



Measuring ROI in a Work-at-Home Program

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Family Mutual Health and Life Insurance Company (FMI)

This case study shows the power of a work-at-home project designed to ease the environmental problems of traffic and congestion caused by the long daily work commute of more than 300 employees. The project cut average daily commute times from one hour and forty-four minutes to 15 minutes, saving each participating employee the cost of 490 gallons of fuel per year and keeping an estimated total 1,478 tons of carbon emissions out of the air. Employees taking part in the project also reported significant intangible benefits, including reduced stress and absenteeism and increased job satisfaction and engagement. The company not only got a boost in its image as an environment-friendly concern, it saved money through increased productivity, lower office expenses and less employee turnover. From an environmental perspective, the study shows how an important project can have significant impact by lowering carbon emissions. It represents a win-win project for participants, their initially reluctant managers, and the organization. Perhaps the greatest winner is the environment. While this type of project may not be suitable for every organization, this is an example of how such a project can be implemented for many organizations.

BACKGROUND

Family Mutual Health and Life Insurance Company (FMI) has enjoyed a rich history of serving families throughout North America for almost 80 years. Their focus has been on health and life insurance products, and they are regarded as a very innovative and low-cost health insurance provider. The executives are proud of their cost control efforts and the low prices they can offer. Company advertisements regularly highlight their low-cost approach, quality of service and ethical practices.

FMI has grown significantly in recent years due to increased healthcare concerns in North America, particularly in the USA. Rising healthcare cost has forced the company to raise premiums several times in recent years, while still maintaining a cost advantage over other suppliers.

This case was prepared to serve as a basis for discussion rather than to illustrate either effective or ineffective administrative and management practices. The authors, dates, places, names, and organizations may have been disguised at the request of the author or organization.

The Challenge

Lars Rienhold, CEO, is proud of the accomplishments of FMI and is perhaps its biggest fan. A man of considerable and contagious personality, he is continually trying to offer affordable health and life insurance policies, provide excellent customer service and be a responsible citizen. As part of this effort, Lars wanted to ensure that FMI was doing all it could to help the environment. While FMI's carbon footprint is relatively low compared to manufacturing companies, its headquarters was located in a congested area. Lars became concerned about helping the environment in as many ways as possible. During a recent trip to Calgary, Canada, he saw a television report about a local company that had implemented a work-at-home program. The report presented the actual amount of carbon emissions that had been prevented with this project. Lars thought that FMI should be able to implement a similar program, including the possibility of employees working from home. He brought this idea to Melissa Lufkin, executive vice president of human resources. The message was short. "I want us to make a difference. I think this is the way to do it." Although her team already had examined the work-at-home issue, Melissa agreed to explore the possibility in a more formal way.

Exploring the Situation

Melissa began her investigation by discussing the issue with the operations chief. Although there was some resistance, John Speegle, executive vice president of operations, was interested in exploring the idea. John was concerned about the lack of a productivity increase in the past three years with the largest segment of employees, the claims processors and the claims examiners. There were 950 employees involved in processing or examining claims submitted by customers or healthcare providers. Claims examiners reviewed claims that were disputed or when an audit sparked a review of a particular claim. The number of claims processors and examiners had grown to the point that the office space they occupied in Building 2 was overflowing. This impeded productivity, not to mention made it an uncomfortable environment in which to work. Given the company's continued growth, it was likely that a new building space or perhaps a new facility was needed to manage the growth.

John concluded, "I'm interested in the possibility of employees working from home if it can be managed properly. Let's explore the possibility if all parties are in agreement to pursue it." John was interested in lowering the real estate cost of new office space, which averaged about \$17,000 per person per year and improving productivity, which was at a rate of 33.2 claims processed and 20.7 claims examined per day.

Melissa discussed the issue with Linda Green, the vice president of claims, to identify her concerns about processors and examiners working at home. Although this issue had been discussed in previous meetings and many people had said that these jobs could be easily managed remotely, Melissa had never received direct communication on the topic. Linda was supportive but raised several concerns. "Some of our managers want to keep tabs on what is going on and they feel like they have to be there to resolve issues and problems and they want to see that everyone is working and busy. I am afraid it is a matter of control, which they may have a hard time giving up if people work remotely." Melissa realized that it would take some extra effort with these managers, who would have to view this initiative as necessary and feasible in their world. Linda added, "I realize that the right approach might make their jobs easier, but right now they may not be at that point."

Next, Melissa met with the IT department and discussed how they could equip workstations at home with the latest technology. She found a supportive audience in Tim Holleman, senior vice president and chief information officer, who thought that employees could be setup with adequate security and technology to work at home in the same manner as they were working onsite. Tim added, “They can have full access to all databases, and they could be using high-speed processes. It would cost FMI a substantial amount the first year, but may not represent a very significant cost in the long run.”

Melissa later discussed potential issues with the legal department. Margaret Metcalf, chief legal officer, was cautious, as expected and said several legal issues would have to be addressed from a liability perspective. She asked about other companies that were pursuing this route and Melissa agreed to furnish examples and make contacts with them to discover what problems they had encountered.

Melissa then contacted Anne Burson, executive vice president of sales and marketing, to uncover any customer service issues that might arise. Anne was in favor of the move as long as customer service would not suffer. She remarked, “The claims examiners are in direct contact with the customers, and I want to make sure that acceptable customer service is maintained. Also, many of the processors have to make routine direct contact with healthcare suppliers, as well as patients, and we want to maintain these contacts at an acceptable level. Other than these concerns, I can see that this would probably help morale and might even improve our service. Let’s give it a try.” Finally, Melissa met with her chief financial officer, Rodrick Harper, to discuss the project and the plan to measure its success. Melissa previously had talked with Rod about measuring success and he expressed some desire to show the value of major human resources initiatives. Melissa was eager to show the value of HR programs and had challenged her staff to measure success, even using ROI. Rod volunteered a member of his team to work with Melissa on these types of projects. When Melissa discussed the project with him, including the measurement plans and a financial ROI, Rod’s interest really piqued. He said, “Let’s make sure this is very credible analysis and that it is very conservative. Frankly, I think we want to be involved when you discuss ROI. I think it’s proper that we use a standard approach to analysis, and we would like to be involved in this every step of the way, if you don’t mind.” Melissa was pleased with the support, but somewhat anxious about working with the Finance and Accounting Team to evaluate a program that she ultimately would own. However, she felt the project was necessary and would be advanced by the very good relationship she and her team had with the Finance and Accounting Group.

Melissa and her staff explored the attitudes of the employees to determine how they would perceive a work-at-home program. She was not sure how many would take advantage of the opportunity, but she was certain most would be interested. The staff conservatively estimated that at least a third would opt to participate in the program. For many in this group, working at home would be a huge motivator and would probably make a difference in retaining them at FMI. From that perspective, the staff suggested that it be explored. Melissa cautioned, “They may have issues at home that they want to address, but we must be able to get eight hours of work out of them. They cannot discontinue daycare, trying to manage childcare and work as well. If they have an elderly or disabled person at home, this cannot be a way for them to deal with both situations. We must have full productivity, and that is essential.”

