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A Multicomponent Intervention System Using Goal Setting, Feedback, and Incentives to Improve Performance in Small Service Businesses

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**A MULTICOMPONENT INTERVENTION SYSTEM USING GOAL SETTING,
FEEDBACK, AND INCENTIVES TO IMPROVE PERFORMANCE
IN SMALL SERVICE BUSINESSES**

by

Doug LaFleur

**A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor Of Philosophy
Department of Psychology**

ADVISOR : DR. JOHN AUSTIN

**Western Michigan University
Kalamazoo, Michigan
December 2004**

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INTRODUCTION

Small businesses are an indispensable engine that drives the U.S. economy. They are job generators and provide innovation and an array of opportunities to the diverse communities that they serve. Although small in their number of employees, the total number of small businesses greatly outnumbers large businesses. Small businesses may not have the name recognition and brand identity that is gained through years of marketing their products that big businesses have. However, their impact on the U.S. economy cannot be underestimated.

According to the U.S. Office of Advocacy, the total number of small businesses (those with less than 500 employees) in 2003 were 5.7 million and represented a 1.9 percent increase from 2002. The total number of large businesses were 171,000. Small businesses represented nearly 99.7 percent of all businesses in the United States in 2000 (U.S. Small Business Administration Office of Advocacy, 2004).

Keeping small businesses operating profitably over extended periods of time can be a daunting task for the owners of these enterprises. Small businesses open and close on a daily basis, giving new entrepreneurs the opportunity to carve a niche for themselves in the marketplace but also often causing great emotional pain to many small business owners and their families. In 2003, a total of 572,900 new businesses were opened, while the number of businesses which closed was 554,800. During this same period, bankruptcies numbered 35,037 for small business owners (U.S. Small Business Administration Office of Advocacy, 2004).

Small firms employ more than half of all people working in the private sector. However, they also do much more for the U.S. economy and workforce. They pay 44.3 percent of the total U.S. private payroll and employ more than half of all private sector employees. They generated all of the net new jobs in 2000 to 2001. Over the decade of the 1990s, they generated 60 to 80 percent of the net new U.S. jobs annually. They create more than 50 percent of the private gross domestic product and federal prime contracts are funded at the rate of 22.8 percent by small businesses. They are also the masters of innovation and patents. Small businesses produce 13 to 14 times more patents per employee than large patenting firms. And when patents are noted in articles and research, the patents created by small businesses are twice as likely to be cited. Small businesses also employ 39 percent of high tech workers such as scientists, computer workers and engineers (U.S. Small Business Association Office of Advocacy, 2004).

Considering the above, the impact of small business on the U.S. economy is anything but small. It is a vital engine that drives the U.S. economy and efforts to improve small business performance are therefore important and worthwhile.

This paper reviews a multicomponent intervention using goals, feedback, and incentives to improve the performance of small businesses. The intervention, called an Impact Group, has been used by over 50 small businesses ranging from chimney restoration dealerships with an annual dollar volume of \$150,000 to some of the nation's largest cardiology practices with \$80 million in sales. Impact Groups use the variables of goals, feedback, and incentives in a unique manner that provides a focus on improving the performance of these businesses while hopefully teaching the participants various elements of the knowledge and skills necessary for maintaining optimum performance.

A key model used in the development of this intervention was The Total Performance System (TPS) model as described by Dale Brethower (Brethower, 1972). This model allows the researcher to gain a micro and macro perspective of the system to be analyzed and creates various perspectives for viewing the organization and designing an intervention.

The TPS allows the researcher to use a systematic, dynamic process to align all parts of the system with other parts and identify outputs and feedback systems that allow the system to change and adapt to its environment. It is based upon the concept of general systems theory, which defines a system as a complex of interacting elements (Bertalanffy, 1968) and the relationships between these elements (Miller, 1978). This perspective allows each vantage point of the system to be methodically analyzed. Taking a systems view of organizations is important because an organization behaves as a system, regardless of if it is being managed as a system (Rummler & Brache, 1990). Systems thinking is part-to-whole and whole-to-part thinking about making connections between system element, whole systems, and subsystems so they fit together into a whole that generates value-added outputs (Brethower, 1982; Kaufman, 1998).

In the TPS model (see Figure 1), a performance system is broken down into seven parts including the system's mission, the processing system, processing system feedback, output, the receiving system and receiving system feedback. The Brethower model is the earliest validated application of a systems model to specifically address human performance (Brethower, 1972). The TPS is "total" because all seven elements must be considered to manage a system intelligently (Brethower, 1995). It has also been referred to as a general systems diagram (Brethower, 1982) and general systems view (Brethower,

1995) because it applies to a very wide variety of adaptive systems (Brethower, 1982).

The purpose of the TPS is to provide guidance in identifying, discussing, and improving key features of an organization (Brethower, 1995).

Mission:

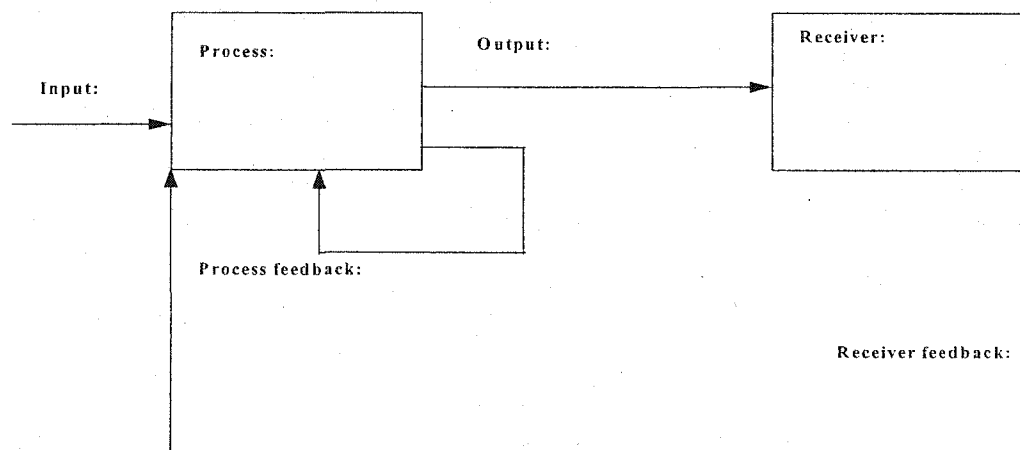


Figure 1. TPS Model¹: A micro and macro perspective of a system in which an organization can be analyzed and an intervention designed.

This dissertation analyzes a system using the TPS model from the perspective of the intervention as the processing system. The following table shows how using the perspective of the intervention as a processing system has been systematically aligned with each part.

The alignment of each perspective assures that each piece fits logically into each other piece and allows the system designer the opportunity to identify disconnects and missing pieces. It assures that key inputs are in place to create key outputs and that all

¹ From "Behavior Analysis in Business and Industry," by Malott, R.W., 1973, *Introduction to Behaviour Modification*, 1-8, Behaviordelia, Kalamazoo, Michigan.

outputs are necessary and useful as inputs to the receivers or to a micro or macro system to which the piece belongs. This perspective creates an environment for a number of key research questions to be explored. Among the TPS related questions addressed in this dissertation are: (1) Can a systems approach to an intervention using goals, feedback and incentives improve the quantity of work produced by a small service business? (2) Can a systems approach to an intervention using goals, feedback and incentives improve the number of estimates written by a small service business? (3) Can a systems approach to an intervention using goals, feedback and incentives increase the backlog of work to be done by a small service business (which is a function of both the work sold and the work produced)?

Goal Setting

Goal setting has proven to be a promising strategy for improving a number of areas of performance in organizational and educational settings. Numerous studies have detailed its effectiveness from both a cognitive perspective (Locke, Shaw, Saari, & Latham, 1981) and a behavior analytic point of view (Fellner & Sulzer-Azaroff, 1984). In general, goal setting entails specifying a level of performance toward which the individual or group should work (Fellner & Sulzer-Azaroff, 1984). Locke (1968) conceptualized goal setting as a relation between conscious intentions and task performance. This cognitive approach may be contrasted with a behavior analytic approach, which notes that a goal is simply a stimulus that precedes behavior. When the antecedent goal reliably accompanies a reinforced response or describes a reinforcement contingency, it acquires discriminative control, increasing the probability the individual

Table 1

The Total Performance System

Processing system	Impact Group Intervention
<p>Mission</p>	<ul style="list-style-type: none"> • Produce business people with improved business building behaviors. • Provide a setting for maintaining the use of these new behaviors in their natural setting. <p>Enables business to improve efficiency and profitability to better serve their customers and communities</p>
<p>Input</p>	<ul style="list-style-type: none"> • Facilitator • Goals • Standards • Peers • Feedback software • Dealers financials
<p>Output</p>	<ul style="list-style-type: none"> • Business people with improved business building behaviors • Consequences for maintaining business building behaviors
<p>Receiver</p>	<ul style="list-style-type: none"> • Attendees' business • Communities serviced
<p>External feedback</p>	<ul style="list-style-type: none"> • Satisfaction surveys • Profit/loss statements • Volume growth
<p>Internal feedback</p>	<ul style="list-style-type: none"> • Goals accomplished • Measures of backlog, production, sales and estimates

will repeat the behavior in the future presence of the same stimulus. Also, attainment of a goal can function as a reinforcing stimulus (Fellner & Sulzer-Azaroff, 1984).

It should also be noted that there are many variables that affect goal attainment and exert some functional control of an individual's completion of goals. Among those found to be particularly influential are the individual's history and current contingencies in relation to goals, how specific and reasonable the goals are, and whether the individuals involved have participated in the setting of the goals or reinforcement has been previously paired with the goals (Fellner & Sulzer-Azaroff, 1984).

Another key technique in this study was the use of Gilbert's ACORN test for assessing goal adequacy and goal attainment. Goals were used throughout the study, but Gilbert's ACORN test was added to the intervention to improve goal attainment by making the goals more specific, more measurable, and more closely connected to the mission and objectives of the company. From a behavior analytic viewpoint, it should be noted that when goals specify response requirements and the criterion for rewards, employees and managers more easily discriminate successful from unsuccessful performance (Fellner & Sullzer-Azaroff, 1984).

