of people to achieve desired results? *Please check the appropriate response.*
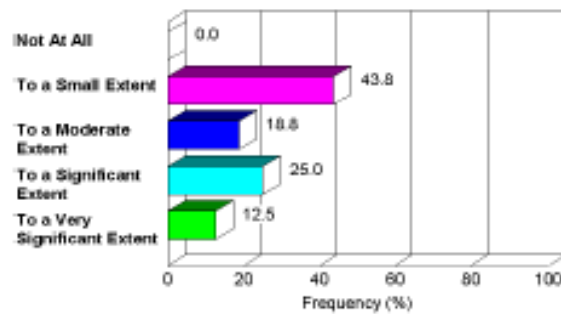
12. To what extent has the Leadership Program enabled you to spend more time leading/managing and less time doing the work. *Please check the appropriate response.*
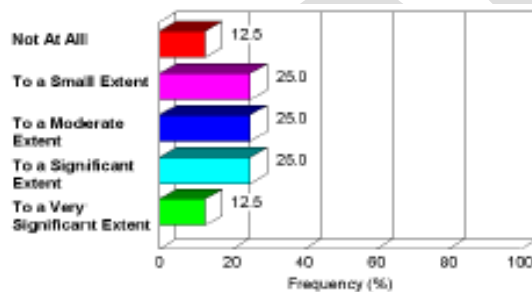
13. Do you think the Leadership Program represented a good investment for your employer?
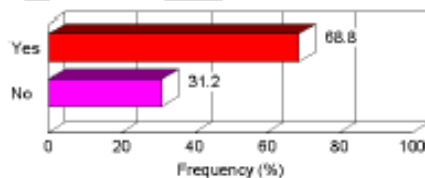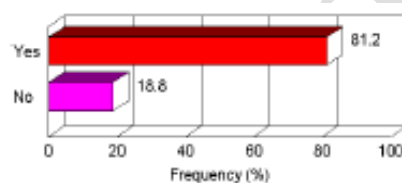

Please explain.
Responses for question # 13 are listed below:
- Developed relationships and common perspective with other supervisors/managers.
- The company did not provide for any follow through.
- This is an entry level training program. Only those at that level may benefit.
- Just the action plan and money saving idea from me paid for the course.
- Techniques not promoted by current management expectations.
- Yes, however, the senior management team must passionately model the behaviors, not their opposites!
- Yes, but the whirlwind the NBU is in right now provides little opportunity for application of the Leadership principles. TOO MUCH is changing right now.
- It was a great asset for me to aid in my own stakeholder management.

- Right elements yet pace of work, length of hours does not lend itself currently to high impact.
- It provides instruction in a set of basic skills needed by all management.
- Although my projects identified during the course have not yet resulted in a positive return, I think that my organization is performing more effectively.
- The wrong people attended.
- The program needs to be updated to provide a better tool. Is it a training tool or money saving project?
- Timing was bad, people were worn out and didn't have the energy to devote to implementing these skills.
- The long term effects of this course for management should be excellent.
- Yes, however, the senior management team must passionately model the behavior.

14. Would you recommend the Leadership Program to others?

Please explain.
Responses for question # 14 are listed below:
- Excellent class giving the supervisor more positive skills to increase work unit productivity.
- Only to those groups who are supported and encouraged to embrace the philosophy.
- The course allowed you the time to actually write down and focus on your problem areas.
- Several techniques for creative input and brainstorming.
- It provides instruction in a set of basic skills needed by all management.
- Good coverage of core elements of leadership.
- It is the same as the LAI.
- Program needs to have more in class group projects: Team building exercises, leadership exercises. Should limit class participation.
- Overall these skills should be embedded in management so they become second nature to helping businesses be successful.
- Yes...I have held supervisory/managerial positions in 12 of the 27 years I have been in this business. I wish I had the training when I got into job.
- I believe it to be an effective way to improve yourself and your people.

15. In what ways can we improve the process to capture the return on investment? *Please specify.*

Responses for question # 15 are listed below:
- With reorganizations & job changes, hard to do.
- To solicit two additional ideas from work unit for money savings ideas.
- The problems at the XYZ Business Unit were due to the extent of senior management commitment.
- My employer needs to provide follow-up sessions to reinforce principles and demonstrate their willingness to support learning.
- More examples.
- Perform this survey after one year.
- Develop a template for the Leadership program graduates to use in identifying improvements as they are discovered. Establish a more global baseline for items to be measured and to compare future trends to the baseline.
- Don't stress on the dollar value. Train the leaders to be better leaders, the money will come back.
- Devote more class time to working on Actions and how we are incorporating the skills in our daily activities.
- This questionnaire is very easy to complete. Our problem is that most of us are constantly in information overload.
- Try to tie the projects to identified company goals.

16. What other comments do you have about the Leadership Program?

Responses for question # 16 are listed below:
- Need more practical exercises.
- The instructor found a way to make the class as effective as possible. I would relish the opportunity to work in a place where the Leadership principles were applied.
- The Leadership program and the employer need to become partners in ensuring the employer gets the most return on investment. Also, the employer, at all levels and in all depts. Need to provide the support to foster the principles of this training.
- It is very time demanding. Individuals with high collateral duties may have problems with the time demand.
- Too much time wasted on developing ROI project. In my case, intervening occurrences have precluded any significant development until next year. Capturing ROI information is not a relative priority when compared to other business related items. I think the Leadership program is a super idea, but we need to de-emphasize the ROI part for the individual and provide more in-class time to review/discuss the skills and behaviors of successful leadership.
- The ideas are very practical and doable! They would work for a new kid on the "management block" as well as for a seasoned veteran.
- I enjoyed it.

