



STUDIO
SOUND
SERVICE

Audioforum@ISE2025

The Architecture of Sound

Integrated Design with Acoustics, Audio and Architecture

Who we are



Studio Sound Service is a well-established design and consultancy company that specialises in every aspect of acoustics and sound systems.

Founded in 1983

SSS has built an enviable reputation for the production of world class performance and recording spaces, from personal studios to large scale film, broadcast and corporate facilities.

By combining aesthetic and technical skills with decades for experience SSS strives to make every project successful, both sonically and visually.



Donato Masci
Physicist & Acoustic Designer - CEO



Cecilia Torracchi
Acoustic & Civil Engineer - Partner



Giulia Bondielli
Acoustic & Building Engineer - Partner



Elena Rossi
Acoustic & Building - Architectural Engineer



Niccolò Pizzamano
Architect & Acoustic Designer



Chantal Valdambrini
Communication Manager

ADR, Post & Broadcast. Cinema Mixing studios. Gaming Studios.

- Iyuno (ex SDI Media) Acoustic Designers (more than 15 countries)
- Cinecittà Studios (Postproduction Facility 2020 Renewal) @ Rome
- Dubbing Brothers (Italy, USA)
- 3Cycle postproduction Facility @ Rome
- FOX Dolby Atmos Studios @ Rome (IT), München (DE), London (UK)
- Netflix Facility @ Rome
- Disney Facility @ Warsaw (PO), Milan
- inHouse (Oscar winner Sorrentino) @ Roma

Music Studios (400+)

- Cicaletto Recording – Francesco Ponticelli @ Arezzo
- Aemme Recording Studio – Salvatore Addeo @ Lecco
- D:POT Recording Arts @ Prato – Fabrizio Simoncioni
- Mulinetti Studio @ Genova – Alberto Parodi
Resolution Award 2015 Best Audio Facility
- The Garage @ Civitella v.d.C. (AR)
Resolution Award 2014 Best Audio Facility
- House of Glass @ Viareggio (LU) – Gianni Bini
Resolution Award 2013 Best Audio Facility
- SonicFab Studio @ Pioltello (MI)
- Waves Music @ Genova
- Marco Borsatti Studio @ Bologna
- Pop Fiction – Janie Price @ Firenze
- Sugarmusic @ Milano
- Experimental Studios @ Torino

Dolby Atmos Music Studios: 50+ rooms

Dolby Atmos Home Entertainment Studios: 80+ rooms

Dolby Atmos Theatrical Studios: 10+ Theatres

Personal Studios:

- Andrea Bocelli, Asaf Avidan, Biagio Antonacci, Daniele Silvestri, Damian Lazarus, Diego Calvetti, Enrico Cremonesi (Fiorello), Enrico Melozzi, Fabio Rovazzi, Federica Vincenti (Michele Placido), Gabry Ponte, Giorgia Angiuli, Irko (Kanye West sound engineer), Luca Agnelli, Marco Masini, Marco Messina (99 Posse), Merk & Kremont, Nari&Milani, Paolo Sandrini, Petra Magoni, Piero Pelù, Pino Iodice, Renato Zero, Vinai.

- Barys Arena (ice hockey) @ Astana, Kazakhstan
- Parlamento del Kazakhstan @ Astana, Kazakhstan
- Chorus Life (arena e cittadella) @ Bergamo
- Stadio Tardini @ Parma

- Hospitals: Nuovo Ruggi @ Salerno, Cesena

- George Lucas Home Theater, Italy
- Cinema Barberini @ Roma

- Chiesa Santa Maria Nuova (Arch. M. Botta) @ Terranuova B. (AR)
- Duomo di Siena new audio system

- Prada Auditorium and Conference Room via Orobica @ Milano
- Presentation room Ferrari HQ @ Maranello (MO)
- Siemens HQ @ Milano
- Heineken HQ @ Milano
- Leonardo Elicotteri @ Milano

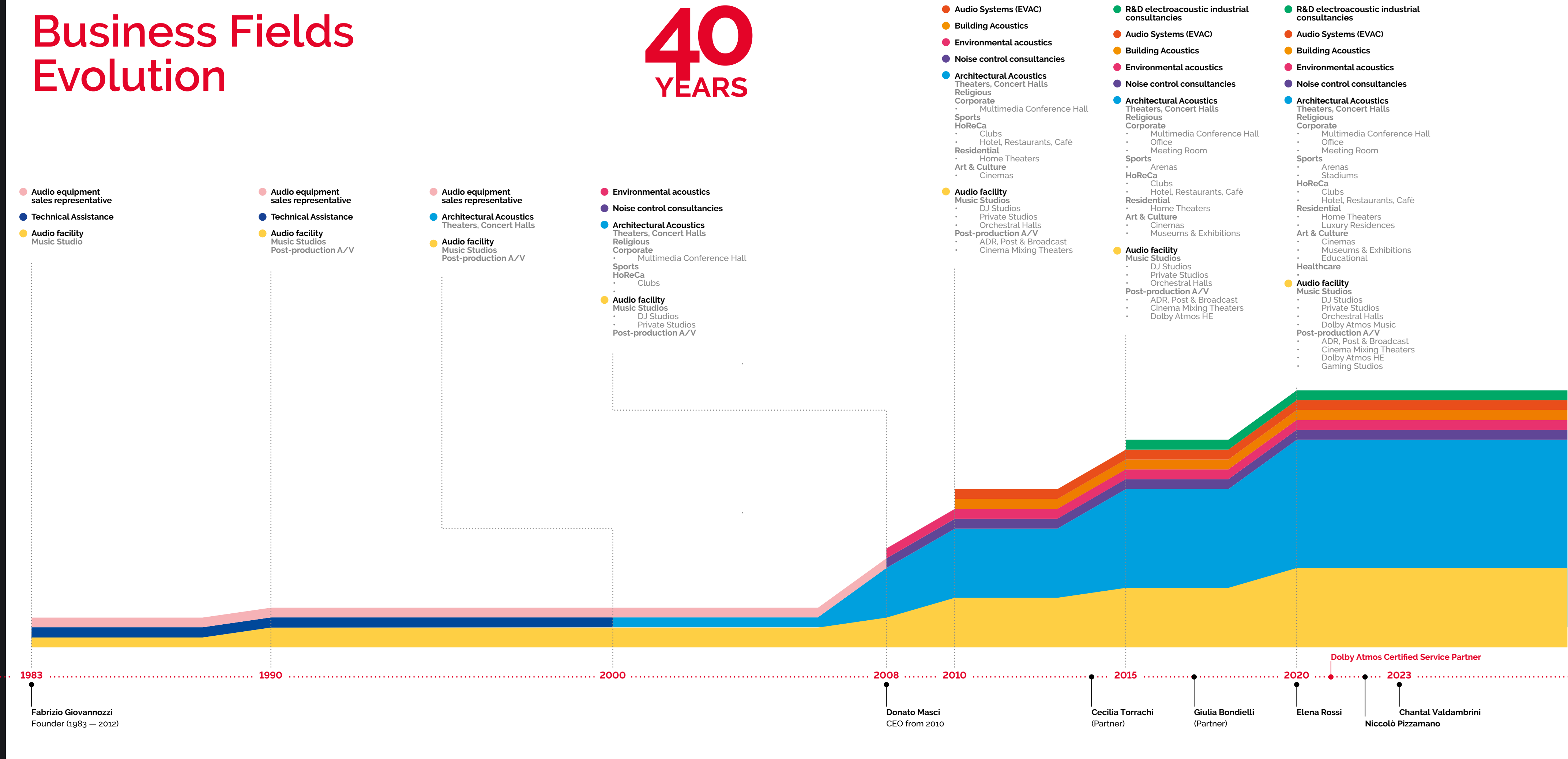
- Four Seasons Hotel @ Firenze
- Portrait Milano – Ferragamo @ Milano
- Caffè dell'Oro – Ferragamo @ Firenze
- Hotel Veronesi (Calzedonia) @ Verona

- EVAC Dubai Metro
- EVAC Bahrain and Islamabad airport (THALES)
- EVAC Scuola di Magistratura Castelpulci @ Scandicci Firenze

- Teatro del Popolo @ Castelfiorentino (FI)
- Teatro del Popolo @ Colle di Val d'Elsa
- Teatro del Popolo @ Poggibonsi
- Teatro il Ferruccio @ Empoli
- Teatro Marconi @ Pistoia
- Teatro Nazionale @ Firenze

Business Fields Evolution

40
YEARS






Studio Sound Service
is the only Italian
Dolby CSP.

We can provide
design,
commissioning and
consultancy services
worldwide with
Dolby's certified
quality standards.

The Dolby logo is displayed in white on a red rectangular background. It features the word "Dolby" in a bold, sans-serif typeface, preceded by the iconic Dolby symbol consisting of two overlapping circles.

Certified service partner



MEMBER 2024 - 2024

Studio Sound Service Srl

Industry-Related Professional

CEDIA Members are smart home professionals providing comfort, control, connection, and entertainment for clients to experience the best moment in life in their homes.

The Association for Smart home Professionals™

CEDIA Member Code of Conduct

Each member of CEDIA shall agree to adhere to the following:

1. Provide to all persons truthful and accurate information with respect to the professional performance of duties.

2. Maintain the highest standards of personal conduct to bring credit to the custom electronic and design industry.

3. Promote and encourage the highest level of ethics within the profession.

4. Responsibly uphold all laws and regulations relating to CEDIA policies and activities.

5.Strive for excellence in all aspects of the industry.

6. Use only legal and ethical means in all ndustry activities.

7.Protect the public against fraud and unfair practices.

8.Use written contracts clearly stating all charges, services, products and other essential information.

9. Demonstrate respect for every professional within the industry by consistently performing at or above the standards acceptable to the industry.

10. Make a commitment to increase professional growth and knowledge by participating in technical and industry business training.

11. Contribute knowledge to professional meetings and journals to raise the professionalism of the industry.

12. Maintain the highest standards of safety

13. When providing services or products, maintain in full force adequate or appropriate insurance.

14. Cooperate with professional colleagues, suppliers and employees to provide the highest quality service.

15. Extend these same professional commitments to all persons supervised or employed.

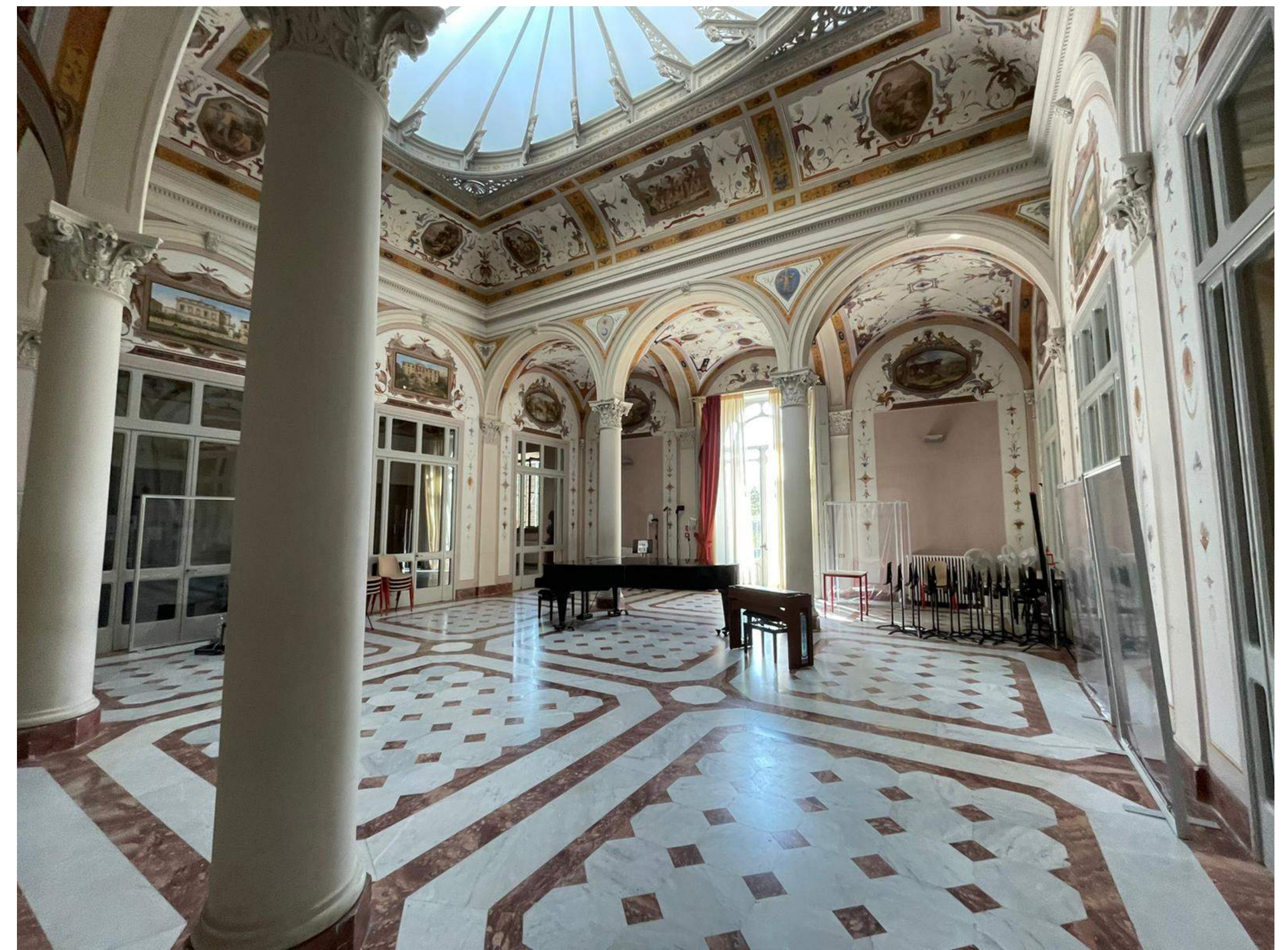
16. Subscribe to CEDIA’s Code of Ethics and abide by the CEDIA Bylaws.

