

## 400 BUILDINGS FOR DANCE

### Systems for performance buildings

- Systems of performing arts buildings
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- Systems of relationships

### Requirements for rehearsal/studio spaces

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- Barres
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- Sound insulation

### Associated areas

- Change rooms
- Physical therapy room
- Lounge and canteen



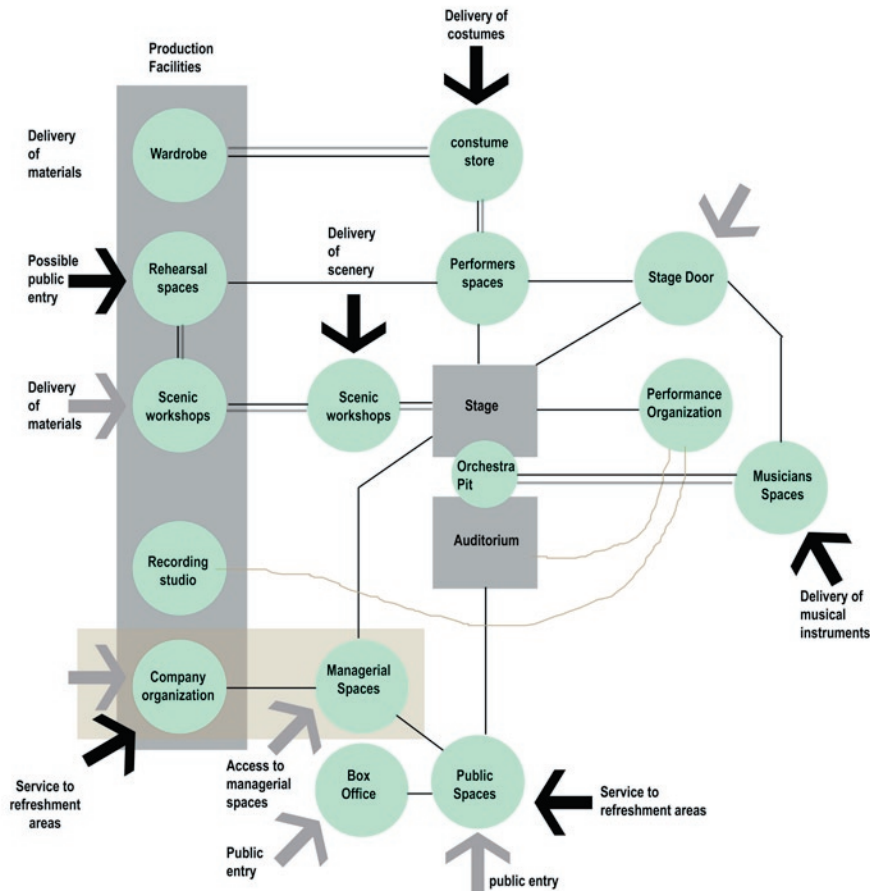


Fig 4.1: The relationship between functions within a building that houses its own production facilities. This system accommodates opera, musicals, dance and drama. (after Appleton: 1996)

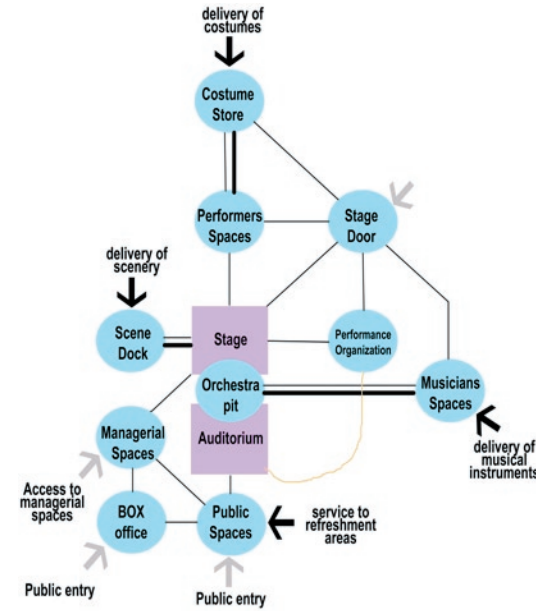


Fig 4.2: The system for a building that receives touring companies only, or with a resident company with production facilities elsewhere. (after Appleton: 1996)

