

nabra

Making hospital life easier.





1 Carrier layer

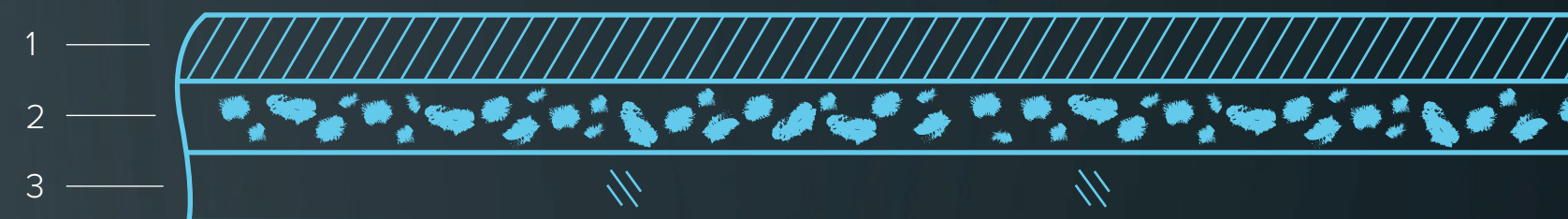
This non-conductive layer is made from a special kind of synthetic polymer that works as a base for the particle mixture. This laminate helps to protect the particles from friction and water damage.

2 Nanoparticles

The layer interacts with the human body. It contains billions of nanosensors that can detect human temperature and heart-beat and can send those signals to remote devices.

3 Protective layer

The nanoparticles are flood coated with a layer of substrate that holds everything in place to create a dust-free and water-tight seal. (Kailo Pain Patch, 2020)



Kailo Pain Patch | Gokailo.com. (2020). Retrieved 2 December 2020, from <https://gokailo.com/>.

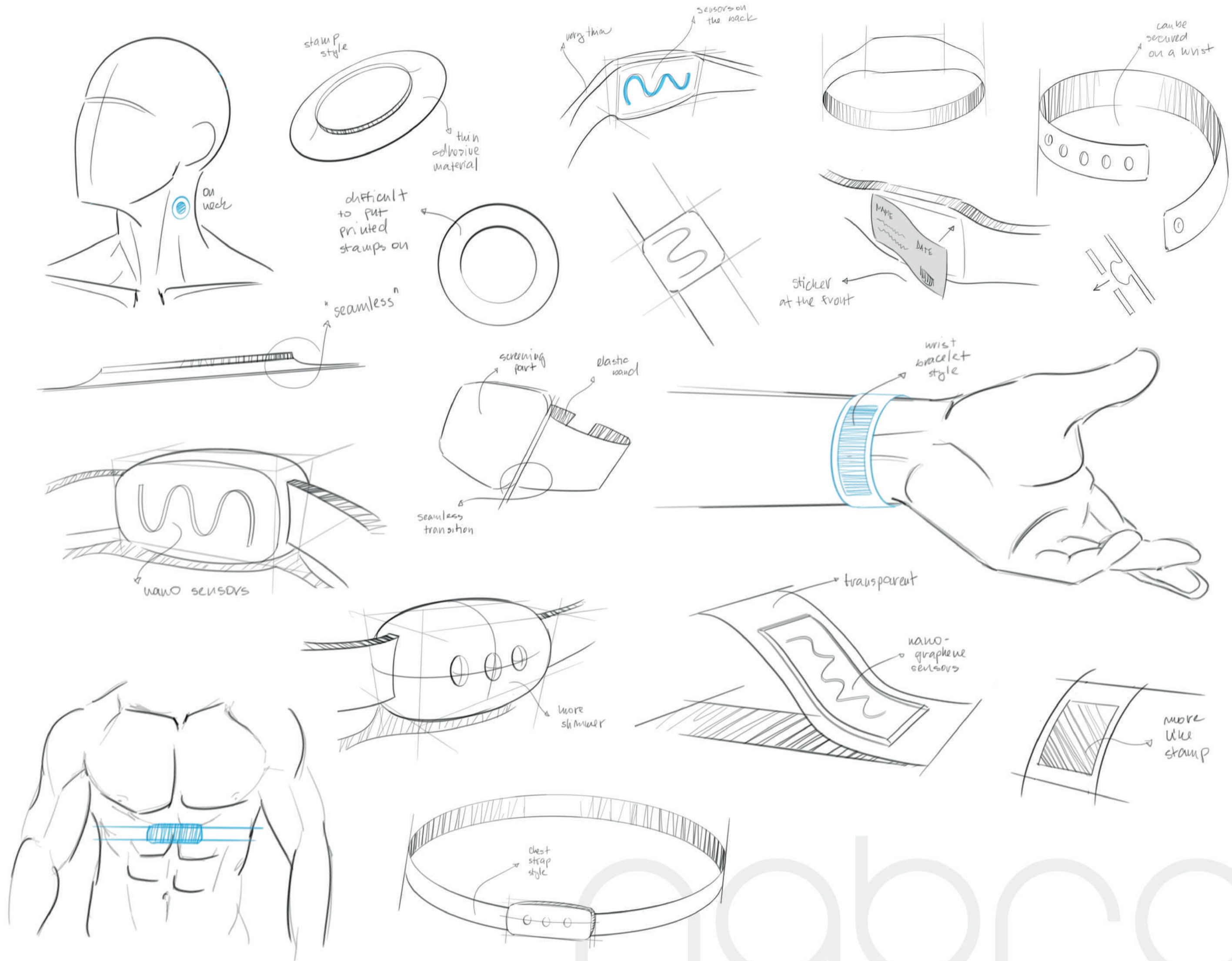
NABRA IN USE

Replacing ordinary hospital plastic tags, Nabra medical patch can sense human temperature and heartbeat. The data from individual patients are then transferred to a central system. This process is less time consuming and more effective without the need for medical staff to take these data values several times during the day.

The patch is designed to be placed on a wrist where patients' printed label will be visible. If necessary, it can be moved to different parts of the arm (or even body).



CONCEPT DEVELOPMENT





NANOTECHNOLOGY

Nanotechnology focuses on “building things” on the scale of atoms and molecules. At this scale, materials’ characteristics differ, for example carbon “nanotubes” are 100x stronger than steel but 6x lighter. (Brahic and Shanahan, 2005)

Nanotechnology is predicted to have the potential to increase the efficiency of energy consumption, help clean the environment, solve major health problems and also increase manufacturing production at reduced costs. Nano products will be smaller, cheaper, lighter yet more functional, require less energy and fewer raw materials for manufacturing. (Brahic and Shanahan, 2005)



Nabra patch has the potential to provide **unique treatments** - drug dosage administration through the skin and showing drug levels in real-time.

HOSPITAL SYSTEM

Nabra system provides the hospital with an easy way of accessing patients’ data taken with Nabra patch. Each hospital bed has a monitor showing “live” heartbeat and human temperature values with brief information about the patient and the diagnosis.

Central system then stores all data in patients’ databases together with medical records, detailed diagnosis etc.