Villa Favard

Florence Conservatory



Ante Operam



Project Target Definition

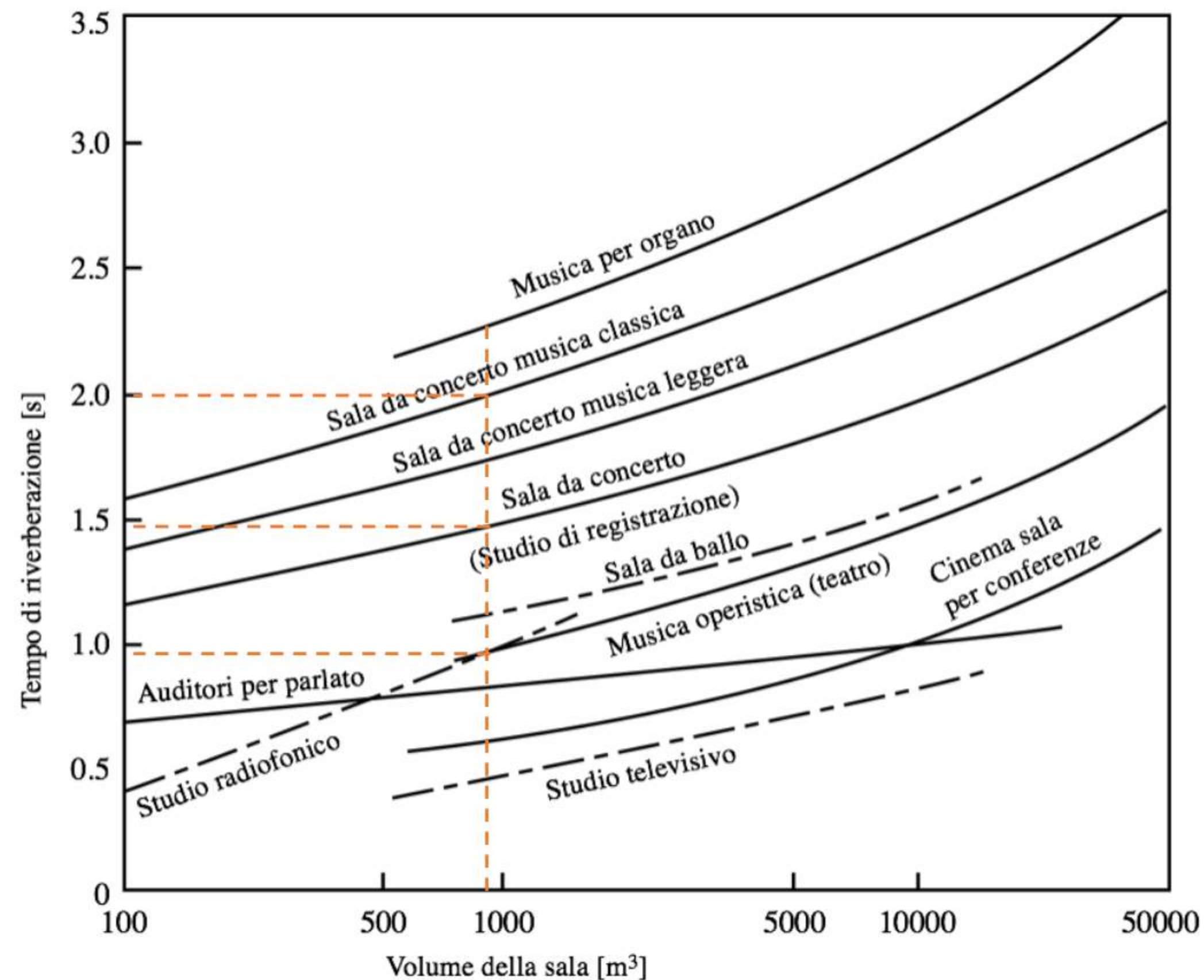
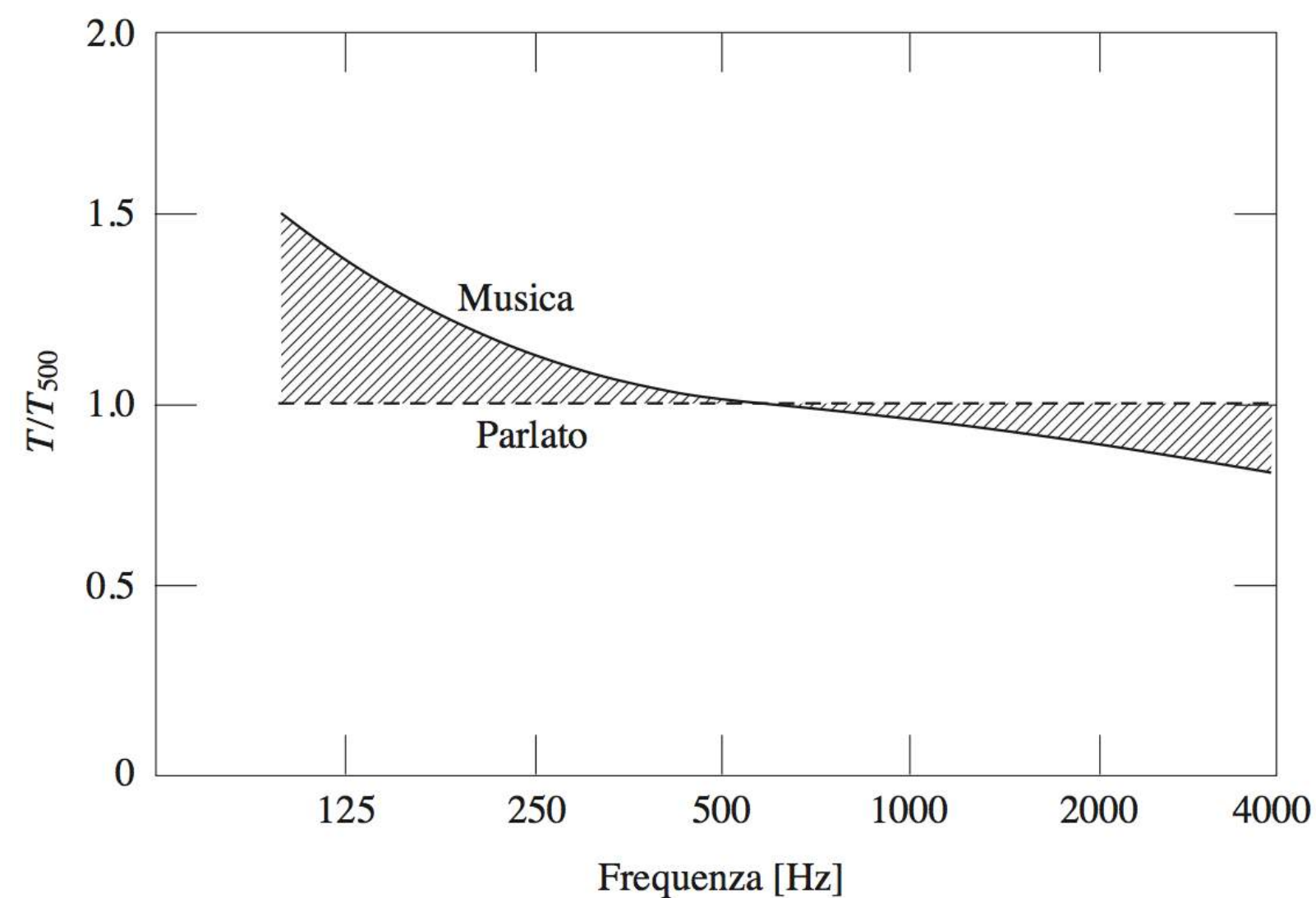


Figura 3 – Tempi di riverberazione di riferimento.

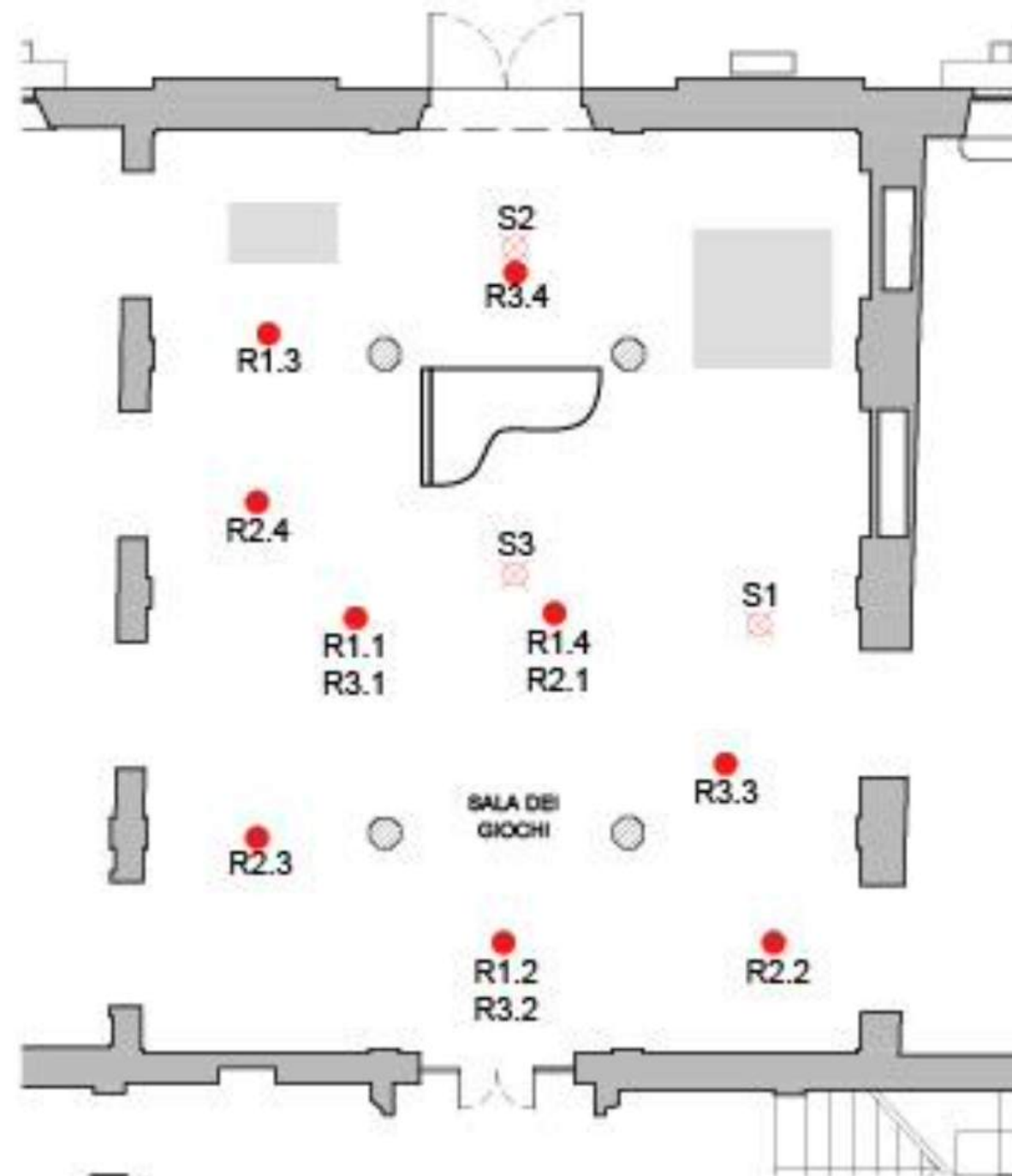
Room Volume: 900 m³

Optimal RT: 1÷2 s (depends on the musical event)

