

The logo consists of the letters 'FIS' in a bold, white, sans-serif font with a thick black outline. The 'F' is a simple block letter, the 'I' is a vertical bar with a diagonal slash, and the 'S' is a rounded, block letter.

FIS

FINISHES & INTERIORS SECTOR

Designing for Acoustic Excellence

Introduction

Joe Cilia, FIS Technical Director

Optimising acoustic comfort in the workspace

Andrew Parkin, Partner – Global Head of Acoustics, Cundall

How do we measure performance to guarantee results

Ben Southgate, Principal Engineer, Sandy Brown

Acoustics Absorption doesn't have to be baffling

Pascal Van Dort, Global Acoustics Ambassador, Rockfon



Joe Cilia

FIS Technical Director

Designing for acoustic
excellence



Andrew Parkin

Partner – Global Head of
Acoustics, Cundall

Optimising acoustic comfort in
the workspace



Optimising acoustic comfort in the workspace

Andrew Parkin

Partner, Global Head of Acoustics



What is acoustic comfort?

What is acoustic comfort?

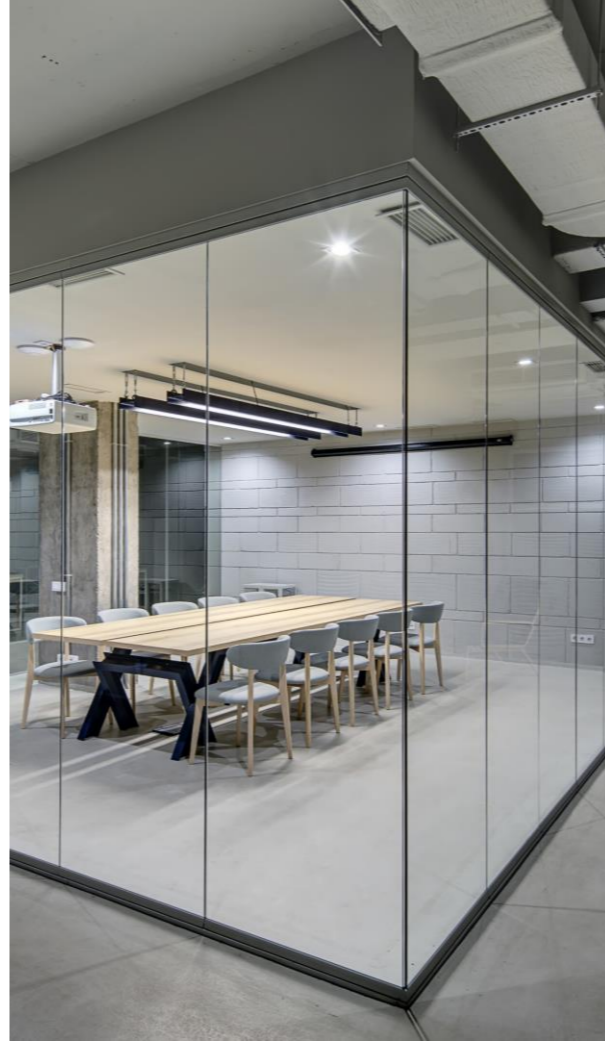
- Varies from person to person
- Depends on role, task, time of day, personality type, neurodiversity etc.
- Whatever you need to feel calm, energised, comfortable, exhilarated
- Sense of home
- Music, soundscaping, natural sounds