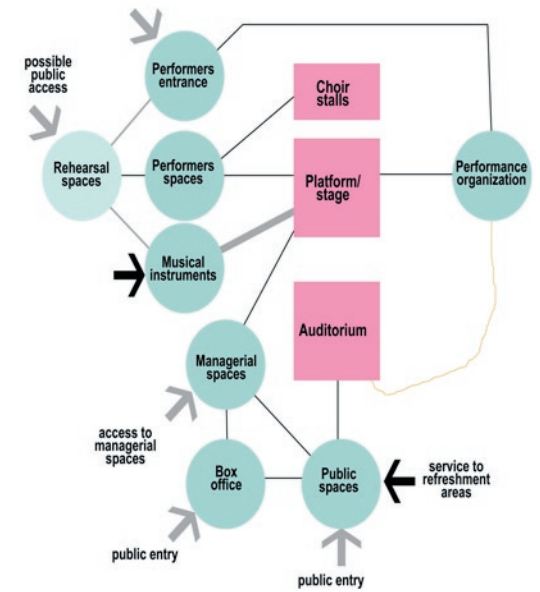


Fig 4.3: The system of relationships for buildings that host live musical performances. (after Appleton: 1996)

### Systems for performance buildings

This section of the thesis looks at the systems that need to be in place in buildings that accommodate dance and performance activities.

To gain an understanding of the relationships between functions within buildings for dance, systems of such buildings were studied. Figures 4.1, 4.2 and 4.3 show these systems. However, these buildings, unlike the proposed State Theatre Dance Centre, include production facilities and their relationships to backstage and public areas. The State Theatre Dance Centre does not house an auditorium and theatre, nor does it link directly into the South African State Theatre. These relationships therefore, only act as a guide to the system that would be designed for the State Theatre Dance Centre.

## The Laban Centre for Movement and Dance – Deptford, London - Herzog & de Meuron.

“The building’s interior is a network of ‘streets’, or corridors and chambers on two full stories with an interstitial mezzanine” (Ryan, 2003: 132). The building gives the impression of a town, the circulation spaces being the streets that wind and carve their way through the rooms which form the solid mass of the building.

As seen in Fig 4.6, the circulation of the building is fairly simple yet charged with moments of intensity. Through contrasting surface treatments, elements are expressed and highlighted.

The principal elements within the building are the two large, black spiral staircases that celebrate the act of movement between the levels of the building.

The polycarbonate sheeting used to clad the building hides the structural logic of the building. The structure only reveals itself in the library. The façades of the building, clad in polycarbonate sheeting, are in some places inlaid with mullionless glass that reveals lit interiors by night and reflections of the surroundings by day.

The inner courtyards of the building, clad in glass with pools of water at the bottom, become a play of reflections and transparency, providing an abstract tool for the formation of fresh spatial qualities. This mix of transparency and reflection creates a dreamlike space of psychedelic images. Within these spaces the different colours that describe each level of the building merge, giving the building an incredible sense of energy and vigour.

Another element that adds to the dynamism of the building is the shadow projections of dancers on the matt façade. “To passersby in the evening, the dancers’ bodies appear as participants in a contemporary shadow play. The building seems to invite motion with its ramping floors, spiraling stairs, and dynamic curves” (Ryan, 2003:136).

Studio spaces have at least one clear glass panel/window for dancers to orient themselves to weather patterns and other exterior realities.

The Laban can be described as a feminine building, not one of ‘flat’ beauty, but rather one of mystifying, obscure and seductive spaces that keep the user in a constant exploration to uncover its ‘secrets’.



Fig 4.4: Courtyard Reflection and transparency.



Fig 4.5: The Laban Centre for Movement and Dance at night



Fig 4.6: Ground floor and mezzanine plan





Fig 4.7: Southern façade of the South African Ballet Theatre



Fig 4.8: The pedestrian boulevard with the Johannesburg Civic Theatre to the right and the South African Ballet Theatre forming the focal point at the northern tip of the boulevard.