"ACORN" is an acronym for five qualifications that every good description of the mission of an institution should include. The mission of an organization could also be described as the most important result of an organization (Daniels, 1989). These five qualifications were used in this study as a guide for developing and analyzing goals that were set by the participants.

The qualifications were asked as questions, in the following manner:

- A: Is it an *accomplishment*, and not just a description of behavior? If the goal has been described as a behavior and not as a result, it has not been adequately identified.
- C: Do those assigned the goal have primary *control* over it? Or does good performance principally depend on others?
- O: Is it a true *overall objective*, or merely a subgoal?
- R: Can this goal be *reconciled* with other goals of the institution, or is it incompatible with them?
- N: Can a *number* be put on it, that is, can it be measured?

Feedback

Gilbert notes that we could dramatically reduce at least three-quarters of the PIPs (performance improvement potential) in the world of work by applying relatively simple procedures for transforming data into useful information, (Gilbert, 1978). He also describes two different ways in which, without training, the information required for competent performance can be improved: The first is data manipulation which is used to confirm performance. Data manipulation would entail providing timely data on the performance to the performer that may be used as feedback to improve the performance. The second is through improvement in the ways in which performance is directed or guided. Gilbert also makes the point that data messages become information only when they inform. The use of this information may be described as providing feedback to the performer. As many authors have noted, feedback is not a precise technical term, and describing a procedure as involving feedback does not explain the behavioral functions of the information provided (Duncan & Bruwelheide, 1986). In fact, depending on past and

present conditions, information about a person's past performance might alter subsequent behavior by acting as a conditional stimulus, reinforcer, punisher, establishing operation, or discriminative stimulus.

Feedback has often been used in multicomponent interventions to improve a variety of performance issues in numerous industries. Feedback has been combined with prompts and goal setting in a restaurant environment (Ralis & O'Brien, 1986), combined with reinforcement to improve the performance and safety of roofing crews (Austin, Kessler, Riccobono, & Bailey, 1996) and combined with goal setting to improve staff productivity in a mental health center (Calpin, Edelstein, & Redmon, 1988). Feedback has been an attractive procedure to use because of its programmatic simplicity, flexibility, and low cost (Fairbank & Prue, 1982).

The study and use of feedback in multicomponent interventions also presents numerous problems for researchers attempting to measure its effectiveness. It is often difficult to identify the source that provides the feedback message (e.g., manager), how the feedback has been transmitted, the content of the message, whether the recipients are employees or groups of employees, and the frequency with which the feedback is delivered (Balcazar, Hopkins, & Suarez, 1986). The effectiveness of feedback delivered according to the dimensions described above often makes it difficult to identify and understand, especially in applied settings and when combined with performance improvement variables (goal setting, incentives, etc.).

Although attempts have been made to tease out the role of feedback in interventions and provide a more precise behavioral definition of the type of feedback used, that is not the intent of this research. Several reviews of the literature concerning

the use of feedback in organizational settings have made it clear that feedback has been used very successfully in improving performance in a wide range of settings (Alvero, Bucklin, & Austin, 2001). This study used feedback in a variety of ways and a case could be made of its use as a conditional stimulus, a reinforcer, punisher, establishing operation, or discriminative stimulus.

According to the *Handbook of HPT*, feedback is most conveniently employed and is most effective when standards (expectations, procedures, and required results) are most clearly and precisely defined and communicated. Feedback serves its informational role best when it enables comparison of actual, observed performance with well-understood standards of performance (Stoltovich & Keeps, 1992). A clear attempt was made in this study to provide a feedback system that employed this comparative strategy. A more detailed explanation of how this was accomplished is provided in the method section of this paper.

Monetary Incentive Systems

Monetary incentives systems have been used to improve individual performance in industry for many years. With the increase in competition from foreign competitors and the decline of the annual productivity growth rates of the United States, organizations began to look for alternative ways to increase productivity as long ago as the 1880's (Blinder, 1990; Dickinson & Gillette, 1993; Lawler, 1990; McCoy, 1992; Peach & Wren, 1992; Schuster & Zingheim, 1992). More recently, various methods of using monetary incentive systems have been used throughout the 1900's ranging from piece rate plans to pay for performance (Milkovich & Stevens, 2000) to variable pay systems (Lincoln 1946,

1951). Monetary incentive systems have been extremely valuable in industry as they often provide the tightest link between performance and pay, and thus offer a vital tool for compensation specialists to use to increase employee productivity (Bucklin & Dickinson, 2001).

Three themes of research have emerged in regards to the current monetary incentive systems used by organizations. These include (1) the amount of incentive earned as a percentage of the total pay or base pay (2) incentive pay earned using various ratio schedules of reinforcement and (3) incentive pay systems using linear, accelerating, and decelerating per piece incentive pay (Bucklin & Dickinson, 2001). This project used an incentive system most similar to a percentage of the totally pay or base pay system and therefore this review will focus on this theme.

A traditional approach in using monetary incentive systems directly linked to the accomplishment of specific organizational outcomes has been to tie a minimum of 30 percent of employees' pay to the accomplishment of the specific targeted results (Fein, 1970, Henderson, 1985). However, Frisch and Dickinson noted that this 30% figure was based more on traditionally held beliefs and not on research data (Frisch & Dickinson, 1990). Various studies have concluded that improved performance was based more upon the contingent ratio relationship between performance and pay and not on the percentage of total pay to base pay or the amount of the per piece incentive (Dickinson & Gillette, 1993; LaMere, Dickinson, Henry, Henry, & Poling, 1996). Even small amounts of incentives (as a percentage of total pay) have been shown to increase performance in workers' accomplishments. An incentive equal to 3% of an employee's wage has been

effective in increasing performance in hourly workers (Frisch & Dickinson, 1990; LaMere et al., 1996). Duncan and Smoot (2001) noted similar findings;

First, it seems clear that pay procedures that are linked directly to performance lead to increased performance compared to procedures that are not strongly linked. Next, it appears that the actual amount of incentive pay as a proportion of base pay can be quite small and still be effective. (p.263)

If pay is linked directly to performance, incentive systems amounting to as little as 2.6% of pay have been shown to be effective in improving performance (LaMere et al; 1996). However, strengthening this link by increasing the percentage of incentive to pay may not lead to further increases in performance. This effect has been demonstrated in various laboratory simulations (Dickinson & Gillette, 1993; Frisch & Dickinson, 1990).

In a comprehensive monetary incentive review article by Bucklin and Dickinson (2001), they noted that:

Performance levels have not been a function of: (a) the percentage of total pay or base pay earned in incentive pay for percentages that have ranged from 3% to 100% of a person's total pay and, similarly, from 3% to 100% of a person's base pay; (b) the per piece incentive amount; (c) the amount earned in total pay or total incentive pay; (d) the ratio schedule of delivery of CRF, FR3, VR2, VR3, and VR4 schedules; or (e) linear, accelerating, and decelerating piece rate pay. Taken together, these data imply that, within the parameters investigated by these studies, the most critical determinant of performance is the ratio contingency between performance and pay; that is, a relationship in which individuals earn a specified amount of money for the number of work units they complete. (p. 125)

Participants in this study were required to produce specific results in order to receive a discount (incentive) on their material purchases. The incentive was relatively small (a 4 dollar per bag discount on the material cost) when related to their rate of pay, however the receipt of the discount was directly related to their continued participation in the program. There was a contingent relationship between performance (active participation in the Impact Group program) and incentive (the discount on their material).

Summary and Purpose

The purpose of this study was to use a multicomponent intervention to improve the performance of small companies. Many of the variables used in this intervention (feedback, goal setting, monetary incentives) have been used separately in various other experiments but this study shows the effect of using a unique combination of these variables in a setting specifically designed for small businesses.

Taking each variable (goal setting, feedback, and incentives) separately, the research in this area is particularly extensive. Articles written in this area include descriptions of package interventions using all three variables (Austin, Kessler, Riccobono, & Bailey, 1996; Johnson & Masotti, 1990; Ralis & O'Brien, 1987), as well as numerous articles using each individual component. However, the current study utilizes a unique approach that includes long-term follow-up and application of the principles used in the intervention. The intervention spanned several years and included data on changes in production, estimates written, and production backlog for several small businesses. Lastly, the application of these techniques to small businesses shows the research community a perspective that is rare. There were no comparable studies using this intervention approach in any of the literature reviewed by this researcher.

METHOD

The participants consisted of customers (i.e., owner/operators of chimney restoration businesses) who conducted business with a midwestern-based company called SOLID/FLUE Chimney Systems, Inc. SOLID/FLUE distributed a cementitious material (called SOLID/FLUE) used to reline and restore chimneys. The customers were operating under a dealership agreement or a franchise agreement and used the SOLID/FLUE product to line their customers' chimneys. At the time of the study, there were 63 businesses authorized to sell and install the SOLID/FLUE product throughout the United States and Canada. All 68 SOLID/FLUE customers were given the opportunity to become involved in the study.

The SOLID/FLUE service is a unique method of chimney restoration marketed to homeowners in need of chimney repairs. The SOLID/FLUE process is a restoration process which relines and restores damaged and/or improperly built masonry chimney. The process involves thoroughly cleaning a chimney, removing any clay tile which may be in the chimney cavity, and then inserting a 35-40 foot inflatable rubber former into the chimney. The former is inflated to the proper size needed and a lightweight cementitious (SOLID/FLUE) material is then pumped around the former. The material hardens overnight and the next day the former is removed creating a one-piece, highly insulative chimney liner inside of the masonry cavity.

A homeowner may be made aware of this need by seeing visual signs of chimney deterioration, by experiencing a chimney fire and having a fire official or chimney sweep inform them of the damage, by adding or changing an appliance (woodstove, furnace,

etc.) or by having their chimney inspected by a chimney service repair person or home inspector.

A typical SOLID/FLUE liner may cost a homeowner \$2,000 to \$2,500. A SOLID/FLUE dealer may complete 50 to 100 chimney lining jobs per two-person crew each year. All SOLID/FLUE dealers in this experiment had crews of two to three men.

The author owned a company that locates, equips, trains and then supports companies that provide SOLID/FLUE services. This support includes resupply of the SOLID/FLUE product and various other products as well as performance improvement services to these participants. The parent company was very interested in developing a network of financially strong dealers. Increasing the financial strength and stability of the customer network was expected to also improve the parent company's financial strength.