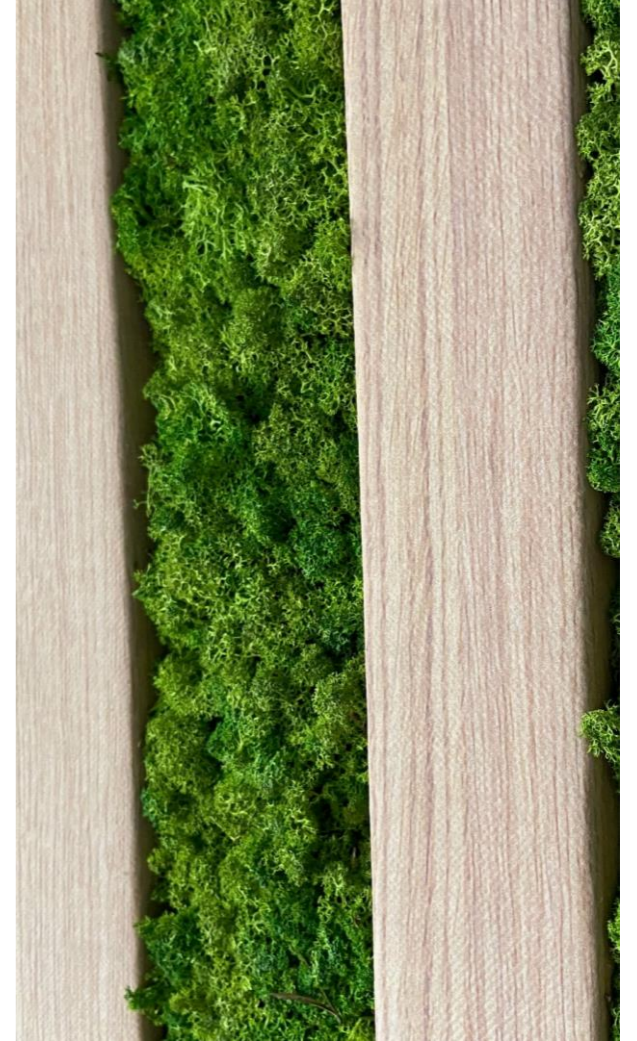
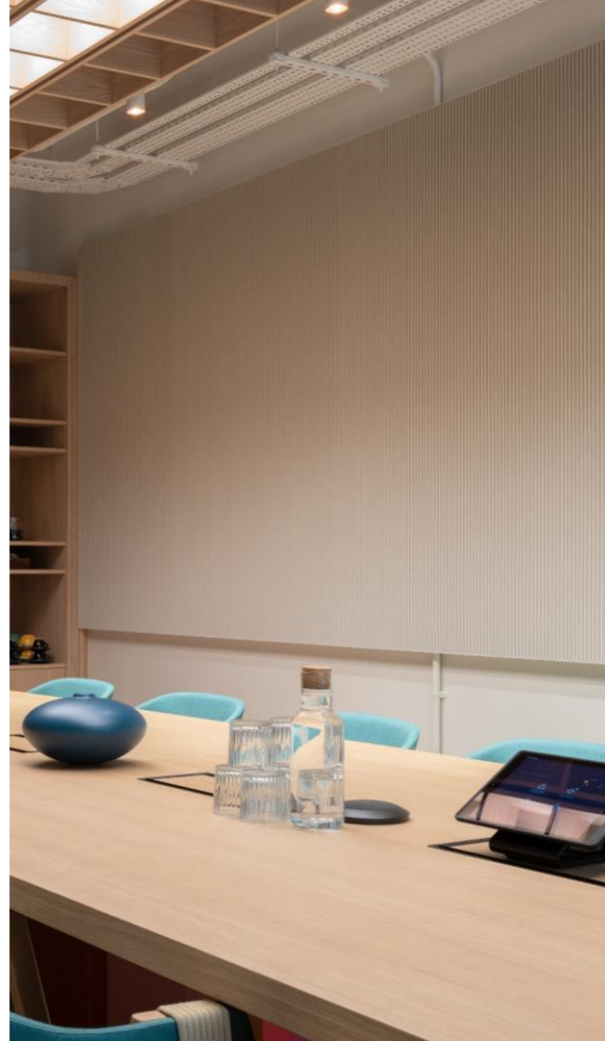
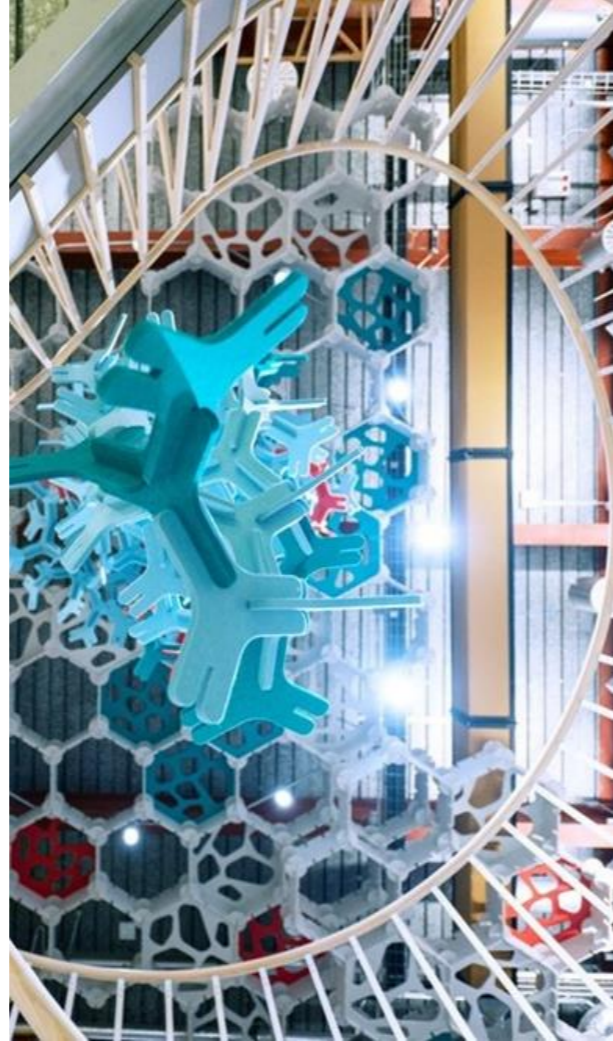


