

### **Background**

- In 1998 FMI conducted market research for SMACNA
- Market model developed evaluating national and regional market performance
- Subsequent research produced HVAC Duct Opportunity Index
- Duct Opportunity Index presented to SMACNA-SMWIA Joint Executives meeting in September 1999
- Joint Committee decided that a Task Force be established to determine the shared traits of highest performing Chapters/Locals
- FMI selected as resource to work with the Task Force

### **Initial Objectives**

- Identify highest performing territories
- Determine shared performance traits and characteristics
- Identify traits and characteristics to be shared and replicated in other areas
- Provide guidance for other geographic areas to improve market performance

## **BACKGROUND**

In 1998 FMI conducted market research for the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) to better understand duct fabrication and duct type trends in non-residential construction. As a by-product of this research, FMI developed a market model that evaluated market performance on a national and regional basis.

At the request of SMACNA, a second research project was conducted to update the duct fabrication trends and to further define the market model that identifies HVAC Duct Opportunity, Labor Hours and the resultant Opportunity Index. This Opportunity Index reflects relative market performance nationally, regionally, and for each SMACNA Chapter.

The Opportunity Index report and recommendations were presented at the SMACNA/SMWIA Joint Executives Meeting in September 1999. The joint committee determined that a Task Force should be established to further analyze the findings of the FMI Surveys with particular emphasis on determining the shared traits of the highest performing Chapters/Locals. FMI was requested to serve as a third-party resource and facilitator to work with SMACNA and the SMWIA on this project.

## **INITIAL UNDERSTANDING OF OBJECTIVES**

FMI, working with a Task Force representing SMACNA and SMWIA, was originally to identify the highest performing territories and conduct research to determine the shared performance traits and characteristics for those territories selected for review. This best practices analyses was intended to identify local market performance and traits that could be shared and replicated in other areas of the country.

This project was a collaborative effort with FMI's role to conduct the research, analyze the results, and present the findings to SMACNA and SMWIA. The Task Force provided input regarding the research process, insight into the local market characteristics and peculiarities, and support from the Chapters and Locals in securing input on a local basis.

The anticipated results from this research were expected to provide guidance for other geographic areas to enhance their local market performance.

**Initial Anticipated Areas of Focus**

- General market characteristics
- Type of work performed
- Labor history in market
- SMACNA-SMWIA history in market
- Local SMACNA-SMWIA leadership traits
- Labor contract profile
- Organizing/recruiting efforts
- Business plans, strategic plans

**INITIAL ANTICIPATED AREAS OF FOCUS**

- General market characteristics
- Types of work performed
- Labor history in market
- SMACNA-SMWIA history in market
- Local SMACNA-SMWIA leadership traits and leader profiles
- Labor contract profile
- Organizing/recruiting efforts
- Business plans, strategic plans

Additional, more specific criteria and areas of focus were developed through meeting with the Task Force, and as personal interviews were conducted in the areas that were selected for the pilot study. These included:

- Labor-Management committees that meet regularly
- Cooperative efforts to market the industry
- Cooperative efforts to recruit the new workforce
- Cooperative efforts to influence legislation
- Building Inspector training programs
- Cost Awareness training programs
- Sheet metal contractors as prime contractors
- Recent labor productivity trends

**General Work Steps-Phase I**

- Opportunity Index Review
- Task Force Meeting
- Territory Selection for Review

**GENERAL WORK STEPS**

Phase I – Additional Data Review and Project Planning

*Opportunity Index Review* – FMI further analyzed the existing Opportunity Index data to develop multi-year chapter trends, normalize chapter hour data where annual hours may have been reported inaccurately and made any required changes in chapter reporting areas. In addition further data sorts (by Opportunity Index, Market Size, etc.) were prepared to enable us to more clearly identify top performers.

