KLPAC

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In 1995, the idea was established by Faridah Merican and Joe Hasham.

In 2003, flash flood occurred in Kuala Lumpur and they needed a new home. After the incident, KLPAC was established.

Working together, KLPAC, a non-profit organisation opened in 2005.

Site selection reasons

The site has an impressive long history and a possibly being the heart of the Malaysia's performing arts community.

- KLPAC consists 4 types of rooms:

Pentas 1

- Consist of 504-seat consist of the best sound system, materials and acoustic absorption.

Pentas 2

- Consist of 190-seats experimental an experimental black box theatre that allows modularity.

Indicine

- 100-seats flexing space.

Studios

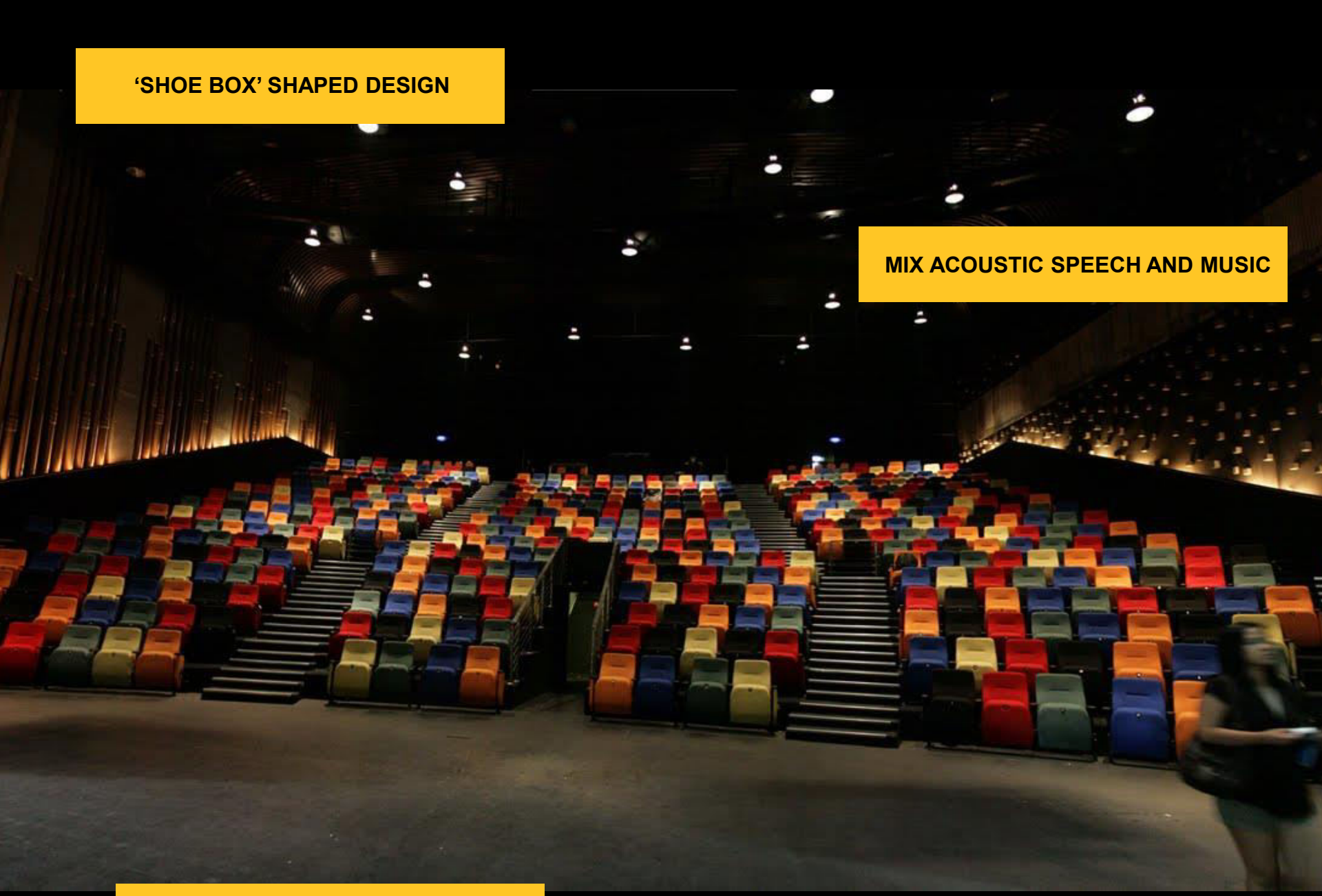
- 9 studios which allows for various uses.