Tools at our disposal

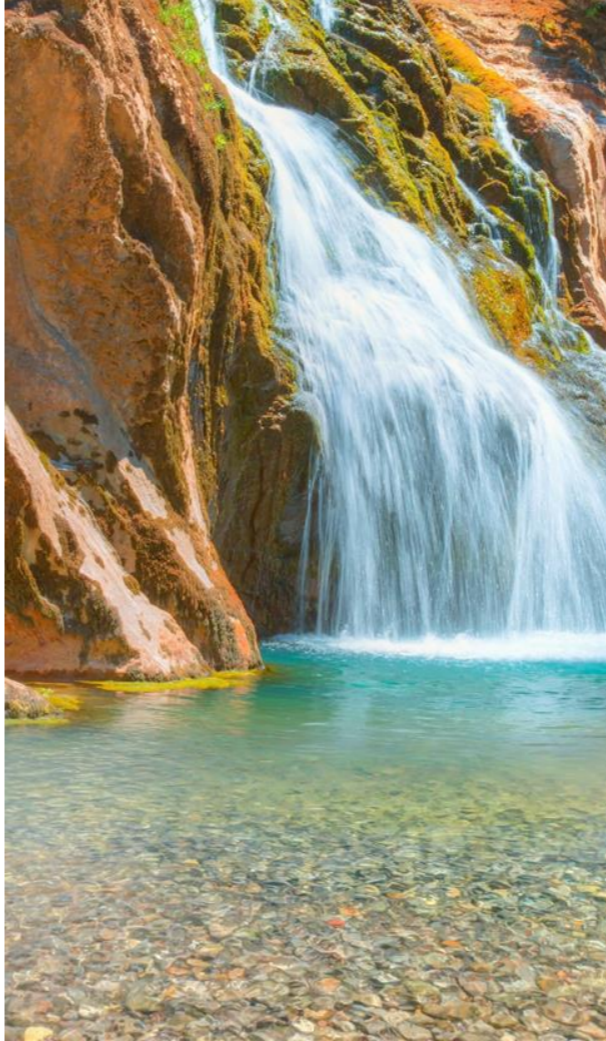
Tools at our disposal: sound insulation



Tools at our disposal: sound absorption



Tools at our disposal: soundscaping

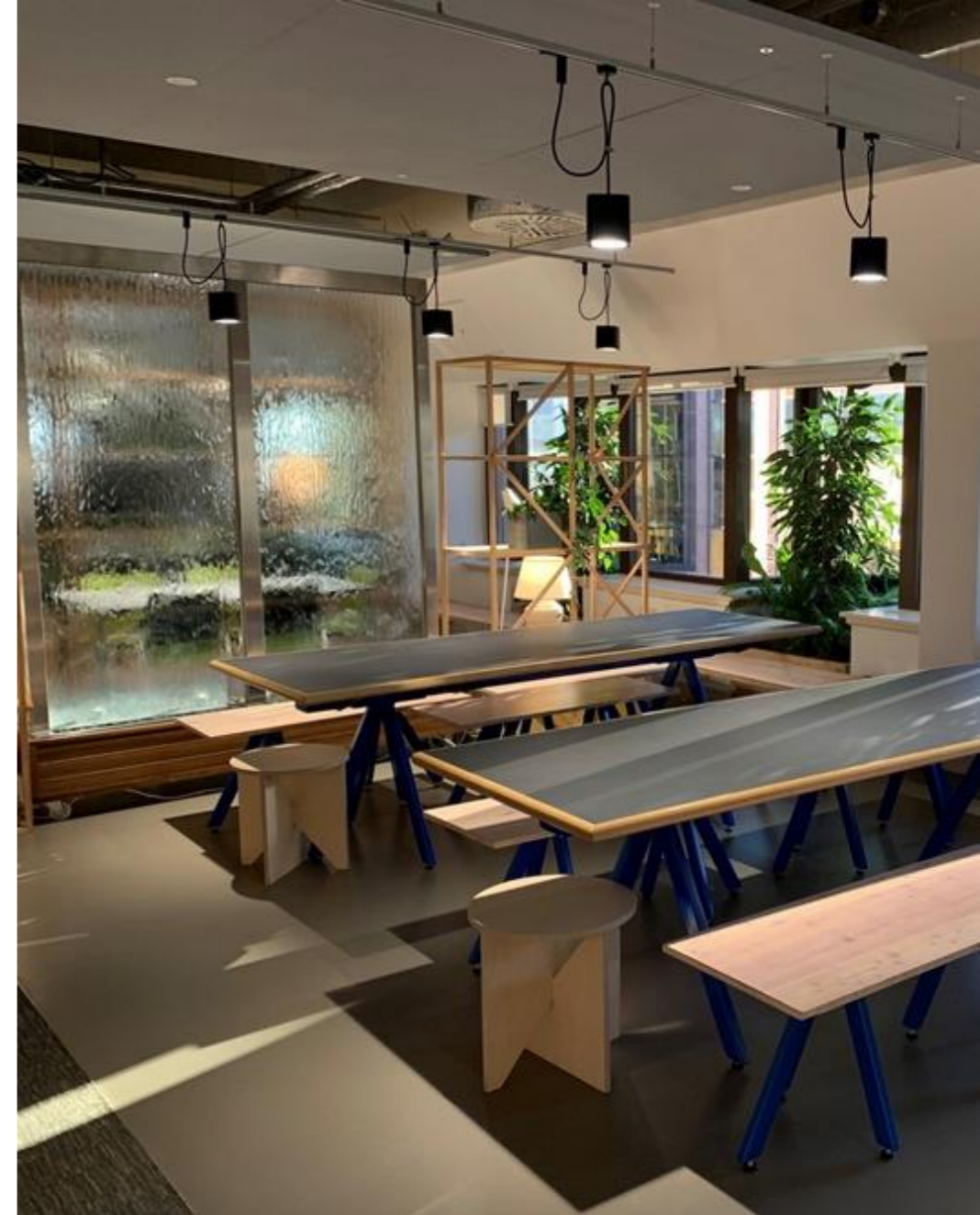




What do we have to do?

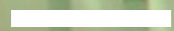
What do we have to do?

- Legally?
 - Nothing
- Commercially?
 - BREEAM, LEED, SKA, WELL
 - BCO
 - BS 8233, ISO 22955, ISO 3382 etc.
- Morally?
 - Whatever we can to help out people feel comfortable, empowered and thrive





Embodied carbon



Embodied carbon

- Cradle to Grave: entire lifecycle of product or site
- Cradle to Gate: production to sale
- Recycled and/or Recyclable
- Key determinant in selecting any product or material
- See blogs at Cundall.com
- This has been ignored for too long





