

Odense University Hospital

- A driver of innovation in Danish health care



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Reality of New OUH

| | 2011 | 2021 |
|--|---------|---------|
| Number of beds | 1047 | 647 |
| Number of bed days | 281,575 | 272,852 |
| Number of outpatients | 509,132 | 655,280 |
| Number of emergency ward visits | 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.

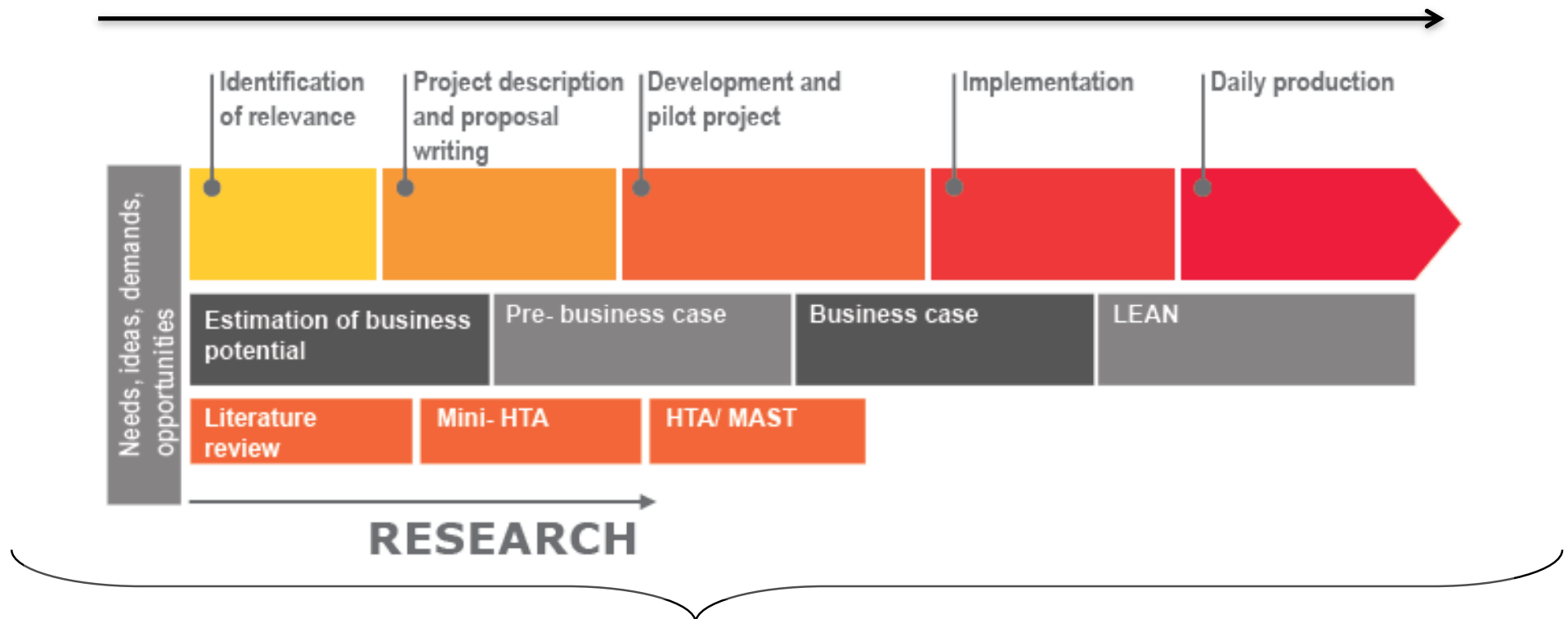
Combining health, industry and science: COPD Briefcase

- 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.
- 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.