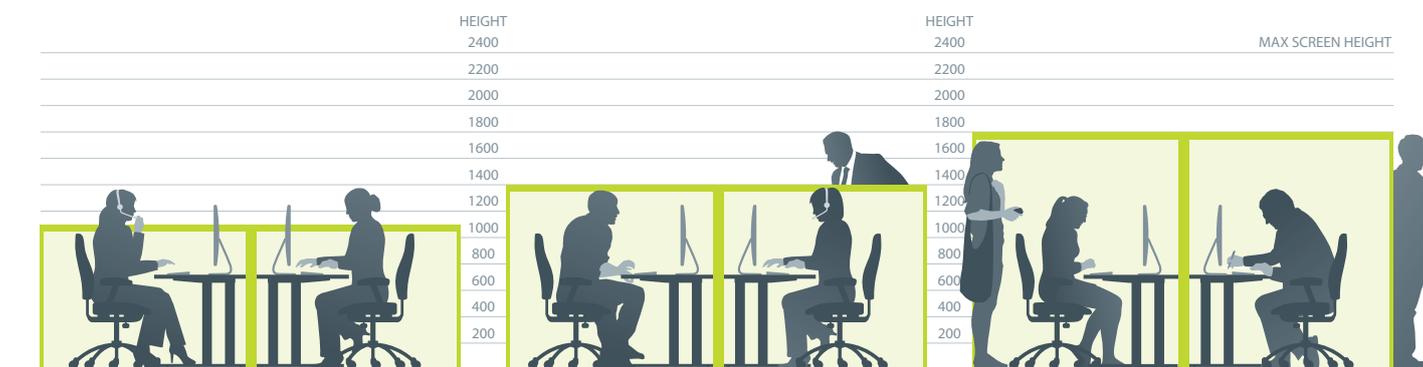# Simple ways to improve acoustics at work

Workplace noise affects many people and reduces the effectiveness of staff to do their job. Here are some simple measures that can help.

Increase acoustic privacy using screens

The higher the screen, the greater the acoustic privacy. It might seem obvious, but even a small increase in height can improve acoustics for a person seated at a desk.

BS EN 1023-1 European standard heights for office screens

Height 1100

*Eye contact
in the sitting position*

This screen height is sufficient to divide workspace without affecting vision.

Height 1400

*No eye contact
in the sitting position*

This screen height offers a high level of privacy whilst still enabling a seated person some degree of visual and audible communication.

Height 1800

*No eye contact
in the standing position*

This screen height and above offers total privacy and excellent acoustic insulation eliminating nearly all distractions from the surrounding area.

Screen position in relation to noise source

The positioning of the screen in relation to the noise source and receiver will determine the acoustic efficiency of the screen.
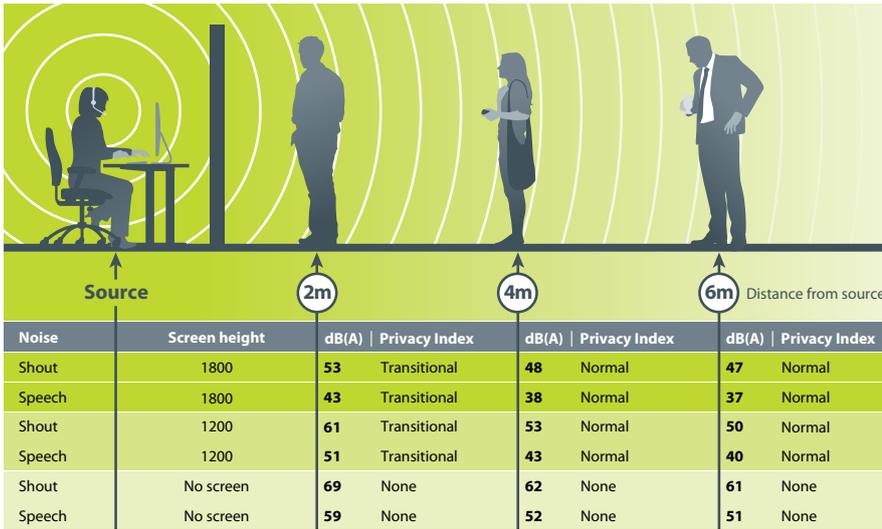

Source

The greater the distance between the source, the screen and the receiver the less the acoustic shadow cast by the screen and therefore a decrease in acoustic efficiency.