Ben Southgate

Principal Engineer, Sandy Brown

How do we measure
performance to guarantee
results

SANDY BROWN

Consultants in Acoustics, Noise & Vibration

How do we measure performance and guarantee results

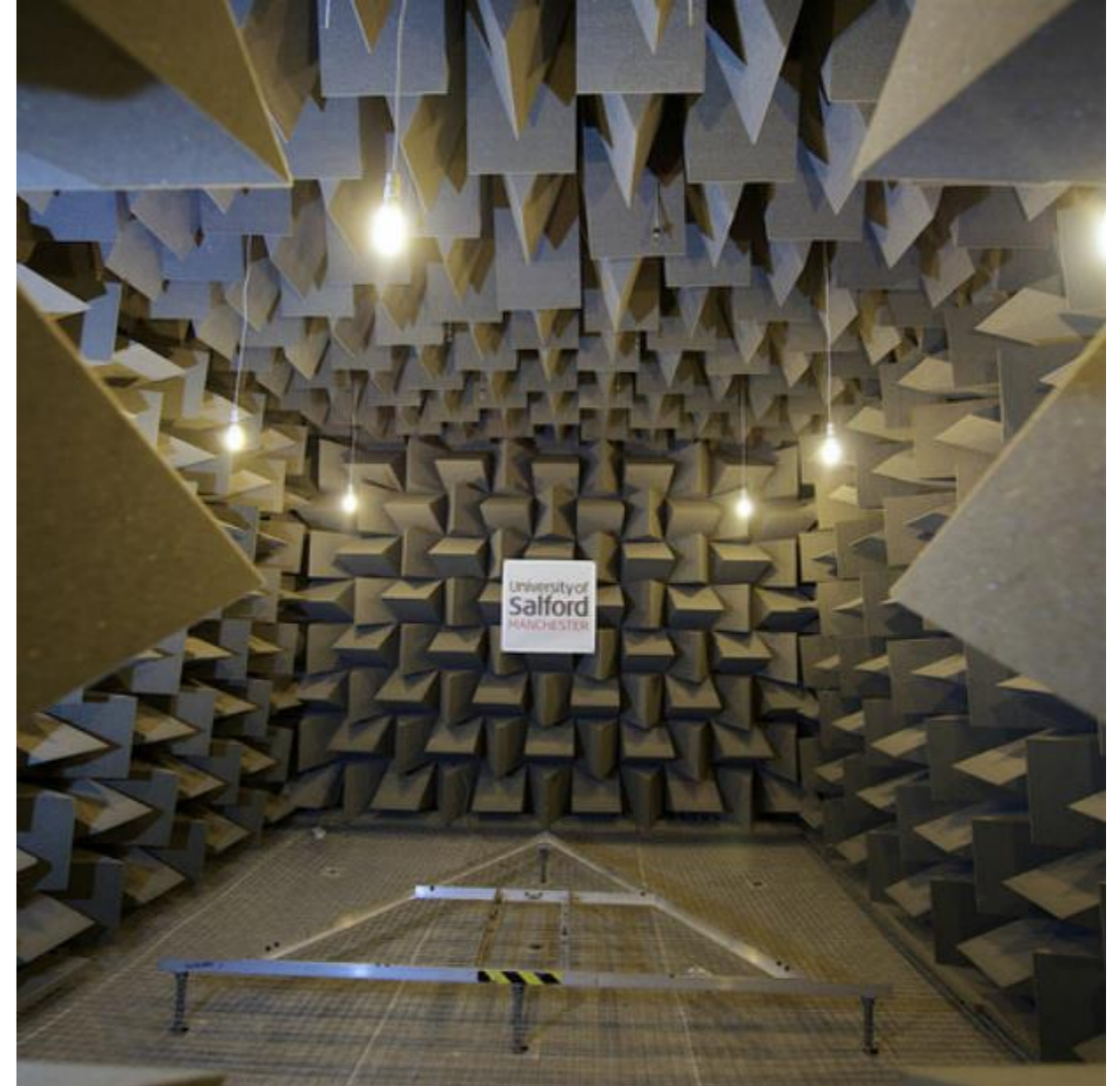
Ben Southgate

Introduction

The five W's (and one H)

- **Why** is testing important?
- **What** can we test?
- **Where** do we test?
- **When** do we test?
- **How** do we test?
- **Who** can test?

- Example project - Pods



Why is testing important?

- Importance of good acoustics
- Acoustics is about numbers
 - Determine feasibility
 - Selecting products
- Garbage in = garbage out
- Determine compliance



What can we test?

- Noise levels
 - How loud is it?
- Sound insulation
 - Sound transfer from one space to another
- Reverberation time
 - Room sound quality (not just echo!)



