

# Odense University Hospital

- A driver of innovation in Danish health care



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# Reality of New OUH

	2011	2021
<b>Number of beds</b>	1047	647
<b>Number of bed days</b>	281,575	272,852
<b>Number of outpatients</b>	509,132	655,280
<b>Number of emergency ward visits</b>	50,006	54,751

400 or 38% less beds available!

28% increase in outpatients!

# Partnering for innovation

$$1+1+1 = 4$$

- Focus on the core competencies of each field:
- Health sector: Knowledge on how to run a hospital and deliver high quality health and care services. Identification of challenges.
- Industry: Technical and business know-how. Application of a different mindset to facilitate change.
- Science (academic institutions): Experts in research and idea generation. Support innovation with evidence and documentation which is key in the health sector.

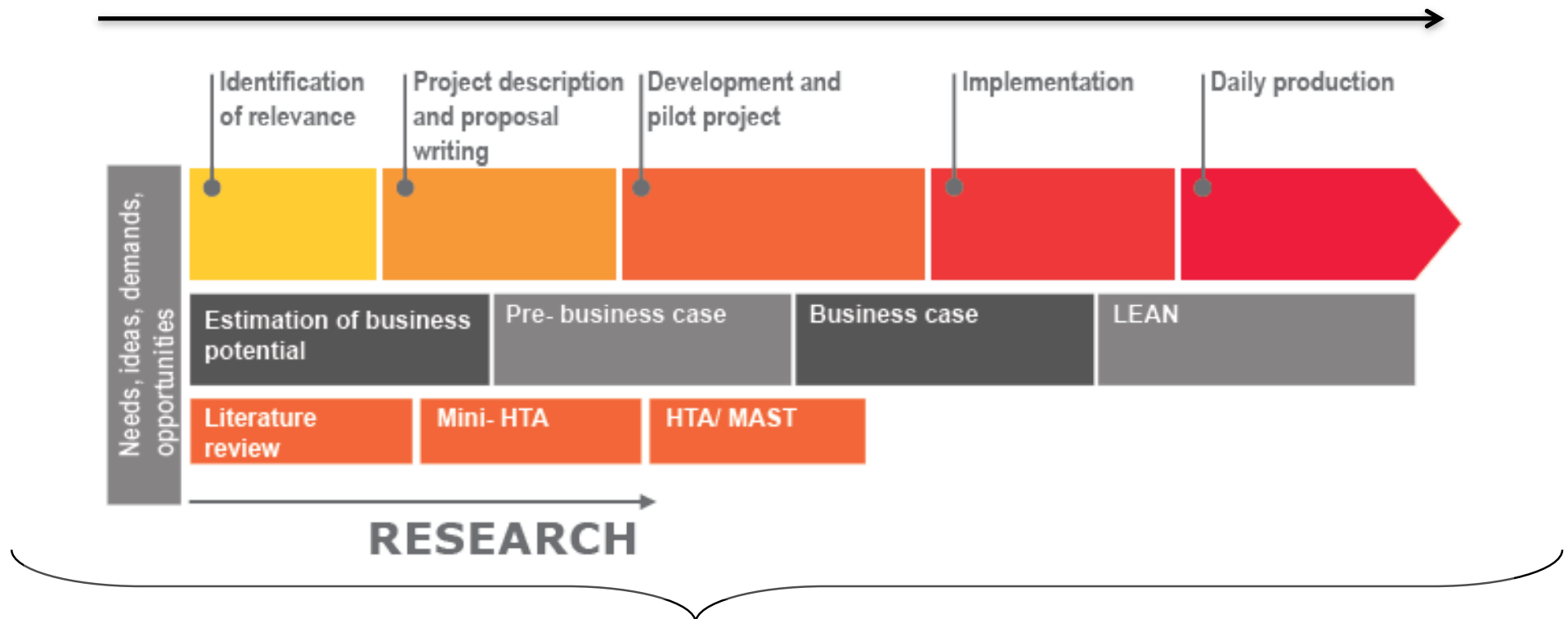
# Combining health, industry and science: COPD Briefcase

