



HOSPITAL BUILD & INFRASTRUCTURE

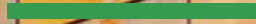
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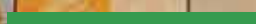
DESIGN

CLEVER USE OF COLOUR CAN HELP PROMOTE
A HEALTHY HEALING ENVIRONMENT



BIG DATA

SAVING LIVES BY APPLYING CLOUD ANALYTICS
TO ELECTRONIC HEALTH RECORDS



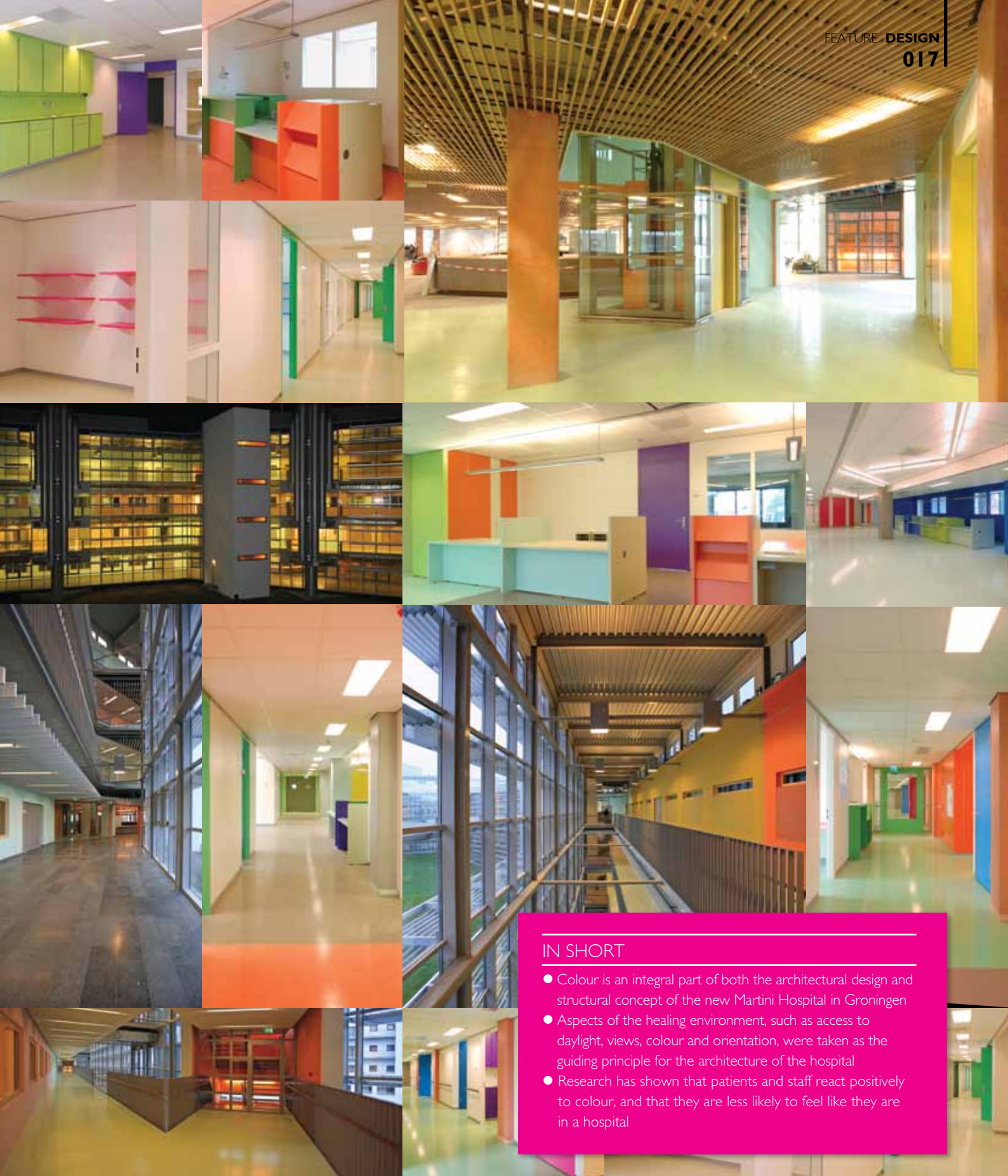
HUMAN RESOURCES

HOW TO RETAIN YOUR BEST EMPLOYEES



THE COLOURS AT MARTINI HOSPITAL IN GRONINGEN

By: Corinne Molenaar, Vos Interior, Groningen, Netherlands



IN SHORT

- Colour is an integral part of both the architectural design and structural concept of the new Martini Hospital in Groningen
- Aspects of the healing environment, such as access to daylight, views, colour and orientation, were taken as the guiding principle for the architecture of the hospital
- Research has shown that patients and staff react positively to colour, and that they are less likely to feel like they are in a hospital

Green, red, orange, purple, yellow, pink, blue... There's colour everywhere in the new development of Martini Hospital in Groningen. Colour is not an autonomous aspect added as an afterthought, but an integral part of both the architectural design and structural concept of the new hospital building, all because architect Arnold Burger of SEED architects, interior designer Bart Vos

and colour artist Peter Struycken joined forces at an early stage.