With this positive reaction (and a few concerns), Melissa and her team decided to undertake this substantial project. After much discussion, the group decided to engage a consulting group, Workforce Solutions International (WSI), to manage the project. WSI had considerable experience in implementing alternative work systems, particularly work-at-home programs. They knew what questions to ask and what situations were going to occur and more importantly, they were able to anticipate the problems that could derail the project.

THE ANALYSIS AND INITIAL ALIGNMENT

After some discussion, the group asked WSI for a proposal. Included in the request for proposal (RFP) to WSI was a forecasting component for the project. Essentially, WSI was asked to bid on analyzing the need for the project to determine its feasibility, forecast its value, design the appropriate program and implement and monitor the success of the program. Success would be measured at the ROI level. Armed with this information, WSI was prepared to begin work on the proposal.

The Consultants

Deborah Rousseau was selected by WSI as the lead consultant for this project. Deborah had previous experience with flexible work systems, had managed many successful projects and was an outstanding consultant. Deborah believed in showing the value of their work and she guided the proposal process toward an agreement to deliver the four components:

1. Clarifying that the solution is needed and connecting it to the appropriate business measures
2. Forecasting the impact and ROI of the project
3. Implementing the program with claims processors and examiners
4. Showing the value of the project using the ROI Methodology

With this focus on results, Deborah knew that she had to skillfully present the best proposal and the most focused implementation possible. There was no room for error. WSI was obligated to deliver the value desired by the clients.

To make the proposal meaningful, Deborah asked the client if they could forecast ROI after they verified the solution. The client agreed. In essence, the proposal was developed in two parts. The first proposal validated the solution and provided a forecasted ROI. The forecast would be developed and approved by the client before the program would be implemented. The second proposal focused on implementation and an impact study with ROI. This seemed reasonable because the analysis required to develop the forecast was part of the analysis that would verify the proper solution to drive the business measures. WSI proposed \$31,000 for the first proposal (\$21,000 for the initial analysis and assessment and \$10,000 for forecasting ROI), which included a briefing to senior executives.

The Analysis

When the first contract was awarded, Deborah began meeting with appropriate individuals from the HR Team, including representatives from employee relations, learning and development, recruiting, compensation and HR planning. She examined records, conducted employee focus groups, and conducted a survey of a small, selected group of employees to understand their desire, need and intentions to work at home if the option was available. In this survey, employees were asked about benefits from this type of arrangement. The focus groups and the survey revealed that this solution should drive business measures.

Part of this analysis involved the examination of other case studies of work-at-home projects, to understand the payoffs of those projects and the barriers to success. This analysis focused on potential improvements in productivity, reduction in absenteeism, improvements in healthcare costs and a reduction in real estate costs. The potential effect on healthcare costs was weak and it was removed as a potential impact measure that could be influenced by this new arrangement. By using the employee feedback, analysis of other studies and examination of internal records, Deborah and the HR Team agreed that this solution could drive important business measures.

Alignment

Deborah's next task was to identify specific business measures. Her key input for this task was provided by the executive vice president of operations (EVP), who thought that this program could reduce real estate and productivity costs. It was obvious that the real estate costs could be improved, unless the cost of maintaining an at-home office proved to be excessive or the same office space for each participant continued to be maintained at FMI. Deborah worked with the EVP to set clear objectives for office space and productivity. After some discussion, the EVP suggested that processors and examiners could both process an average of at least one more claim than they had been producing and the office expense should be dramatically reduced, in the neighborhood of 20 percent for the first year. When discussing the actual ROI of the study, the EVP was reluctant to set an objective. However, when Deborah suggested that the ROI should be more than an investment in a building, for example, the EVP agreed to set a goal. Given that FMI would average about 15 percent for capital expenditure investments, Deborah suggested that an ROI of about 25 percent would be appropriate, and the EVP agreed.

The vice president of claims confirmed the objectives regarding productivity and real estate costs with Deborah and then focused on turnover reduction. The annual turnover rate at the time was 22.3 percent and they felt that an improvement rate of at least 5 percent to 17.3 percent should be achievable if the project was successful. They also reviewed the absenteeism rate and thought it could drastically improve from a current level of 7.3 percent to a new level of 4.0 percent. Deborah addressed the critical issues regarding implementation during this discussion.

Deborah met with Ginger Terry, environmental coordinator in the procurement function, to collect data about carbon emissions from automobiles and set a goal to show the actual reduction in carbon emissions

that could be realized by eliminating the office commute. Ginger had compiled data about the commute time of employees for these two groups and the average time was estimated to be one hour and forty-four minutes each day. In a work-at-home arrangement, this time could be reduced to about 15 minutes, assuming a visit to the office every seven days. Deborah realized that the environmental benefits would not add to the ROI in monetary terms, but would be a substantial intangible for the citizens of this city and of the country as a whole.

Finally, she met with the CFO, chief legal counsel, chief information officer and the HR Team. The principal focus of the meeting with this group was to review the tentative objectives for additional refinement and concurrence.

Deborah's meeting with the HR team generated some important information, in terms of what employees and managers must learn to make the process effective and successful. Several questions surfaced about working without distractions, such as childcare issues, other people in the residence or elder parent care. Associates also would have to adjust their working habits from an office to a home environment. They would need to adopt the discipline and structure necessary to be effective, by following consistent rules, regulations and working hours. It was also noted that managers must be able to effectively provide coaching and counseling along the way and be there for associates to address particular issues.

Deborah also explored the issues of perception and desired reaction with the executives. The executives expressed their belief that the process was needed and ultimately would be motivational and rewarding for participants. With this data, Deborah began to develop the objectives that would lead to the ROI forecast.

Questions for Discussion

1. Critique the way in which the analysis has been conducted.
2. Are there additional questions or issues you would explore? If so, what are they?
3. Write the objectives for all five levels.
4. Complete the V-model showing the connection between the upfront assessment, objectives and evaluation at five levels.

OBJECTIVES AND ALIGNMENT

From the discussions, subsequent analyses and potential solutions, Deborah, Melissa, and the HR Team could develop all of the objectives at different levels. The objectives are developed from the needs at different levels.

Objectives

Table 1 shows the objectives for the project by different levels, ranging from reaction to ROI. Deborah secured agreement on the objectives from those stakeholders involved.