- 2005: Dept. of Respiratory Medicine declared that they needed a better quality of treatment for the COPD patients.
- 2006: OUH and GiTS collaborate to develop a mobile solution to offer COPD patients treatment and monitoring in their own home after discharge.
- Criteria: Simple and easy to use. Work every time. Stable and high quality connection.
- The end product: A 'briefcase' with only three buttons; Power, Connect and Volume.
- Pilot project: Patients and staff reported satisfaction
- To obtain solid documentation of the service, it was included in a large European research project and a PhD (incl. Randomised Control Trial)
- The conclusions from the PhD and the overall evaluation of the service (*economy, patient perspective, organization, ethics*) will be published at **European Telemedicine Conference 2013, in Edinburgh** (October 2013)
- The service is already implemented in the daily operations at OUH for the benefit of patients and staff. See video on [www.ouh.dk/copdbriefcase](http://www.ouh.dk/copdbriefcase).
- Today more than 2000 patients have been admitted to hospital in their own home.



# The innovation & documentation process

*Innovation projects must come from an identified need or demand and the goal is always large-scale implementation into daily operations*



*Innovation must always be coupled with solid evidence and documentation to ensure that the solutions developed truly bring value to the end user*

# Documenting eHealth services

- A number of ongoing clinical and PhD projects create clinical evidence on innovative solutions:
  - COPD Briefcase – Treatment and monitoring in the home of COPD patients
  - Treatment and diagnosis of diabetic ulcers – Development of 3D camera
  - ePatch – Wireless monitoring of heart arrhythmia
- The clinical evidence is coupled with a comprehensive analysis the solution seen from of economic, organisational, ethic, societal and patient perspectives through the MAST model.
- ***Health care as a discipline is based on scientific evidence!***

# Innoevent

- Collaboration with educational institutions can also create innovative processes based on user needs in the hospital

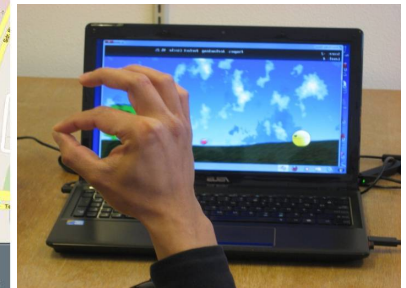
- 700 students gather for a week to bring new ideas to life.
- Students from various fields of study – health professions (nurses, physiotherapists, etc.) to multimedia and IT, graphic design, etc.
- The hospital sets the overall theme and presents clinical and organizational challenges
- The students come up with ideas and create prototypes and mock-ups guided by expert facilitators
- On the last day the solutions are presented to a field of judges from the participating institutions
- Various ideas from Innoevent have been formed into innovation projects at OUH

## Innoevent themes

- 2010: Communication with patients
- 2011: Serious games in the hospital (Gamification)
- 2012: Patient safety
- 2013: New OUH

## Results

- New solutions and ideas
- New internships
- New research projects and PhDs.
- Creation of new SMEs based on new ideas
- Recruitment for the beneficiary company
- Demonstration and influence on staff
- Marketing for academic institutions and the hospital



## The missing link?

### Motivational Interviewing can improve treatment adherence with telemedicine

- Motivational interviewing is an evidence based method to increase dialogue between patient and practitioner, thereby promoting adherence and positive health outcomes
- Motivational Interviewing is a collaborative method that elicits reasons for change thereby increasing patients' adherence to treatment – an important precondition for treatment efficacy

Emmons, Rollnick, 2001

Zweben, Zuckoff, 2002

Dimatteo, Giordani, Lepper, 2002



# Innovation is good – but....

- Innovation projects must fit into the overall strategy of development for the hospital
  - projects must support the long and short term goals and visions
- The key is to make the most of the core competencies of all innovation stakeholders to improve the health services provided to patients and citizens.