



# Nightingale

Smart monitoring, safer care

Stakeholder management by Value Sensitive design

# THE HUMAN FACTOR



- = Design '*materializes*' values
- = Technologies promote or demote values
- = Use influenced by needs and competence of end-users

**Lack of understanding human factor is key  
to failure of innovation**

# VALUE SENSITIVE DESIGN

Focused  
Inclusive

Proactive  
Interactive

# Identify stakeholders

**(mind the gap)**

## Translate values into Nightingale benefits and risks

## Design choices



# NightWatch



## Nightwatch wins award

### 'Good Industrial Design'

Supervision during the night is a requirement for children and young people with epilepsy. Existing warning systems still fail to detect the majority of nightly episodes. The NightWatch was designed to change this situation. The first test results of this revolutionary form of nightly supervision are promising. On 24 October 2016, it was announced that the look and feel of the NightWatch are also greatly appreciated. During the Dutch Design Week, the NightWatch won the Good Industrial Design award.

*The NightWatch is the result of a consortium of parties: Kempenhaeghe / Technical University Eindhoven, SEIN, UMC Utrecht Hersencentrum, Hobo Heeze BV, Pontes Medical, Epilepsy Fund, Livassured and several patient interest groups, including the ZIE Foundation. NPK design was commissioned to create the design of the new system.*

HOME / NIGHTWATCH WINS AWARD



## Design choice 4

### “Evidence based versus trusted system”

Include *only* evidence based sensors for seizure detection

- B Maximum scientific validity
- B Focus on *detection* of seizures
- R Lack of trust in system by caregivers
- R Failure to detect life threatening situation

Include non-evidence based oxygen saturation sensor

- B Trusted system better integrated in social context
- B Potential to detect complication of seizure (SUDEP)
- R Potential burden of extra sensor
- R Potential increase in false alarms
- R Possibility of false sense of security

van Andel J, Leijten F, van Delden H, van Thiel G.  
What Makes a Good Home-Based Nocturnal  
Seizure Detector? A Value Sensitive Design  
PLoS One 2015





# Values map as part of common challenge

## Plan to integrate VSD into design process



THANK YOU