Alignment

The alignment model is shown in Figure 1. It shows the connection between the upfront needs assessment, the objectives, and the evaluation. Deborah found it helpful to construct this model to clearly determine whether any pieces were missing. She worked through the analysis in order beginning with Level 5. The project's value became obvious early in discussions. She then clearly explored the business needs with different stakeholders. Job performance needs were revealed in concerns voiced by the senior vice president of claims. The learning needs evolved from that conversation and the reaction needs were consequently developed from these discussions. Previous studies in which Deborah and her firm had been involved dictated some of the learning and reaction needs, e.g., projects sometimes fail because people do not fully understand the rules, do not understand the work process or have the incorrect perception of the process. The objectives came directly from the needs assessment and were specifically developed based on each need. At this point, evaluation was tentative in terms of how the data would be collected. More detail on the evaluation side would be provided as the project unfolded, but the V-model provides the alignment necessary at the different levels of needs assessment, objectives and evaluation.

Questions for Discussion

1. What is the value of having objectives at all five levels? Please discuss.
2. Is it helpful or necessary to develop a V-model on a program that is destined for implementation? Please explain.

ROI FORECAST

With a clear understanding of the solution and the connection to the business impact measures, a forecast was now possible. Although Deborah could have forecast reaction, learning and application, she limited her forecast to impact and ROI. This essentially is what was requested in the RFP, with most of the emphasis on the ROI number itself. Deborah developed the forecast, following the assumptions from the various involved stakeholders.

Figure 1. Project Alignment

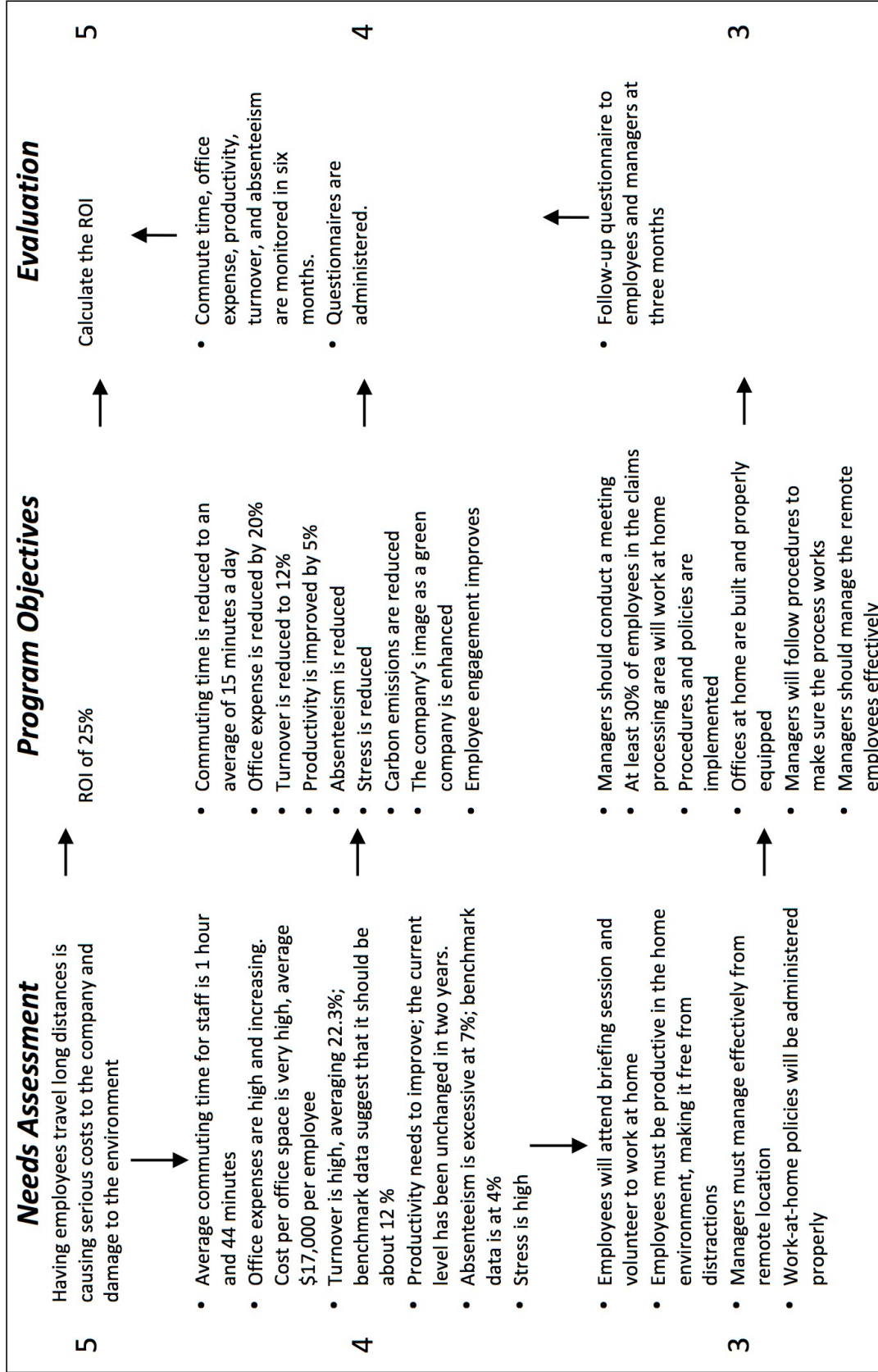


Figure 1. Project Alignment (continued)