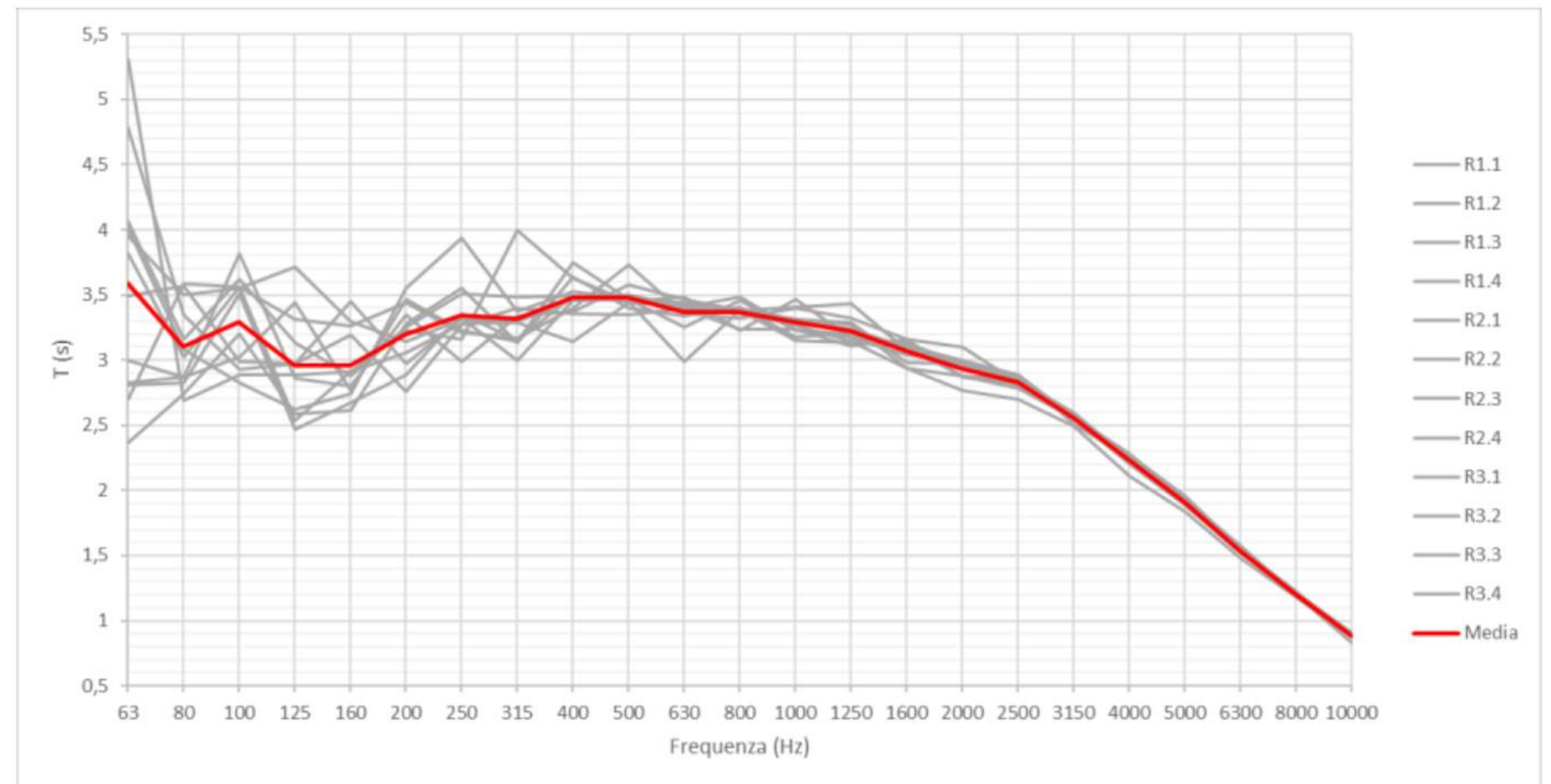
Optimal tonal behavior of reverberation time, approximately 1.5 times longer at low frequencies than @500Hz



Measurement of pre-existing conditions



· Pianta della Sala dei Giochi: individuazione della posizione di sorgenti e ricevitori.



Reverberation times (T_{30}) measured in pre-existing conditions

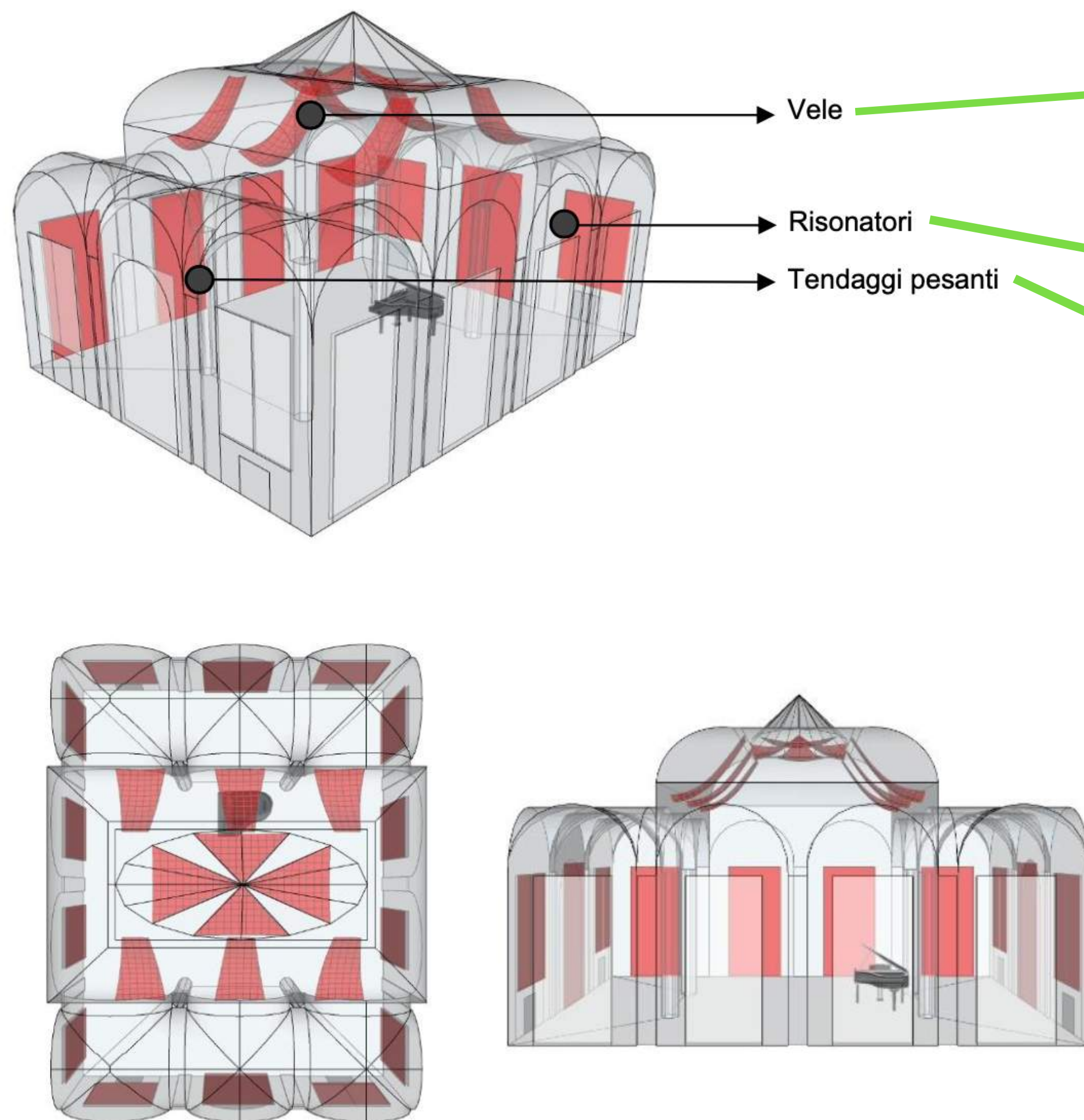
Measured RT @ 500 - 1000 Hz : 3.4 s
Optimal RT: 1÷2 s (depends on the musical event)

Even at low frequencies, the reverberation is very high and causes harmful emphasis during musical performances.

Acoustic Treatment Design



Acoustic Treatment Design



Acoustic Treatment Design

Resonators

The correction of low frequencies is achieved using acoustic resonators tuned to specific frequencies.

The resonators are rectangular box-shaped elements that contain a resonating membrane and sound-absorbing material inside. The elements are covered with acoustically transparent fabric.

This type of solution allows for the absorption of a range of low frequencies through elements with reduced thickness.



Acoustic Treatment Design

Heavy Curtains

Heavy velvet curtains (fabric heavier than in pre-existing conditions) were installed in front of each opening to control the reflection caused by glass doors.

The use of curtains allows for variable acoustics: with open curtains, the room will be more reverberant, while with closed curtains, high frequencies will be more controlled.



