Workplace Research

Office Acoustics:
An overview of combined research studies

The Issue of Noise in Open Plan Environments

*According to **Tom Peters:***

“The knowledge of employees is corporate America’s largest single asset.”

Workplace noise affects:

- *Productivity*
- *Satisfaction*
- *Stress levels*
- *Employee hiring and retention*

Source: Dynasound Collaborative Studies

Productivity and Satisfaction

Lack of speech privacy decreases employee satisfaction and productivity:

- *70% of employees participating in a recent study say that noise in the open plan environment is the number one workplace distraction, affecting satisfaction and productivity*
- *Case studies show a 175% increase in employee satisfaction in a more quiet workspace*
- *Worker performance can increase 13% - 20% when speech noise is reduced*

Source: Dynasound Collaborative Studies

Greatest Impact on Productivity & Satisfaction

Having a quiet workspace was cited by more than 70% of employees participating in a Knoll study as being critical to workplace productivity and satisfaction

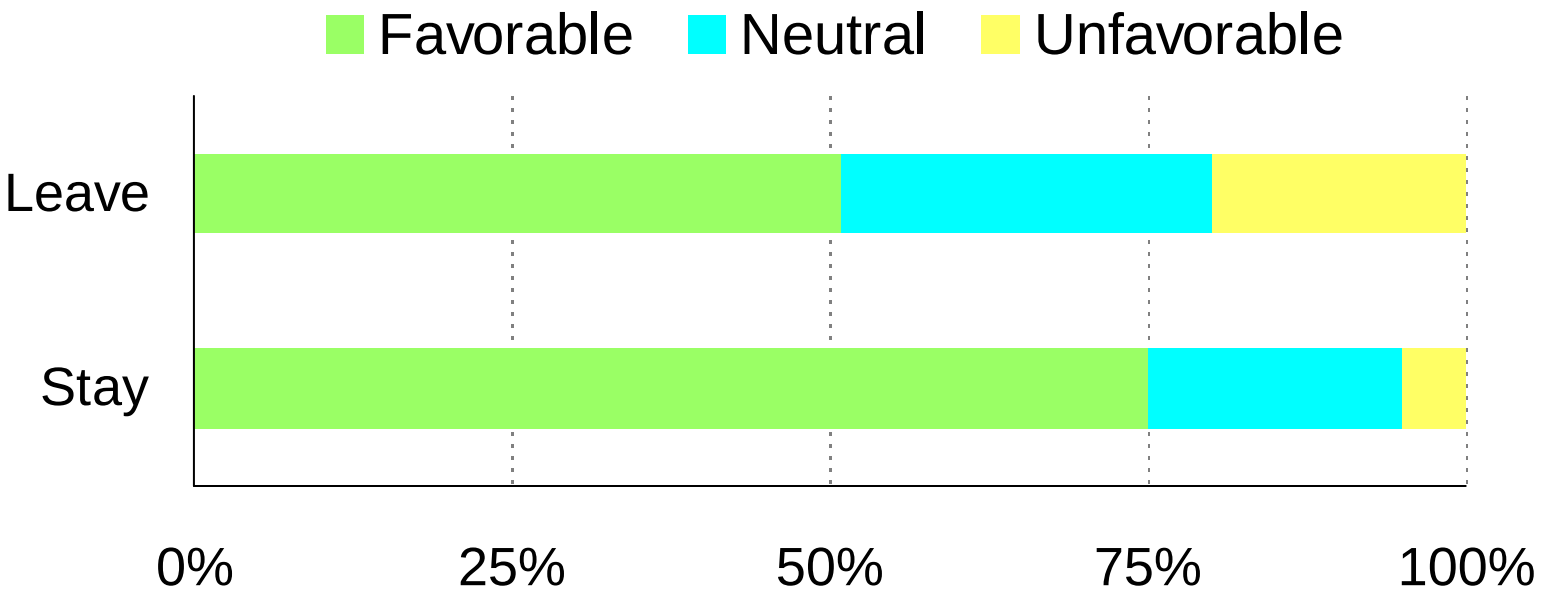
- *Space to store work-related materials*
- *Ability to control heating and air conditioning*
- *Quiet space*
- *Space that can be personalized to individual work style*

70%+ say these would make them more productive and satisfied

Source: Knoll, Inc.

Higher Satisfaction = Higher Retention

A study conducted by The Hay Group revealed that employees who are satisfied with their physical working conditions plan to stay at their companies.



Source: Competing for Talent
The Hay Group, Inc.

Employee Stress

A series of collaborative research studies conducted by Dynasound with 5 major U.S. corporations revealed that:

> *"52% of all employees participating in the study reported that they **felt stressed at work – due to lack of ability to think and concentrate** in the open plan environment."*

Source: Dynasound Collaborative Studies

Employee Stress

Employee stress can have significant cost implications for businesses:

- *Job stress is the leading cause of illness, depression, & workplace violence in the USA*
- *More than 1 million American workers are absent each day due to stress and 40% of employee turnover is due to stress*
- *The problem is costing US industry $300 billion each year in absenteeism, healthcare costs & stress management care*
- *A Gallup poll conducted in 2000 showed that 80% of workers report feeling stress on the job*

Source: Reuters News Service & American Institute of Stress

Why Workplace Noise is Increasing

Over the last decade, there have been significant changes in workplace planning, space utilization and the technologies being used, all of which are adding to increased noise levels:

- *Higher workstation densities - 10'X10' to 6'X8' or smaller*
- *Collaboration and teamwork*
- *Speaker phones*
- *Desktop video conferencing, and other voice activated technologies are being introduced to the workplace*

Source: Dynasound/Knoll Benchmarking/Trend Studies

The Solution to Open Plan Noise

A balanced approach to office acoustics considers office furniture, acoustical ceilings, and sound masking as the key components of an integrated system.

The "A,B,C's" of workplace acoustics are:

- ***Absorb –** the ceiling must absorb 90% of speech noise*
- ***Block –** furniture panels must contain speech noise within the workstations*
- ***Cover –** sound masking must provide even distribution of sound to prevent workers from easily overhearing speech conversations*

Source: Dynasound Collaborative Studies

The Solution to Open Plan Noise

To effectively address office noise, components need to meet various acoustic performance levels:

- ***Ceiling Systems***
  - *.70 or .75 NRC mineral fiber ceiling*
  - *.95 NRC in high density environments (I.e. call centers)*
- ***Furniture systems***
  - *Panel height of 60”*
  - *For 42”– 48” high panels, glass should be used to 60”*
  - *Panel STC should be 20 +*
- ***Sound masking***
  - *Even distribution of sound into space*
  - *High quality “tuning” to site conditions*

Source: Dynasound Collaborative Studies

Conclusion – The ROI

To calculate the payback for an upgrade to speech privacy in an existing open plan environment, assume only a 1% performance increase for a middle manager making $75,000:

- *Average open plan layout = 150sf per worker*
- *Net salary cost = $500.00 per sq. ft.*
- *Cost of .90 NRC ceiling and masking upgrade = $2.00 per sq. ft.*
- *Total one time cost for acoustics upgrade = $350 per worker*
- *Total benefit of 1% performance increase = $750 per year*
- *Net payback occurs in 6 months or less at only 1% improvement in productivity*

Research suggests a 13 - 20% increase in worker productivity in a distraction free environment

Source: Dynasound Collaborative Studies

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