

ATCO International Co. .... A Case Study of Office Speech Noise Distraction and Worker Productivity:  
**ACCOUSTICAL IMPROVEMENTS TO REDUCE NOISE  
RESULT IN 19.8% INCREASE IN TELEPHONE SALES**

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**BACKGROUND:**

Previous Dynasound collaborative case studies of six major corporations revealed that employees cite noise as the number one distraction in open plan offices, and that they would be more productive in quieter workspaces. As summarized in the report, "The Sound of the Effective Workplace," acoustical corrections in each of the six workplaces resulted in the following improvements:

- Worker satisfaction as a result to the reduction of the most problematic speech noises improved by an average of 174% over the three month test period.
  - Worker satisfaction with all other types of noise in the open plan improved by an average of 25%.
  - Stress levels were reduced – workers reported an average "improvement" of 27%.
  - Perceived productivity increased – workers said their productivity improved after three months in the more quiet workspace by an average of 13%
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**ADDITIONAL RESULTS ON THE SIXTH CASE STUDY – ATCO INTERNATIONAL:**

**ATCO INTERNATIONAL...** A national manufacturer and distributor of chemical supplies, ATCO sells most products through a telemarketing staff at their Atlanta headquarters. The telemarketing operation maintains detailed records of sales results per employee, which provide management with highly accurate records of actual records of actual productivity per telesales worker.

- **Methodology** of the ATCO case study: A SIX MONTH STUDY OF THEIR TELEPHONE CALL CENTER...
  - The ATCO study was supervised by Mr. Michael Frank, Executive Vice President
  - The telemarketing center was an open plan environment
  - Like each of the other five case studies, a survey was conducted prior to acoustical corrections to determine employees' opinions of their workspace environmental conditions.
  - As in the other case studies, open plan noise levels were rated to be the number one employee distraction in the workspace.
  - A telemarketing case study was chosen because many corporations understand the measurable and quantifiable nature of worker productivity in call centers. In addition, decision makers believe there are likely similarities between high concentration telephone communications work and today's clustered "knowledge worker" activities.
  - The acoustical corrections included the following"
    - The original .55 NRC (Noise Reduction Coefficient) ceiling were replaced with high performance .95 NRC ceilings.
    - Sound Masking systems were installed.
    - Original 60" high non-absorptive furniture panels were replaced with .70 NRC sound absorptive panels.
    - Sound absorbing wall panels were installed in several perimeter areas to prevent sound reflection off hard surface drywall from reflecting into adjoining cubicles.
    - No other changes were made to the workspace in the call center.

- **Summary** of the ATCO case study results... after acoustical corrections were made:
  - The follow up surveys completed by the telemarketing employees showed a **300% increase** in worker satisfaction with the reduction of speech/conversational noises.
  - These results clearly indicate that the workers were previously disrupted by constant noise levels within the call center area.
  - Worker satisfaction with other building facility and telephone ringer noises also increased by a factor of 140%.
  - Although workers had estimated that their productivity/sales would increase by an average of **8% in a quieter environment, results were far more dramatic...**

- **Detailed Results...**

Tracking of sales results began after the acoustical corrections were completed. Since there is a seasonal aspect to ATCO's sales, all sales comparisons for each month of the tracking comparison were compared to the same month the previous year.

RESULTS OF THE SALES TRACKING, AFTER ACOUSTICAL IMPROVEMENTS:

\* MONTH 1: Jan. to Jan. ....AVE. SALES PER WORKER = (+) 8.3%

\* MONTH 2: Feb. to Feb. ... AVE. SALES PER WORKER = (+) 17.4%

\* MONTH 3: Mar. to Mar. ....AVE. SALES PER WORKER = (+) 12.3%

\* MONTH 4: April to April ....AVE. SALES PER WORKER = (+) 38.6%

\* MONTH 5: May to May7....AVE. SALES PER WORKER = (+) 0.4%

\* MONTH 6: June to June ....AVE. SALES PER WORKER = (+) 41.9%

**THE SIX-MONTH ATCO STUDY SHOWS AN AVERAGE SALES PER WORKER INCREASE OF 19.8%....**

**SUMMARY...**

Acoustical measurements before and after corrections were made showed a reduction in noise levels in the **call center area of an average of 6 decibels...** a significant reduction, and obviously very noticeable to the center's employees.

**Mr. Michael Frank, Executive Vice President of ATCO says that "the acoustical improvements were very noticeable to our call center employees. They all commented how much quieter the workspace had become, and that they can concentrate more since the improvements were made.**

**"While there may have been some additional factors, we believe the substantially more quiet workspace has made an important contribution to these sales increases."**

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