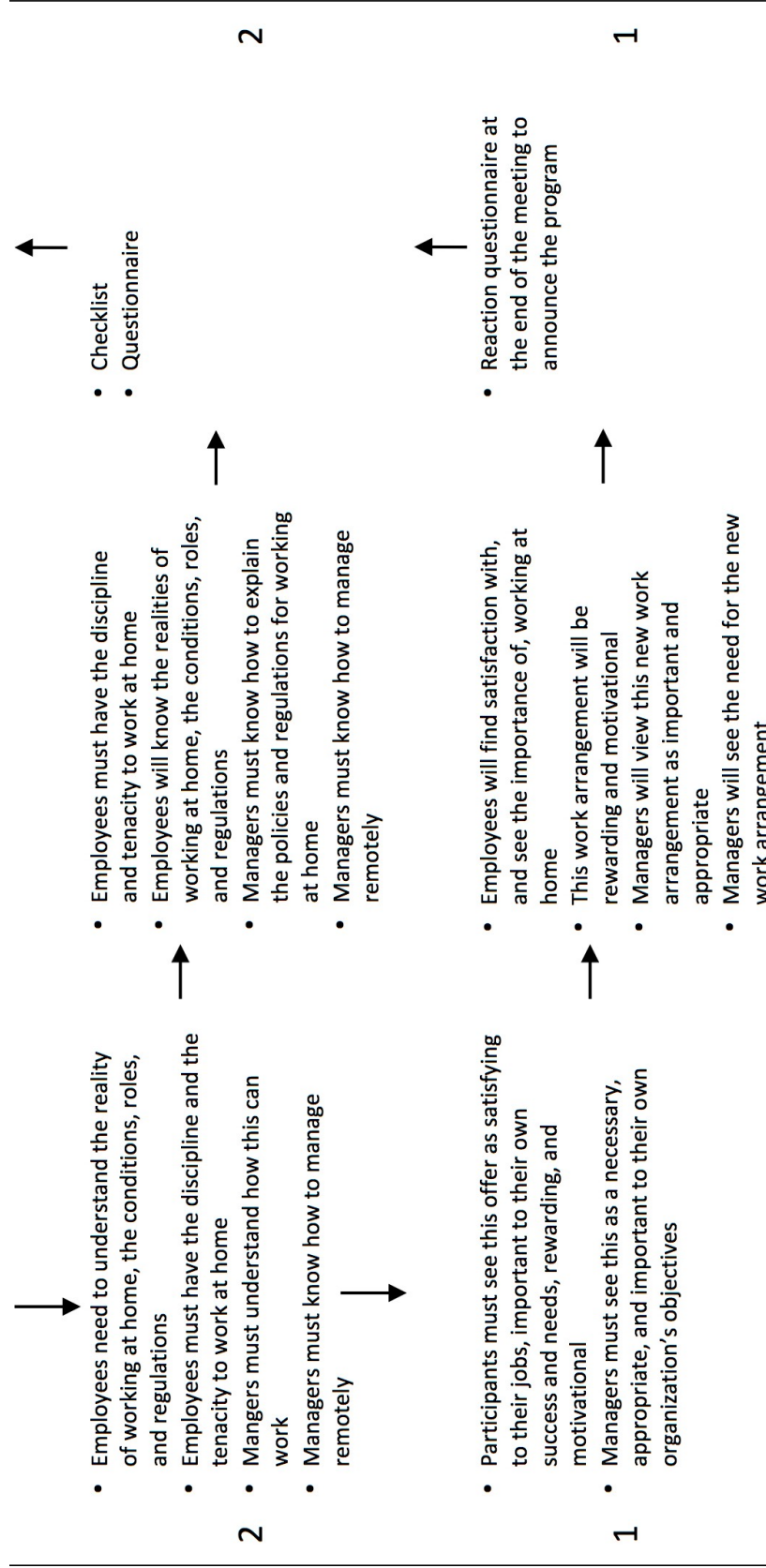


Table 1. Detailed Objectives

After implementing this project:

Reaction

- Employees should see the work-at-home project as satisfying, important, rewarding, and motivational.
- Managers must see this project as necessary, appropriate, and important to FMI.

Learning

- Employees must know the realities of working at home, the conditions, roles, and regulations.
- Employees must have the discipline and tenacity to work at home.
- Managers must be able to explain company policy and regulations for working at home.
- Managers must be able to manage remotely.

Application

- Managers should conduct a meeting with direct reports to discuss policy, expected behavior, and next steps.
- At least 30% of eligible employees should volunteer for at-home assignments within one month.
- At-home offices are built and should be properly equipped.
- Work-at-home employees should work effectively at home.
- The at-home workplace should be free from distractions and conflicting demands.
- Managers should properly administer the company's policy.
- Managers should manage the remote employees effectively.

Impact

For those involved in the program:

- Commute time should be reduced to an average of 15 minutes per day.
- Office expense per person should reduce by 20% in six months.
- Productivity should increase by 5% in six months.
- Employee turnover should reduce to 12% in six months.
- Unplanned absenteeism should be reduced.
- Stress should be reduced.
- Carbon emissions should be reduced.
- The company's image as a green company should be enhanced.
- Employee engagement should improve.

ROI

- The company should achieve a 25% return on investment.
-

Impact Forecast

The first important input to the forecast was the expected number of employees who would participate. This was a voluntary program for which both the advantages and disadvantages were clearly laid out for employees, along with conditions and regulations. Not everyone would be willing to go down this path. As stated earlier, Deborah and the HR Team thought that about one-third of employees would sign up for this program. One-third of 950 is 317, so the forecast is based on 317 participating employees. Based on the percentage makeup of the two groups, this translates into 237 and 80, respectively, for processors and examiners.

Figure 2 shows the development of the monetary forecast, following estimated improvement in business measures. The estimated business impact was obtained directly from the chief of operations and the vice president of claims. The monetary value of a claim also was obtained by these stakeholders, estimated to be \$10 cost for processing a claim and \$12 for review of a claim. The office expenses were estimated to be \$17,000 and the cost of a turnover taken directly from a similar study (where the cost of turnover was pegged as a percent of annual pay) was provided at \$25,400. With this in mind, the calculations are listed next.

Figure 2. Forecast of Monetary Benefits

Anticipated Participation

- Target Group: 950
- Predicted Enrollment: 1/3
- $950 \times 33 \frac{1}{3}\% = 317$
- Allocation: 237 processors
80 examiners

Estimated Impact

- Productivity: 1 additional claim processed
1 additional claim examined
- Office expenses: 20% reduction
 $\$17,000 \times 20\% = \$3,400$
- Turnover reduction: 22.3% to 12% = 10.3% improvement

Converting Productivity to Money

- Value of one claim = \$10.00
- Value of one disputed claim = \$12.00
- Daily improvement = 1 claim per day
- Daily improvement = 1 disputed claim per day
- Annual value = $237 \times 220 \text{ work days} \times 1 \times 10.00 = \$521,400$
- Annual value = $80 \times 220 \text{ days} \times 1 \times 12.00 = \$211,200$

Office Expense Reduction

- Office expenses in company office: \$17,000 annually per person
- Office expenses at home office: \$13,600 first year per person
- Net improvement: \$3,400, first year
- Total annual value = $317 \times 3,400 = \$1,077,800$

Converting Turnover Reduction to Money

- Value of one turnover statistic = \$25,400
 - Annual improvement related to program = 10.3%
 - Turnover prevention: $317 \times 10.3\% = 33$ turnovers prevented
 - Annual value = $\$25,400 \times 33 = \$838,200$
-

Estimated Costs and ROI Forecast

The costs of the project were estimated to be about \$1 million. This estimate is the total cost including the amount of the initial analysis to determine whether this was the proper solution and the development of that solution. The majority of the charges were in the IT support and maintenance, administrative and coordination categories. When the monetary benefits are combined with the cost, the ROI forecast is developed, as shown in Figure 3.