Four customers initially participated in the experiment. However, one of the companies dropped out of the study before its completion and discontinued their SOLID/FLUE business. The companies were small (less than \$1,000,000 in sales volume), privately owned and managed chimney service companies. The companies were located in the central and eastern portions of the United States. Each company provided the SOLID/FLUE service to its local community and serviced an area equal to approximately a 50-mile radius of its office. Although some of the companies who participated offered other services besides SOLID/FLUE, each company had separated its SOLID/FLUE division to operate as an individual profit center. Each SOLID/FLUE division was managed by a separate manager. Within the SOLID/FLUE division, a minimum of 75% of the total sales volume was created through sales of SOLID/FLUE

minimum of 75% of the total sales volume was created through sales of SOLID/FLUE chimney linings with the remainder resulted from miscellaneous chimney service work including cleanings, masonry repairs and assorted other small maintenance work.

Participants

All employees of the participating companies ranged in age from 25 to 58 years of age. Employees' experience with the SOLID/FLUE system ranged from 2 to 5 years. All participants operated a business prior to operating the SOLID/FLUE business. The individual background of each participant is described below:

Participant A

Participant A was a SOLID/FLUE dealer for 5 years. He had a background in historic restoration before becoming involved in SOLID/FLUE. He had been a longtime resident of the community that he was working in, and had been involved in several projects of significant historical significance prior to his being a SOLID/FLUE dealer. He had an Ivy league education and operated his dealership as a separate division of his restoration division. He was 52 years old and operated his SOLID/FLUE business with two to four employees, depending upon the job and the backlog of work he had to complete and the timeframe in which it had to be completed.

Participant B

Participant B was a SOLID/FLUE dealer for 3 years. He had background that included both residential and commercial construction. He also operated a snow plowing service that included state funded contracts as well as residential customers. He was 58

years old and operated his SOLID/FLUE division with a general manager as well as one other employee.

Participant C

Participant C was a SOLID/FLUE dealer for 3 years. Participant C also was a co-owner of a commercial contracting business. He personally managed his SOLID/FLUE dealership and focused mostly on older, historic restoration jobs in affluent communities. He managed all sales, marketing, and production of the business. He had one to two other employees (depending upon the work load and season) who worked in the production end of the business.

All participants passed a certification test upon initial completion of their SOLID/FLUE training when they originally became SOLID/FLUE customers. This certification test covered topics necessary for the participants to master in order to properly line chimneys according to national building codes as outlined in the National Fire Protection Agency's (NFPA) 211 code on chimneys, fireplaces, and venting.

Independent Variables

Each participant attended a one-week training program at the SOLID/FLUE corporate headquarters upon his initial purchase of their SOLID/FLUE dealership. During the course of this training program, each participant was required to receive a passing grade (90% correct responses on a multiple choice and short essay exam) to validate his understanding of the concepts being taught. The test involved national building code requirements for chimney installations (as taken from National Fire Protection Agencies 211 code book) as well as various chimney flue-sizing questions to

assure a knowledge of how to put the proper size of a chimney flue into each installation.

The primary emphasis of the test was on installation and code issues.

The Impact Groups meetings were offered to the SOLID/FLUE participants at six-month intervals. The meetings were held in hotel conference rooms. The hotels were all located within 45 miles of the host's location. All meetings were held on a Friday and Saturday of the week. The visiting companies arrived on Thursday afternoon or evening and many would attend a group dinner the evening prior to the meetings. The meetings would then start promptly at 8:00 a.m. on Friday.

The format of the Impact Group was as follows:

1. A group of participants met every 6 months at one of the participants' locations for a two-day program.
2. During this meeting, all participants shared goals, financials, and their problems with all other participants (and the researcher) in attendance. Goals and financial forms were provided by the home office to guide participants in creating their goals and producing their financials (Appendices A and B). The Impact Group process is described in Appendix C.
3. Input was given to all attendees on the validity of their goals and their progress towards previous goals.
4. During the late afternoon of the first day of the program (on Friday), all companies except the host shared their information (goals, financials, problems) with the group and the focus then switched from all of the participants in attendance to the host participant.
5. The host participant then shared his goals, financials and problems with the other participants.
6. The host participant's key process was analyzed.
7. The host participant's key employees were interviewed.
8. Key problems and alternative solutions were offered to the host participant and the hosts' employees.

9. Upon leaving the program, participants submitted weekly financial information to the researcher on four key areas of their business.
10. The group met again in 6 months and the process repeated itself.
11. Prior to the meetings, attendees were required to provide a list of their goals for the next six months. Four of the categories were pre-determined and were defined as sales, production, marketing and backlog. The goals were to have completion dates.
12. Attendees also provided a copy of their financial statement grouped into common line item categories. A copy of the common financial line categories is included in Appendix B.
13. Between each meeting, each attendee had his/her performance monitored on a weekly basis by forwarding information (via fax) on their actual performance in five key areas, including: (a) Estimates written; (b) Backlog produced; (c) Marketing contacts made; (d) Work produced; (e) Gross profit.

The attendees were updated between meetings on a three-month interval regarding their progress towards their own goals and also received information on all other attendees' progress towards their goals.

According to the TPS analysis conducted for the purposes of this study, external feedback was provided to attendees in the form of job satisfaction, profit/loss changes, and volume growth. These are described below.

1. Job satisfaction forms - the results of the satisfaction form were reviewed during the overview of the company at each Impact Groups meeting (see example satisfaction form Appendix D).
2. Profit/loss and volume growth – volume growth was noted during each 6-month meeting and was covered in detail when each participant presented his business goals during each Impact Group meeting.

As a result of the TPS analysis, the internal feedback provided to the attendees included the following items.

1. Work produced was communicated in the weekly feedback system that each Impact Groups participant received via fax from the SOLID/FLUE home office (see Appendix E for a sample feedback form).
2. Feedback on estimates written was communicated in the weekly feedback system that each Impact Groups participant received via fax from the SOLID/FLUE home office.
3. Feedback on marketing contacts made was communicated in the weekly feedback system that each Impact Groups participant received via fax from the SOLID/FLUE home office.
4. Feedback on backlog produced was communicated in the weekly feedback system that each Impact Groups participant received via fax from the SOLID/FLUE home office.
5. Feedback on overhead per month was taken from the income statements and goal statements and was communicated during the Impact Groups meetings during each participant's overview of his business.
6. Feedback on net income per month was communicated during the Impact Groups meetings during each participant's overview of his business.

The attendees were required to forward their actual financial information in advance of attending the Impact Group. These data were transformed to a spreadsheet format to show comparisons between each company. All attendees were shown a copy of an exemplar's financial sheet for their particular volume level (see Appendix F for an example of the financial sheet distributed to attendees). These forms clearly identified the gap between what each attendee was doing and what others in similar positions were doing.

Attendees were required to bring to Impact Groups meetings information on their goals for their businesses. The goals were arranged in common categories including goals for estimates, goals for backlog, goals for overhead, etc. A list of the goals is

included in Appendix A. Attendees could also supply goals for miscellaneous items. During each attendee's time to provide a summary review of his company's past six months performance, he explained his progress on his goals by identifying what his goals were and how the company performed on the goal. Each attendee then identified his new goals for the next 6 months (or longer). At that stage, the group provided suggestions and an analysis of how to decrease the gap between what is and what should be. The group then identified his new goals for the next 6 months (or longer).

An organization map was produced showing the key functional pieces of each business (see to Figure 2).

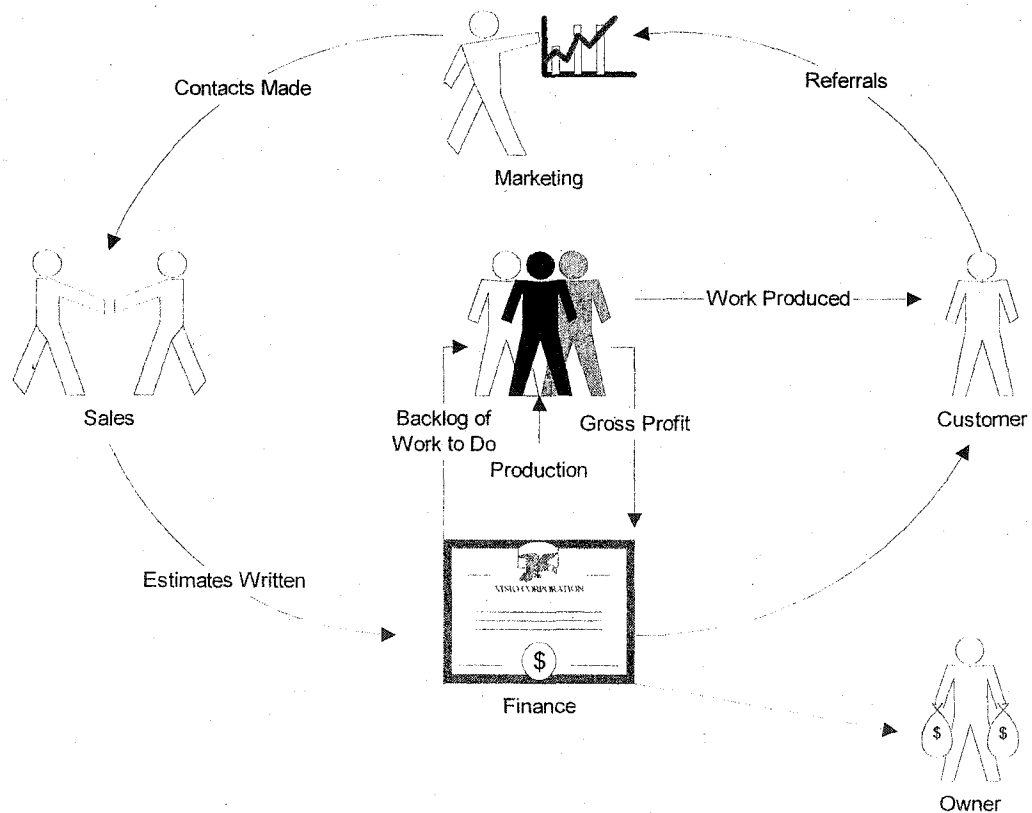


Figure 2. SOLID/FLUE Organizational Map: The key functional pieces of SOLID/FLUE business.