Source

The lesser the distance between the source, the screen and the receiver the greater the acoustic shadow cast by the screen and therefore an increase in acoustic efficiency.

acoustic comfort
by screen solutions

Reduction in dB(A) using AA65 screens

Noise	Screen height	2m		4m		6m	Distance from source
		dB(A)	Privacy Index	dB(A)	Privacy Index	dB(A)	Privacy Index
Shout	1800	53	Transitional	48	Normal	47	Normal
Speech	1800	43	Transitional	38	Normal	37	Normal
Shout	1200	61	Transitional	53	Normal	50	Normal
Speech	1200	51	Transitional	43	Normal	40	Normal
Shout	No screen	69	None	62	None	61	None
Speech	No screen	59	None	52	None	51	None

Noise levels
Normal Speech (male) = 65dBA
Shout (male) = 75dBA
Typical environmental background noise level = 45dB

Privacy Index (PI)
No privacy = PI 0 - 69%
Transitional privacy 'poor' = PI 70 - 79%
Normal privacy 'non-intrusive' = PI 80 - 94%

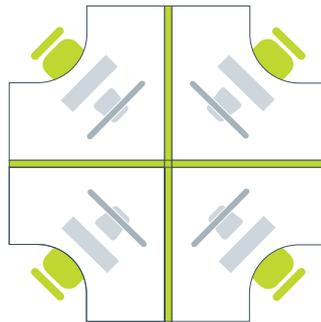# Reduce reverberant sound using absorbing materials

The most effective way to reduce reverberation is by absorption, leaving reflected and transmitted noise to a minimum.

Special sound absorbing products like AA65 screens are most effective, but, adding any materials with softer surfaces, such as carpet or fabric, will help.

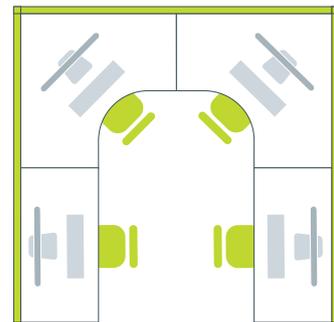# Use desk layouts that suit a persons work

Cluster or coral? If staff frequently communicate with each other then a cluster arrangement with low screens is most appropriate. A coral layout with high screens ensures good privacy and enables people to communicate if needed.
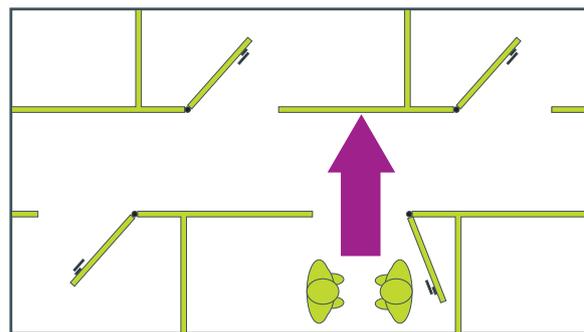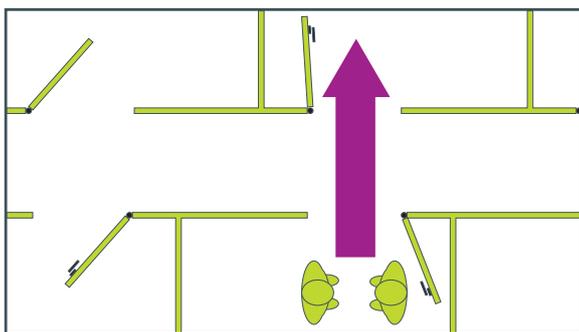
Cluster

Good for staff contact.
Provides no privacy.

Layout footprints are the same.

Coral

Good for staff contact.
Affords good privacy.

Stagger door positions in partition layouts

When designing partition layouts always try and stagger the position of the office doors in the corridors.
This will help stop the sound energy from conversations flowing straight from one office to the other.