### General Work Steps-Phase I

- Opportunity Index Review
- Task Force Meeting
- Territory Selection for Review

*Task Force Meeting* – FMI facilitated a one-day planning session with the Task Force consisting of the following suggested members:

SMWIA

- International Rep
- Local Reps (2 or 3)

SMACNA

- National Staff
- Local Chapter Staff
- Contractor (1 or 2)

*Territory Selection for Review* – During this planning session, the Task Force thoroughly reviewed individual territory performance levels using the preliminary data provided by FMI. Additional sorts were handled on-site as required before the final selection was made. This meeting provided:

- Territory selection for review –20 total areas (mix of high and low performers w/geographic diversity)
- Determination of key issues to be reviewed for each territory
- Finalization of the overall work plan with any modifications to the original plan noted

### Phase II – Territory Analysis

### General Work Steps-Phase II Territory Analysis

- Survey Preparation
- Territory Visits
- Results and Recommendations
- Task Force Briefing
- Follow up Survey

*Survey Preparation* – During this work step, FMI developed the required surveys and other input instrument(s) for use during the field visits to the selected chapters. In addition, the territory review meeting dates and overall schedule were established to maximize the output received from these visits.

*Territory Visits* – On-site interviews were conducted with key thought leaders in each market. Data collection for those areas noted in Understanding of Objectives were also handled during these on-site meetings. Where possible FMI provided an information request checklist prior to the meeting to facilitate the transfer of information.

*Results and Recommendations* – Based on the information received from the target markets selected, FMI prepared an analysis of the critical success factors and best practices from the territory review to be delivered initially through a briefing to the Task Force and subsequently in a written report to SMACNA and the SMWIA.

**General Work Steps-Phase II  
Territory Analysis**

- Survey Preparation
- Territory Visits
- Results and Recommendations
- Task Force Briefing
- Follow up Survey

*Task Force Briefing* – The Task Force Briefing was held on January 4, 2001, in Dallas, TX. Initial observations, results, and recommendations from the Territory Visits were presented by FMI. The Task Force decided that it would be important for FMI to conduct a follow-up survey across all SMACNA-SMWIA Chapters/Locals in order to determine whether statistical confirmation of the initial critical success factors and best practices is possible.

*Follow-up Survey* – FMI conducted the survey, which went out to all SMWIA local business managers and to several contractors and chapter managers for each SMACNA chapter. The results of the survey have been added to the written analysis that follows.

Territories Selected for Study	
Territory	Rank
T-1	1
T-2	2
T-3	7
T-4	11
T-5	12
T-6	16
T-7*	23, 28, 63
T-8**	26, 55
T-9	29
T-10	38
T-11	44
T-12	54
T-13	57
T-14	61
T-15	72
T-16	74
T-17	76
T-18	80
T-19	82
T-20	88

\*The T-7 area is home to three different SMACNA chapters all served by one Sheet Metal Union Local.  
 \*\*The T-8 area is home to two different SMACNA chapters both served by one Sheet Metal Union Local.

**Executive Summary**

Hypothesis:

That differences in market performance among Chapter/Local pairs can be at least partially attributed to specific business practices, market characteristics and other activities that are performed by the SMACNA/SMWIA Chapter/Local leadership.

Conclusion:

Statistical evidence was found that confirms the hypothesis. There are specific business practices, market characteristics and other specific activities that are linked to SMACNA/SMWIA Chapter/Local performance.

Market Characteristics Considered:

- Market Growth
- Unionization
- Types of work performed
- Labor history in market
- Sheet Metal contractors as prime contractor

Business Practices/Activities Considered:

- Labor-Management committees that meet regularly
- Cooperative efforts to market the industry
- Cooperative efforts to recruit the new workforce
- Cooperative efforts to influence legislation
- Building Inspector training programs
- Effectiveness of leadership in both the union local and the association chapter
- Leadership and membership committed to growth
- Strategic and business planning
- Use of project labor agreements
- Use of equality or targeting funds
- Cost Awareness training programs
- Recent labor productivity trends

Issues:

The above lists were developed either by the Task Force at its initial meeting in Chicago, IL on June 26, 2000, or in the process of conducting the territory visits and analysis.