Figure 3. Forecasted ROI

Total Forecasted Monetary Benefits											
Benefits =	<table style="border: none;"> <tr> <td style="padding-right: 20px;">\$521,400</td> <td>Processor Productivity</td> </tr> <tr> <td style="padding-right: 20px;">211,200</td> <td>Examiner Productivity</td> </tr> <tr> <td style="padding-right: 20px;">1,077,800</td> <td>Office Costs</td> </tr> <tr> <td style="padding-right: 20px;"><u>838,200</u></td> <td>Turnover Reduction</td> </tr> <tr> <td>\$2,648,600</td> <td></td> </tr> </table>	\$521,400	Processor Productivity	211,200	Examiner Productivity	1,077,800	Office Costs	<u>838,200</u>	Turnover Reduction	\$2,648,600	
\$521,400	Processor Productivity										
211,200	Examiner Productivity										
1,077,800	Office Costs										
<u>838,200</u>	Turnover Reduction										
\$2,648,600											
Costs =	\$1,000,000										
BCR =	$\frac{\$2,648,600}{\$1,000,000} = 2.65$										
ROI =	$\frac{\$2,648,600 - 1,000,000}{\$1,000,000} \times 100 = 165\%$										

Presentation of Results

Although this number is quite impressive, Deborah cautioned the team not to make the decision solely on the ROI calculation. In her presentation to the senior executives, Deborah stressed that there were significant intangibles, first and foremost being the contribution to the environment, which is not included in this calculation. Other factors such as job satisfaction, job engagement, stress reduction and image were huge intangibles that should be directly influenced from this. However, because these projects need to be based on good business decisions, the ROI forecast is credible and conservative and based on only one year of value. Much more value will be realized after the first year, because most of the office setup expenses will occur in the first year.

Deborah also cautioned that for these results to materialize, the program would have to be implemented with a focus on results and the objectives set for the program. One by one, she presented each of the objectives and stressed that they would be communicated to all the stakeholders, including the employees. This would ensure that everyone would clearly grasp his or her responsibilities to make the program successful. While it should deliver a significant ROI, most of the emphasis should be placed on the intangibles.

Questions for Discussion

1. What value does a forecast add to the situation? Is it needed in today's climate?
2. How helpful would it be to include reaction, learning, application and intangibles in the forecast?
3. What prevents credible forecasts from being an option pursued by consultants and clients?

THE SOLUTION

The details of the solution were developed with proper input. For this program to be successful the design had to be acceptable, and the execution must be flawless.

Design

The design of the program followed the traditional work-at-home model, in which employees work a full 40-hour week in a home office designated for this work. The office was equipped with the appropriate interconnectivity to the company, databases, and functions, much like an office in one of FMI's buildings. The pertinent ground rules for this arrangement included the following:

1. The office must be free of distractions. For example, it is recommended that a television not be located in the room.
2. Employees must work on a set schedule, if they are required to have direct contact with customers, which most are. Employees must log on at the time they begin their work and log off when they have completed work for the day.
3. The system has mechanisms for monitoring the work being accomplished. Each activity can easily be tracked to provide a user performance profile. In essence, the system determines if a person is working and records the results.
4. The home office must be designed for efficiency, good health, and safety.
5. Employees were urged to take short breaks and re-energize as necessary and to always take a lunch break. The total amount of expected actual work time was 40 hours.
6. Employees were required to negotiate expectations and agreements with the family and significant others.
7. When employees must take time off for personal errands, visits to the doctor or other breaks, this time will be subtracted from their time worked. The employees will be required to make up that time during the week.
8. Employees must stay in touch with the office and periodically make contact with the immediate manager.
9. Employees must sign a work-at-home pledge and attend a session on "working at home."
10. Because there was an initial investment in equipment, computers and connections, employees were required to sign a two-year commitment to continue to work for FMI, with certain conditions. If they were to leave the company before the end of two years, they would be required to pay back the setup charges, estimated to be about \$5,000.

The principal stakeholders agreed on the design. It was reviewed by a group of employees in a focus group and then modified to produce the final set of regulations.

Execution

With the design finalized, the program was launched via communication to the target group of 950 employees. Employees received memos explaining the program and were asked to attend briefing sessions during formal working hours to discuss the work-at-home arrangement. In all, 21 employee

meetings were held for the 950 employees and managers held meetings with their respective teams to discuss the advantages and disadvantages of the process. Employees were given three weeks to make a decision and to enroll in the program.

Questions for Discussion

1. Critique the design of the work-at-home arrangement.
2. Discuss the implementation and execution.
3. What precautions must be taken in an experiment involving only one segment of the company?

ROI PLANNING

The next logical phase of the process was to plan for the ROI Study. This involved completing the data collection plan and the ROI analysis plan. This phase emerged from the objectives and the input that went into the V-model.

Data Collection Plan

The starting point for the data collection plan, shown as Figure 20-4, are the objectives listed in Table 1. The measures are further defined along with those objectives. Methods of data collection are identified, sources of data are pinpointed and the timing for data collection is determined. The plan concludes with the responsibilities for collecting the data. The data collection is comprehensive and primarily focused on interviews, questionnaires and monitoring the data in the system.

ROI Analysis Plan

Figure 5 shows the ROI analysis plan, which details the analysis for the impact study. This document begins with the impact measures planned for analysis. The first column lists each of the data items, followed by the method of isolating the effects of the program on the data and the method of converting data to money. The intangibles anticipated from the project are listed after the particular cost categories. The individuals or groups targeted for the results are then identified, along with any influences that might make a difference in this evaluation.

When completed, the data collection plan and the ROI analysis plan provide a road map to conduct the study. The various stakeholders approved these documents, allowing the work to begin.

Data Collection and Integration

Data collection followed the data collection plan using interviews and questionnaires. The interviews were few in number, but they did provide an opportunity to explore the issues that were included on detailed follow-up questionnaires. All participating employees and their managers received the questionnaires. In total, 342 questionnaires were distributed to employees and 45 managers. Figure 6 shows the data integration plan and how the data was collected and integrated to form the results.

Figure 4. Data Collection Plan

Evaluation Purpose: Measure Success of Program Program: FMI Work-at-Home Project					
		Responsibility: HR/Consultants		Date: March 30	
Level	Broad Program Objectives(s)	Measures	Data Collection Method/ Instruments	Data Sources	Timing
1	Reaction <ul style="list-style-type: none"> Employees should see the work-at-home project as satisfying, important, rewarding, and motivational Managers must see this project as necessary, appropriate, and important to FMI. 	<ul style="list-style-type: none"> Rating scale (4 out of 5) 	<ul style="list-style-type: none"> Questionnaires Interviews 	<ul style="list-style-type: none"> Participants Managers 	<ul style="list-style-type: none"> 30 days 30 days
2	Learning <ul style="list-style-type: none"> Employees must know the realities of working at home, the conditions, roles, and regulations Employees must have the discipline and tenacity to work at home Managers must be able to explain company policy and regulations for working at home Managers must be able to manage remotely 	<ul style="list-style-type: none"> Rating scale (4 out of 5) 	<ul style="list-style-type: none"> Questionnaires Interviews 	<ul style="list-style-type: none"> Employees Managers 	<ul style="list-style-type: none"> 30 days 30 days