PENTAS 1


PENTAS 2

INDICINE

STUDIO

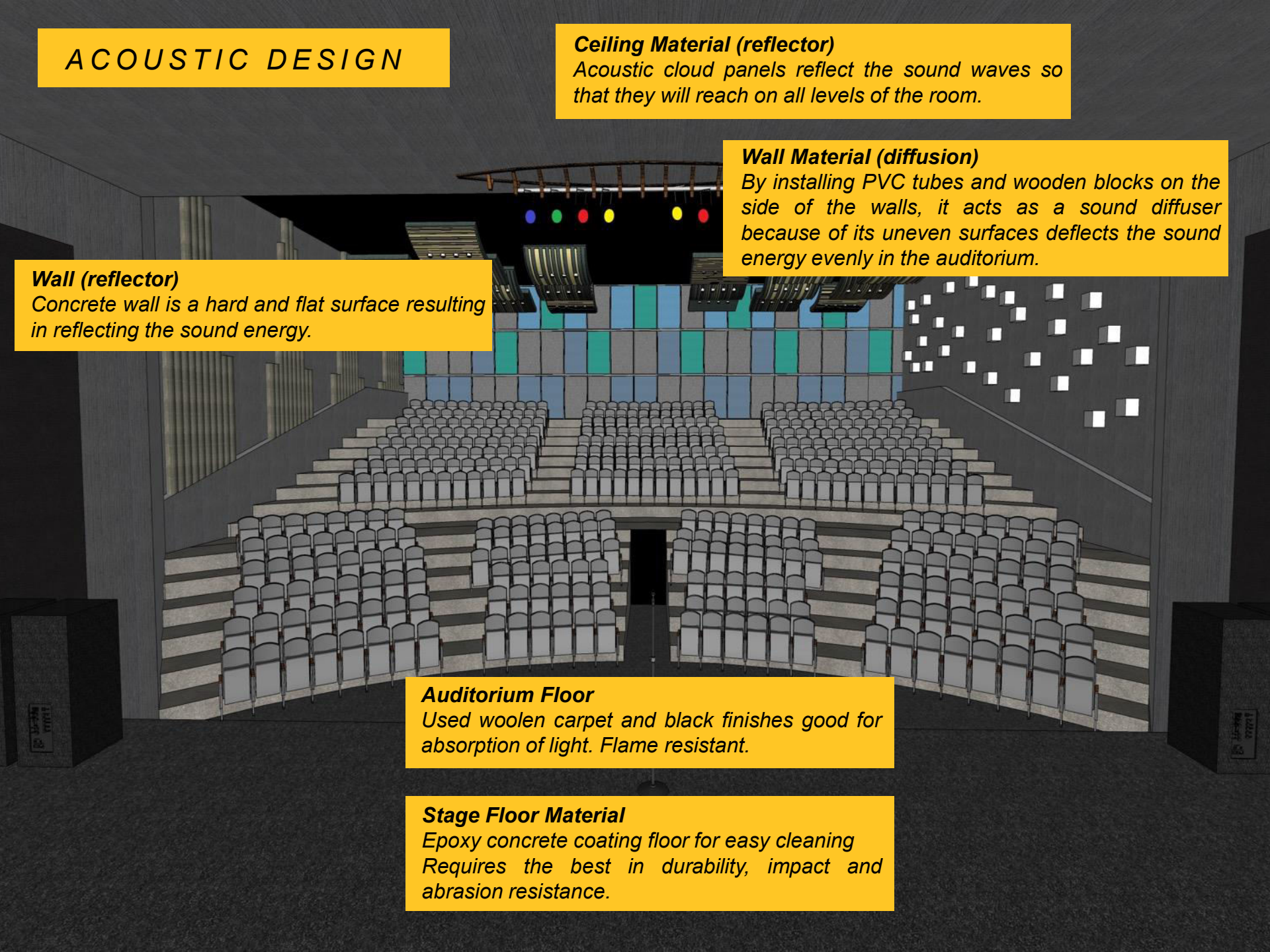

‘SHOE BOX’ SHAPED DESIGN
MIX ACOUSTIC SPEECH AND MUSIC
CAN FIT UP TO 506 OCCUPANTS

ACOUSTIC DESIGN

Ceiling Material (reflector)
Acoustic cloud panels reflect the sound waves so that they will reach on all levels of the room.