Many of the indicators for the weekly internal feedback measures were taken from this analysis of the business. Because of the small number of employees and the fact the owner/operator was the manager of the various functional units, the organizational level analysis also serves to show the overall products for the individual level of performance for the owner's behavior (or general manager, if appropriate).

The Impact Groups also served as a method to manage and create additional contingencies to maintain an individual's performance. When serving as the host company, the contingencies surrounding the owner/manager's performance were analyzed using a questionnaire designed using Gilbert's (1978) Behavior Engineering Model. The members of the group also served as a key variable to provide a level of accountability to the owner/managers. By reviewing each other's businesses on a continual basis, the members gained an intimate knowledge of what was working and what was not working in each of the businesses. They occasionally questioned why something was not working and, when solutions were offered, the structure of the program created an environment where the proposed solutions were followed up on during a later meeting.

An exemplary process analysis was conducted on the key SOLID/FLUE process. The key process includes all the major steps implemented from the first call from a homeowner (or insurance adjuster) until the job is completed. This process was identified as "The Eight Step Process" and is shown in Appendix G.

The host company of the Impact Group placed their key process on one sheet of paper for all of the other attendees to review during the meeting. During the latter part of the first day of the Impact Group, the host was required to give all other attendees a

description of their key process showing attendees the host's one page overview of the process as well as giving them a verbal explanation of this process. This explanation was accompanied by handouts of all of the forms used during this key process to all of the other attendees. The second day of the meeting included all of the attendees reviewing the one-page handout of the key process and conducting an analysis of any gaps in the host company's process.

The ACORN test was used during the Impact Groups when participants shared their business goals with the other participants. The ACORN test information was displayed at the front of the room and all participants were prompted that all of their goals must meet this test as criteria for the goals being accepted by the group. After each individual goal was shared with the group members, the participants were asked to publically signal approval or disapproval. If a particular goal did not pass the ACORN criteria, the member (or members) who disapproved explained their rationale for disapproval. The attendee whose goal was declined could then reconsider his goal and formulate another goal to pass this test.

As noted earlier, many of the feedback pieces were delivered using a format that provided feedback "just in time" to produce valuable information to the performer. This information flow is described below.

A monetary incentive system was created which provided all participants a discount of 4 dollars per bag of SOLID/FLUE mix provided they sent (via fax or mail) their weekly feedback to SOLID/FLUE on the dependent variables as outlined later in this paper. They were also required to attend all Impact Group meetings during this period. If they failed to send in the weekly feedback or attend the meetings, they would

not receive a discount on their next purchase from SOLID/FLUE. Each dealer was given a grace period of 7 days in which to send in their weekly feedback. The SOLID/FLUE material was being supplied to the dealers at a cost of approximately (it varied according to their volume) 25 dollars per bag. A discount of 4 dollars per bag represented a 16% discount in material cost. The SOLID/FLUE material was delivered in 40 bag pallets so each order would net a savings of \$160.

Dependent Variables

The dependent variables were collected on a weekly basis with baseline data being collected for 52 weeks and then data being collected for the following 104 weeks of the intervention.

The dependent variables were as follows: (a) estimates written, (b) backlog produced, and (c) work produced. These measures were collected on a weekly basis and forwarded to the SOLID/FLUE home office for processing.

Estimates Written

This was a quantity measure of the number of estimates written for a SOLID/FLUE lining job per week. When an estimate was made that included two or more SOLID/FLUE linings at the same property, this counted as one estimate.

Dollar Backlog

This was a quantity measure in dollars of the work sold (work for which deposits had been received). It quantified the total amount of work to do that had not yet been produced.

Work Produced

This represented a quantity measure of the dollars of the total value of work produced through the week. For instance, if a \$5,000 job was started on Monday at 8:00 am and completed by Friday at 5:00 pm, then this represents \$5,000 in work produced. However, if a \$5,000 job was started on Monday at 8:00 am and the job was half completed by Friday at 5:00 PM, then this represents \$2,500 of work produced during the week.

Interobserver Agreement

Interobserver agreement was conducted by reconciling the participants' data to the home office with actual material purchases made through the SOLID/FLUE home office. Each year a survey was completed by the majority of SOLID/FLUE customers and data were generated on numerous aspects of the participants' businesses. Among the data used to reconcile the participants' actual data with their material purchases was the following:

1. The average retail job price was \$2,500
2. The average SOLID/FLUE bags used per chimney was 15

Using the above mentioned data, the following formula was used to validate the accuracy of the data provided to the experimenter:

1. Work Produced: Monthly mix purchases were divided by 15 to determine the actual number of jobs done during the period
2. Dollar Backlog: The number of jobs completed was then multiplied by \$2,500 to determine the work produced as well as used to monitor the backlog figure being provided to the home office

3. Estimates Written: The total number of estimates written were divided by the participants' sales closure rate as provided at each Impact Group meeting. This figure was then multiplied by \$2,500 and compared with the participants' data

All participants reported data were within the expected ranges of the above calculations.

Social Validation

Gilbert (1978) stated that one of the primary purposes of businesses is to strive to constantly increase the worth of the organization. He describes worth as the value received divided by the cost incurred. Using Gilbert's model in this experiment, worth could also be measured as the increase in owner's equity during the period of the intervention. Owner's equity represents the income retained after all expenses have been subtracted from the revenue received. For social validation purposes, each participant's financial statements were recorded for the fiscal year covering the experimental period and equity was calculated.

Experimental Design

The experimental design began as an AB design involving four companies. However, one of the participating companies discontinued the dealership during the process (for reasons unrelated to the study), so this study was continued with the remaining three participants. All participants were exposed to three Impact Groups meetings at the same time during the study. The baseline period lasted 12 months, and the intervention period lasted 24 months. Weekly feedback data were collected during the entire experimental period (baseline and intervention).

Human Subjects Protection

The companies were not exposed to any type of intervention that they would not have been exposed to during the normal operating procedures of their business. The Impact Groups are a service offered to each SOLID/FLUE dealer. Every SOLID/FLUE dealer was reminded of this program in newsletters and other promotional material distributed to them during the normal course of doing business. SOLID/FLUE offers it to the dealers as a means to accelerate their learning curve, as well as a method to provide contingencies to the companies to help them improve their businesses.

All companies were given post-briefing sessions after the final phase of the intervention. The post briefing session consisted of handing out a letter of informed consent (see Appendix I) as well as verbally explaining to each company the purpose of the research. Data were collected past the final session as this data collection service was offered to all SOLID/FLUE dealers including all of the dealers who participated in the Impact Groups meetings.

This experiment was approved by the Western Michigan University HSIRB (see Appendix J).

RESULTS

Figure 3 shows the dollar production of companies A, B, and C during the experimental period. The graphs note the Impact Groups as well as the updates as they occurred over six periods, covering a time period of approximately two and one half years. Only one company (Participant A) in the experiment showed signs of the intervention having any noticeable effect on performance as related to dollar production and backlog. Participant B and C showed no noticeable effect during the duration of the intervention period as compared to the baseline period.

Participant A showed a slight upward trend within six months of the completion of the first Impact Group meeting. Dollar production for Participant A increased from \$3,300 to \$3,509 during the first six month period, then continued to rise steadily over the next 18 months. For the 12 month period prior to exposure to the independent variables, their dollar production averaged \$2,376 per week and then increased to an average of \$4,683 after exposure to three Impact Group meetings. Their last six months of weekly production averaged \$6,986. Participants B and C showed no increase in dollar production during the duration of the experiment. In fact, participant B increased slightly in dollar production during the first 18 months of the experiment and then steadily decreased during the next 18 months of the experiment. Participant C showed a consistent level of variability during the entire baseline and intervention period.

Participant A showed an increase in backlog (Figure 4) during the intervention phase of the experiment. Their backlog increased from an average of \$10,188 per week