Figure 4. Data Collection Plan (continued)

3	<p>Application</p> <ul style="list-style-type: none"> Managers should conduct a meeting with direct reports to discuss policy, expected behavior, and next steps At least 30 percent of eligible employees should volunteer for at-home assignments within one month At-home offices are built and properly equipped The home workplace should be free from distractions and conflicting demands Managers will properly administer the company's policy Managers should effectively manage the remote employees 	<ul style="list-style-type: none"> Checklist Sign Up Rating Scale (4 out of 5) 	<ul style="list-style-type: none"> Data Monitoring Data Monitoring Questionnaires 	<ul style="list-style-type: none"> Company Records Company Records Participants Managers 	<ul style="list-style-type: none"> 30 days 30 days 90 days 90 days
4	<p>Impact</p> <ul style="list-style-type: none"> Commute time should be reduced to an average of 15 minutes per day Office expense per person should reduce by 20 percent in six months Productivity should increase by 5 percent in six months Employee turnover should reduce to 12 percent in six months Unplanned absences should be reduced Stress should be reduced Carbon emissions should be reduced The company's image as a green company should be enhanced Employee engagement should improve 	<ul style="list-style-type: none"> Direct costs Claims per day Voluntary turnover Rating scale (4 out of 5) Rating scale (4 out of 5) 	<ul style="list-style-type: none"> Business Performance Monitoring Survey 	<ul style="list-style-type: none"> Company records Participants Managers 	<ul style="list-style-type: none"> 6 months 6 months 6 months 90 days 90 days
5	<p>ROI</p> <ul style="list-style-type: none"> Achieve a 25% return on investment 	<p>Baseline Data:</p>			

Figure 5. ROI Analysis Plan

Program: FMI Work-at-Home Project Responsibility: HR/Consultants Date: _____

Data Items (Usually Level 4)	Methods for Isolating the Effects of the Program/ Process	Methods of Converting Data to Monetary Values	Cost Categories	Intangible Benefits	Communication Targets for Final Report	Other Influential Issues during Application
<ul style="list-style-type: none"> Office expenses 	<ul style="list-style-type: none"> Control group Expert estimates 	<ul style="list-style-type: none"> Standard value based on costs 	<ul style="list-style-type: none"> Initial analysis and assessment Forecasting Impact and ROI Solution development IT support and maintenance Administration and coordination Materials Facilities and refreshments Salaries plus benefits for employee and manager meetings Evaluation and reporting 	<ul style="list-style-type: none"> Reduced commuting time Reduced carbon emissions Reduced fuel consumption Reduced sick leave Reduced absenteeism Improved job engagement Improved community image Improved image as an environmentally friendly company Enhanced corporate social responsibility Improved job satisfaction Reduced stress Improved recruiting image 	<ul style="list-style-type: none"> Participants Managers HR team Executive group Consultants External groups 	<ul style="list-style-type: none"> Must observe marketing and economic forces Search for barriers/obstacles for progress
<ul style="list-style-type: none"> Productivity 	<ul style="list-style-type: none"> Control Group Participant estimates 	<ul style="list-style-type: none"> Standard values External studies 				
<ul style="list-style-type: none"> Turnover 	<ul style="list-style-type: none"> Control Group Participant Estimates 					

Questions for Discussion

1. Critique the data collection plan.
2. Critique the ROI analysis plan.
3. How helpful is the data integration figure?
4. What improvements would you recommend for data collection and analysis?

Figure 6. Data Collection Methods and Integration

Method	Level 1 Reaction	Level 2 Learning	Level 3 Application	Barriers / Enablers	Level 4 Impact	Costs
Initial Participant Questionnaire	X	X	X		X	
Initial Manager Questionnaire	X	X	X		X	
Participant Interviews	X	X	X		X	
Follow-up Questionnaire: Participants	X		X	X	X	
Follow-up Questionnaire: Managers	X		X	X		
Company Records			X		X	X

RESULTS

The data were collected following the data collection plan. The levels of data present the results.

Reaction Data

Reaction data was collected early in the program and focused on both reactions from the employees involved in the project and their managers. Although open verbal and informal positive reactions were detected early in the process, four particular measures were collected on the questionnaire directly from the employees.

1. The satisfaction with the new work arrangement.
2. The importance of this approach to their success.
3. The rewarding effect of this opportunity for them.
4. The motivation effect of this arrangement. The company anticipated this new work arrangement would provide a more motivated employee who would produce more.

These four measures scored high numbers and Table 2 shows the results. The reaction from the employee perspective averaged 4.4 on a 5-point scale.

Table 2. Reaction Data

<p><u>From Participating Employees</u></p> <ul style="list-style-type: none">• Rating of 4.6 out of 5 on satisfaction with new work arrangement• Rating of 4.7 out of 5 on importance of new work arrangement to their success• Rating of 4.2 out of 5 on the rewarding effect of the new work arrangement• Rating of 4.1 out of 5 on motivational effect of new work arrangement <p><u>From Managers</u></p> <ul style="list-style-type: none">• Rating of 4.2 out of 5 on importance of the work alternative• Rating of 4.1 out of 5 on appropriateness of the work alternative• Rating of 4.3 out of 5 on the need for the work alternative

From the managers’ perspective, it was important to understand how managers perceived this new work arrangement. Although there were many aspects of this issue, the objectives focused on three points: how managers perceived this program to be necessary, appropriate, and important to the company. Managers must see the necessity of this program in today’s work climate when considering problems encountered with commuting and the environment, as well as the desire for the flexibility of working from home. Table 2 shows the managers’ reactions, which exceeded expectations. The ratings averaged 4.2 out of 5 on the three items. In summary, the reaction surpassed the expectations of the implementation team.

Learning Data

Although this project is not a classic learning solution, where significant skills and knowledge must be developed for the program to be successful, there is still a learning component. Employees must understand their roles and responsibilities and managers must understand the policies of working at home. They also must have the ability to explain the policies and successfully address any performance issues that can develop in the unique environment of a remote workforce. The managers and employees provided self- assessment input on their questionnaires, which typically show the learning from the two groups. The managers were given an opportunity during meetings to practice the performance discussions so they would be able to address the issues effectively. The facilitator of the meeting was required to confirm that each manager could successfully address those issues and that every manager involved in the program properly demonstrated their ability to do so. As Table-3 shows, the self-assessment ratings exceeded the expectations on five measures from employees, averaging 4.3 out of 5. Managers averaged 4.1 out of 5 on two measures. The confidence to explain the policy was 3.9 out of 5, just short of the goal of 4.0. Still, there was confidence that learning had occurred so that the program could be properly implemented. Also, each manager successfully demonstrated four types of performance discussions through role playing.