Wall Material (diffusion)
By installing PVC tubes and wooden blocks on the side of the walls, it acts as a sound diffuser because of its uneven surfaces deflects the sound energy evenly in the auditorium.

Wall (reflector)
Concrete wall is a hard and flat surface resulting in reflecting the sound energy.

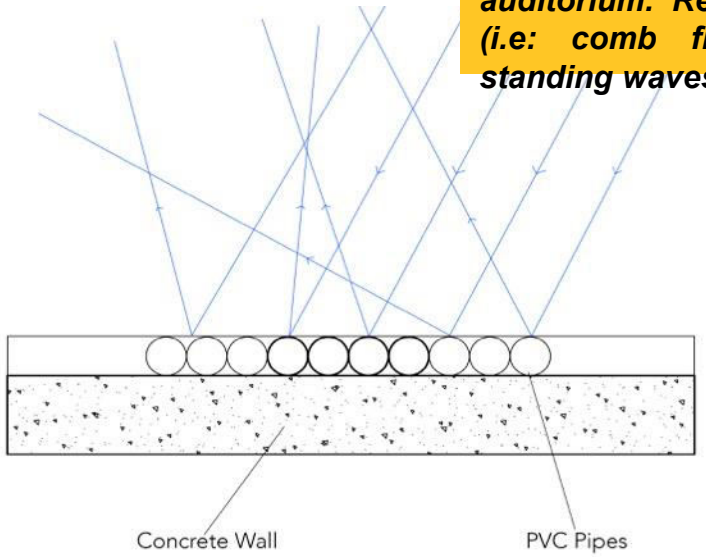


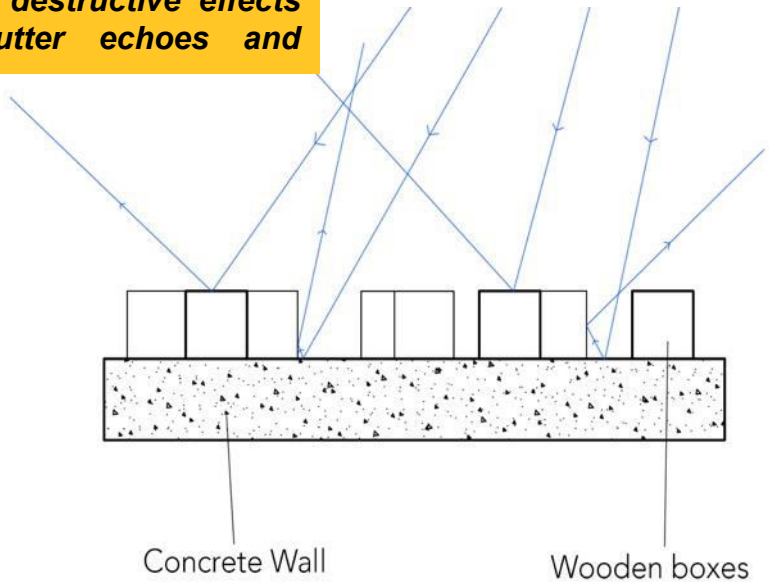
Auditorium Floor
Used woolen carpet and black finishes good for absorption of light. Flame resistant.

Stage Floor Material
Epoxy concrete coating floor for easy cleaning
Requires the best in durability, impact and abrasion resistance.