### Interpreting the Charts

- The following charts illustrate data gathered from territory visits
- The vertical axis on each chart represents the average rank of Chapter/Local pairs
- The horizontal axis on each chart represents either a rating from 1-5, with 1=poor and 5=excellent, or a yes/no question
- An important point to keep in mind is that the shorter columns represent better average rankings-i.e., an average ranking of 19 is better than an average ranking of 25

### Territory Visits:

The Task Force selected 20 Chapter/Local pairs for visits and analysis in Phase II of the project. The original project plan was to select approximately 15 of the highest performing Chapter/Local pairs and four or five of the lowest performing Chapter/Local pairs to provide a best practices group and a control group. However, the Task Force decided that a different approach was needed. Eight of the top 10, 11 of the top 15 and 15 of the top 20 performing chapters came from the north central region. Also, seven of the bottom ten performing chapters came from the northeastern region.

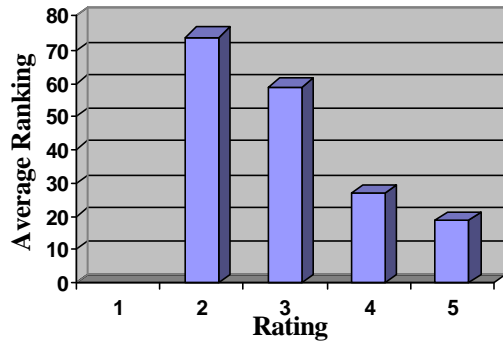
The Task Force was concerned that taking only the top 15 and the bottom five would result in a narrow sample that would not accurately represent the diversity in markets, labor conditions, geographies, population density, and other factors that exist across the country. Therefore, the Task Force considered all of these factors in their selections, yielding a sample that is far more representative of the overall US market conditions than would have resulted from a top-performers-only approach.

As FMI consultants completed the territory visits, the criteria and conditions listed above were recorded and discussed. The format that was chosen included in-depth conversations with two-four leaders in each territory, usually including the local business manager, chapter manager, and one or two area SMACNA contractors. This format provided rich discussions of area economies, the labor-management relationship, and other pertinent local conditions.

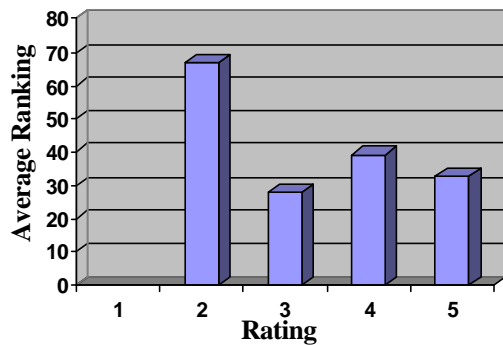
The format was chosen so that the Task Force would be able to discover as well as predict the true factors that coincide with high and low performance. The intention was to discover or "bubble up" issues that could be validated with a statistical instrument at a later date.

After the territory visits were completed, FMI tabulated, analyzed and presented the results to the Task Force. The preliminary indications were that individual factors like good communication and collaboration between labor and management, good leadership, and members who support growth, seem to be more prevalent where rankings are higher.

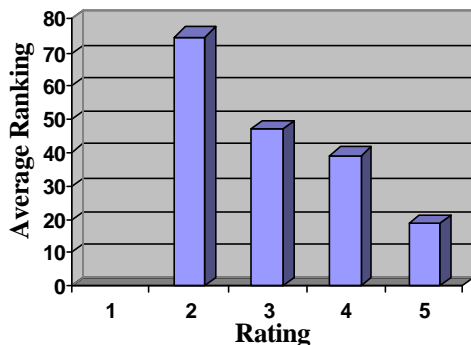
**Graph 1 - Average Rank Cooperation\***



**Graph 2 - Average Rank Relationship\***



**Graph 3 - Average Rank Combined Leadership\***



\*There were no areas that rated "1" on this criteria

The graphs to the left are good examples of the observed trends in the territory visits. The correct interpretation of the charts is that the higher the rating of the particular criteria – in this case labor management cooperation and labor management relationship – the better the average ranking of the chapter/local pair.

