

Smart Hospital

Jukka Vasara, Granlund Group

06/12/2021



”



Two million square
metres of designed
hospital space during
60 years

180 hospital designers

Building on innovation



Background for the Smart Hospital project

Infection routes

1. Contact Infection

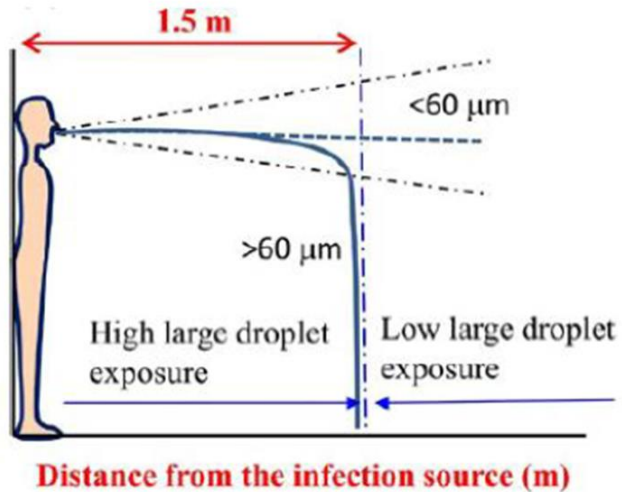


- Easy to understand
- Easy to protect
- practical applications are needed to ensure adequate hand hygiene

Background for the Smart Hospital project

Infection routes

2. Droplet infection



Close contact: combined exposure from droplets and droplet nuclei (aerosols)

- Easy to understand
- Easy to protect
- Needs more research data to prevent droplet infections more effectively