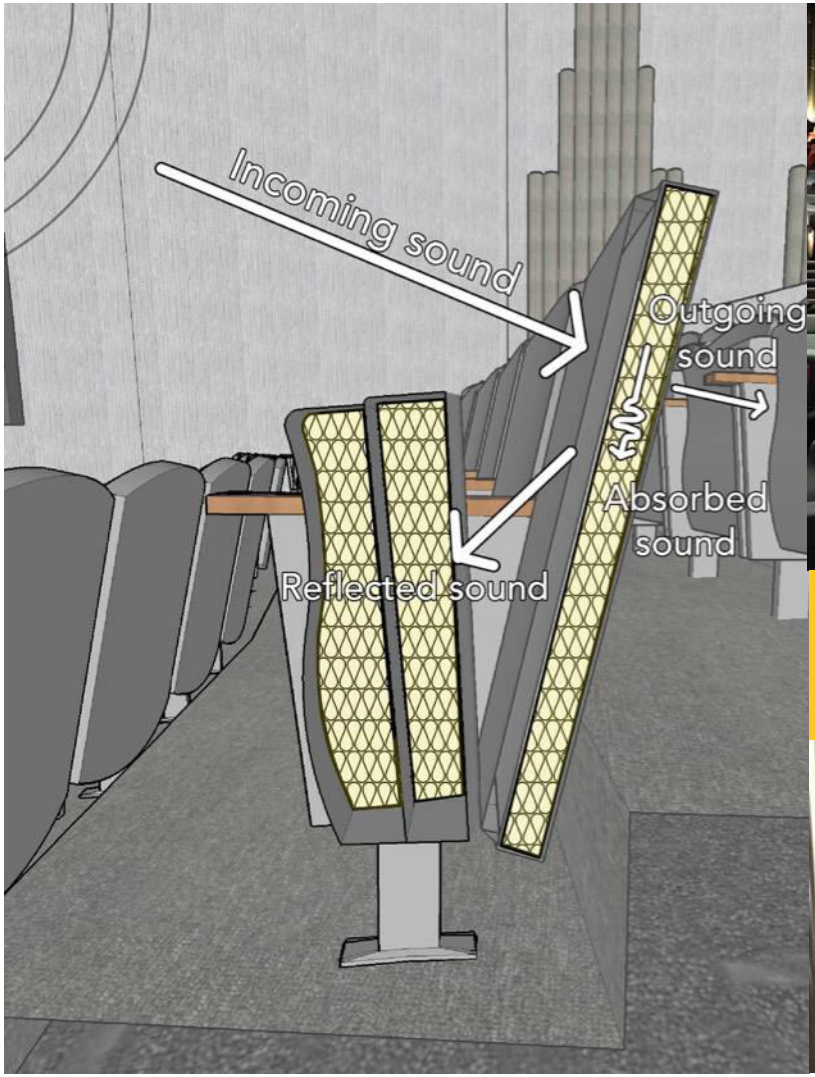
SOUND DIFFUSION

Uneven surfaces of the walls allows sound energy to be reflected in different angles, thus dispersing them to all over the auditorium. Reduces the destructive effects (i.e: comb filtering, flutter echoes and standing waves.)



