



TRANSFORMATION

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INSTITUTE OF CONTEMPORARY
DESIGN PRACTICES

INDUSTRIAL DESIGN



LEARNING FROM ONE ANOTHER TO SHAPE NEW MARKETS

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Product development in the care market is heavily regulated. It mostly focuses on improving the details of beds and their accessories. The Swiss company Embru develops, produces and distributes patient care products for old people's and nursing homes, rehab clinics and psychiatric clinics. The 3rd-semester students experimented in close cooperation with the SME to sound out new design possibilities. They were aware of the fact that they were a group of future users – and are proud to present their novel product.

A whole world of opportunities and worries is concentrated in the word 'hospital bed'. Anybody who has ever had to deal with a care situation knows what it means to move their family member into an institution or find high-quality at-home care. The person's environment gets smaller – and more complicated: less space, less furniture, less independence; more care, more supervision, more reliance on others. Often, the bed ends up being a final 'nesting' place: the place where people in need of care spend most of their time – and die. What if it were possible to improve this place by making it look less clinical without impeding its functionality?

According to the Swiss Federal Statistics Office, Spitex – i.e. Switzerland's umbrella organisation of home care providers – cared for and provided support to nearly 441,000 people in 2021. That is roughly 5% of the overall population. A total of 153,585 people lived in old people's and nursing homes in the same year. Altogether, that is 594,595 beds in which people live and sleep during their last months or years of life. Due to the ageing of the population, this trend is on the rise.

Students are generally far removed from the world of elderly care, ageing and infirmity. Unless they have experienced the concerns associated with it from their own family. So it is all the more interesting that the group of 16 3rd-semester students deliberately chose to participate in the FHNW – Embru collaborative project.¹ The alternative would have been to design a piece of luggage for Victorinox. A better fit for the reality of young adults – so one would think. But instead they dared to enter the jungle of legal standards for medical products. They spoke to care

professionals and people who are cared for; they learned about the importance of fall and bedside prevention and the meaning of words like 'trapeze bars'; they heard that people with dementia are afraid of the dark and that a drawer in the bedside table must be reserved for care materials.

The task for the fall semester 2022/2023 was to develop designs for hospital beds and the objects surrounding them, such as bedside tables, UX/UI control systems for operating different reclining positions, and the lighting around the bed and in the room. Since Embru's patient care products are generally used in the contract furniture area, they need to meet the requirements for the elderly care and hospital market. The company is one of two biggest suppliers of patient care products in Switzerland. It also has a long tradition in the manufacturing and distribution of school furniture, as well as outdoor furniture and residential furniture from the classical modernism period in the early 20th century. Design questions regarding the form and function of residential and outdoor furniture have always been discussed and responded to with contemporary designs.

It is different in the field of elderly care. 'If architects insist on a good design, nursing and care professionals ask whether a bed is constructed in such a way that it allows them to wash, turn around and seat the patients', says Erich Harperink, Head of Sales and Marketing and member of the managing board. A hospital or home care bed is not a design product. The demands in this market are above all functionality, hygiene, durability, easy maintenance and cost. 'Besides, we are manufacturers, so we need to be able to build and make what we offer.'

AT THE EMBRU PRODUCTION SITE

The sun is shining on the semester kick-off event in Rüti. Sixteen students, lecturers Sebastian Stroschein and Martin Baumann and the author walk across the sprawling Embru premises. The company has just finished redeveloping and renovating the former factory owner's villa, which now serves as the Embru museum. Metal processing has always been concentrated here. The factory halls tell the story of industrialisation, but the machinery, including computer-operated laser cutting and bending machines, is at the cutting edge. Embru is investing in its competitiveness, in jobs, and in Switzerland as a production location.

Stefan Wolff, Project Manager Development, is accompanied by Philipp Städler, Head of Development, the main interlocutor, feedback giver and knowledge authority for the students. He not only shows the production halls where steel is cut, bent and powder-coated, and where the specialised skilled workers actually – all jokes aside – listen to heavy metal, but he also gives them a tour of the care home furniture exhibition, which features hospital beds, hospital equipment, recliners and mattresses in the familiar colours, ranging from apple green to pigeon grey. The most recent in-house development for the home care sector is the 'Fortuna Viva' bed. It has what it needs: an adjustable headboard and bedfoot, movable side bars and castors. It is washable, meets all the standards, and feels less clinical than a hospital bed thanks to its beechwood-style finish.

The time has come for the students to delve into their task. How does it feel to stretch out one's body on the mattress? Where can I hold onto? Where can I

turn on the light? The Fortuna Viva bed will be with them from the interim presentation up until the final presentation. Since early October it has been there in the workshops at the institute, serving as a study object, a workspace, and a place for tests and experiments.

DEVELOPING AND LEARNING TOGETHER

Collaboration is a key component of the educational concept of the Industrial Design study programme. The latter sees itself as a creativity lab and think tank where students can work together with experts and representatives of companies and institutions and learn from one another. Together with Embru, the real-life question of the hospital bed and its surroundings was not only to be brought into an academic context for the analysis and design development, but each idea also needed to be able to prove itself both in the interim presentation in front of Philipp Städler and Stefan Wolff and in the final presentation in front of the entire managing board of Embru. When working with external partner companies, students must always deal with the reality of the market, which more closely reflects real-world working conditions. The students studied the company in order to immerse themselves in its daily life, to understand its needs and constraints. Because their fantasy and knowledge could not be boxed in, they also made proposals that went above and beyond the briefing. In the present case, the company asked the students to improve a hospital bed and its accessories. But a handful of students presented a vision of a completely new bed. More on that later.