For example, in graph 1, "Average Rank-Cooperation", the chapter/local pairs who were rated a 5 in cooperation, had an average ranking of approximately 19. On the other hand, chapter/local pairs who were rated a 2 in cooperation were ranked, on average, over 70. This would suggest that labor-management cooperation and better rankings could be linked.

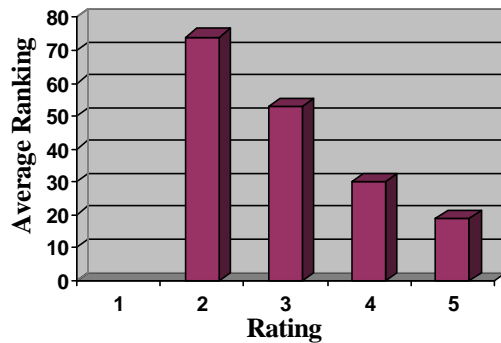
Similarly, in graph 2, the quality of the labor-management relationship seems to be better in areas that are ranked higher. Those areas that received a 5 on quality of relationship had an average rank of slightly more than 30, while those areas that received a rating of 2 had an average ranking of almost 70.

Several other traits were tested, and a similar pattern evolved, where the positive traits are rated higher, the corresponding average rank of the Chapter/Local pairs is better. The relationship is not always a straight line, as can be observed in the second graph above. In graph 2, "Average Rank-Relationship", those areas that received a 3 actually had a better average ranking than those areas that received a 5. However the overall trend is still toward the higher-rating/higher ranking association.

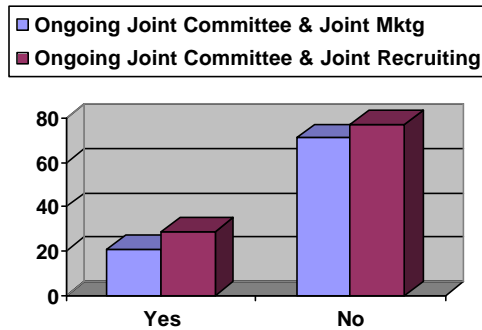
The individual characteristics appeared to confirm the hypothesis to a degree on their own. However, the Task Force assumed that there is no "magic bullet" out there that can simply be implemented. Rather a more realistic approach would be to assume that there are a number of positive practices that chapters and locals could apply.

Taking this approach, the individual characteristics and criteria were combined to measure how they interact together in relation to the performance of Chapter/Local pairs. The initial results demonstrated a strong connection between combinations of positive criteria and management practice, and better or higher rankings.

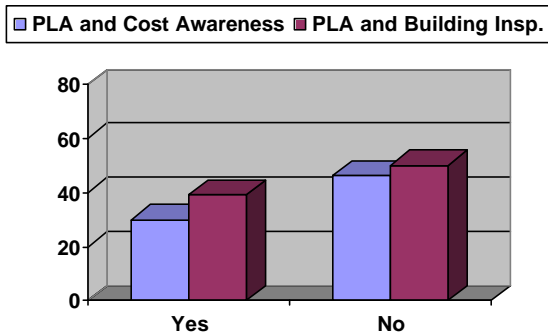
**Graph 4 - Average Rank Combined Leadership, Growth, Cooperation, and Relationship\***



**Graph 5 - Average Rank Joint Committee & Joint Marketing; Joint Committee & Joint Recruiting**



**Graph 6 - Average Rank PLA and Cost Awareness Training; PLA and Building Inspector Training**



\*There were no areas that rated "1" on this criteria

Graphs 3 and 4 illustrate this trend very well. First, by combining the ratings for both the chapter and the local union leadership, it becomes quite apparent that as the better rated leadership teams are positioned in areas that are ranked higher. The same can be said for the second chart as well. In this case, combined leadership, commitment to growth, level of cooperation, and relationship quality are all averaged and the corresponding average rankings are displayed.