Table 3. Learning Data

<p><u>From Employees</u></p> <ul style="list-style-type: none">• Rating of 4.0 of 5 on the discipline and tenacity to work• Rating of 4.1 of 5 on the tenacity to work at home• Rating of 4.3 of 5 on roles and responsibilities• Rating of 4.3 of 5 on conditions and regulations• Rating of 4.2 of 5 on the realities of working at home <p><u>From Managers</u></p> <ul style="list-style-type: none">• Rating of 4.2 of 5 on key elements of the policy for working at home• Rating of 3.9 of 5 on the confidence to explain policy• Successful skill practice demonstration on performance discussions – all checked

Application Data

These types of programs can easily go astray if employees are not following the policies properly and the managers are not managing the process appropriately. Consequently, application and tracking the implementation of the process became a very important data set. Table 4 shows the key items monitored which are directly connected to objectives. In all, 93 percent of managers conducted meetings with employees to discuss the work-at-home arrangement. Although 100 percent would usually be expected, a few managers either did not have direct employees or had no employees who were interested in working at home. The possibility remained that some managers did not conduct the meetings when they should have. Because of this, a complete briefing involving all employees covered most of the issues that the managers were exploring in the meeting. The meeting with the managers represented reinforcement and showed their connection to the project.

Table 4. Application Data

- Ninety-three percent of managers conducted meetings with employees to discuss working at home.
- Thirty-six percent of eligible employees volunteered for at-home work assignments (342 participants).
- In total, 340 home offices were built and equipped properly (two employees changed their minds before establishing an office).
- Work-at-home employees rated 4.3 out of 5 on working effectively at home.
- Ninety-five percent of employees reported the workplace was free of distractions and conflicting demands.
- Managers rated 4.1 of 5 on administering policy properly
- Managers rated 3.8 of 5 on managing remote employees effectively

After all the briefings and information sharing, 36 percent of eligible employees volunteered for work-at-home assignments, representing 342 participants. This participation was better than expected and left the project team pleased. In the follow-up data, the participants rated 4.3 out of 5 on working effectively at home; in addition, 95 percent of the employees reported that the workplace was free of distractions and conflict. The managers rated themselves 4.1 out of 5 on properly administering policy. However, some had difficulty when it came to the rating of managing employees remotely, which was 3.8 out of 5.

Barriers and Enablers

With the recognition that many issues could derail the success of this program, the barriers and enablers were captured. Table 5 shows the barriers and enablers to success and as expected, there were some classic barriers; however, the barriers did not prove to be very significant. The greatest obstacle was the lack of manager support, with 18 percent of participants indicating this as a concern. Following closely behind was lack of necessary support from staff that would normally support them in their office work. Additionally, 15 percent indicated communication breakdown, while 11 percent thought this program would limit their career progression. A few felt that they would be left out of decision-making and that IT support would be lacking, while some indicated that they were concerned about the lack of social interaction.

Table 5. Barriers and Enablers to Success

Barriers	Percent Indicated
Managers support is lacking	18%
Lack of support staff	16%
Communication breakdowns	13%
Career progression is limited	11%
Left out of decisions	9%
IT support is lacking	7%
Lack of social interactions	5%
Enablers	Percent Indicated
Personal cost savings	89%
Flexibility to schedule	71%
Convenience of work	71%
Work-life balance	64%
I have all the tools	54%
Support of manager	31%
Support of staff	14%

Regarding the enablers, the number one enabler on this list is the personal cost savings. Many employees signed up for this arrangement as a way to save costs by not paying to commute. Next was the flexibility of having some adjustments in their work schedule and taking time for personal activities to be made up. After that was the convenience of working in a home setting and improved work-life balance. Most said they had all the tools to make it work. Only 31 percent said the support of the managers helped to make it more successful. Finally, 14 percent said staff support helped them. These barriers and enablers provided an opportunity for process improvement.

Isolating the Effects of the Program

As the impact data were collected, the key question was how much of this improvement actually was connected to this specific project. While several methods were considered, a classic approach was used. The work-at-home group was considered an experimental group and compared to a matched group that would serve as a control group. The comparison group was matched with the experimental group on job category, length of service with the company, gender, age, and marital and family status. With these multiple variables it was difficult to get a perfect match, but the team felt that there was a very good comparison between the two groups. As a backup, expert estimates were used.

Impact

The impact data were monitored and included three measures: productivity, office expense and turnover. The team decided not to value this program on absenteeism and instead left it as an intangible. Although absenteeism is probably connected to the program, the HR team thought it would be best to avoid absenteeism as a measurable objective. If there is too much focus on this measure, some employees may decide to work while sick. Table 6 shows the impact data of both the experimental group and comparison group six months after the project began. The differences are significant, representing distinct improvements in the three measures and exceeding the objectives of the project. Having the data identified and isolated to the project, the analysis moves to the next step, converting data to money.

Table 6. Impact Data

Business Performance	Work-at-Home Group	Comparison Group	Change	Number of Participants
Daily Claims Processed	35.4	33.2	2.2	234
Daily Claims Examined	22.6	20.7	1.9	77
Office Expense Per Person Annualized Turnover*	\$12,500	\$17,000	\$4,500	311
(*Processors and Examiners)	9.1%	22.3%	13.2%	311

Converting Data to Money

Table 7 shows how each of the data sets was converted to monetary value. As the table explains, the method for converting the productivity improvement to value was using standard values. The value previously was developed by a group of experts and analysts in finance and accounting. The number was rounded to \$10 for claims processing and \$12 for claims examination. The calculation shows the annual cost saving.

Office expenses were rounded numbers taken directly from the procurement function. The projected cost for at-home employees was \$13,600. However, the actual cost was rounded to \$12,500 for the first year. This was compared to the annual cost to maintain the office for all employees, \$17,000 per person. The first-year value included cost of a computer, desk and other items that would certainly be there as long as that person works at home. The net improvement was \$4,500. The second-year value shows a cost reduction of \$3,600. To be conservative, only the first-year value was used in the comparison.

Table 7. Converting Data to Money

<u>Productivity Improvement</u>	
• Cost (value) of processing one claim=\$10.00	
• Cost (value) of examining one disputed claim=\$12.00	
• Daily improvement=2.2 claims per day	
• Daily improvement=1.9 disputed claims per day	
• Annual value=234 x 220 workdays x 2.2 x 10.00= \$1,132,560	
• Annual value=77 x 220 days x 1.9 x 12.00=\$ 386,232	
 <u>Office Expense Reduction</u>	
• Office expenses in company office: per person \$17,000 annually	
• Office expenses at home office: per person \$12,500 first year; \$3,600 second year	
• Net improvement: \$4,500, first year	
• Total annual value=311 x 4500= \$1,399,500	
 <u>Turnover Reduction</u>	
• Value of one turnover statistic= \$25,400	
• Annual improvement related to program=41 turnovers prevented, first year	
• Annual value=\$25,400 x 41= \$1,041,400	
 <u>Total Annual Benefits</u>	
• Productivity—processing one claim \$1,132,560	
• Productivity—processing one disputed claim \$386,232	
• Office expense reduction—\$ 1,399,500	
• Turnover reduction—\$1,041,400	
<hr/>	
Total \$3,959,692	

For turnover reduction, several turnover cost studies were performed on jobs in the insurance industry, using the ERIC database. The cost ranged from 90 percent to 110 percent, which seemed consistent and credible to the project team. The 90 percent figure was used and when multiplied by the average salary, yielded \$25,400. In all, 41 turnovers were prevented in the first year based on six months of experience. The total annual benefits for the program equal \$3,959,692.