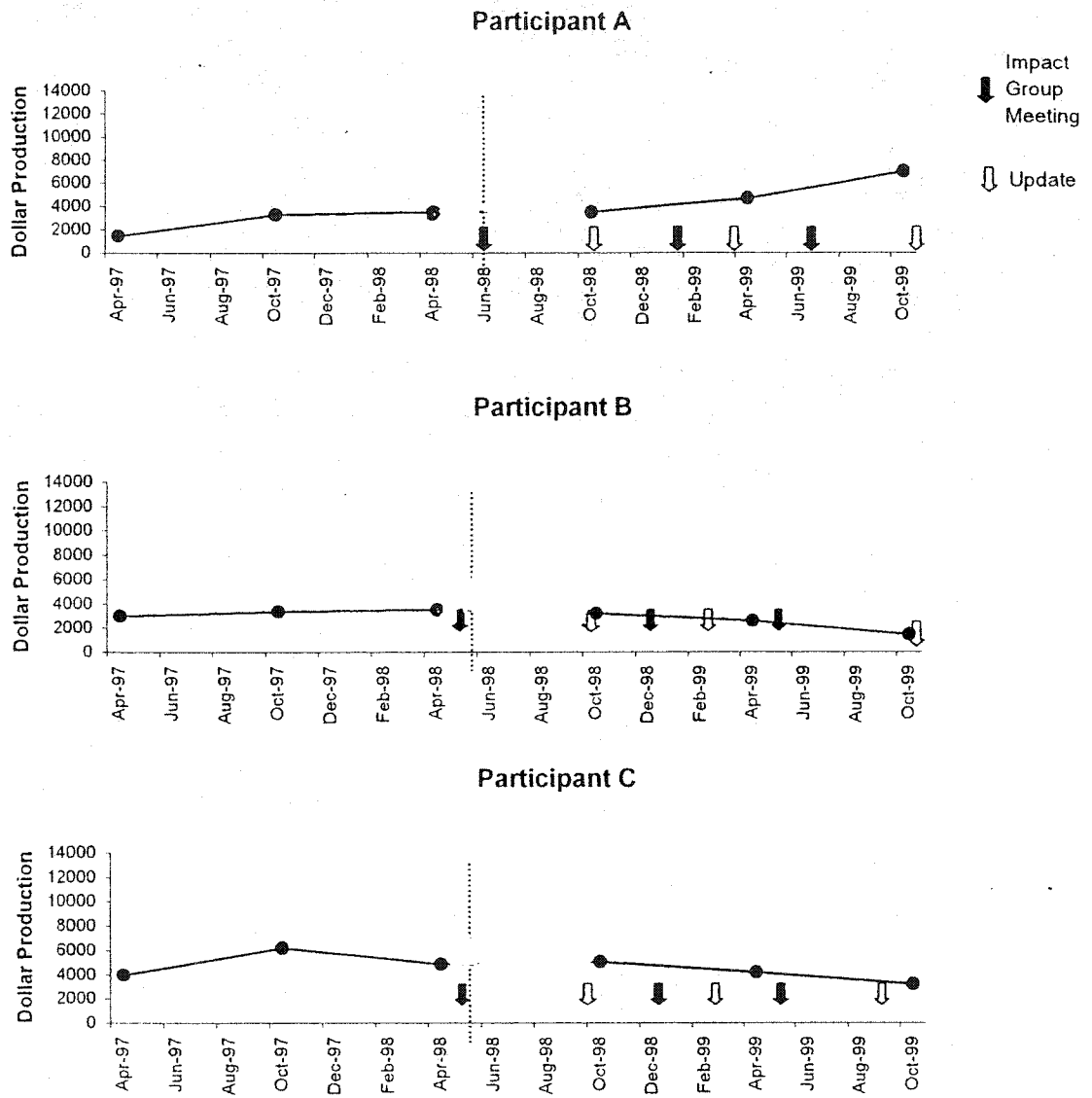


Figure 3. Work Produced

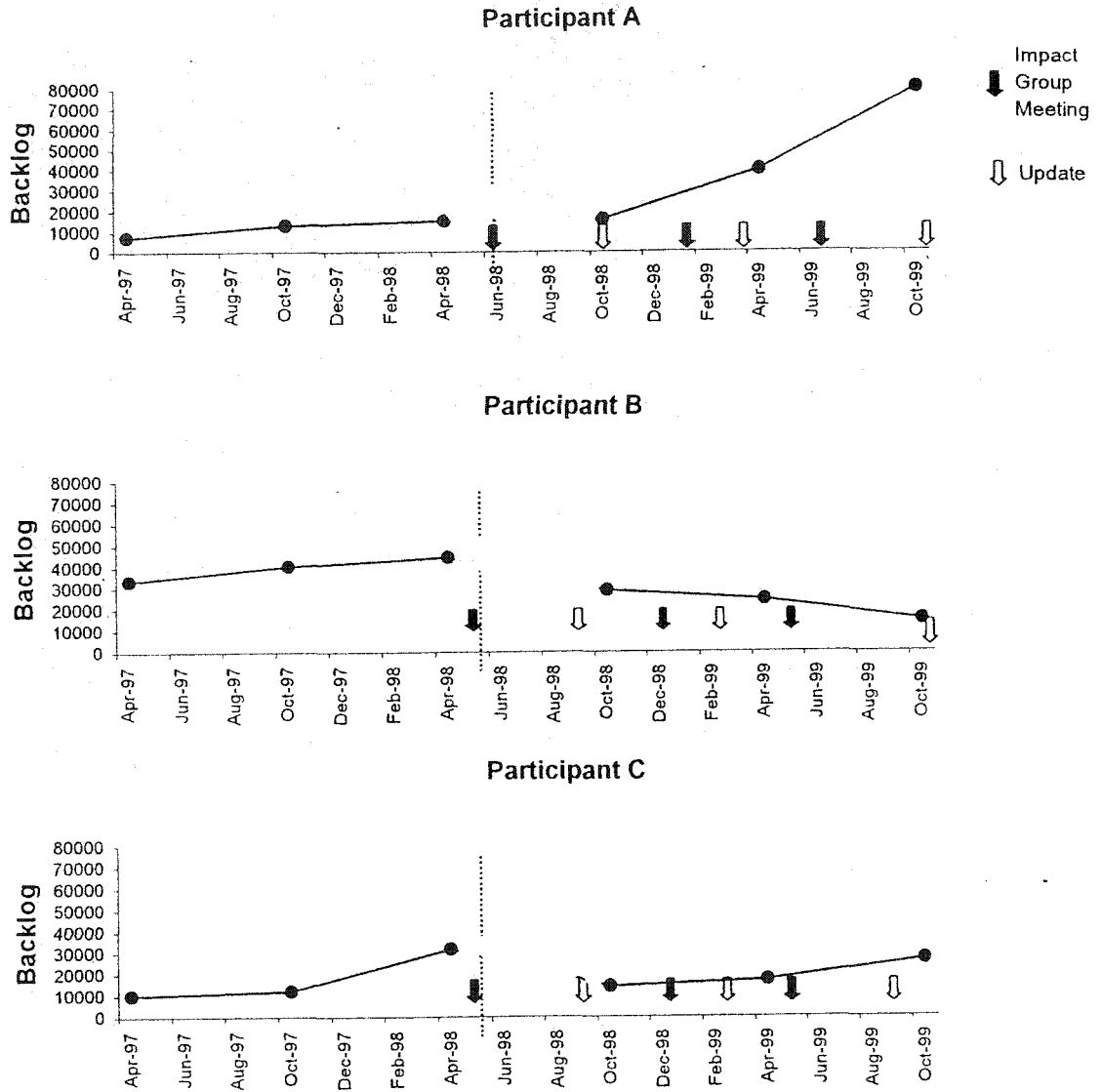


Figure 4. Dollar Backlog

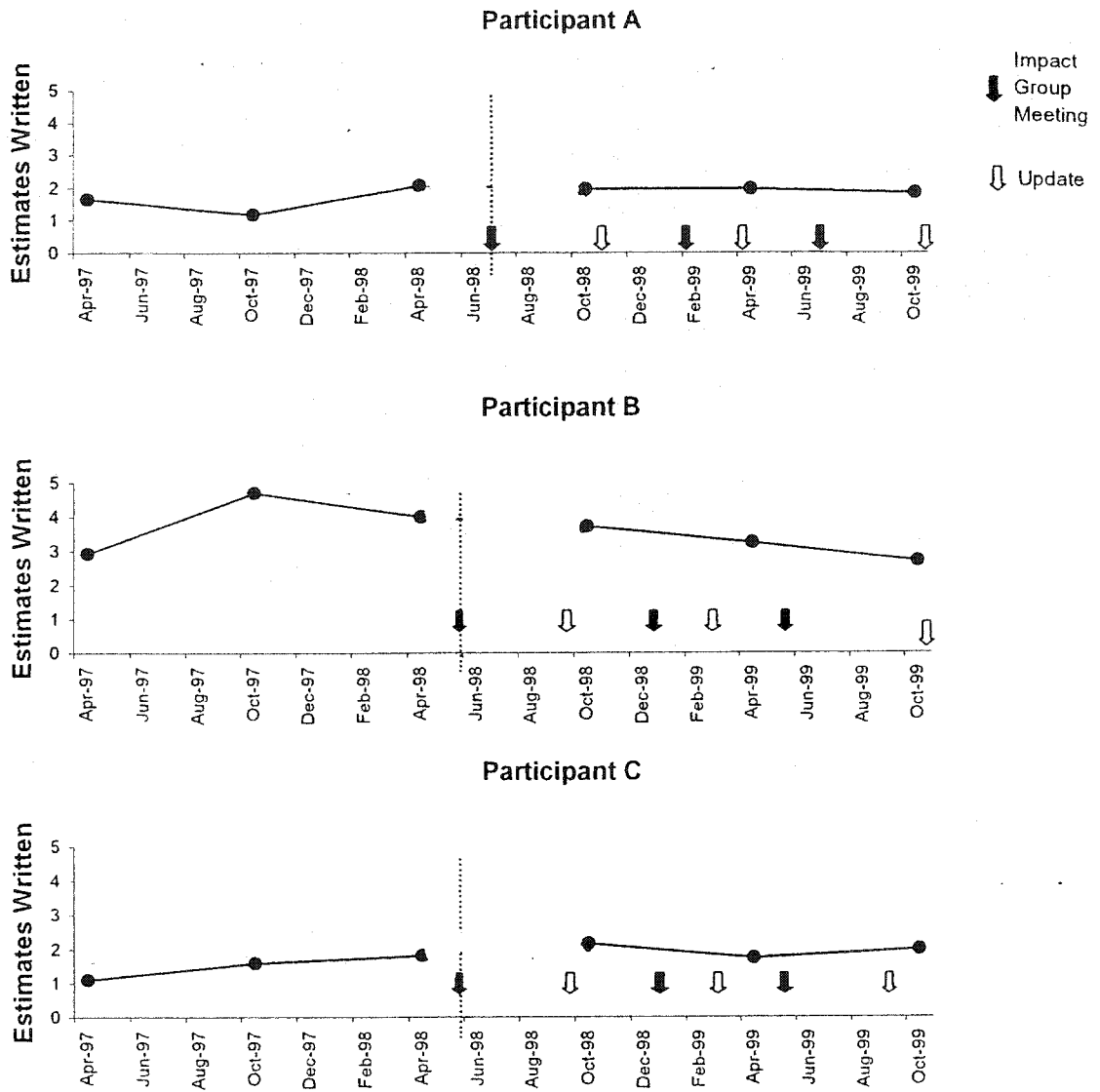


Figure 5. Estimates Written

to \$37,701 during the 24 month intervention period. In the last six months Participant A averaged \$79,811 per week in backlog. Participant B showed an initial increase during the baseline phase of the experiment and showed steady decreases in the periods following baseline. Participant C showed an initial increase during baseline just prior to the intervention period, then decreased considerably in backlog upon exposure to their first Impact Group period (from an average of \$31,946 in backlog per week to \$14,274). They steadily increased their backlog after this period and eventually worked their backlog up to an average of \$26,812 by the end of the experimental period.

Estimates written showed very little change from baseline to experimental period for all three participants. Participant A averaged 1.64 estimates per week during the baseline period and 1.92 after exposure to the independent variables. Participant B averaged 3.97 estimates per week during baseline and 3.22 estimates after baseline. Participant C averaged 1.49 estimates per week before baseline and 1.96 estimates after baseline.

