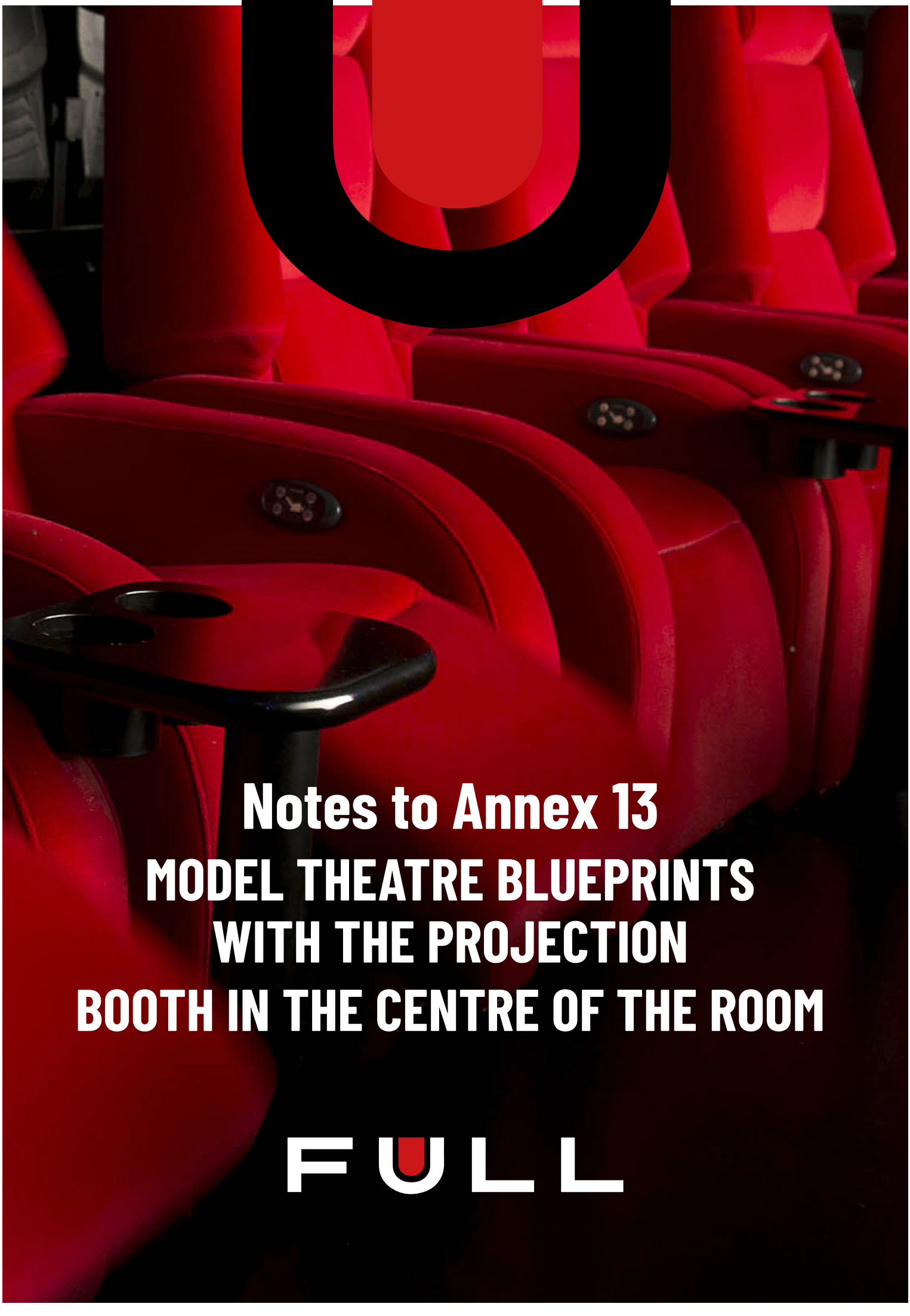

Notes to Annex 13
MODEL THEATRE BLUEPRINTS WITH THE PROJECTION BOOTH IN THE CENTRE OF THE ROOM

FULL

MODEL THEATRE BLUEPRINTS WITH THE PROJECTION BOOTH IN THE CENTRE OF THE ROOM

These blueprints are not part of the model, but rather an experimental design, an optimal evolution of the model. We always like to push the limits of what is possible.

In this evolution of the model, with the projection booth placed in the middle of the room, it will be even harder to get hold of the lenses we need. Managing to get manufacturers to produce lenses that have already existed, as in the case of the base version of the model, should be relatively simple. In contrast, the lenses required for Scope projection from the middle of the room with a screen as big as the one we propose have never existed.

However, it would be possible to prototype such a lens and manufacture a small batch of units. This should not be too complicated, but the unit price would probably be very high, because, projecting from the middle of the room, the focal length of the lens would have to be very short. The shorter the focal length, the trickier the internal design of the lens, the bigger the diameter of each of the multiple lenses that it comprises and the higher the price. Nevertheless, it would be worth the effort because, if we project from the middle of the room, we could maintain the 90° projection axis with respect to the centre of the screen while, at the same time, tilting the screen heavily over the seats. This would decisively help to enhance the movie-goers' sensation of immersion, as it would be a far more immersive screen.

This tilted screen gives rise to another serious drawback of the experiment that we are proposing. When we heavily tilt a screen, it bulges. When we project onto this bulge, the image is distorted. This is a difficult problem to resolve. Through our experiments with tilted screens, we have verified that, up to an angle of 6°, the distortion caused by the bulge is practically imperceptible. We decided to push this tilt a little further, as we needed to reach 8° in the biggest room, and 8.5° in the medium-sized room. This was necessary to meet one of our fundamental requirements: 90° projection axis with respect to the centre of the screen. Although we have experimented this distortion and we consider it "tolerable", we must explain it in detail so that the Exhibitor can decide. Resolving this difficulty without tolerating any distortion caused by the bulge in the screen would involve designing a big screen that is somehow self-supported from behind. This would not be too complicated with an unperforated screen, but when we add perforations to the equation, the problem is hard to resolve, as we must be sure not

to cover any of these perforations (When some of the perforations on a blank screen are covered, it is usually perceptible with the naked eye).

If somebody wants to explore this path to find a potential solution, they should consult a reputable screen manufacturer.

In the small and very small rooms, we have opted for an untilted screen because the laser regulations require us to maintain a 2.4-metre height with respect to the bottom of the projection beam. In turn, this forces us to put the projector in a hanging booth suspended at a sufficient height. If we had tilted this big, curved screen forward, it would have caused very serious distortions in the projected image. These distortions would have been far worse than in the case of the bulge in the screen in the bigger rooms that we discussed above.

A downside of the design we are proposing is that placing the projection booth in the middle of the room would require us to lose some of the best seats, though only a few. If we placed this projection booth to coincide with the row of reclining seats, we would lose 6 to 8 seats.