Fig 4.9: The eastern façade of the building also showing the link passage.

Fig 4.10: The pedestrian boulevard: facing south with the South African Ballet Theatre to the left of the image.



## The South African Ballet Theatre – Johannesburg

The South African Ballet Theatre forms part of the regeneration of the Braamfontein area. The building is an annex to the Johannesburg Civic Theatre and is situated west of the Civic Theatre. The new South African Ballet Theatre forms an integral part of the surrounding context and it is clear that the context was considered in the development and execution of the concept and project.

The building links directly into the main building of the Civic Theatre via a passageway. The southern façade orientates toward a regenerated, landscaped pedestrian boulevard which connects the park (south of the Civic Theatre) to the Johannesburg School of Arts (north of the Civic Theatre) as well as other commercial buildings to the west of the new building. Movement through the pedestrian boulevard occurs against a slope where wheelchair access is not accommodated in all areas. The translucent southern façade of the building forms a grand focal point to the northern tip of the pedestrian boulevard, making it a landmark in the Braamfontein area.

On closer inspection, the following was noted:

- The public entrance is badly defined (entrance through the Civic Theatre is exclusive to students and staff)
- Upon entry one has a choice to move either up or down a flight of stairs. Wheelchairs are not accommodated in the building at all, yet the ground floor houses a toilet for the disabled.
- On ground floor, a seating platform overlooks the ballet studio. This was intended for use by public members to view dancers, yet this space is not being used since the building is virtually impenetrable by the public. The area around the building where the entrance is situated is fenced and secure.
- The building lacks office space so users in need of office space had to occupy the area underneath the viewing amphitheatre on the ground floor.
- The studio spaces are generous and have a floor to ceiling height of approximately 6 metres.

Fig 4.11: The Laban Centre for Movement and Dance.

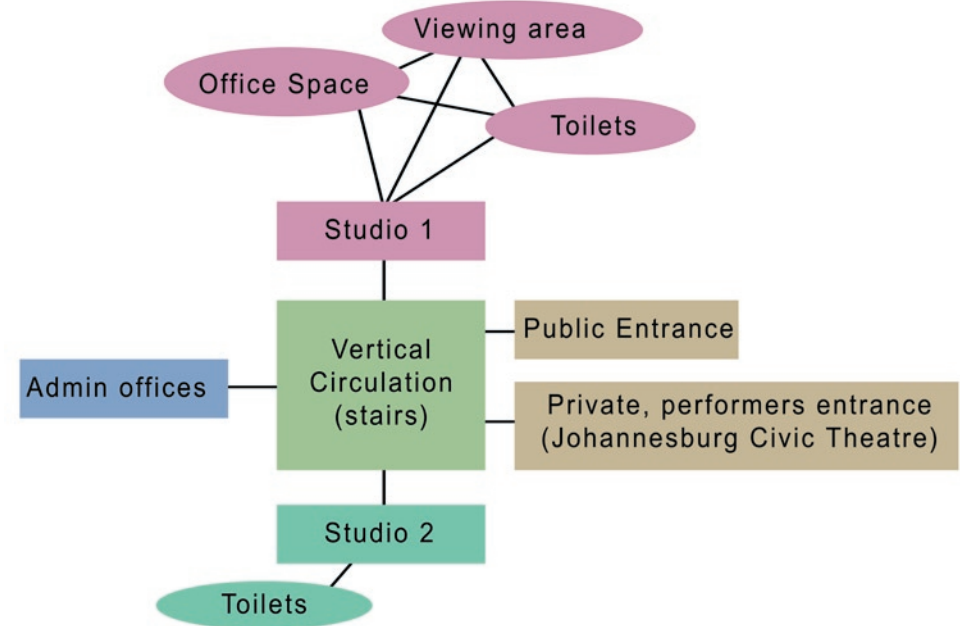
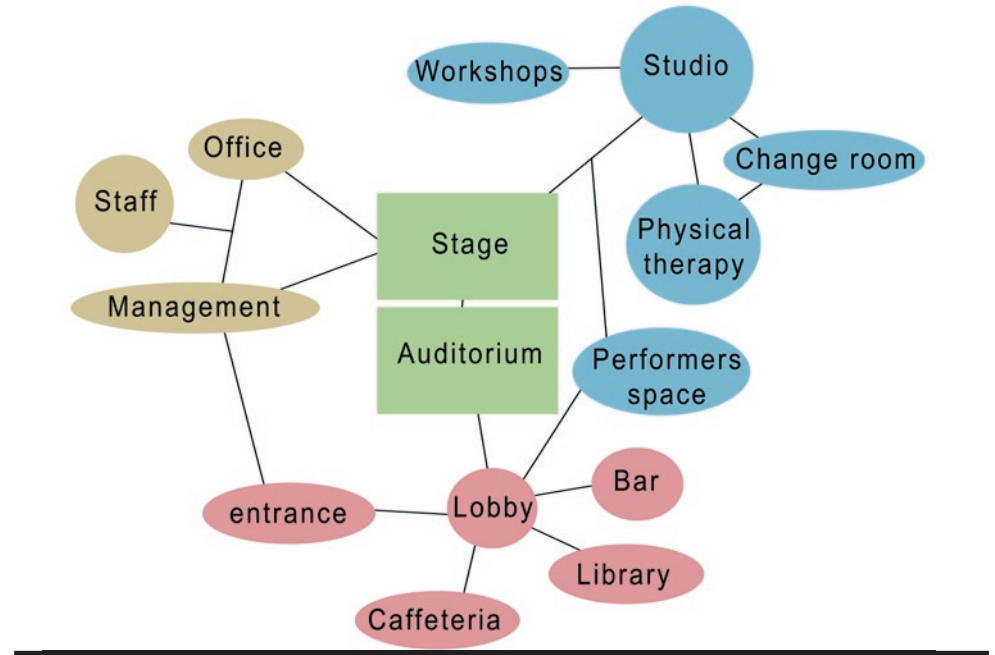