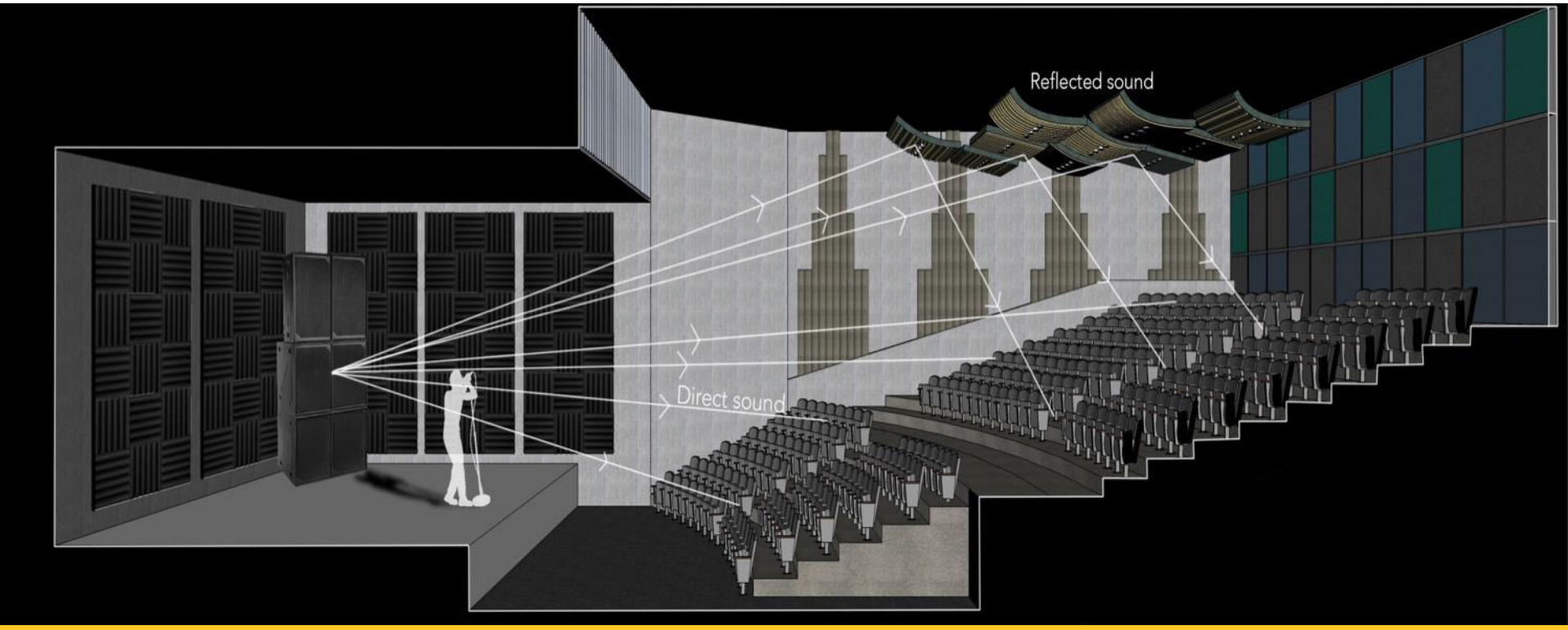


SOUND ABSORPTION



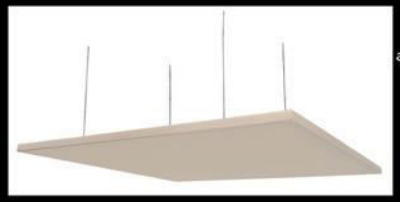
Soft, porous materials such as acoustic panels, foam chairs and woolen carpets are used to absorb sound energy resulting in lesser reverberation time.

SOUND REFLECTION



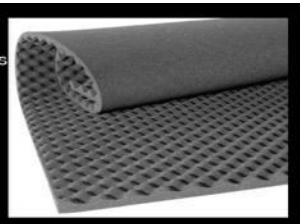
The reflection of sound follows the law "angle of incidence equals angle of reflection", sometimes called the law of reflection. The same behavior is observed with light and other waves, and by the bounce of a billiard ball off the bank of a table. Hard surfaces such as concrete walls, floorings and cloud acoustic panels are used to reflect direct sound thus dispersing the sound equally in the auditorium.

SOUND REVERBERATION



Acoustic cloud panels
Reduces reverberation with 1.10 - 1.22 absorption coefficient and also reflects the sound waves to disperse it equally in the auditorium.

Acoustic fabric wall panels
With its soft surfaces, it prevents sound waves to be reflected thus having the absence of echoes and a low reverberation time.



Concrete walls
The walls and structures are made thick so that it would not 'leak' outside and disturb the public. The sound could conducted and dissipitated in the structure.

Foam chairs
Chairs are made from foam to absorb sound and are arranged in different levels for audiences to have an unobstructed view of the stage.

REVERBERATION TIME

Surface	Material	Area (m^2)	Absorption (500Hz)	Abs. Unit (m^2)
Wall	Acoustic fabric panels	161	0.44	70.84
Wall	Concrete with zinc	135	0.02	2.7
Wall	Concrete with PVC	135	0.02	2.7
Ceiling	Concrete with fabric clouds	802	0.02	16.04
Floor	Concrete with epoxy coating	802	0.02	16.04
Occupants	-	506	0.46	232.76
		Total Absorption (A)		**341.08**

$$RT = \frac{0.16V}{A}$$

$$RT = \frac{0.16 \times 8020}{341.08}$$

$$\boldsymbol{RT = 3.76s}$$

CONCLUSION