



PLANWORLD MAGAZINE 1/2012
COPY ANN KARLÉN / JOURNALEN IMAGES COURTESY OF JOURNALEN

Welcome to Sweden's most modern training clinic – The magnificent 366 m² Karolinska Institutet: A fun place to work!



Dentist Jana Johansson Huggare is also responsible for hygiene, infection control and the environment at the Department of Dental Medicine at Karolinska Institutet.

Ultramodern, environmentally friendly and energy-efficient, with clean surfaces, full of light and air. Karolinska Institutet's new training clinic practises what it preaches.

In just nine months, the Department of Dental Medicine of Karolinska Institutet was able to convert a former laboratory into Sweden's most modern training clinic. There are 16 workstations, a room for taking X-ray images, a sterile room, reception and a waiting room. "Both the staff and students find the new working environment pleasant," says the department's project manager **Jana Johansson Huggare** proudly.

Pressing need for more workstations

There was a pressing need for more training positions at Karolinska Institutet in Huddinge. Early 2010, Jana started as project manager for a new clinic. The financing was already in place with a budget and an empty location on floor 7. In February, a project group was formed and consultants were contacted. Good practices from the clinic on floor 6 were adopted and efforts were made to improve things that worked less well.



The patient chair's green upholstery is made of thick viscoelastic memory foam.

The new waiting room is brightly coloured and exciting.

Tougher environmental requirements

"Naturally, we will make the new location as environmentally-friendly as possible," thought Jana, who is involved in environmental work at the department. She presented the idea to environmentally-certified Akademiska Hus and it was well received.

The result was the decision to go one step further. For example, building components were subject to environmental assessment. Also, Jana read an article about a clinic in Valbo that had invested in a suction system that saved on both energy and resources. This inspired careful requirement specifications for the equipment.

Renovation and purchasing go hand in hand

The starting point was an unfinished surface. Mr **Göran Johansson** at KI Properties came along with the brilliant idea of building a raised floor so that hosing and wires could be hidden under the floor. This also meant that other activities in the building were not disturbed by dust, vibrations, etc.

"This is very important when you have a sterilisation centre with sensitive equipment on the floor below."

The most important criterion during purchasing of equipment and furnishings was flexible delivery, so that the delivery time could be adjusted to meet the construction schedule. Direct on-site delivery is absolutely critical when there is no storage room available. In addition, great emphasis was put on ergonomics and the environment.

Dental nurses as interior designers

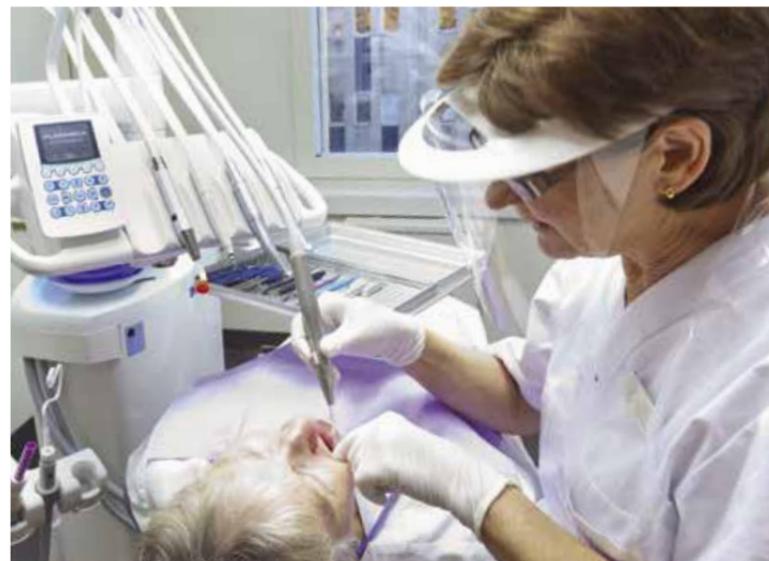
A group of dental nurses came up with suggestions and ideas for the décor and color-scheme together with the architect.

The plum color on the patient chairs is an elegant addition to the oak in the furnishings and was selected with KI's 200-year anniversary in mind (it matches the logotype of Karolinska Institutet). The two Planmeca Sovereign units are lime green. They are intended for patients with back pain and who have trouble lying down. These chairs have a slightly thicker viscoelastic memory foam.

Environment and ergonomics in focus

With 16 workstations at the training clinic, there was a risk of high heat generation, which is energy-consuming and creates a need for increased ventilation. Therefore, LEDs were selected for the ceiling lights and operating lights, as well as for the dental curing lights.





In addition, because the students practise taking X-ray images, the X-ray equipment was placed in a separate room to minimise risks of radiation exposure.

Also, great emphasis was put on ergonomics and proper working postures, especially because several users are left-handed.

