# The Danish Healthcare System and Aarhus University Hospital

*CEO Poul Blaabjerg,*
*Aarhus University Hospital*

# Highly specialised treatment

**AUH** provides highly specialised treatment for all patients in the Region of Central Jutland

**Criteria for highly specialised services:**

- Rare
- Complex
- Resource demanding

**AUH** covers the full range of medical specialties and has nearly **500** out of 600 highly specialised services in Denmark

# AARHUS UNIVERSITY HOSPITAL

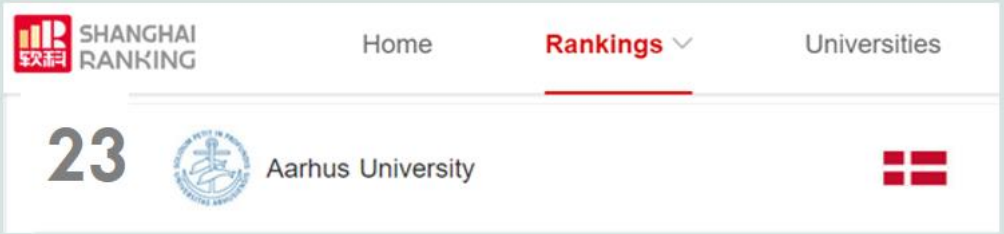
Dansk Neuroforsknings Center

Denmark's most **complete hospital** at the highest international level

Ranked as **Denmark's best** hospital 13 times

Awarded the **19th best Smart Hospital** in the world in 2021.


**Research** carried out in collaboration with Aarhus University - also **top-ranked internationally.**




# The Hospital City

AUH is committed to treatment, education and research

- Local hospital for the 350,000+ citizens
- Highly specialised hospital for patients in Central Denmark Region and in West Denmark
- The only hospital in Denmark offering proton beam radiotherapy
- All medical specialties in same location
- Largest workplace in Aarhus with more than 10,000 employees

# Figures from AUH

**Number of beds**

*856*

**Clinical departments**

43

## ANNUAL ACTIVITIES 2020:

**Discharges:**

*83,233*

**Emergency visits:**

*48,879*

**Surgeries:**

*82,910*

**Outpatient visits:**

*889,370*

**Births:**

*4996*

Strategic ambition for Aarhus University Hospital

# Aarhus University Hospital covers all medical specialities at the highest international level

## We have a whole-person approach

We are leading in patient involvement

We make it easier for the patient to make difficult decisions

We create a workplace characterised by safety, involvement, and commitment

## We create results through collaboration

Aarhus University Hospital builds communities across professions and departments

We ensure smooth and safe transitions in patient pathways between colleagues in the healthcare system locally, regionally, and nationally

We contribute to develop a world-class healthcare system

## We have the highest level of professionalism

We educate, develop, and attract the most competent staff

We ensure optimal conditions for research creating breakthroughs and improvements for patients

We focus on, prioritise and develop professional strongholds

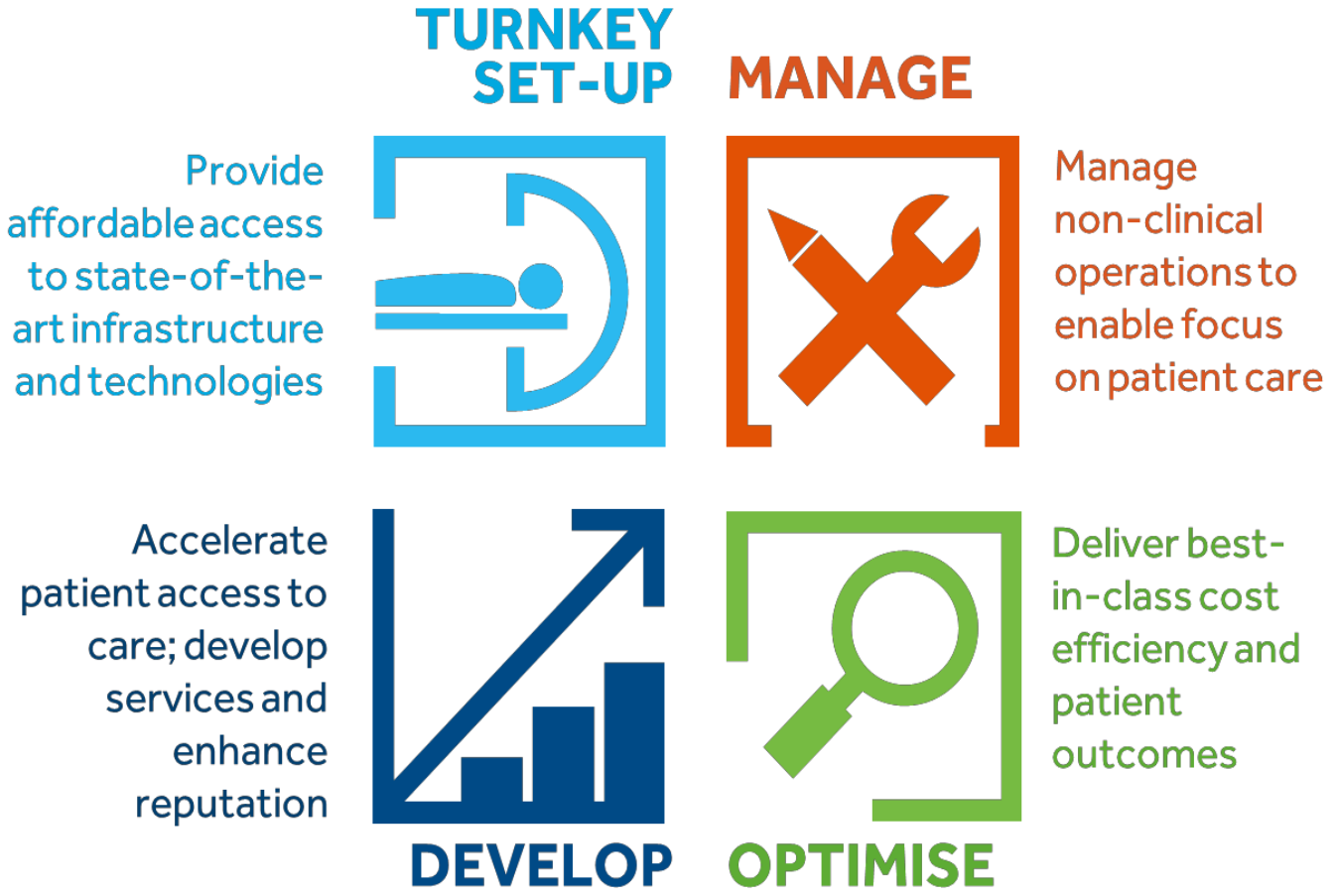
Cross-organisational management close to clinical practice · Working environment · Work life · Innovation · Data · Digitisation · Well-run hospital