Acoustic Treatment Design

Transparent canopies



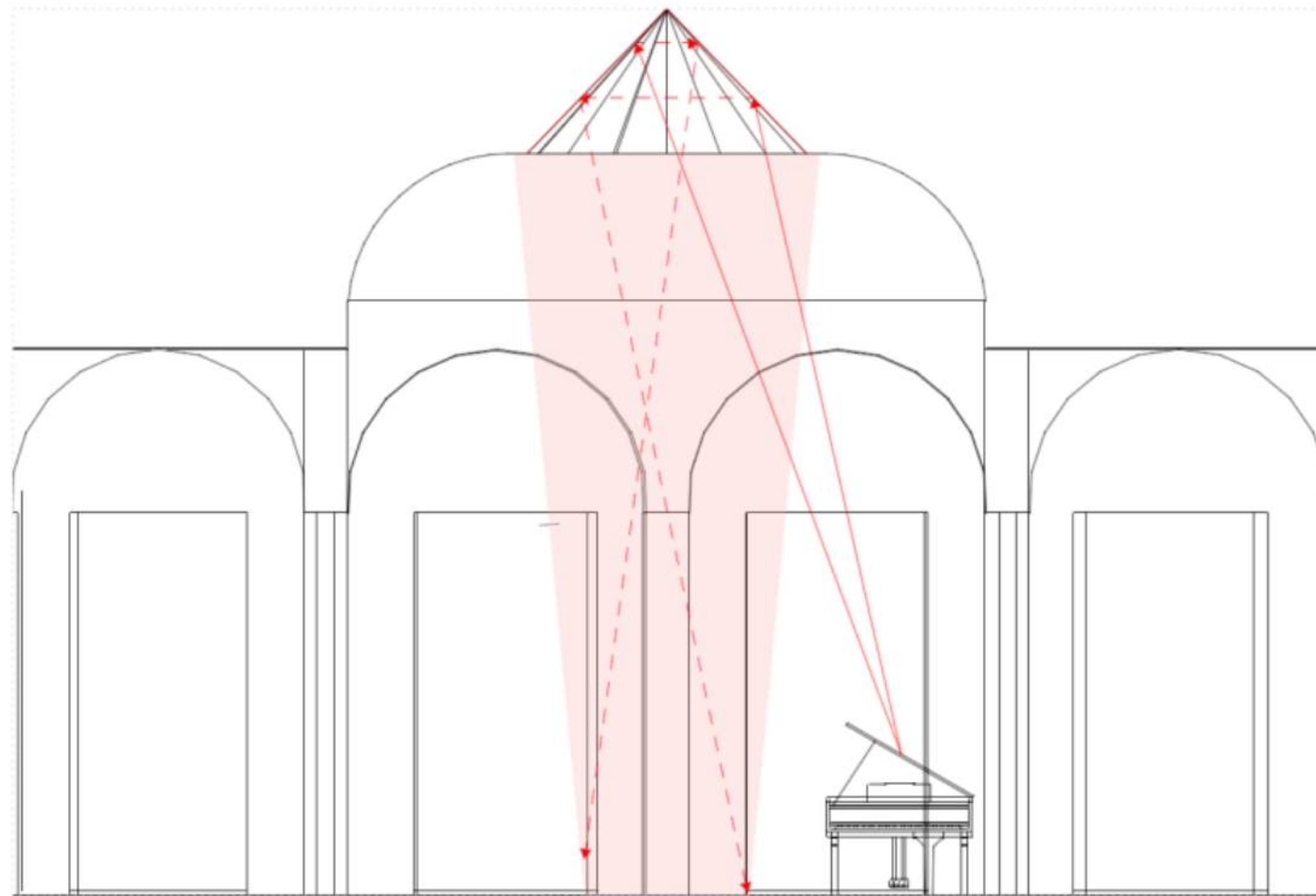
Acoustic Treatment Design

Transparent canopies

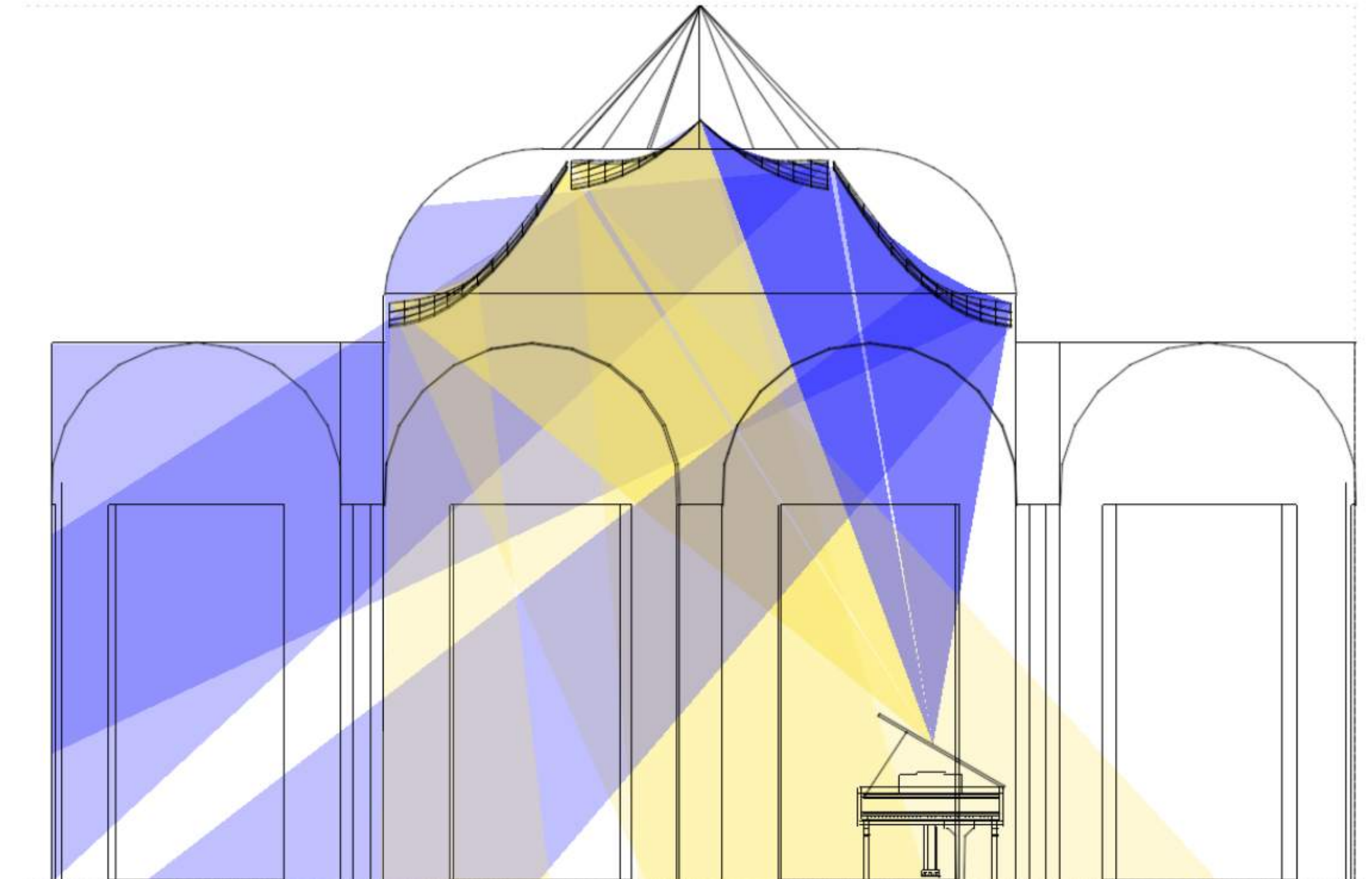


Acoustic Treatment Design

Transparent canopies



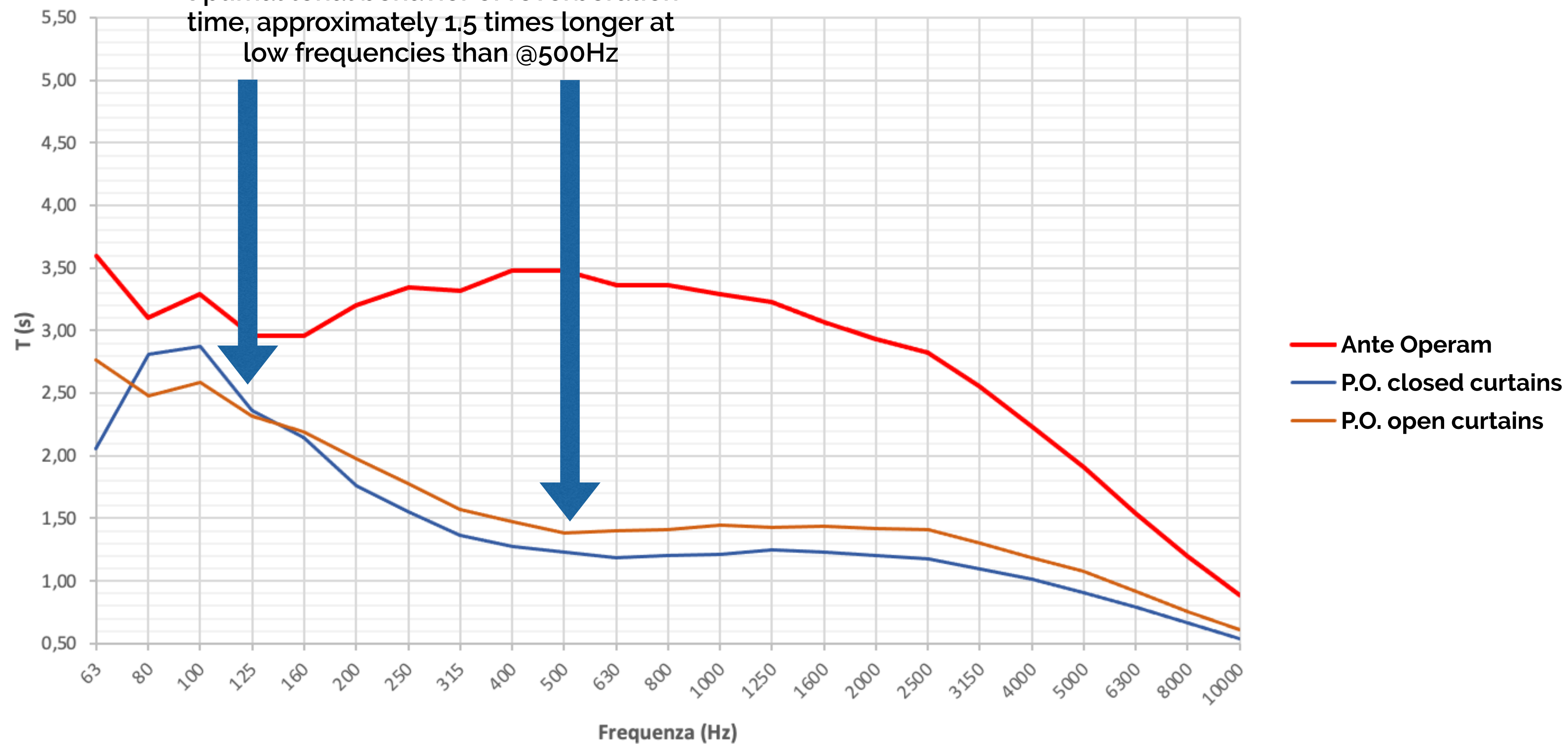
The concave roof caused significant sound focusing in the central part of the room



The convex canopies correct the focusing problem, transforming it into an opposite phenomenon of diffusion and distribution of sound. Listening becomes more uniform and enjoyable throughout the room.

Final results

Optimal tonal behavior of reverberation time, approximately 1.5 times longer at low frequencies than @500Hz



Sala Conferenze Castelnovo de' Sabbioni

Cavriglia (AR)