Appendix B: Action Plan Document

Action Plan For The LAI Leadership Training Program - Part I

Name _____   **Instructor Signature** _____   **Follow-Up Date** _____

Objective _____   **Evaluation Period** _____ **to** _____

Improvement Measure _____   **Current Performance** _____   **Target Performance** _____

SPECIFIC STEPS: *I will do this* ⇨	**END RESULT:** *So that* ⇨
1. _____ _____	_____ _____
2. _____ _____	_____ _____
3. _____ _____	_____ _____
4. _____ _____	_____ _____
5. _____ _____	_____ _____
6. _____ _____	_____ _____
7. _____ _____	_____ _____

EXPECTED INTANGIBLE BENEFITS:

_____

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Action Plan For The LAI Leadership Training Program - Part II

Name _____

Improvement Measure _____ **Current Performance** _____ **Target Performance** _____

ANALYSIS

A. What is the unit of measure? _____ Does this measure reflect your performance alone? Yes ❑ No ❑

   If not, how many employees are represented in the measure? _____

B. What is the value (cost) of one unit? $ _____

C. How did you arrive at this value? _____

   _____

   _____

D. How much did this measure change during the last month of the evaluation period compared to the average before the program? (monthly value) _____ Please explain if necessary. _____

E. What percent of this change was actually caused by the application of the Leadership Training Program? _____ %

F. What level of confidence do you place on the above information? (100% = Certainty and 0% = No confidence) _____ %

G. If your measure is time-savings, what percentage of the time saved was actually applied toward productive tasks? _____ %
   (0% to 100%)

ACTUAL INTANGIBLE BENEFITS:

_____

Appendix C: Business Impact - Consolidation of Results from Action Plan and Money Savings Projects

Appendix C: Business Impact - Consolidation from Action Plan and Money Savings Projects

Key Influence	Unit of Measure	Reported Value of One Unit	Monthly Change Reported in Measure	% Change Caused by Program	Confidence Level Reported	Total Monthly Program Benefit	* Annualized Program Benefit
1. Action Plan Item: Increased personal availability to do productive work and…	Time savings	$65 per hour	18 hours improvement $1,170.00	60%	100%	$702	$7,722
Additional savings for avoiding use of consultant.	Cost savings	N/A	N/A	60%	100%	N/A	$4,326
2. Action Plan Item: Reduction in personnel turnover.	Cost savings	$100 * per hour per person	Reduction from 4 people to 2 people over six month period in group 100 x 2 = 200 x 40 hours = 800 x 4 weeks = $32,000	75%	90%	$21,600	237,600
3. Action Plan Item: Reduction in preparation time for work week work orders by employees.	Time savings	$18 per hour	16 man hours, processing time reduced by 2 days	70%	100%	$201.60	$2,218
4. Savings Project: Did not write a purchase order with vendor for service.	Cost avoidance (Savings)	N/A	$3,600 average monthly savings (Additional $24,000 beyond 1998 not included)	50%	90%	$1,620	$19,440
5. Savings Project: Combined Emergency Preparedness dinner with offsite volunteer picnic.	Cost savings	$12,000 actual savings	N/A	50%	100%	N/A	$6,000
6. Savings Project: Elimination of two unnecessary computer program licensing agreements.	Cost savings	$3,000 actual savings	N/A	100%	100%	N/A	$3,000

* The basis of turnover cost in item #2 is the salary and benefits ($50 per hour) for the position identified. Research demonstrates that the cost of turnover for Nuclear technicians ranges from 200% to 300% due to the extensive training required as well as recruitment and other costs. The low end of the range (200%) was used in this calculation.

Appendix C: Business Impact-Consolidation from Action Plan and Money Savings Projects

Key Influence	Unit of Measure	Reported Value of One Unit	Monthly Change Reported in Measure	% Change Caused by Program	Confidence Level Reported	Total Monthly Program Benefit	Annualized Program Benefit
7. Savings Project: Planned and initiated common QA/QC program (LAB STATS) between Plant Sea Breeze and Galay).	Cost savings	$10,000 actual savings in administrative area. Additional savings in other areas not attributable to the Leadership program.	N/A	80%	100%	N/A	$8,000
8. Savings Project: Consolidation of staff in existing facility and eliminate cost of three rental trailers.	Cost savings	$32,400 - $1000 cost of moving - $31,400 savings yearly	N/A	100%	100%	N/A	$31,400
9. Savings Project: An improved DR system for more efficient plant maintenance and repair.	Cost savings and time savings	N/A	This person lost job responsibilities after reorganization. No longer a supervisor. Project being worked but no result.	N/A	N/A	N/A	N/A
10. Savings Project:	Cost savings	N/A	$4,800	90%	75%	Savings not yet realized.	N/A
11. Savings Project: Unidentified. Full implementation will require two years.	Cost savings	N/A	$0.00	N/A	N/A	N/A	N/A

Total Annual Benefits $319,706