Background for the Smart Hospital project

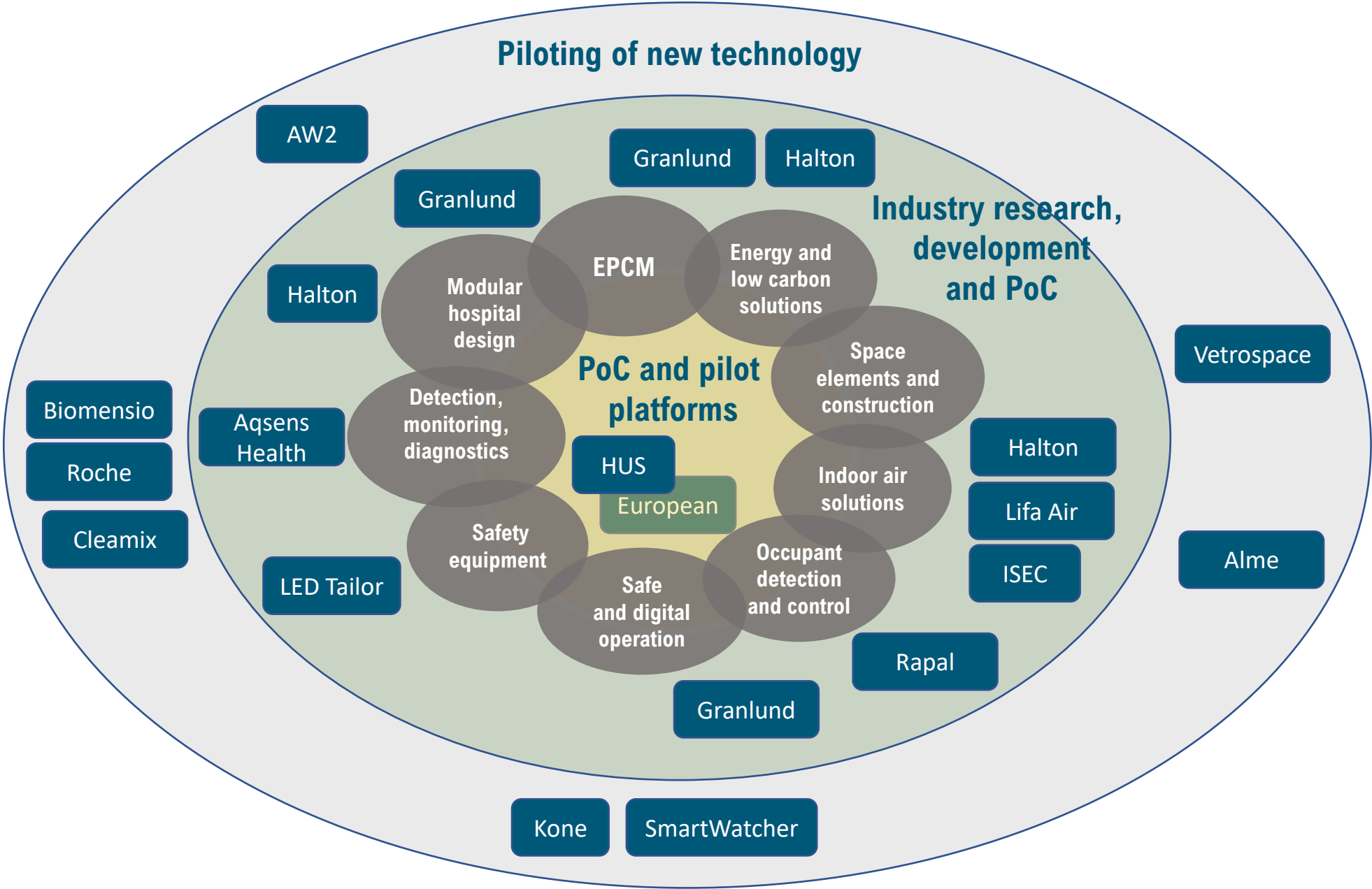
Infection routes

3. Air infection

- What we don't see is hard to understand
- How many viruses can cause the disease?
- How can we protect ourselves?



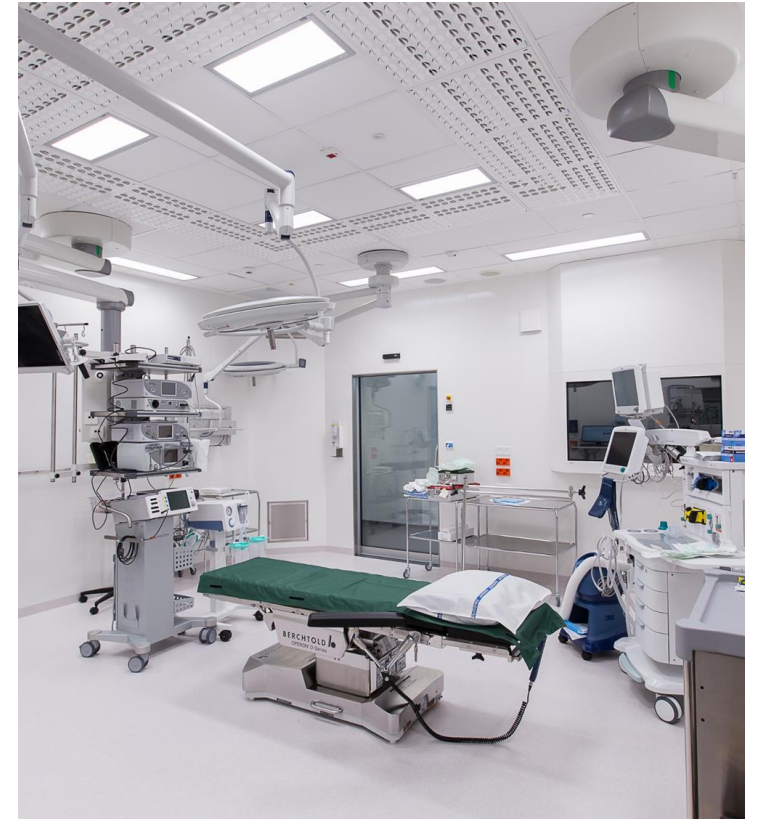
Use Case 1 – Smart Modular Healthcare



Concept development

Smart modular, scalable and movable healthcare concept

Solutions for different type of modular spaces: isolation rooms, clean zones, virus laboratories, intensive care units, cleanrooms, first aid, operating rooms, dental care, health care center, emergency and waiting lobby, ...