Acoustic Absorption with stretched fabric
on the ceiling



Architectural integration

Aquilone dell'Ornellaia

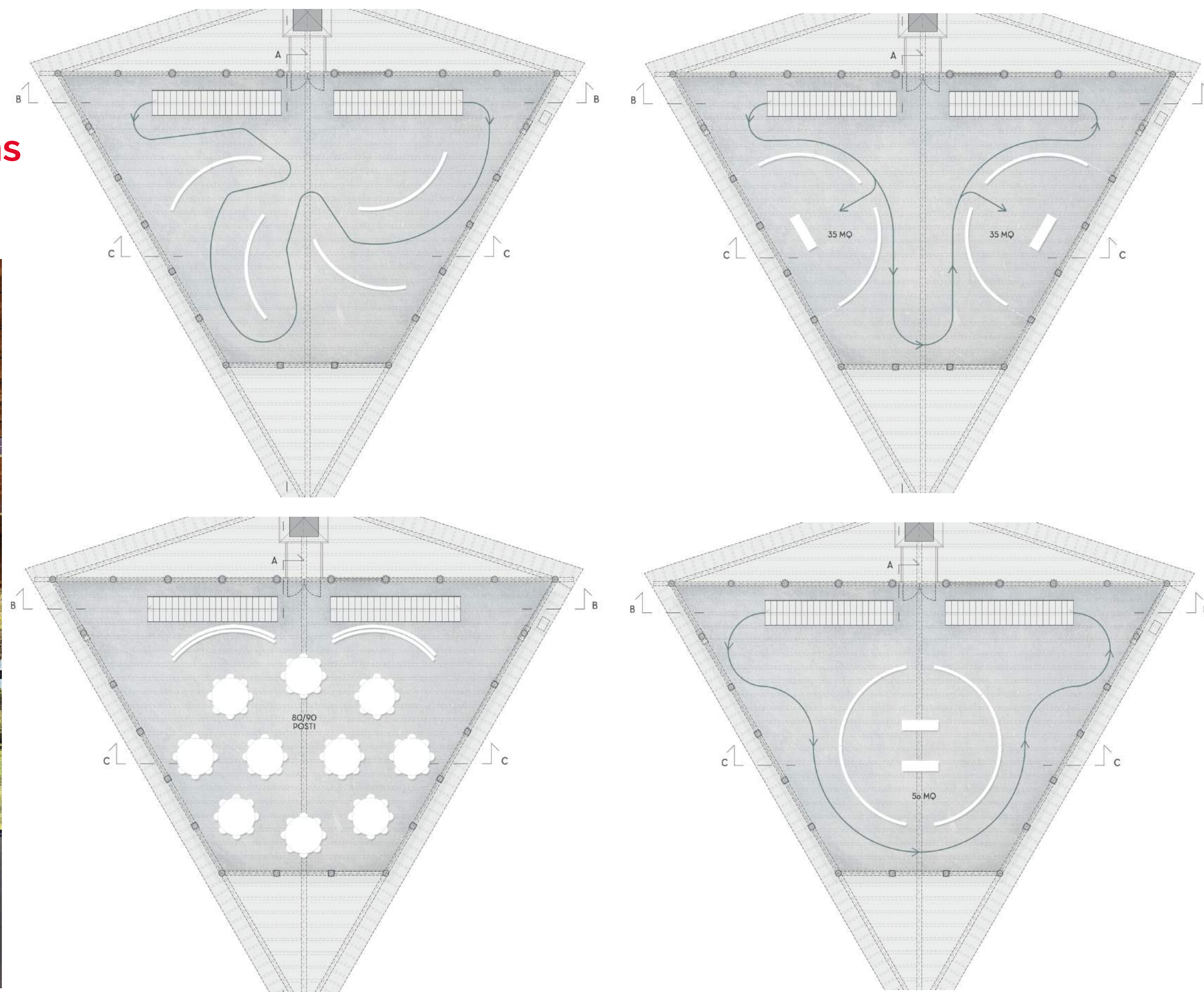
Bolgheri



Floor plan: various functional configurations

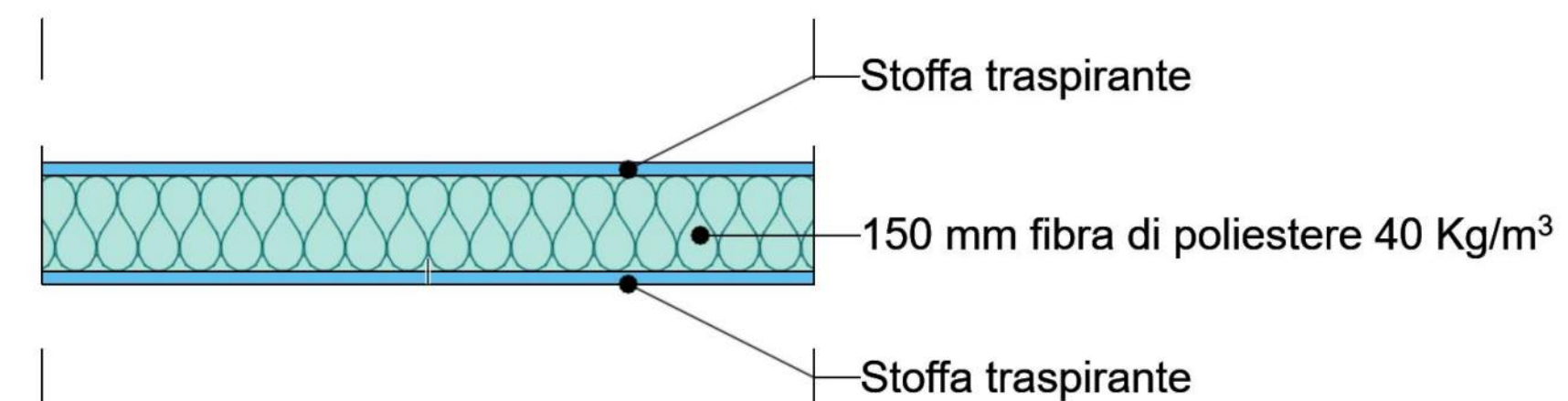
Volume = 1240 m³

Acoustic design: ceiling and movable partitions



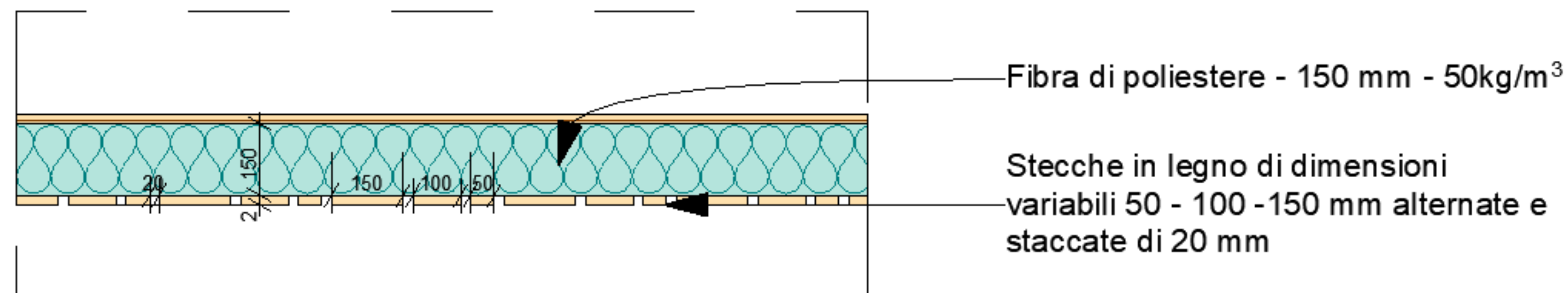
Integrated intervention: acoustics + architecture

Acoustic design of the 4 movable partitions



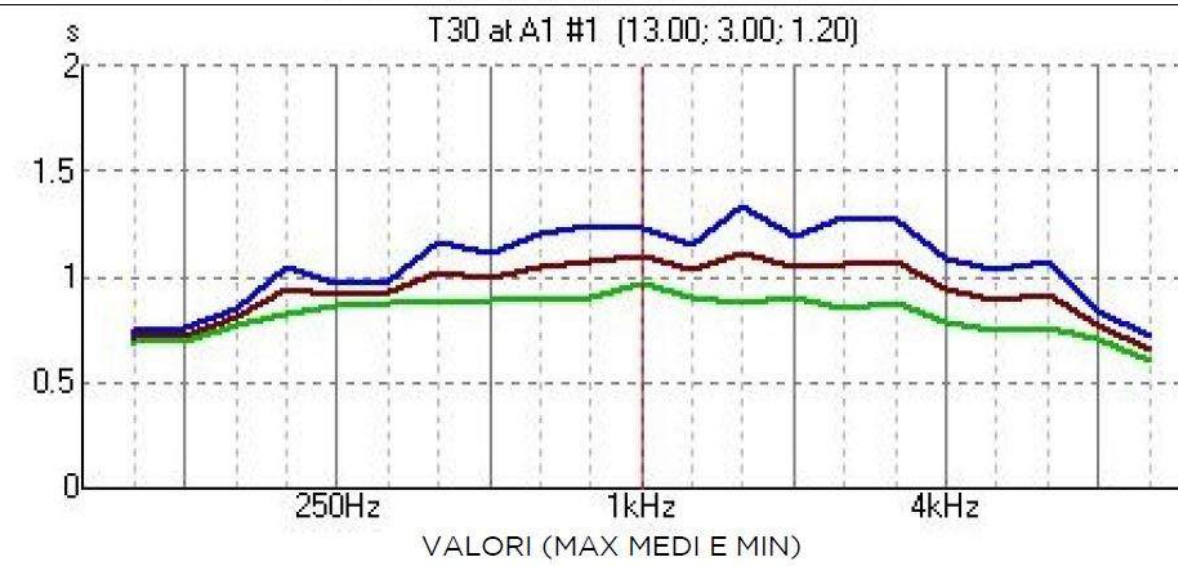
Integrated intervention: acoustics + architecture

Ceiling acoustic design

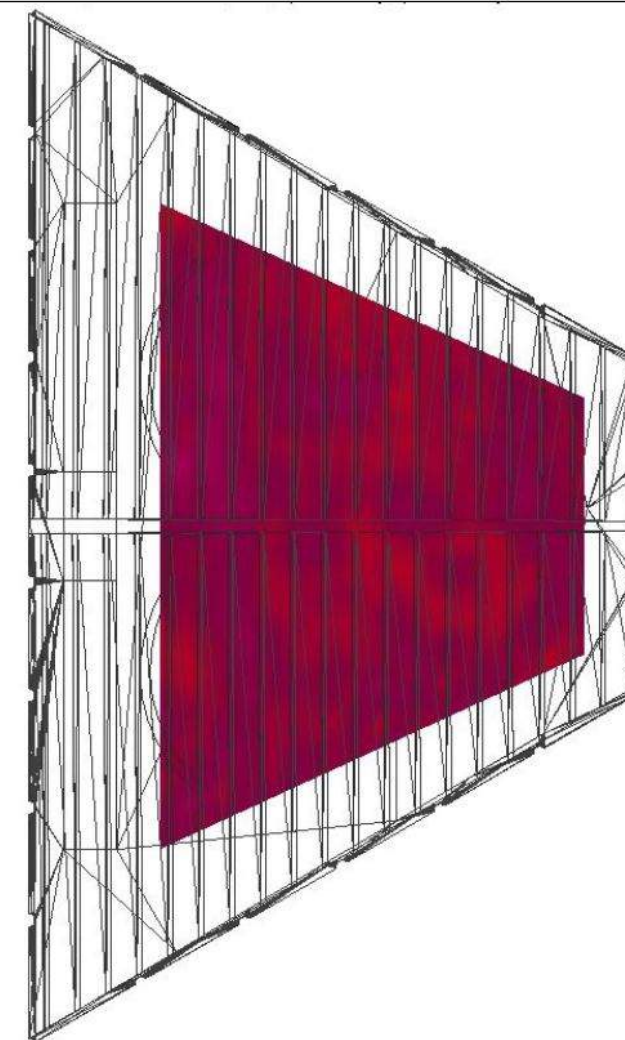
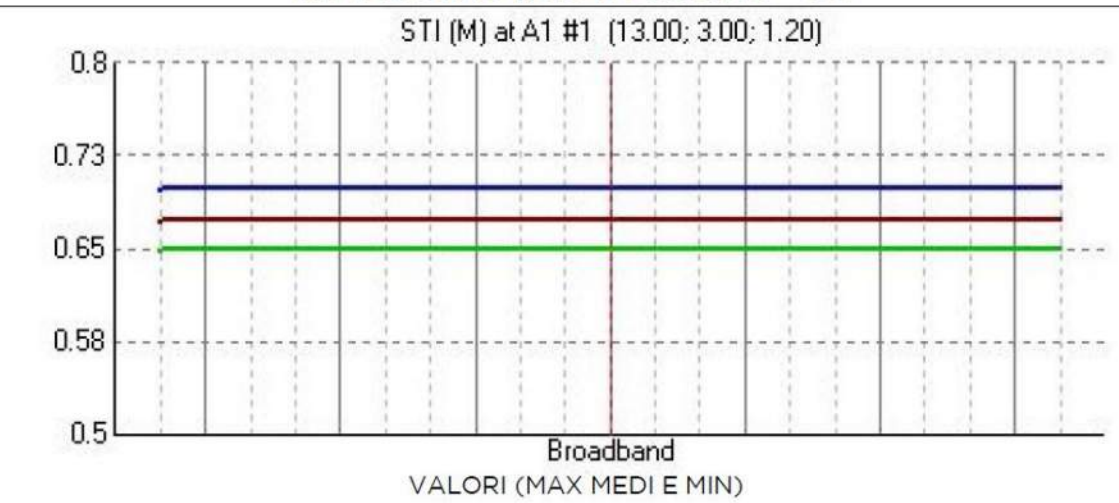