Fig 4.12: The South African Ballet Theatre.

### Systems analysis

Figures 4.11 and 4.12 show the relationship of functions within the Laban Centre for Movement and Dance and the South African Ballet Theatre, respectively.



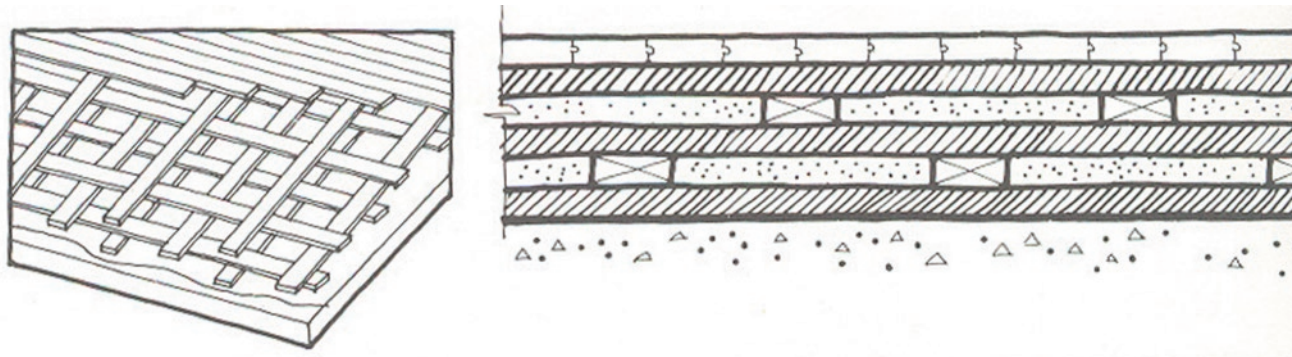


Fig 4.13: Five layer basket-weave timber floor.

## Studio/Rehearsal space requirements

In order for a space to be used as a rehearsal space or dance studio, it needs to adhere to a number of very specific requirements in terms of systems that need to be in place for the space to be ‘dance friendly’. The next part of this section will look at these requirements.

### Flooring:

For multi-purpose dance flooring a timber, finished with linoleum or vinyl sheets will be installed.

The floor will be stained in a dark rather than light colour so that reflection will be minimized.