Costs

The costs of the entire project as developed and monitored were estimated and are shown in Table 8. These costs include the initial analysis to determine whether this was the proper solution, the ROI forecast, and the actual development of the solution. Most of the charges are for IT support and maintenance, administration, and coordination categories.

Table 8. Project Costs

Initial Analysis and Assessment	\$ 21,000
Forecasting Impact and ROI	\$ 10,000
Solution Development	\$ 35,800
IT Support and Maintenance	\$ 238,000
Administration and Coordination	\$ 213,000
Materials (400 @ \$50)	\$ 20,000
Facilities and Refreshments – 21 meetings	\$ 12,600
Salaries Plus Benefits for Employee and Manager Meetings	\$ 418,280
Evaluation, Monitoring and Reporting	<u>\$ 23,000</u>
Total First Year Costs	\$ 991,680

Questions for Discussion

1. Calculate the benefit-cost ratio and ROI for this project.
2. Interpret these two calculations and what they mean.
3. Are the results of this study credible? Explain.

ROI Calculations

The ROI is calculated when the costs are totaled, and the monetary benefits are tallied. Table 9 shows the calculation of the benefit-cost ratio and the ROI. The ROI calculation at 299 percent greatly exceeds the initial objective of 25 percent. However, important results are not included in the calculation. The intangibles are critical to this study.

Table 9. ROI Calculations

$\text{BCR} = \frac{\text{Consulting Monetary Benefits}}{\text{Consulting Costs}} = \frac{\$3,959,692}{\$991,680} = 3.99$
$\text{ROI} = \frac{\text{Net Consulting Benefits}}{\text{Consulting Costs}} = \frac{\$3,959,692 - \$991,680}{\$991,680} \times 100 = 299\%$

Intangible Benefits

Table 10 shows a list of the intangible benefits connected to the project. A list of expected intangibles is included on the participants' and managers' questionnaires. To compile these results, at least 10 percent of respondents had to indicate a 3, 4, or 5 on a 5-point scale where 3 is moderate influence, 4 is significant influence and 5 is very significant influence. These are powerful intangibles, including those connected to the environment. Participants and managers can clearly see the connection. These may be the most important data sets in the minds of some executives, because it is the intangible image of helping the environment that often drives these types of projects. When these data sets are combined with the very high ROI, it is easy to see the tremendous payoff of this program.

Table 10. Intangible Benefits

<ul style="list-style-type: none"> • Reduced commuting time • Reduced carbon emissions • Reduced fuel consumption • Reduced sick leave • Reduced absenteeism • Improved job engagement 	<ul style="list-style-type: none"> • Improved community image • Improved image as an environmental-friendly company • Enhanced corporate social responsibility • Improved job satisfaction • Reduced stress • Improved recruiting image
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Fuel Savings

Because the individuals involved in this program have eliminated their commute, with the exception of an occasional required visit to the office, the fuel savings were significant. The average daily commute time reduced from 104 minutes to 15 minutes. When considering the average speed (30 mph), the average miles per gallon of gasoline (20 mpg) and the cost of fuel (\$3 per gallon), a savings of \$1,470 per year is realized in fuel costs alone.

Carbon Emissions

From the perspective of the top executive, the principal motivating factor of this program was to reduce carbon emissions. With reduced fuel consumption, carbon emissions were consequently reduced. A total of 490 gallons of fuel per person was saved, for a total of 152,390 gallons each year. This translates into 1,478 tons of carbon emissions.

What Makes the Results Credible

It is important to understand what makes this data credible. It is impressive in terms of the numbers, but some specific things make it very credible.

1. The impact data improvements were taken directly from the records and are not estimated.
2. The effects of the program were isolated from other factors using a comparison group.
3. Several impact measures were not converted to money, although they have significant value.
4. All the costs were included, including the very heavy start-up cost.
5. Only the first-year values are used in the analysis. This program will have a lasting effect as long as each individual is employed with FMI.
6. When estimates were used, they were taken from the most credible sources.
7. All of the data sets and methods have buy-in from the appropriate operating executives and key managers.

There is no reason to dispute the results presented in this process.

Questions for Discussion

1. Which audiences should receive the results of this study?
2. What specific methods should be used to communicate results?
3. What specific improvements could be made to this program going forward?

About the Authors



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Since 1997, Patti has been a driving force in the global adoption of the ROI Methodology and the use of measurement and evaluation to drive organization change. Her work as an educator, researcher, consultant, and coach supports practitioners as they develop expertise to help organizations and communities thrive. Her work spans private sector, public sector, nonprofit, and nongovernmental organizations. Her work has been featured on CNBC, EuroNews, and in more than a dozen business journals. Patti is author, coauthor, or editor of over 75 books and dozens of articles focused on measurement, evaluation, accountability, and ROI.



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Jack is a world-renowned expert on accountability, measurement, and evaluation. He provides consulting services for Fortune 500 companies and major global organizations. The author or editor of more than 100 books, he conducts workshops and presents at conferences throughout the world. Jack's expertise in measurement and evaluation is based on more than 27 years of corporate experience in the aerospace, textile, metals, construction materials, and banking industries. Jack regularly consults with clients in manufacturing, service, and government organizations in 70 countries in North and South America, Europe, Africa, Australia, and Asia.

About ROI Institute, Inc.®

ROI Institute, Inc., founded in 1992 as a service-driven organization, assists professionals in improving programs and processes using the ROI Methodology® developed by Dr. Jack J. Phillips and Dr. Patti P. Phillips. This Methodology is the global leader in measurement and evaluation including the use of return on investment (ROI) in non-traditional applications. ROI Institute regularly offers workshops, provides consulting services, publishes books and case studies, and conducts research on the use of measurement and ROI. This makes ROI Institute the leading source of content, tools, and services in measurement, evaluation, and analytics. Working with more than one hundred ROI consultants, ROI Institute applies the ROI Methodology in 20 fields in over 70 countries. ROI Institute authors have written or edited over 100 books, translated into 38 languages. Organizations build internal capability with the help of ROI Institute and its ROI Certification process. By successfully completing this process, individuals are awarded the Certified ROI Professional® (CRP) designation, which is respected by executives in organizations worldwide.