DISCUSSION

A number of points can be made regarding the effect of the Impact Groups on the dependent variables. A primary goal of the Impact Groups was to increase the dollar production of the dealers' performance on a weekly basis. Doing this serves the dual purpose of providing more gross profit to the dealers (provided they maintain their gross margins per job) as well as providing more mix sales volume to SOLID/FLUE. The majority of the sales volume of SOLID/FLUE is from the mix purchases that the dealers make. SOLID/FLUE maintains a high gross profit on the SOLID/FLUE mix, therefore each additional pallet of mix purchased by the dealers adds considerable gross profit to the company. Thus, providing Impact Groups to SOLID/FLUE dealers as a method of improving the material sales has been considered to be a cost effective method to improve SOLID/FLUE's bottom line net income.

A review of the dollar production figures shows that, for two of the three participants, the Impact Group process did not serve its purpose of improving their production on a per weekly basis. However, Participant A showed a steady increase in dollar production and it should be noted that this participant has developed into one of the top five dealers in the SOLID/FLUE network. Anecdotally speaking, it was apparent during the Impact Group meeting that he was listening to the suggestions for improving his business and implementing the suggestions on a continuous basis. Although his production increased steadily during the duration of the intervention period, it should also be noted that he showed steady increases during the 12 month baseline period as well. His first six months during baseline showed an average of \$1,452 per week in dollar

production and his second six months saw this increase to \$3,300 per week. This large increase could have been attributable to the natural growth of his business from marketing the SOLID/FLUE product through his historic restoration business. It should be noted that the continual increase (after exposure to the independent variables) may have occurred regardless of Participant A's participation in the Impact Groups. The data show a pattern of growth that continued during and after the baseline period.

Participants B and C showed no effect in their dollar production per week. When looking at this, however, it should be noted that Participant B also showed a decrease in backlog during this time and therefore may not have had enough work to produce to improve their production per week. Participant B continued to produce at the steady rate similar to the baseline period. During Participant B's last six month period, production dipped to a low of \$1,460 per week (compared to a weekly average of \$3,127 for the previous 28 weeks). However, backlog also dipped to an all time low during this period (to an average of \$15,032 per week). It has been noted that often dealers slow down their production levels as their backlog decreases in order to keep their workers on payroll and avoid the risk of permanently losing them if they have to be laid off. The skill set required for installation of the SOLID/FLUE product is extremely unique, and attracting and maintaining employees to do this type of work can be very difficult. Anecdotal information collected from SOLID/FLUE dealers shows that it takes a minimum of one year to gain the skills to complete SOLID/FLUE jobs. The work is very hard and the pay with most dealerships is similar to or lower than a non-union level brick mason. Keeping existing employees is a high priority for all SOLID/FLUE dealers. Therefore, the slow

down in production may have been due to a conscious effort to decrease the weekly goals in order to retain employees.

Participant C showed a slight increase in production after the first Impact Group meeting and saw their numbers decrease steadily afterwards. It should be noted that Participant C did numerous jobs on Nantucket island which created seasonality in their work. Typically, they would do work on the island during the late fall and then shut down their operation until early spring. In the spring, they would finish up their jobs and get off of the island to pursue jobs in the New England market (excluding the islands) for the summer period. However, Participant C was never able to grow a solid non-island business and after continuing his SOLID/FLUE business for two years following this experimental period, shut down his SOLID/FLUE operation completely.

Backlog for Participant A also improved steadily during the baseline and intervention phase of the experiment. As noted earlier, Participant A also owned a historic restoration business. Participant A was able to use this business to leverage his SOLID/FLUE business by writing estimates for the chimney work into his larger estimates for restoration work. Participant A had a very affluent client base who had a history of spending large sums of money on their residences in order to maintain the historical integrity of their properties. Maintaining the existing outward appearances of these properties was a high priority for many of Participant A's clients and also for the historic districts in which the work was being completed. SOLID/FLUE was a natural fit for this clientele as the product is hidden (it goes inside of the chimney opening) and thus no outward signs are seen of the finished product. These issues may help to provide an explanation for Participant A's high levels of production and backlog.

Since the relationship between backlog, production and sales is perhaps not obvious, it seems appropriate to discuss this briefly. Backlog is the amount of work that a dealer has signed contracts for and for which work has not been completed. If additional work is being sold, and work is not produced, then backlog will continue to grow. However, if additional work is being sold, and work equal in amount to what is being sold is being produced (or completed), then backlog will remain the same. If additional work is being sold, and work produced is greater than the amount sold, then backlog will decrease and eventually run out. When managing backlog it is best that dealers consider the length of time that their customers will wait to have their work completed. This must be balanced with the fact that a certain degree of backlog allows for the ups and downs of work that is sold. Many dealers like to see a minimum two to three months of work in backlog. If a dealer averaged \$5,000 in dollar production per week, then a two month backlog would represent approximately \$40,000 in revenue. If a dealer has \$40,000 in backlog, and a job is not sold for a month, the dealer will still be able to function and keep paying its employees. Maintaining and balancing backlog is a key variable for running a successful SOLID/FLUE business. It takes into account that the SOLID/FLUE business is a system, and any system should be balanced to maintain the correct relationships with other parts. If work continues to be sold at the rate of \$5,000 per week, but production is tracking at \$10,000 per week, then whatever is in backlog will eventually be depleted and the workers will run out of work to do. This has been a difficult concept for new SOLID/FLUE dealers to understand and manage. It was hoped that the weekly feedback would provide timely, accurate information that would help in the management of this relationship.

Participants B and C were not able to increase their backlog throughout the experimental period. It should be noted that this was in spite of the fact that their weekly production was not increasing either. If their weekly production would have been increasing, this would have made the backlog harder to maintain, especially if the same number of estimates were being written (which they were) and the sales closure rate remained the same. To increase the backlog with a steady amount of estimates, it would have been necessary to increase the sales closure rate. It should be noted that the Impact Group did not include an element of focused sales training or marketing. The host of each Impact Group session was required to demonstrate a sales call to all of the participants (as a group). This was done to provide an example (or non-example) and the call was critiqued by the attending members. However, sales training where the participant is required to perform in a sales simulation environment and then taken out on the job with a highly skilled sales performer (and trainer) was not a part of this process.

Considering the data from this experiment, sales training and marketing should have been further investigated and a separate program should have been offered to participants who had data indicating problems in these areas. The sales closure rate should have been determined (and analyzed) and compared to exemplars. If low, focused sales training should have been conducted. A second solution would have been to work with the dealerships marketing programs to increase the number of estimates written. If more estimates were written, and the sales closure rate remained the same, then more jobs would have been sold.

The number of estimates written during baseline and after showed little or no improvement from the Impact Groups and seemed to reflect the natural variability and

seasonality of the business. Participants A and C showed a small increasing trend, but not enough to attribute it to the Impact Group process. The increase may have been from the fact they were becoming more established and thus wrote more estimates as more people became aware of their services. It may also have been attributable to improving economic conditions in the dealer's areas. Both Participants A and C were in areas where their work was primarily for restoration purposes (as opposed to insurance repair work due to a chimney fire). Restoration (and historic restoration) projects have historically slowed down considerably in times of economic decline and improve greatly when the economy improves. This is as opposed to insurance repair work where the jobs are being paid for by an insurance company and SOLID/FLUE dealers tend to maintain a very high closure rate (typically 70 to 80 percent). Restoration work typically hovers in the 20 to 30 percent closure rate range and dips into the 10 to 20 percent range during slow economic times.

It was noted that Participant B had shut down his operation approximately two years after completing this experiment. Participant C also closed down their operations, although they lasted a year longer than Participant C. Participant B had a long history of hiring and firing general managers for their SOLID/FLUE division as the owner of the dealership created a very difficult working environment for each manager of the SOLID/FLUE business. They were constantly starting and stopping their SOLID/FLUE operations and continually sending their new general manager to the home office training program. Besides the difficulty in training new general managers, the production crew was in a constant state of change as well. This caused very slow production times and quality issues also became a problem.

Participant C had a long history of being a SOLID/FLUE dealer as this dealership was operated by a previous owner prior to being bought by Participant C. The previous owner had a strong following on Nantucket Island which Participant C was able to capitalize on and continue to develop. Participant C maintained a history of slow sales that was caused by a low closure rate combined with few estimates being written. Eventually, as the work on Nantucket slowed down and Participant A was unable to develop other sources of work in the New England area, the business volume continued to drop and the dealership was eventually closed down.

It was hoped that the use of incentives would be strong enough to get some lower performing dealerships to commit to the Impact Group process and then follow through on their commitment by attending all of the meetings and also by sending in their feedback on a weekly basis. The three dealerships who participated in this process were either new dealers (Participant A) or lower producing dealers (Participant B and C). It was felt that the slower producing dealerships would not have participated in this process had they not been encouraged (via lower mix prices) to do so. They had been invited to participate many times previously and on each occasion had elected not to. The incentives seemed to work in this respect although the Impact Group process did not seem to have any measurable effect on business performance. Obviously, it should be considered that there was some potential selection bias in the dealers who opted to participate in this process. Often, the higher performing dealers seem to gravitate toward processes such as this and some seem to use the knowledge gained to accelerate their learning and move faster in their development (although this is an anecdotal observation). It was felt before this experiment that offering an incentive to lower performing dealers

would allow us to impact some of the lower performers and use the process to move them along to be higher performing dealers. The experimental results of this dissertation do not seem to support that notion.

The use of an AB design limited the effectiveness of the study. This type of design precludes strong causal inferences, even if the data had supported this notion. The data in this study did not indicate a strong effect on any of the dependent variables, and in the few instances where an effect may have been noted, consideration should be given of the limitations of the experimental design.

A confounding variable of this type of study is the effect that changes in employees have on the effectiveness of each company. When dealing with small companies, who may number from 2 to 5 employees, having 2 employees quit during the year may cause extreme variability in the productivity of the crews. Finding and hiring new workers and then properly training them may severely hamper the production capacity of a small business. Participant B provided an example of this as he was constantly hiring and firing managers and crew members and his results may have been effected by this issue.