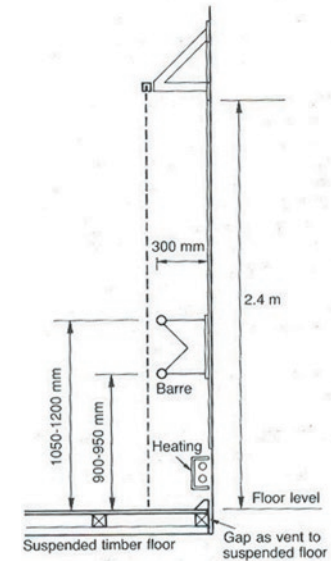
A couple of flooring systems for dance studios are available, including a five-layer, basket-weave installed directly on top of the structural concrete slab. These layered floors are resilient and are used as a shock absorber for dancers’ feet. Figure 4.13 shows this basket-layering of the timber sections for a 5-layer basket-weave floor.

Floors in studio spaces need to be washable, especially if the studio is used for different types of dance (ballet and modern dance). According to Armstrong and Morgan in *Space for Dance* (1984:69), rosin from ballet slippers is hard on bare feet and difficult to remove from wood. Battleship linoleum, or vinyl sheeting, should therefore be used for the top layer of the flooring system.

### Mirrors:

Studio spaces require a continuous strip of mirrors along at least one full length of the studio. Mirrors need to be perfectly aligned to prevent any distortion in reflections. These mirrors need to be at least 2m high and a curtain that can be pulled across the mirror needs to be installed. “Dancers rely on mirrors during rehearsals, but need to be weaned of that dependency as the first performance date draws near” (Armstrong and Morgan: 70).

Fig 4.14: Barres indicating heights

**Barres:**

Dance companies of most choreographic styles use barres for warm-up sessions and in classes. In order to accommodate full companies, studios need barres along at least three walls. Permanent barres occupy less floor space and are more rigid, therefore fixed barres are preferred. Where barres run along mirrored walls the barres will be floor mounted and allowance will need to be made for the curtain to hang in-between the barres and the mirrors. See Figures 4.14 and 4.15 for heights of barres, curtains and mirrors.

**Lighting:**

“Rehearsal-room lighting should be incandescent, or at least a combination of incandescent and fluorescent” (Armstrong and Morgan: 70). Wherever possible, allowance should be made for daylight to penetrate the space. Dancers spend most of their time in studios, and windows allow them to orientate themselves to the changing exterior weather and time patterns.

Positioning and shading of glazing needs to be considered to avoid glare, unwanted solar gain and heat loss. A minimal electrical pipe grid for theatrical lighting can be considered for in-studio, live presentation. This could add to the usefulness of the space.

**Heating and Ventilation:**

Studio spaces do not need to be chilled by an air-conditioning system, but in hot climates like South Africa, the humidity and temperature will need to be controlled. This requires an HVAC system. Temperatures need to be kept steady at 21° - 24° Celsius, and the air supply will have to run slowly through oversized ducts to avoid drafts.