Where do we test?

Lab



Site



When do we test?

Lab test data

- ASAP!
- Needed in assessments

Site tests

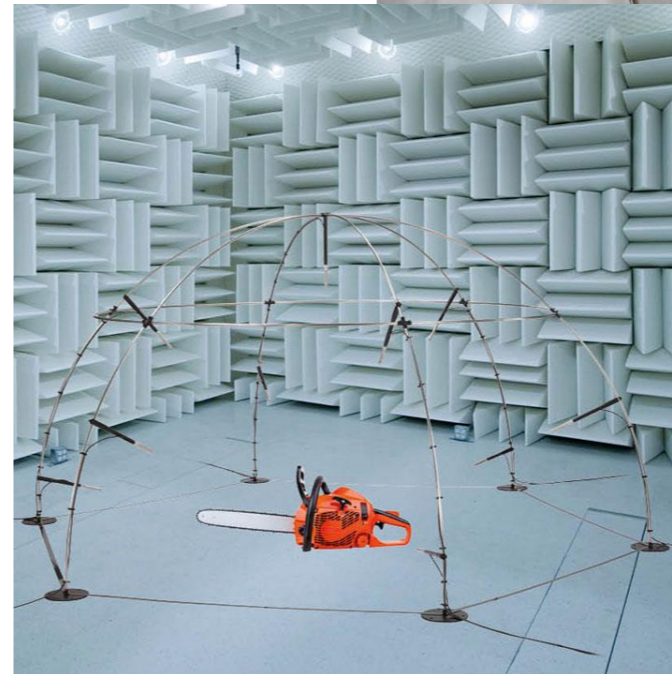
- Around completion
- Mock-up testing



How do we test?

Noise levels

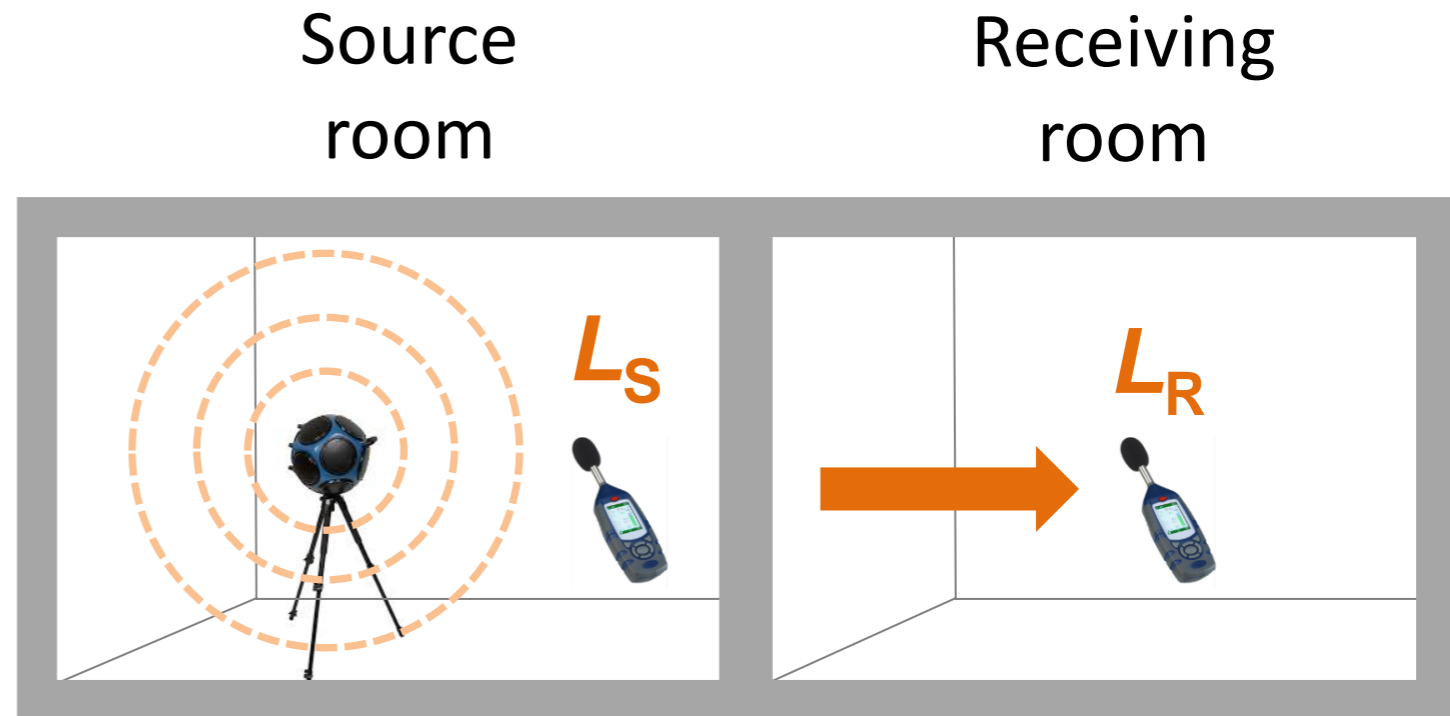
- Site test: Sound pressure level
- Lab test: Sound power level