The operating equipment was assigned as little space as possible, yet meeting the current environmental and energy requirements in terms of care, operations and maintenance. Smooth surfaces and durable, anti-wear material is important in a training clinic, as is safe equipment that prevents injuries.

Finally, equipment for wet suction systems was selected. Instead of built-in amalgam separators in each unit, the separation process is centralised, which saves energy and is more hygienic. The clinic estimates energy savings

of up to 75%. The system also reduces the cost of equipment per workstation. Further savings are achieved on maintenance and service resources.

The clinic also wants the cleaning system to be as automated as possible so that students can handle the routines quickly and effectively. The ultramodern equipment acquaints the students with current state-of-the-art working conditions.

Each workstation has a number

The number on each workstation allows the students to connect their computer to the central network in the building, and to reserve time with a teacher when they need help with their studies or want to conduct a treatment that is part of the training. The low-radiation computer screens save energy.

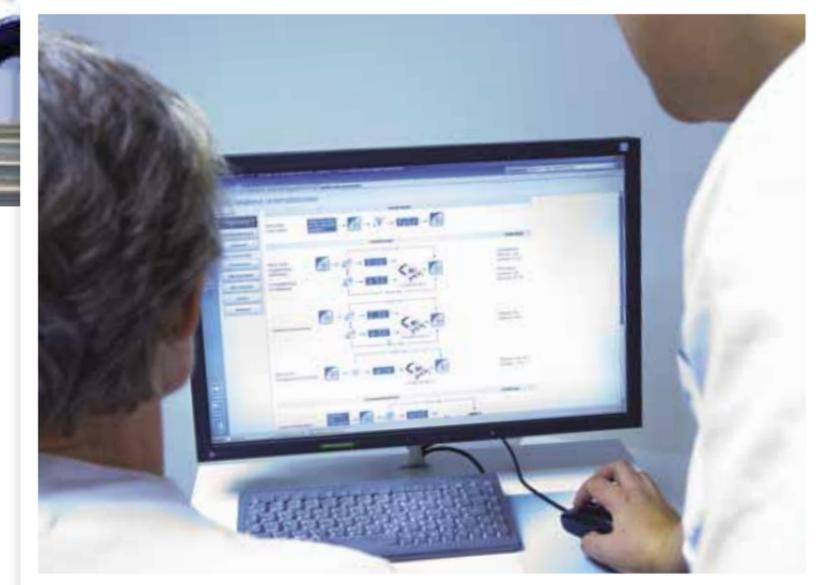


Planmeca's cleaning system only needs to be run for 2 minutes for thorough cleaning, which is more efficient than simply rinsing out the hoses.

Infection control in theory and practice

Outside each workstation is a workbench with custom-sized Corian washbasins with countertops and storage. For storage, the clinic prefers drawers instead of cabinets. Here you will find disposable items, such as cups and napkins, as well as gloves, masks and plastic aprons. There are waste baskets for sorting recyclable waste.

The final year dental students have a good theoretical understanding of infection control and the environment. In the first semester, they learn basic procedures (protection, hand disinfection, safety, prick injuries, eye douching, etc.) In the fourth semester, they get in-depth information about infection control, the environment and safety procedures. In addition, they learn various procedures, such as how to report an injury and how to clean the treatment area. A test on infection control is then given. During the seventh semester, the students receive training on environmental issues and sustainable development.



New possibilities with IT

Thanks to Clinic Management software, the procedures at workstations can be monitored. Maintenance and operations are handled by the department's medical technicians, and the head dental nurse supervises the cleaning functions that extend the life of the equipment. The dental unit recognises which user logs in and "disconnects" instruments that the particular user is not allowed to use (e.g. the micromotor). The Clinic Management software has many options that can be of help during teaching.

The units are also equipped with intraoral cameras for acquiring images.

Better awareness of infection control and environment for future dentists

"In December 2009, the Department of Dental Medicine was the first department at Karolinska Institutet to receive environmental certification. We are the only department providing patient care in addition to training and research," explains Jana.

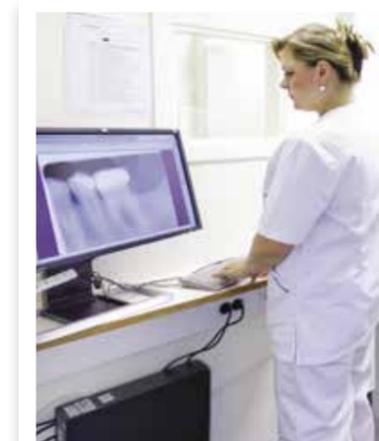


Image processing (Planmeca Romexis) is calibrated with the rest of the building and functions perfectly.

"The goal is total energy savings of 10% per year and we focus on three things: lower energy consumption, educating students about sustainable development, and reducing and phasing out environmentally dangerous chemicals."

"There is a strong belief that if we put a lot of energy into environmental education, our students will take this environmental awareness with them into their working life."