This trend held true with other characteristics as well. Graph 5 shows two combinations of practices, Joint Labor Management Committees and Joint Marketing Efforts and Joint Labor Management Committees and Joint Recruiting Efforts. As graph 5 illustrates, Chapter/Local pairs that have both Joint Labor Management Committees and Joint Marketing initiatives have an average rank of approximately 20, while those that do not have an average rank near 70.

Similarly, those Chapter/Local pairs that have both Joint Labor Management Committees and Joint Recruiting efforts have an average rank of approximately 30, while those that do not are ranked almost 80.

Graph 6 shows the difference in average ranking among Chapter/Local pairs that utilize project labor agreements and have cost awareness training for union members and those that do not. Also the average ranking of Chapter/Local pairs that have Project Labor Agreements and Building Inspector Training Programs is illustrated versus those who do not.

While not as pronounced as graph 5, it is still clear that the Chapter/Local pairs that utilize Project Labor Agreements and have either Cost Awareness Training for union members or Building Inspector Training, tend to be ranked higher than those Chapter/Local pairs that do not. In the case of Project Labor Agreement in combination with Cost Awareness Training, the average rank is approximately 30, while in the case of Project Labor Agreement with Building Inspector Training, the average rank is 40. The average ranks of those Chapter/Local pairs without these combinations are approximately 45 and 50, respectively.

**Follow-up Survey**

Responses	129
Territories Represented	45

**Original Territory Visits**

Responses	68
Territories Represented	23

**Total Survey + Territory Visits**

Responses	191
Territories Represented	68

**Criteria Exhibiting Statistical Link to Performance**

- Importance of residential work
- Commitment of leadership and membership to growth
- Combination of residential importance and growth
- Combination of residential importance and cooperation
- Combination of residential importance, growth, and cooperation
- Joint labor management Committee and cooperative labor management legislative efforts
- Joint labor management committee and building inspector training
- Joint labor management committee and separate labor agreements
- Joint labor management committee and cooperative labor management marketing
- Yes/No Index

Most of the other criteria followed a similar pattern, so it was decided that the list of criteria and practices from above should be tested further in a broad survey of all Chapter/Local pairs.

Follow-up Survey:

The evidence that the criteria and practices described above were probably linked to Chapter/Local performance seemed quite convincing on its own merits. However in order to be quite certain the Task Force decided that a follow-up survey to a broader representation of the country would be important. That survey was approved by the Task Force at the January meeting in Dallas, and was mailed to all territories that were not selected for personal visits.

The goal of the survey was to determine whether any of the criteria and/or practices were statistically related to Chapter/Local market performance as expressed by the Opportunity Index-based rank.

Just as the data from the territory visits suggested, almost all of the criteria and practices appear to be linked with high performance. Statistical links could not be proved for all criteria on their own, however, several individual criteria were statistically linked. Also, the combinations of several criteria or factors were statistically linked with Chapter/Local performance.

All of the criteria listed to the left are present or higher rated in Chapter/Local pairs that are higher performing. The most important criteria based on the feedback from respondents are: joint labor management committees, residential work as an important part of the work mix, and commitment of leadership and membership to grow the organizations.

Criteria that are also important based on the survey responses are cooperative marketing efforts, cooperative legislative efforts between the local union and the association chapter, building inspector training, and separate labor agreements (classified workers). These criteria do not share the same intensity of statistical relevance as the ones mentioned in the paragraph above, as they do not provide statistically relevant links to performance on their own. However, when paired with the above criteria – joint labor management committees,

residential construction importance and commitment to growth – they become statistically linked to performance.