Simulations

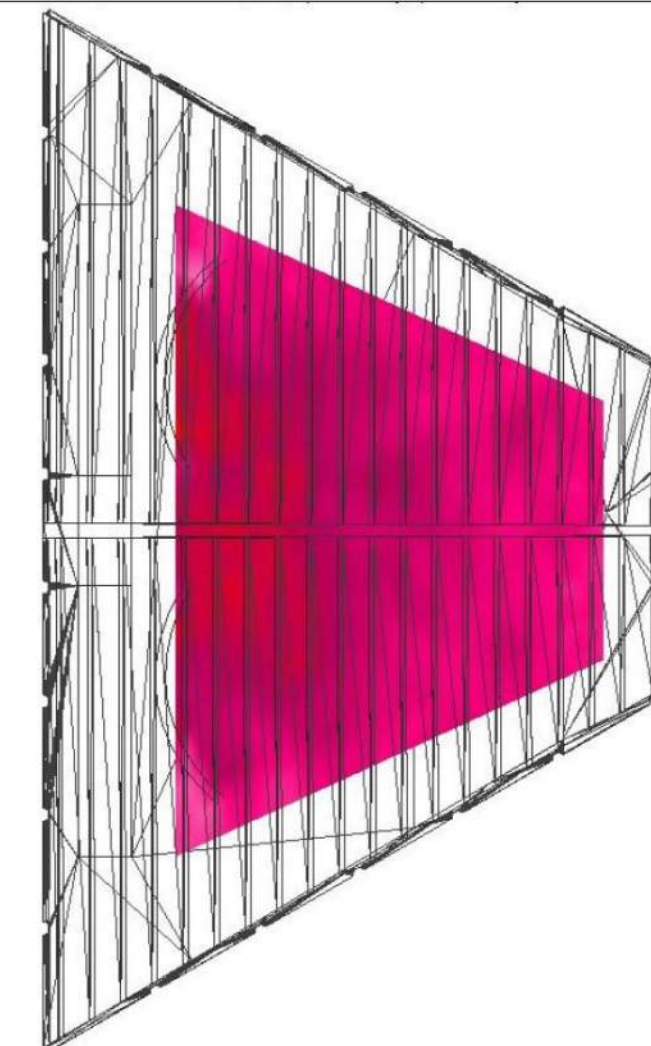
TEMPO DI RIVERBERAZIONE - T30



INTELLIGIBILITÀ DEL PARLATO - STI

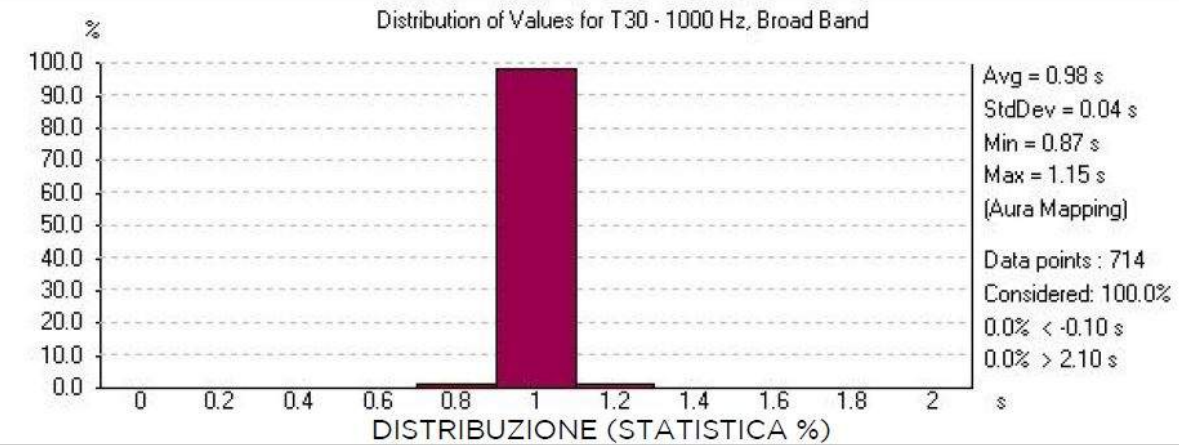


Rev. Time (s)
Max: 1.15
1
9
Min: 0.87

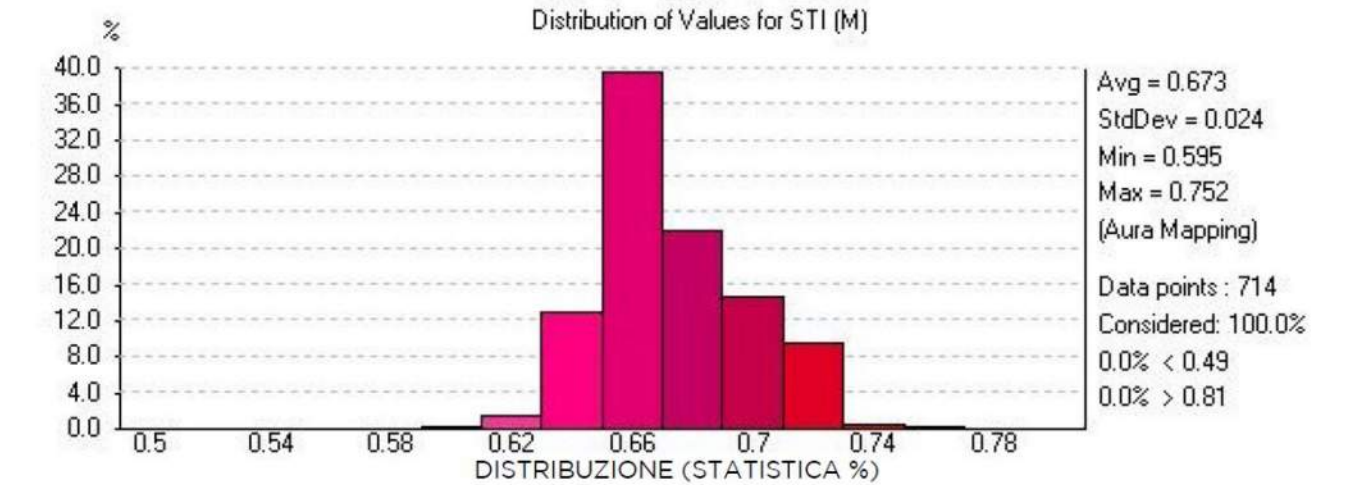


STI
Max: 0.75
Min: 0.59
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
Max: 0.75

Distribution of Values for T30 - 1000 Hz, Broad Band



Distribution of Values for STI (M)



T30 ideal value: = 0.9-1 s a 500 Hz
T30 average = 0.98 s

STI ideal value: > 0.6
STI average = 0.67

Portrait Milano (Ferragamo)

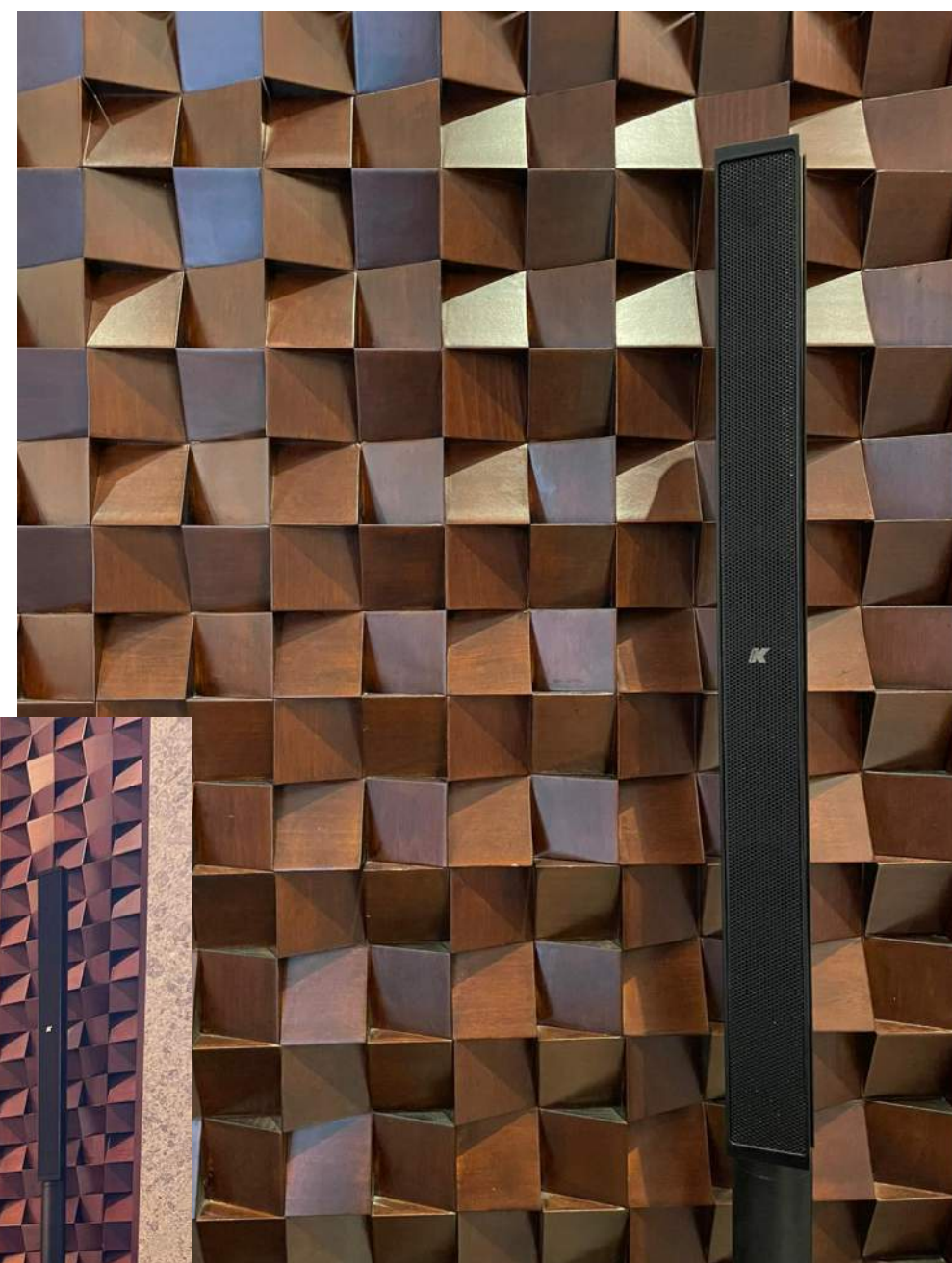
Milano



Bar/Lounge - acoustics + architecture + sound system

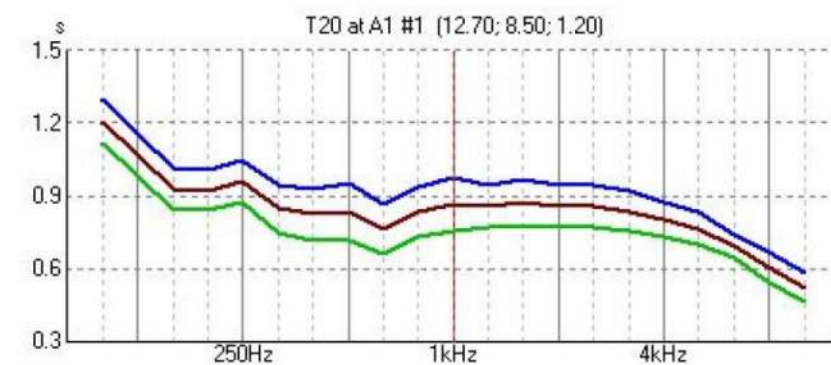
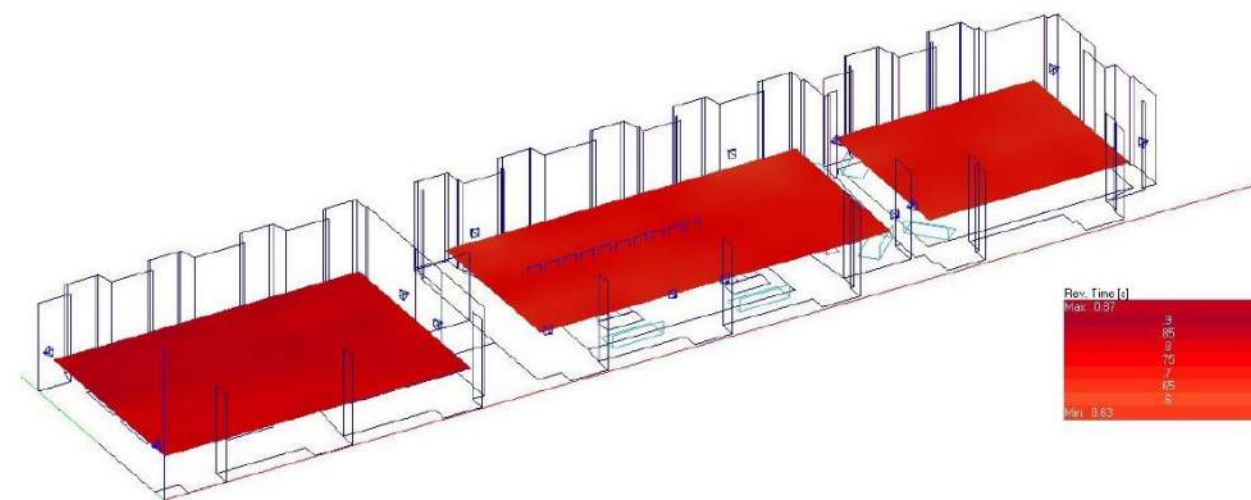
Acoustic design: sound-absorbing ceiling finish

