



ROYAL UNITED HOSPITAL BATH, NICU BATH, UK

The Royal United Hospital Bath NHS Trust enlisted BuroHappold's Smart Space team to carry out an initial high-level summary of staff movement data from the Royal United Hospital Bath NICU (neonatal intensive care unit).

The dataset that we received comprised an excel file containing paired time and location information (in the format of room names). The dataset was found to contain the traces of 10 unique devices roaming the NICU area. The room names were combined with plans of the NICU area to derive the coordinates of the rooms.

The dataset was analysed using Smart Move our in-house spatial modelling, analysis and simulation package. This package enabled the analysis of the traces and thus the generation of statistics on the usage of NICU rooms/zones and the movement of the people carrying the location devices. The usage of rooms was analysed in terms of dwell times, number of visits, and other occupancy statistics.

The movement of people was analysed in terms of travel distances and speeds.

The overall findings of this high-level exploratory analysis are as follows:

- 51% of the occupants' time is spent in nurseries (Rooms 1-7)
- 20% of the occupants' time is spent in corridors
- 10% of the occupants' time is spent in the nurse station

The study helped the client to better understand existing activity patterns and visitor preferences. With a holistic look at people's desire lines, we can formulate a strategy to direct footfall through the new development. Accurate modelling provides a basis on which to assess potential risks and implement countermeasures to negative factors such as poor layouts, access, inadequate parking facilities and lack of signage. Such analytical foresight makes people movement a powerful tool in all stages of design.

CLIENT

The Royal United Hospital Bath NHS Trust

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