Collaboration is cooperative learning experience, a market exploration, a transformation opportunity. At the interim presentation at the ICDP in Basel and also at the final presentation at Embru at the end of the semester it became clear that the students made designs that focused above all on the patients and their caregivers. They wanted to promote independence, give relief to care workers, optimise the use of space, make interfaces more self-explanatory and create a comfortable place.

Reto Monigatti and Moritz Häberlin's 'Arcusante' introduced a new function of the side rails: via a swivel mechanism, they can also be used as a seat for visitors or caregivers. The duo rethought the surface cladding of the headboard, bedfoot and sides – and gave them a cosy look with a colour palette based on Embru's design colours. For the bedside table, they designed a piece of furniture with sliding doors that go around the body of the table rather than drawers in order to save space. Their ensemble has an overall northern European design feel – cosy, practical, colourful. It is functional, as the assignment requires, but aesthetically completely new.

INSPIRATION FOR NEW APPROACHES DESPITE PRICE PRESSURE

Embru's Classics collection served as an important reference point for the students. Making up less than 15% of the share of sales, it is the historic niche in the company's portfolio. Design lovers know the steel tube furniture by Werner Max Moser, the chaise longue by Marcel Breuer, the Alfred Roth bed or the 'Spaghetti' lounge by Huldreich Altorfer. Good design is evident there. So the students incorporated steel tube elements, different colours and metal-wood combinations into their designs. Design can make brands stronger. Why not build a bridge between the

residential segment and home care furniture? Andreas Mantel, owner of Embru and Head of Marketing, later says: 'The [students'] design approaches are on a very high level. It is not possible to work out everything in detail, the basic idea counts.' That is his praise. But then he pulls back: the market is conservative, the existing models work, the new has it tough.

However, market success does not only depend long term on sales figures, but on a willingness to innovate despite restrictive standards and a very price-sensitive clientele. Nearly 600,000 people need a final 'nest' each year. So Phillip Städler declares what he absolutely must do in his day-to-day as Head of Development: 'We should pursue new ideas and give them a chance. Our focus is on manufacturing. Design students look at our work from a different perspective. We had contemplated some solutions already; they are now being confirmed.'

It is not an agile market. The number of people in need of care is rising, as is the cost. In tendering processes, the price is a major factor, being weighted at 70%. The nursing and care of the elderly is expensive. Development and production costs for a cosier, less clinical look hardly pay off. Additionally, a variety of standards must be met: the EU Medical Devices Directive, the Swiss Medical Devices Ordinance, as well as numerous harmonising standards. So it is difficult to introduce a new design or new materials just like that while respecting the existing functional specifications of the product.

In order for elderly care to work in the future, we need technical solutions and a new way of understanding at-home care. The students came up with some good solutions: intuitive remote controls, integrated lighting solutions or functional enhancements for beds. Valentina Ernst and Basil Gasser considered the kind of needs a person with dementia, paralysis, vision impairment, hearing loss or other typical age-related conditions might have. Their answer was 'trebo', an arc that straddles the bed's headboard. This arc, with its different functions, acts as the solution to almost everything in the bed area: a light, storage surface, bed extension for very tall people, bed guard. New types of residences and ways of life such as privately organised shared flats for seniors or multi-generational homes are emerging. People want to stay in their homes as long as possible, which, logically, also means more at-home care. The idea is to reinforce this trend. For Embru, this would create a new market: the hospital bed for private use (i.e. the home care bed).

'Cambio' is a concept by Nina Lundvik, Laura Strazza and Svenja Mischler. At the final presentation, they amazed the managing board with a configurator that was strikingly similar to the Embru website, and showed their product in all its variations. They imagined that two people, Marc and Anja, want to buy a bed. They are both around 40 years old and want to invest in a bed that will serve them for many years to come. They want it to age alongside them and be able to meet their needs when they are 70. At first glance, 'Cambio' looks like a well-designed bed with a tall headboard that extends beyond the side panels and has an integrated shelf. It has a solid wood frame that is deep enough to conceal the castors, and the entire height-adjustable frame is covered with a slatted base. A socket and light are integrated into the

headboard. The invisible side guard in the noble bed-frame pops out when pressure is applied and can be pulled up. The students devised the mechanism themselves and gave an impressive demo at the final presentation.

Their concept offers ideas for a new product. It epitomises what a successful collaboration means for all participants: a cooperative learning experience that has managed to transfer knowledge, widen perspectives and foster transformation. And it makes a proposal that goes beyond the assignment to create a 'hospital bed for a nursing home'.

This proposal could prompt the actors in the elderly care market to expand their view of the final years of our lives. What would happen if everyone involved were to lie down in the bed themselves and think: What do I want to see? What colour should my furniture be? How should it feel? What sort of relief should it offer me and the person caring for me? What do I want from my final nesting place? We now have some good first answers.

1 Stephanie Ringel initiated the project with Prof. Sebastian Stroschein and was actively involved in documenting it as a communication expert. The journalist (who specialises in design, architecture and science) and owner of a communication agency is well-versed in home care – her mother lives with dementia and is cared for at home. She has been working in the Industrial Design study programme as an expert for years, in particular at the BA students' oral exams. www.stephanieringel.com