Plan 140 m²

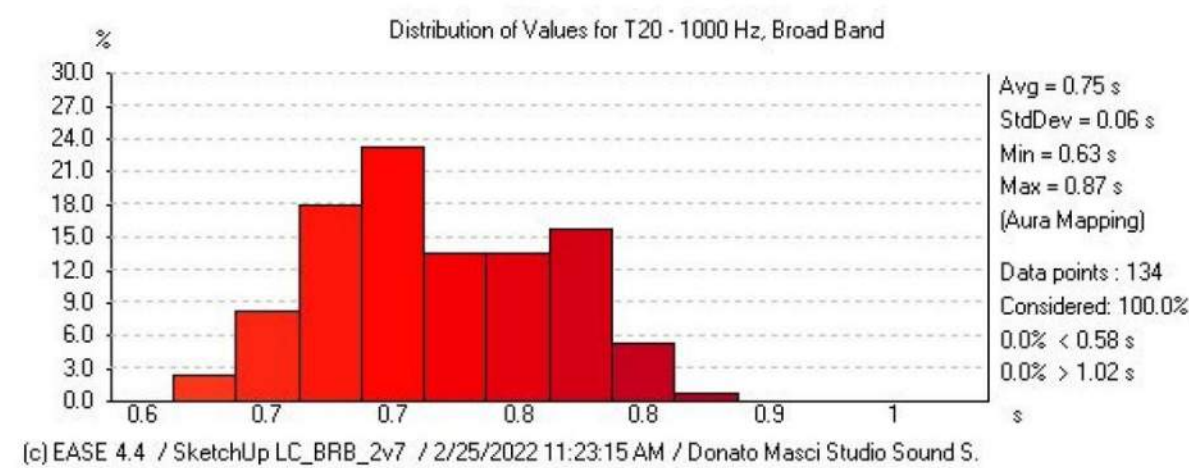


Design simulations: acoustics + sound system

Tempo di riverberazione T20



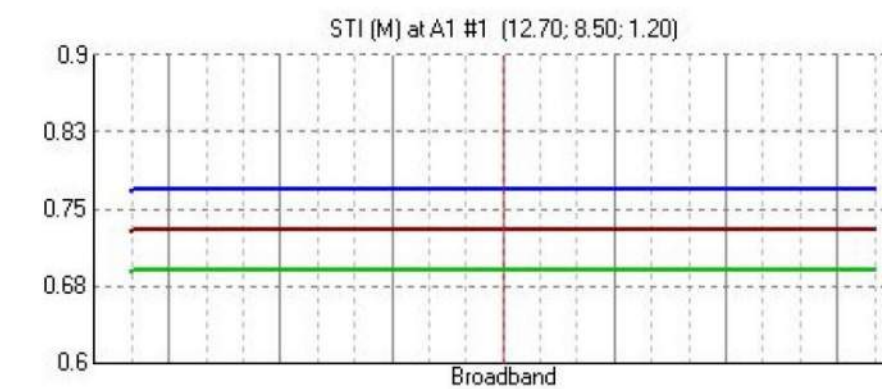
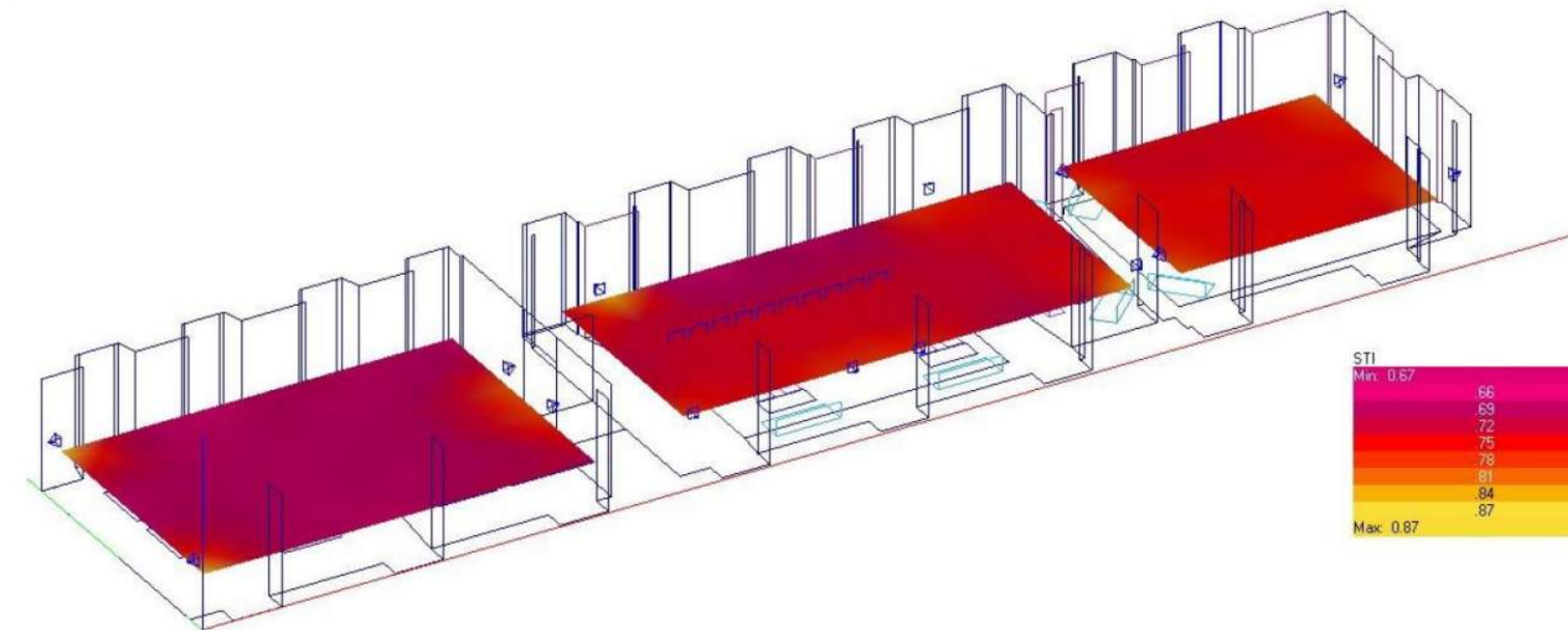
(c) EASE 4.4 / SketchUp LC_BRB_2v7 / 2/25/2022 11:21:12 AM / Donato Masci Studio Sou



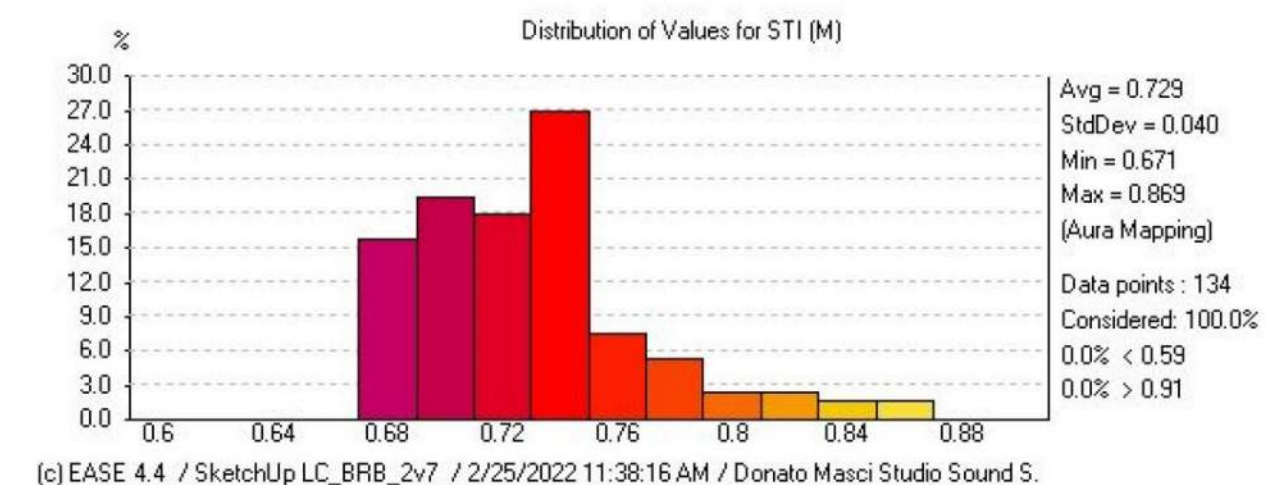
(c) EASE 4.4 / SketchUp LC_BRB_2v7 / 2/25/2022 11:23:15 AM / Donato Masci Studio Sound S.

T20 ideal value = 0.8 a 500 Hz
T20 average = 0.75 s

Indice di intelligibilità STI



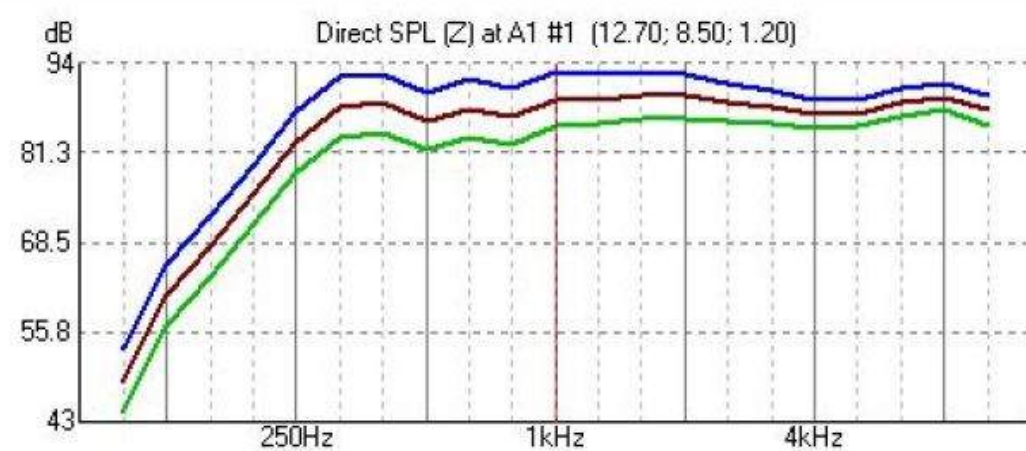
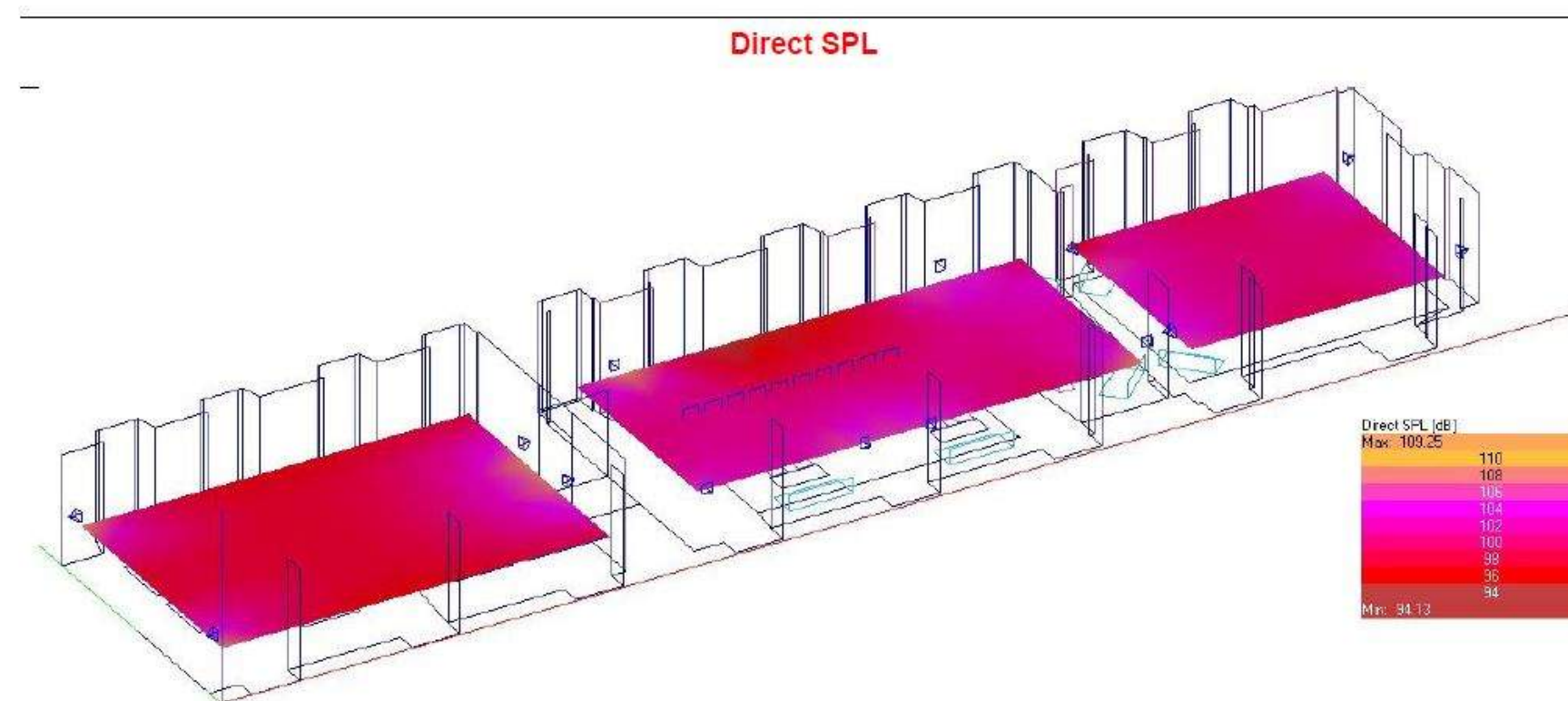
(c) EASE 4.4 / SketchUp LC_BRB_2v7 / 2/25/2022 11:37:35 AM / Donato Masci Studio Sou



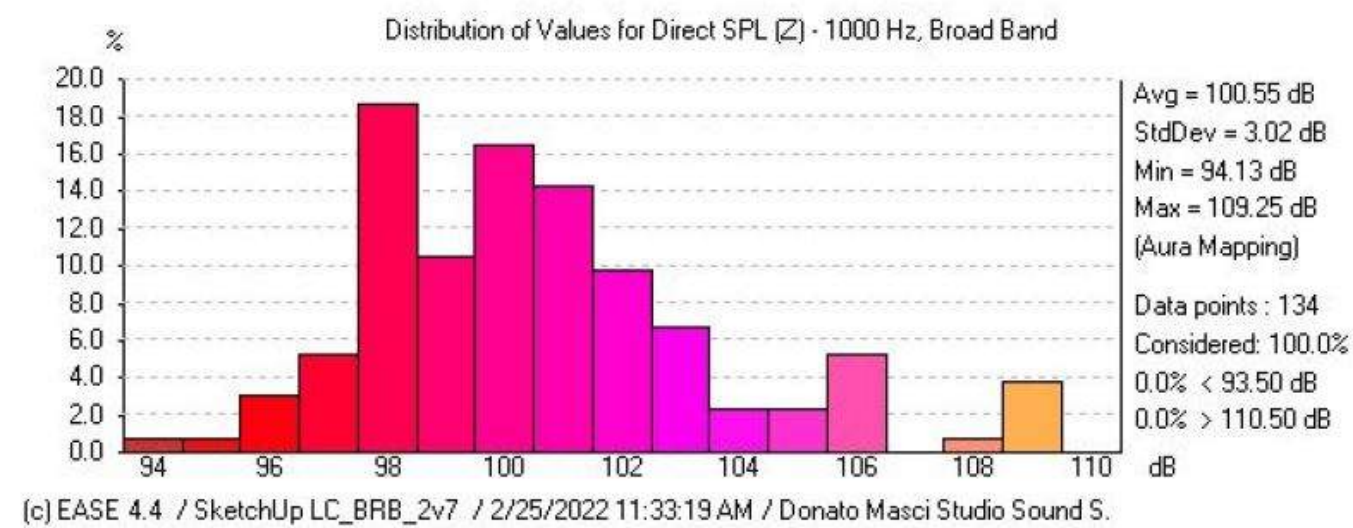
(c) EASE 4.4 / SketchUp LC_BRB_2v7 / 2/25/2022 11:38:16 AM / Donato Masci Studio Sound S.