Another limitation of this study was that the incentives were contingent upon participation in the study. This condition was created to provide access to lower producing dealers to the process and to maintain a high level of participation. However, this produced a study where the effect of the incentive system was not possible to measure as there was no baseline data on the dealers participation in the study prior to the intervention. The dealers who participated attended all of the meetings and provided their feedback to SOLID/FLUE on a weekly basis. From that perspective, there was 100

percent participation. However, dealers may have provided feedback and participated regardless of the incentive being offered. Lack of baseline data on this variable severely limited a proper analysis on its effect on the dealers participation performance.

A strength of the study is the systems approach in designing the intervention. The intervention had many of the elements that had often been effective as stand alone variables (incentives, feedback, goals) and the systems approach provided a design framework for their inclusion in the intervention. Improvements on this type of intervention may now be made by changing various aspects of the system, including the goal of the intervention, structure and timeliness of feedback, the receivers of the process, etc.

The Impact Groups focused on the entire organization as the target, which allowed for unique access to measures that may not be available in a more micro analysis in an organization. For instance, overall production totals and net income totals were available and monitored in the process. In future studies, these bottom line indicators would provide an opportunity to continually alter approaches to the process while focusing on the overall value of the intervention as it relates to profitability. This study was also conducted over 30 months, which provided long term data. The long term provided a excellent opportunity to analyze whether or not it had any effect on the dealerships.

This is the second experiment that this author conducted on the use of Impact Groups to improve performance in small businesses. This second experiment was very similar to the first except for the use of an incentive system to maintain attendance and consistent performance of the dealers sending in their weekly feedback. It also had a

different set of primary dependent variables. Each experiment had elements of success, although it is difficult to make a case that the Impact Groups had a strong effect on the improvement of the key dependent variables as outlined in the projects. Each experiment had elements where there seemed to be an effect in a certain dependent variable for a particular participant. However, there were even more instances where there seemed to be no effect. Much work needs to be done on this concept in both the design and in the determination of what the goals are for the intervention.

A key area to note is that there were clearly differences between the contingencies in effect during the Impact Groups and the contingencies in effect when the attendees returned to work. The Impact Group contingencies included peer pressure from the participants for completion of the goals as well as numerous variables that were controlling the verbal behavior of the Impact Group participants. Impact Group participants often make aggressive statements regarding their goals while in the presence of their peers. However, upon returning to their work environment, there are numerous competing contingencies that they encounter that make completion of their goals extremely difficult. These may include satisfying cash flow needs, hiring and managing employees, and various other crisis situations that often arise in these types of small businesses. These competing contingencies make completion of the desired goals extremely difficult.

Practitioners hoping to use this concept should note that it is important to determine what the purpose of the Impact Group is (the mission of the process) and continue to collect data to determine its effectiveness. An Impact Group may be designed for many purposes, and these could include; (a) increasing the profitability of a

host company (b) increasing the volume of material used by a host company (c) increasing the number of goals accomplished for the host company (d) increasing the skills and knowledge of the attending owners and managers, etc.

Another lesson learned is to continue to assess and change the process to gain the desired effect of the Impact Groups. This may include narrowing the scope of the goals of the process as well as identifying new processes to create changes in the dependent variables. This may involve more research into the problems prevalent in the companies before attendance of the meeting and more post-work after the meeting to set up contingencies to support the desired effect.

This dissertation represents the collection of a different set of variables versus a previous study (LaFleur, 2004) that was completed by this author. Each included worthy goals but each focused on different goals and used slightly different interventions to accomplish them. As Impact Groups are offered to various industries, the mission of the groups may vary greatly and the data collected to verify that the groups are accomplishing its mission will vary. The key will be to be sure that the mission is clear and that data are constantly being collected to accomplish this mission.

Goals

Goals

Name _____

Date When Goal
Will Be Met

Goals - What you would like to accomplish

Sales

* _____

Volume per week _____

Closure rate: Insurance _____ Non-insurance _____

Marketing

* _____

Estimates per week _____

* _____

Dollar volume backlog _____

* _____

Marketing contacts per week _____

Production

* _____

Gross profit per job _____

* _____

Production per week _____

Customer satisfaction points per job _____

Administration/Financial

Net income per month _____

Overhead per month _____

Miscellaneous Goals - Must be measurable

Financial Forms

	<i>Jan. - Dec. 2002 Actual</i>	<i>Jan. - Dec 2003 Budget</i>
Gross Sales	_____	_____
Cost of Goods Sold	_____	_____
Material (Mix)	_____ %	_____ %
Material (Other)	_____ %	_____ %
Labor	_____ %	_____ %
Workman's Comp.	_____	_____
Payroll Tax	_____	_____
Subcontract	_____	_____
Rental Equip.	_____	_____
Permits	_____	_____
Freight	_____	_____
Subtotal Direct Expenses	_____ * %	_____ %
Gross Profit	_____ %	_____ %
Overhead		
Office Supplies	_____	_____
Travel & Enter.	_____	_____
Small Tools	_____	_____
Bad Debt	_____	_____
Gas & Oil	_____	_____
Maintenance	_____	_____
Bank Charges	_____	_____
Marketing/Adv.	_____	_____
Telephone	_____	_____
Refuse	_____	_____
Uniforms	_____	_____
Warranty	_____	_____
Supervision & Sales Wages	_____	_____
Supervisory Payroll Taxes	_____	_____
Insurance	_____	_____
Rent	_____	_____
Utilities	_____	_____
Truck Lease	_____	_____
Dues & Subs	_____	_____
Acctg & Legal fees	_____	_____
Training & Conv.	_____	_____
Home Shows & Fairs	_____	_____
Yellow Pages	_____	_____
Interest	_____	_____
Depreciation	_____	_____
Admin. Expenses & Charges	_____	_____
Subtotal Overhead Exp.	_____ %	_____ %
Net Income	_____ %	_____ %

*All % figures should reflect the amount your figuring divided by the gross sales amount (then times 100). For instance, if direct expenses are \$20,000 and gross sales are \$50,000, then the percentage figure would be \$20,000/\$50,000 or .40. To turn this into a percentage--multiply it times 100.

Program Agenda
IMPACT GROUP MEETING

<u>TIME</u>	<u>First Day Description</u>	<u>Duration</u>	<u>Who Attends</u>
8:00 – 8:30	Review Company 1	30 min.	Guests, Host
8:30 – 9:00	Review Company 2	30 min.	Guests, Host
9:00 – 9:10	Break	10 min.	
9:10 – 9:40	Review Company 3	30 min.	Guests, Host
9:40 – 10:10	Review Company 4	30 min.	Guests, Host
10:10 – 10:20	Break	10 min.	
10:20 – 10:50	Review Company 5	30 min.	Guests, Host
10:50 – 11:20	Review Company 6	30 min.	Guests, Host
11:20 – 11:30	Break	10 min.	
11:30 – 12:00	Review Company 7	30 min.	Guests, Host
12:00 – 1:00	Lunch	60 min.	
1:00 – 1:15	Host company sales presentation	15 min.	Guests, Host
1:30 – 2:00	Review Company 9	30 min.	Guests, Host
2:00 – 2:10	Break	10 min.	
2:10 – 2:40	Review Company 10	30 min.	Guests, Host
2:40 – 3:10	Review Company 11	30 min.	Guests, Host
3:10 – 3:25	Host company sales presentation	15 min.	Guests, Host
3:25 – 3:35	Break	10 min.	
3:35 – 5:00	Interview Employees	85 min.	Guests, Host Employees
6:00 – 6:45	Process Walk Through at Host Location	45 min.	Guests, Host Employees
6:45 – 8:00	Host company provides dinner	75 min.	Guests, Host Employees

Program Agenda

<u>TIME</u>	<u>Second Day Description</u>	<u>Duration</u>	<u>Who Attends</u>
8:00 – 8:40	Compare Exemplary Process to Host Process/Good Things	40 min.	Guests
8:40 – 8:50	Break	10 min.	
8:50 – 9:35	List Problems & Alternative Solutions	45 min.	Guests
9:35– 9:45	Break	10 min.	
9:45 – 11:45	Good Things (explain to host & employees) and Problems & Alternative Solutions	120 min.	Guests, Host Employees
11:45 – 12:45	Lunch	60 min.	
12:45 – 1:15	Group Breakout	30 min.	Guests, Host Employees
1:15 – 1:45	Reconvene and Get Consensus	30 min.	Guests, Host Employees
1:45 – 2:15	Non-sugarcoated Version to Owner/Manager	30 min.	Guests, Host
2:15 – 2:45	Pick next site date & host Other issues Evaluation/Closing Comments	30 min.	Guests, Host

Job Satisfaction Forms

Customer Name: _____

Customer Address: _____

Please rate the following:

	<u>Very Unsatisfied</u>	<u>Unsatisfied</u>	<u>Satisfied</u>	<u>Very Satisfied</u>
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<i>Courteous, friendly service</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
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Comments: _____

<i>Cleanup during and after job</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
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Comments: _____

<i>Quality of completed job</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
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Comments: _____

<i>Overall professionalism</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
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Comments: _____

Office/Sales Staff:

<i>Courteous, friendly service</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
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Comments: _____

Feedback Program

Weekly Feedback Form

Name:

Allen - SOLID/FLUE

Phone Number:

Fax Number:

Actual

Standard

Week Ending (Friday): _____
(fax every Monday before noon)

Estimates Written

This is a quantity measure of the number of estimates written for a SOLID/FLUE lining job. When an estimate is written that includes two or more SOLID/FLUE linings at the same property, this is still counted as only one estimate.

Work Produced

This is a quantity measure in dollars of the total value of work produced through the week. If a \$10,000 job was started on Monday at 8 a.m. and by Friday at 5 p.m. it was half completed, then this represents a \$5,000 in work produced for the week.

Dollar Backlog

This is a quantity measure in dollars of the total of all work sold but not yet completed.

Marketing Contacts Made

This measures the quantity of "face to face" contacts made with insurance officials, building officials, fire prevention officers, etc. It does not include sales telephone calls or visits to potential customers to give an estimate. When groups of people are addressed (such as a meeting with insurance adjusters) then each person present may count as one contact made.