Proof of concept pilots

Finland, HUS (Children's hospital)

Target to find also international pilot from Europe

- discussions started in Eastern Europe: Romania

Safe and digital operation in healthcare (how to guarantee safe operation by digital solutions also during pandemic conditions)



What we are going to research

e.g. Digital solutions, circulating air filters, non-contact solutions



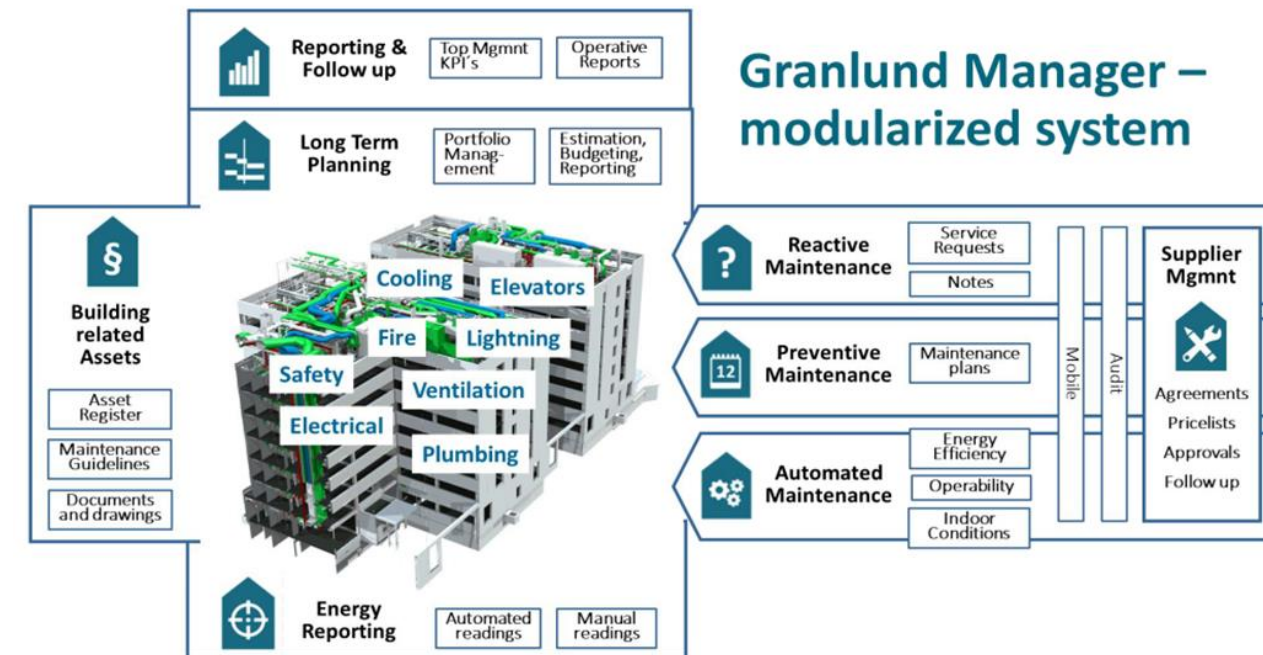
Development ideas related to functional design

- Measurement technology: Co2, motion detectors, radar technology
- Identification of numbers of persons
- Cleaning level identification
- Identification of time spent cleaning
- Identification of hand washing
- Presets for treatment situations: ventilation, lighting
- Traffic lights: facilities safe, call for maintenance, cannot be used
- Opportunities for telecare
- Opportunity for different suppliers to offer their systems and products as part of this concept



How research information is utilized in business

- Market research in several countries
- Focus on countries with large hospital investments
- utilization of research information in design solutions
- differentiation from competitors e.g. through research data
- Bringing our leading software platform Granlund Manager for digitally managed facilities
- Preparation of comprehensive design proposals with the IHDA team





Integrated Hospital Design Alliance





Building the hospital of the future

<https://www.granlundgroup.com/industries/hospitals-and-healthcare/>