STI ideal value > 0.6
STI average = 0.73

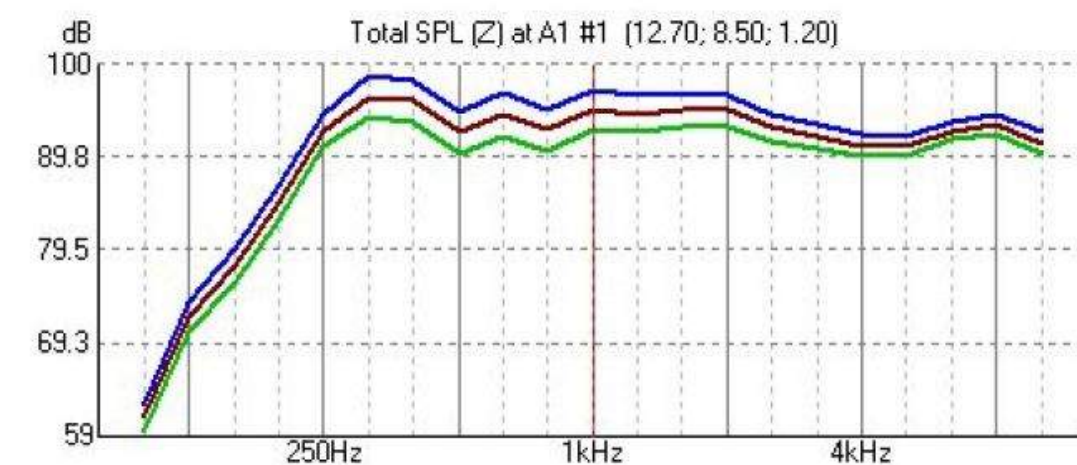
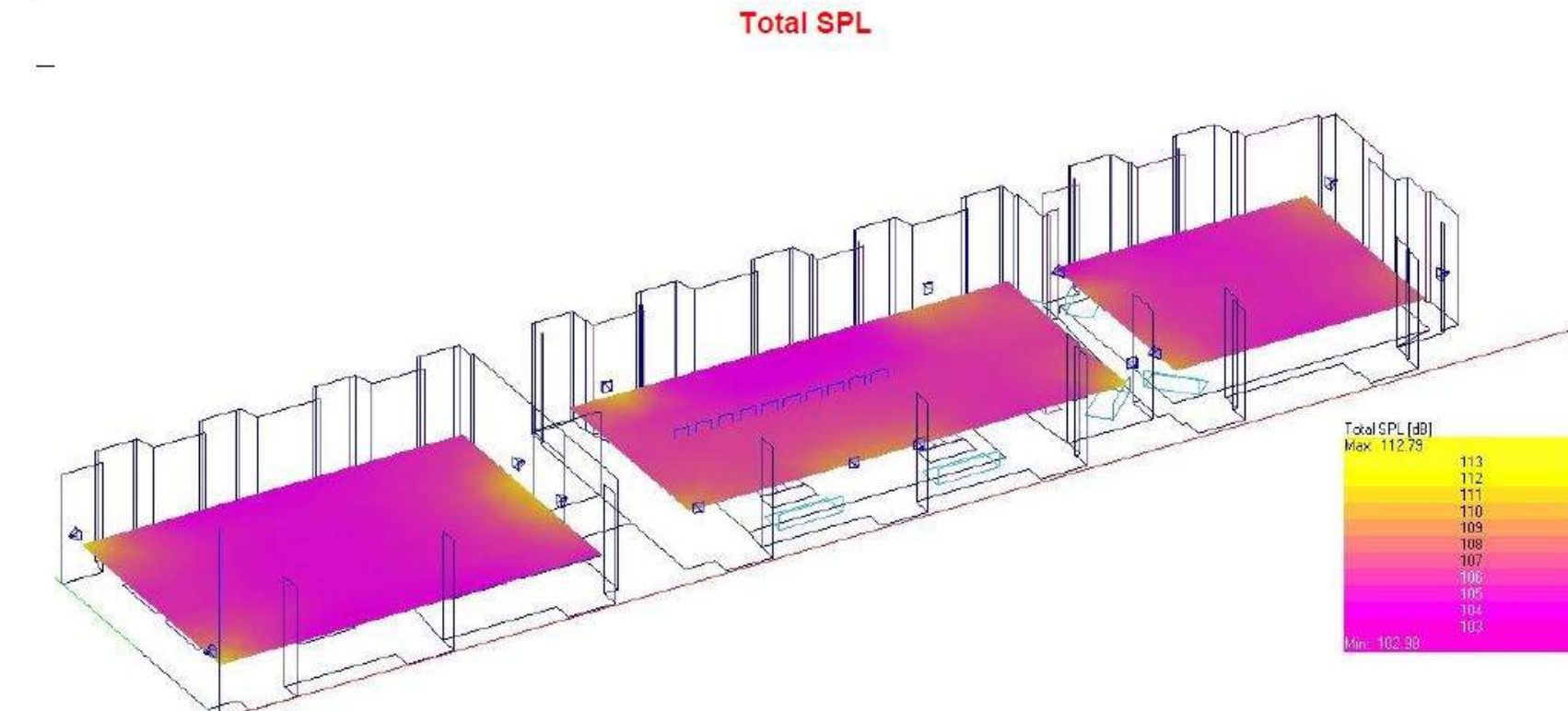
Design simulations: acoustics + sound system



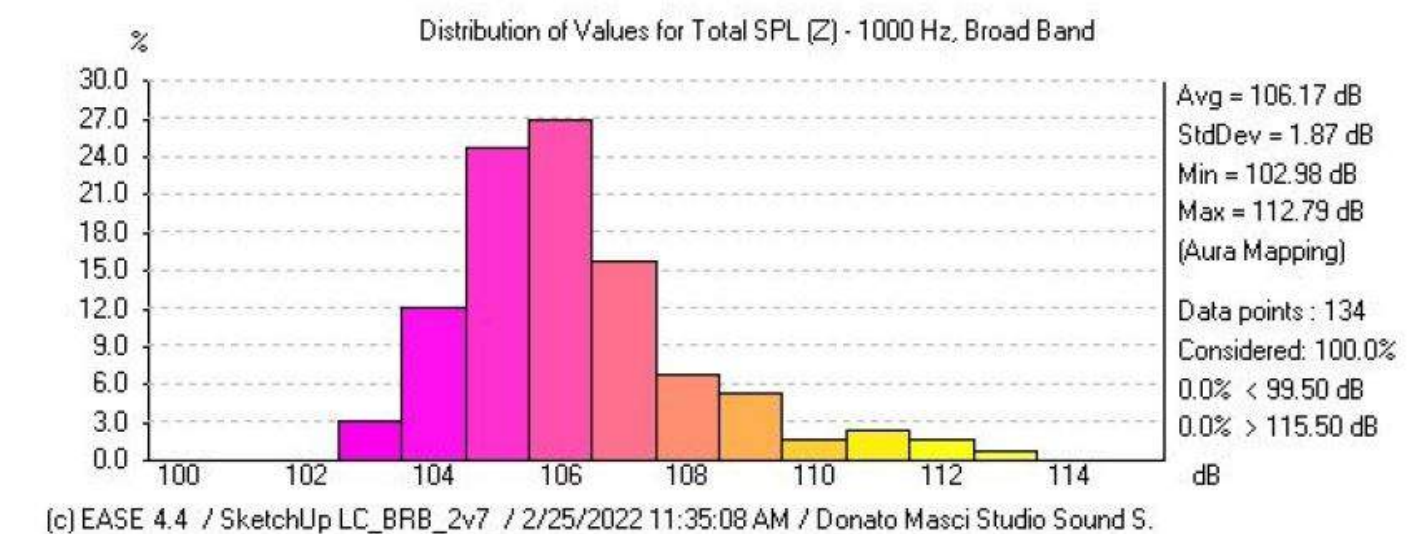
(c) EASE 4.4 / SketchUp LC_BRB_2v7 / 2/25/2022 11:32:46 AM / Donato Masci Studio Sou



Direct SPL = 100 dB



(c) EASE 4.4 / SketchUp LC_BRB_2v7 / 2/25/2022 11:34:31 AM / Donato Masci Studio Sou



Total SPL = 106 dB

Portrait Milano (Ferragamo)

Milano

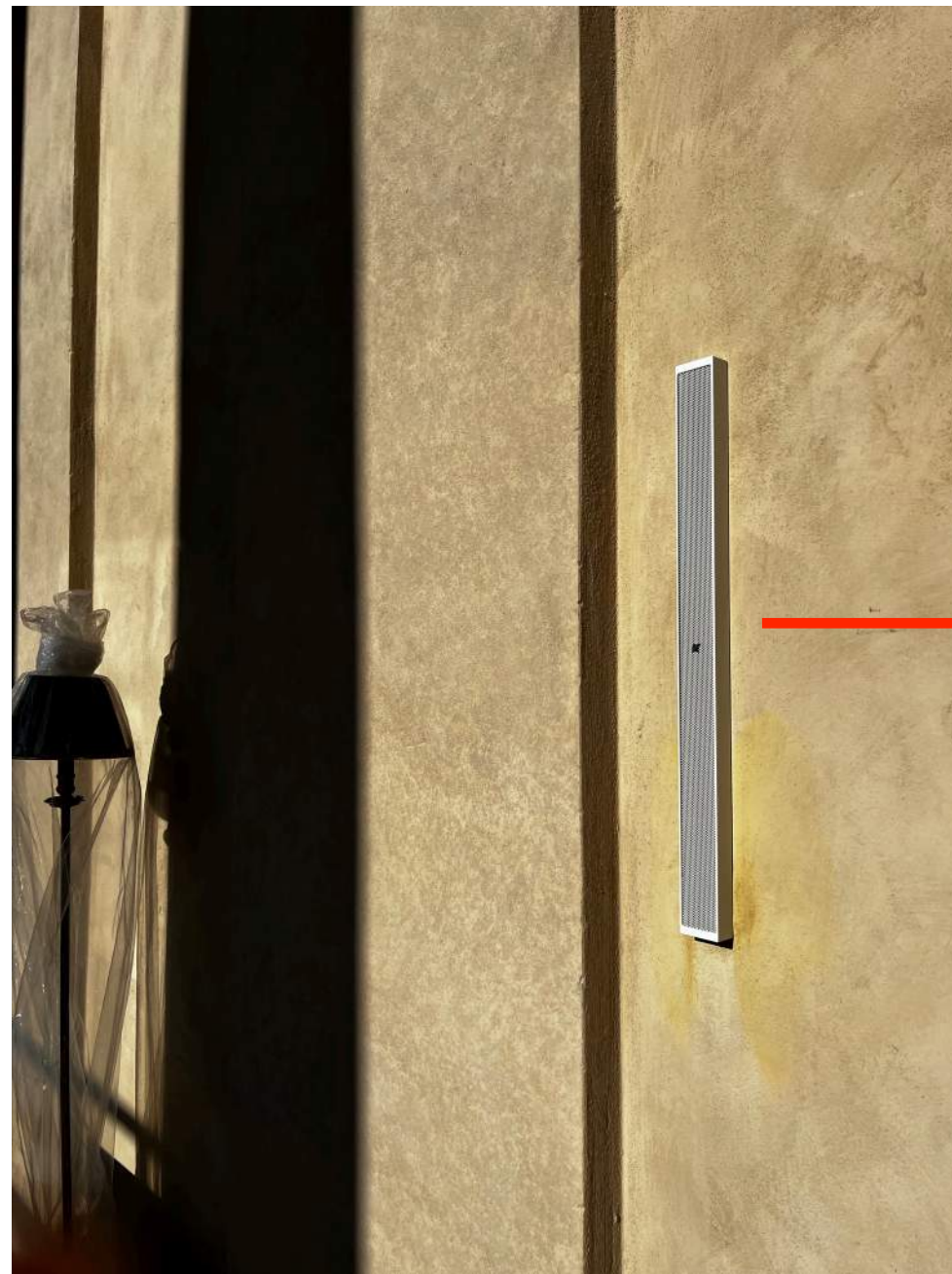


Portrait Milano (Ferragamo)

Milano



Lungarno Collection Hotel Portrait Milano



Q&A





Grazie!

PDF Presentation Download

studiosoundservice.com/it/education

Contacts

info@studiosoundservice.com

studiosoundservice.com