### **Conclusions**

- Performance and the criteria and practices listed above are statistically linked with Chapter/Local pair performance
- Causal link has not been established
- Baseline has been established
- Causality can be tested in the future using this baseline

### **Task Force Recommendations**

- Support labor-management relationship improvement
- Develop best practices database that is electronically available
- Standardize market share measurement process that can be done at the local level
- Establish goals for market share improvement
- Conduct analysis of joint marketing programs for process, content, and effectiveness
- Create joint leadership training for business managers and contractor leaders
- Make the best practices report the focus of the next joint conference break out sessions
- Formalize and capitalize on "Together we do it better" as a theme
- Provide incentive for growth
- Seek to learn and exchange best practices with other trades

### Conclusions:

Based on the combination of data from the territory visits and the follow-up survey, statistical links have been established between performance and the criteria and practices listed above. Since the data supporting this conclusion is a one-time "snapshot" of the situation across the country, it is not possible to draw a causal link between the criteria and practices and performance.

A causal link could only be demonstrated beyond a doubt if the same analysis were conducted prior to implementing criteria and practices and after implementing criteria and practices. In areas where the practices and criteria are already largely in place, the causal link will be difficult to prove. However, in areas that currently do not have the criteria and practices in place, this link can be determined. The baseline has already been established through the data collection and analysis of this project. Causation can be tested for those areas now by implementing some or all of the specific criteria and practices, allowing time for them to take effect, and then re-measuring performance.

### Task Force Recommendations:

- Create foundations for collaboration/cooperation and sell the value of industry growth. Encourage the formation of local labor management committees and identify "the how to process" for improving labor management relationships and enhancing cooperation. Include in the process specific descriptions of best practices in a format to share and initiate similar practices in other areas. Keep "the process" simple with a step-by-step process to improve from "D" to "A" in order to meet the needs for cooperative efforts at differing stages of maturity. As a part of this effort promote the opportunity to gain FMCS financial grants for joint labor management initiatives.
- Develop and populate a best practices database that is electronically available. Include in that data base "expert" contacts for specific initiatives and a complete listing of resources (best practice examples, studies, websites, papers, university resources).

### **Task Force Recommendations**

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  - Provide incentive for growth
  - Seek to learn and exchange best practices with other trades
- Develop a cost-effective, user friendly model for market share measurement process that can be easily done at the local level. Track market segment data and periodically report on results.
  - Establish goals for market share improvement at the local and national levels. Provide for a follow-up monitoring process to access and evaluate the extent of market improvement and/or penetration.
  - Conduct analysis of "joint marketing programs" for process, content, and effectiveness. Create model program for use of others based on demonstrated effectiveness.
  - Create joint leadership training program for local union and contractor leaders with a focus on change implementation, addressing "hard issues," action plans with a major emphasis on "no more band aids," commitment to improving the market share for contractors and members, and the value of formalized, standardized planning processes with joint labor management goals. Take advantage of opportunities for joint training and orientation-utilize EXISTING FORUMS when possible.
  - Utilize the Best Practices Report as the focus for the next joint SMWIA/SMACNA conference. Have breakout sessions, live interaction with the "experts" (those who have improved their position in their market areas).
  - Formalize and capitalize on "Together we do it better" as a theme.
  - Provide incentives for growth. Facilitate organizing by reducing initiation fees and waiving testing. Cooperate in organizing-recruiting contractors. Set clear expectations of SMACNA Chapters.
  - Seek to learn from and exchange with other specialty trades best practices.

### Implementation

The Task Force also recommends that once decisions are made with respect to the recommendations summarized above, that a task force/committee be assigned responsibility for implementation, follow up and periodic progress reports to the Joint Committee.