Martini Hospital originally comprised two locations, one of which was eventually closed down. The Van Swieten location was expanded by adding about 60,000m² of new premises based on a design by SEED Architects. The new building was built according to the Martini Health Design, based on the principles of Healing Environment and IFD-construction. ➔

A healing environment is an environment in which people can feel comfortable. This environment benefits the healing process and people's sense of wellbeing and it lessens stress. Characteristics of a healing environment are the use of (a lot of) daylight, colour, and natural elements. This gives the hospital a warm and humane feel.

As the healthcare sector will be faced with significant changes in years to come, while the basic needs and preferences of people essentially remain the same, the new development of Martini Hospital required a flexible building. The underlying philosophy of the building is independent from the care-concept, which is sure to change in time. The organisation of the hospital was deliberately not set in concrete at that time, but instead it was decided that a building would be designed based on universal human values. This meant that there would be fewer fixed functions.

As a result, aspects of the healing environment, such as access to daylight, views and orientation, were taken as the guiding principle for the architecture of the building. The measure of depth of the basic volumes was reduced to 16 metres, whereas a depth of 25-30 metres is customary for hospitals. This resulted in relatively shallow, light rooms with 30% extra daylight on average. And, consequently, there was access to daylight from both sides of the corridor between wards, where doors are usually open. There were also large windows that almost reach the floor and can be opened.

IFD

For the layout and furnishing of Martini Hospital, Arnold Burger and Bart Vos designed a complete modular-system concept including everything from walls to desks and cupboards. The concept is called IFD, which stands for Industrial, Flexible, and Demountable.

Demountable modular walls are used with a small module-size of 30 cm. The technical pipes and cables can be integrated into the walls so that any required combination and layout is possible, even in the arrangement with windows. The walls have different colours, so that it will always be possible to create rooms with different colour schemes, i.e. with a different atmosphere.

The modular furniture system designed by Vos is similarly interchangeable. Purpose-made, standardised elements are assembled on site, always in a different way depending on the requirements. As the technical elements integrated into the basic modules are detachable, a change of functions can be realised without having to break anything away. It is possible, for instance, to build the desk that you need at a certain stage, and later conveniently add to it, or disassemble the desk so as to use it in a different place or in a different form. The flexible modular furniture system too, has been designed in colour.

COLOUR

Colour plays an important part in the healing environment. Martini Hospital contacted the well-known Dutch colour artist Peter Struycken to develop a special colour palette for the new building. Struycken has composed a palette with 47 colours that can all be combined (see figure 1).

If both the walls and the furniture can have colours, then this results in a range of options for the architectural design and the layout to reinforce each other.

For the actual application of colours in the new building, Burger and Vos selected 19 colours from the palette of 47, five of which were relatively neutral colours for the walls and floors. So there are plenty of colours left for future use.

For the application of colours, a matrix was developed. This is a set of rules by which colours are distributed in the available space. When the colours were applied, the matrix was the guiding principle, rather than the space itself. By not thinking in terms of colour-groups, nor in

▼ **FIGURE 1:** Dutch colour artist Peter Struycken developed a special colour palette with 47 colours for the new building



terms of specific wards, but rather in terms of the hospital as a whole, each ward was now treated the same, and discussions about colour were avoided. The hospital floors were coloured wing by wing, rather than on a room by room basis. Within one room, a specific colour-field on a wall or floor could therefore unexpectedly change into a different colour. This way, it was possible to create varied rooms, whereby no two rooms in the building were the same.

The colours of the fixed elements in the building create connections, as can be seen, for instance, in the way in which the columns accompany the change of colours on the floor.

The colour palette with its independently combinable colours supports the idea of disassembly and re-use of interior elements such as walls, doors, and fixed furniture. After a new layout has been made, the coloured elements will always match, whether they are walls or pieces of furniture. Based on the matrix, the colours have been rolled out through the entire building and have been translated onto the exterior as well. Indeed, their application starts in the car park. At nighttime, the interplay of interior colours can be viewed through the windows from the outside as well.

At Martini Hospital, a colour ambience has thus been created that makes short shrift of the clinical image of hospitals. Due to the changing colours, the relatively long corridors provide constantly changing stimuli, and this makes the building exciting without evoking restlessness. The colours provide a focal point for visitors and staff, and have a positive effect on the healing process. Meanwhile, research has shown that patients and staff react positively to the colours, and that they are less likely to feel they are in a hospital.

Throughout the project, Burger and Vos have aimed to create a harmonious whole. It has resulted in a balanced interplay between the building and its layout, colours, materials and furniture. An environment has been created to which clearly a lot of care has been given and which helps to improve the wellbeing of all those who work or stay there. 🌱