Fig 4.15: Barres, curtains, and mirror heights

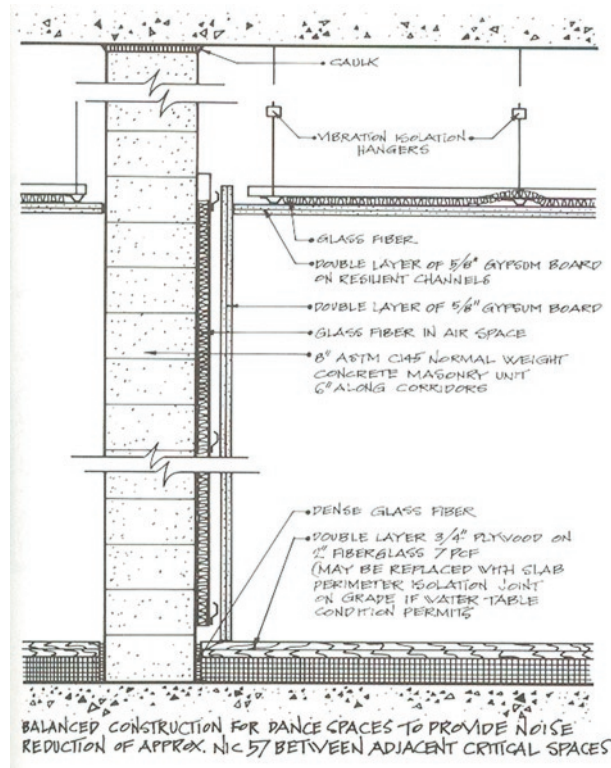
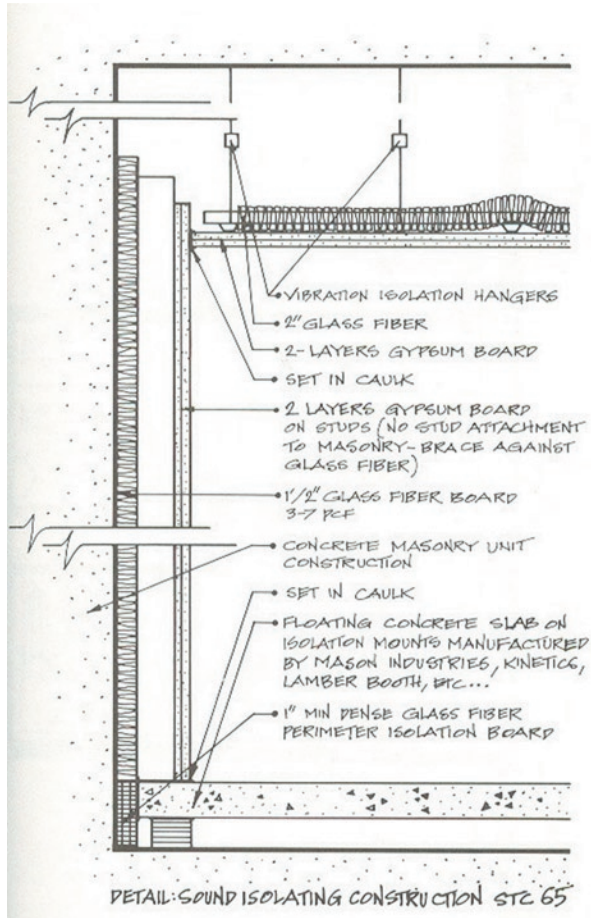


Fig 4.16 & 4.17: Insulation through layering

**Sound insulation:**

Increasing wall, floor and ceiling mass is the simplest way to contain sound. This is, however, not always possible. Another way to achieve sound insulation would be to construct walls, floors and ceilings of multiple layers that are separated by air, insulation, resilient pads and anti-shock hangers. The air spaces between the layers would slow the travel and ultimately render them too weak to travel from room to room. Figures 4.16 and 4.17, taken from Armstrong and Morgan (1984: 63), indicate the layering of surfaces so as to decrease and ultimately stop sound penetration.

Doors that lead into rehearsal spaces need to be approved for sound insulation. Sound must also be stopped from running through the HVAC system into other rooms.



## Associated spaces

Although the energy within centres for the performing arts concentrates around the stage and rehearsal spaces, there are far more left to consider in the design of a centre for dance. It is the spaces surrounding the above-mentioned 'energy centres' that service and feed them. These associated spaces are just as critical and important to consider, since they become the spaces of retreat and rest.

Associated areas in a centre for the performing arts are:

- **Changerooms:** Changing rooms with toilets, showers and lockers are essential for servicing rehearsal studios.
- **Physical therapy room:** Large dance companies and centres usually employ a full-time therapist. Therapy rooms may include massage table, floor mat, full-length mirror, lockable cabinet for first-aid equipment and medicine, small refrigerator and a desk and chair for the therapist.
- **Lounge and canteen:** Throughout the day, dancers travel in groups from rehearsals to stage etc. The lounge therefore becomes the place for non-physical therapy and solitude where dancers can regain a sense of individuality.

Other amenities:

- Conference/class-rooms
- Administration office spaces
- Library
- Auditions room
- Model-making facilities
- General storage
- Music room with recording facilities