How do we test?

Sound insulation

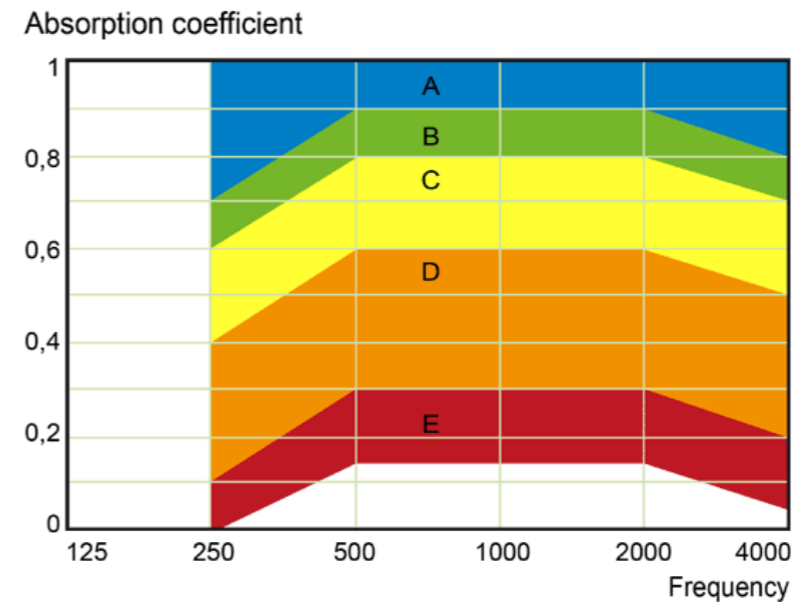
- Sound insulation = $L_S - L_R$
- Site test: D_w
- Lab test: R_w



How do we test?

Reverberation/sound absorption

- Site test: Reverberation time
- Lab test: Sound absorption
 - α_w 0 to 1
 - Absorption Class



Who can test?

- Anyone... but who to trust?
- Ask questions
- Look out for rogue claims
- Ask for the test report

“Sound-proof”

“0 decibels”

“Silent”

“Acoustic material”



Pods project

- Lack of testing consistency
- No accountability
- ISO 23351-1:2020
- Doesn't work for all pods
- New verification scheme
 - By assessment to standard
 - To be launched at CDW



Web article

Summary

- Reliable data is critical
- Understand what you need
 - Sound insulation/absorption etc
 - Lab or site
- Always question reliability
- If in doubt, ask an acoustician!



Ben Southgate

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Pascal Van Dort
Global Acoustics Ambassador,
Rockfon

Acoustics absorption doesn't
have to be baffling

Designing for acoustic excellence

Agenda

- **Acoustics Absorption doesn't have to be baffling**
Pascal van Dort, Rockfon

Where it goes wrong





COMPUTING
DIVISION
COMPUTING
SECTION

























The solutions



















KINGSLEY NAPLEY





Bank







Creating a
world that
sounds good
to everyone

Sounds Beautiful

Designing for acoustic excellence

Questions

Designing for acoustic excellence

Your panel can be contacted

- pascal.van.dort@rockfon.com
- a.parkin@cundall.com
- ben.southgate@sandybrown.com



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Panel Debate

Your panel can be contacted at



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- ben.southgate@sandybrown.com



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We'll be right back