Gross Profit Per Job: (below)

<u>Name</u>	<u>Actual Gross Profit</u>	<u>Standard</u>
_____	_____	<div style="border: 1px solid black; width: 100%; height: 100%;"></div>
_____	_____	
_____	_____	
_____	_____	

Exemplar's Financial Sheet

FINANCIAL STANDARDS

Gross Sales	\$87,500	\$137,500	\$212,500	\$237,500
Cost of Goods Sold				
Material (mix)	15750	24750	38250	42750
Material (other)	1750	2750	4250	4750
Labor	7000	11000	17000	38000
Workman's Comp. (labor)	578	908	1403	3135
Payroll Taxes (labor)	711	1059	1518	3342
Subcontract Labor	0	0	0	0
Rental Equipment	1750	2750	4250	4750
Permits	875	1375	2125	2375
Gross Profit	59086	92908	143704	138398
Gross Profit as Percentage	68%	68%	68%	58%
Overhead Per year				
Office Supplies (.5%)	438	638	1063	1188
Travel & Entertainment (.2%)	175	275	425	475
Small Tools (2%)	1750	2750	4250	4750
Bad Debt (.5%)	438	638	1063	1188
Gas (3%)	2625	4125	6375	7125
Equip./Veh.Maintenance (2%)	1750	2750	4250	4750
Bank Charges (.1%)	88	138	213	238
Marketing/Advertising (2%)	1750	2750	4250	4750
Telephone (.7%)	612	963	1488	1663
Refuse & Laundry (.3%)	263	413	638	713
Uniforms (.3%)	263	413	638	713
Freight (.1%)	88	138	213	238
Warranty (1%)	875	1375	2125	2375
Gen. Mang. /Owner's Salary	25000	30000	45000	50000
Workman's Comp (Salary)	1688	2025	3038	3375
Payroll Taxes (Salary)	2130	2513	3660	4043
Insurance	6000	6000	6000	6000
Rent	2400	2400	2400	2400
Utilities	360	360	360	360
Truck Lease	3600	3600	3600	3600
Dues/Subscriptions	1000	1000	1000	1000
Legal Fees	500	500	500	500
Accounting Fees	500	500	500	500
Training & Convention	1000	1000	1000	1000
Home Show & Fairs	2000	2000	2000	2000
Yellow Pages	3600	3600	3600	3600
Interest Expenses	3600	3600	3600	3600
Depreciation/Amortization	5000	5000	5000	5000
Net Income	-10407	11344	35455	21254

The Eight Step Process

Process Owner _____

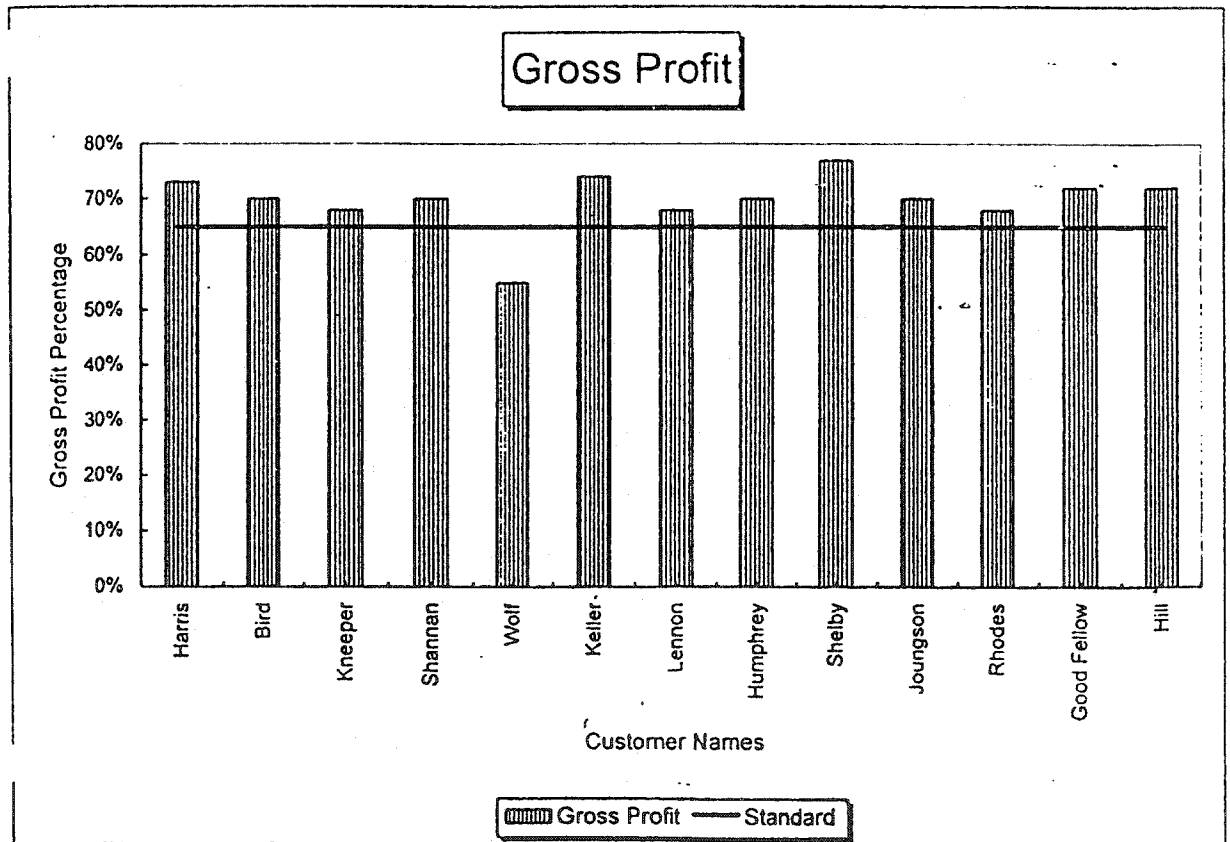
Eight Step Process

		<u>Form to Use</u>	<u>Person Responsible</u>
1.	When call comes in, immediately fill out "lead sheet" and transfer appropriate information to "tracking form".	Lead Sheet Tracking Form	_____
2.	Take lead sheet, qualify the call (within 24 hours), schedule appointment (schedule 80% within 3 days of call), add "work to be done" and "check list" form to "lead sheet" and place in folder.	Lead Sheet Work to be Done	_____
3.	Go to customer, examine chimney, take measurements and photos. Fill out work to be done & check list forms.	Work to be Done Check List	_____
4.	Return, type estimate & (hand deliver if necessary) within 24 hrs.	Estimate Form	_____
5.	Upon confirmation, post to production calendar.	Prod. Calendar	_____
6.	Using job folder, explain job to crews giving time allowed and estimate of material needs.	Lead Sheet Work to be Done Check List Estimate Form	_____
7.	Upon completion, collect money and satisfaction form from customer and job costing form from crew chief.	Satisfaction Form Job Costing	_____
8.	During next weekly meeting, share satisfaction info. and compare estimate to actual labor and material.	Satisfaction Form Gross Profit Graph Job Costing	_____

Gross Profit Feedback

Gross Profit

Name	Actual	Standard
	73%	65%
	70%	65%
	68%	65%
	70%	65%
	55%	65%
	74%	65%
	68%	65%
	70%	65%
	77%	65%
	70%	65%
	68%	65%
	72%	65%
	72%	65%
	Average	Variance
	70%	5%



WESTERN MICHIGAN UNIVERSITY
 H. S. I. R. B.
 Approved for use for one year from this date:

MAY 18 2001

x. Michael A. Pritchard
 HSIRB Chair

Letter of Informed Consent

Western Michigan University Department of Psychology

Principal Investigator: Dale Brethower, Ph.D.

Research Associate: Doug LaFleur

I have been asked to allow the data obtained during my participation in Impact Groups to be included in a research project entitled: The Effects of a Multicomponent Intervention on the Accomplishments of Goals in a Small Businesses Setting. I understand that this research is intended to study the effects of a multicomponent intervention using goal setting, feedback, and incentives in a small business setting. I further understand that this project is Doug LaFleur's dissertation project.

My consent to participate in this project indicates that I have attended numerous "two day" sessions titled "Impact Groups" and will willingly share my financial, goal accomplishment, and performance data with the researcher for the purposes of the study. During the meetings, I had been asked to provide specific, objective goals in various functional areas of my business as well as various sub-goals in these areas. I then met in two-day meetings on six-month intervals with other peers who have businesses providing similar services. During these meetings I compared goals, shared financial data and worked collectively with my peers to help improve my goal setting and completion of these goals. The setting and attainment of my goals served as a primary benefit of this research.

I understand that all future use of this information will be handled in a confidential nature. This means that my name will not appear on any papers on which this information will be recorded. The forms will all be coded and Doug LaFleur will keep a separate master list with the names of the participants and the corresponding code numbers. Once all data are collected and analyzed, the master list will be destroyed. All other forms will be retained for three years in a locked file in the Principal Investigator's facility.

As in all research, there may have been unforeseen risks to the participant. If an accident or injury occurs, appropriate emergency measures will be taken. However, since the research involves historical data, this does not apply. Please note that no compensation or treatment was made available to me except as otherwise stated in this consent form.

I understand that I may refuse to allow my information to be included in the research by Doug LaFleur without prejudice or penalty. If I have any questions or concerns about this study, I may contact either Doug LaFleur at 616-363-3824 or Dale Brethower, Ph.D. at 616-676-3485. I may also contact the Chair of Human Subjects Institutional Review Board at 616-387-8293 or the Vice President for Research at 616-387-8298 with any concerns that I have. My signature below indicates that I understand the purpose and requirements of this study and that I agree to participate.

 Signature

 Date

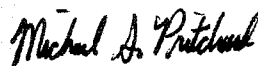
HSIRB Letter

WESTERN MICHIGAN UNIVERSITY

Date: May 18, 2001

To: Dale Brethower, Principal Investigator
Doug LaFleur, Student Investigator for dissertation

From: Michael S. Pritchard, Interim Chair



Re: HSIRB Project Number: 01-04-03

This letter will serve as confirmation that your research project entitled "The Effects of a Multicomponent Intervention on the Accomplishments of Goals in a Small Business Setting" has been **approved** under the **expedited** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: May 18, 2002

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