## In the best hands throughout life

# INNOVATION THROUGH PARTNERSHIPS

# INTEGRATED HEALTH SOLUTIONS (IHS)

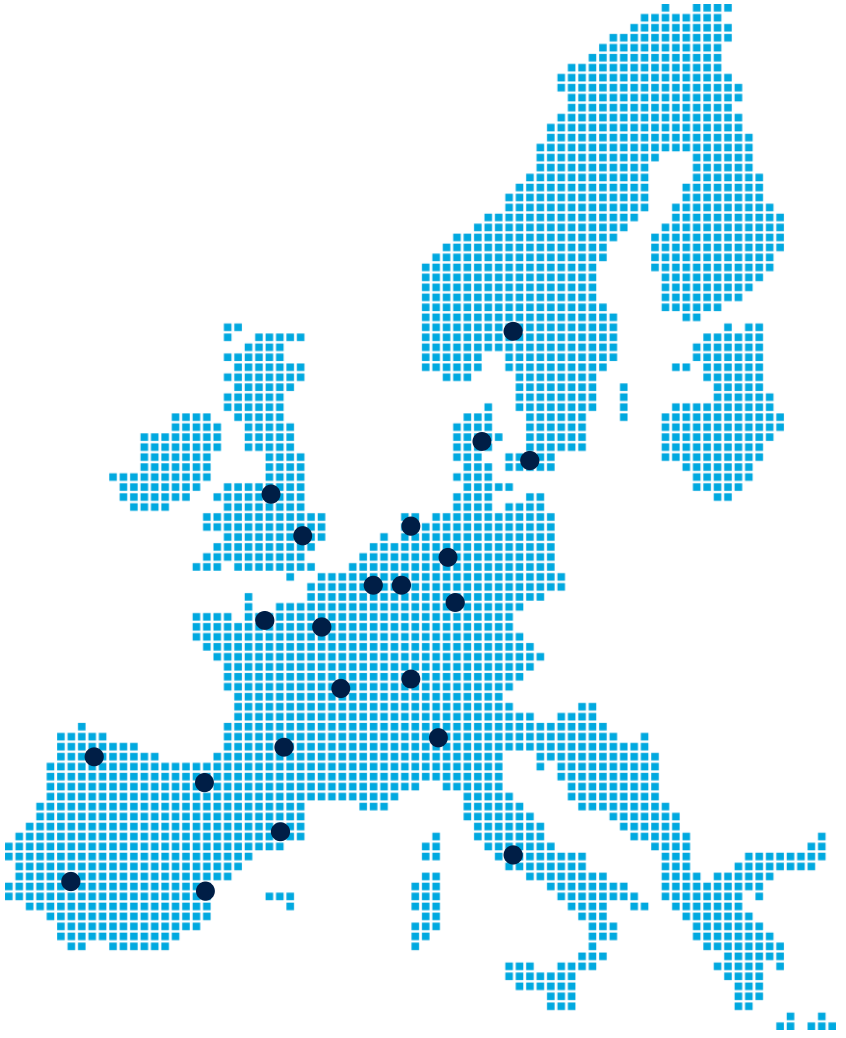
## SUPPORT HOSPITAL DEVELOPMENT WITH A WIDE RANGE OF SOLUTIONS



# INTEGRATED HEALTH SOLUTION ACROSS EUROPE

## +200 PUBLIC-PRIVATE PARTNERSHIP AS BASIS FOR CREATING CHANGE

- Long term and trust based partnerships
- Continuously KPI-follow up and valuebased financing
- Inspiration from international experts and partnerships
- New technologies



# A LONG-TERM PARTNERSHIP BETWEEN AUH AND MEDTRONIC TO OPTIMIZE NON-CLINICAL PROCESSES WITH OBLIGATING FINANCIAL GOALS

**OPTIMIZE AND PROFESSIONALIZE** CORE ACTIVITIES SUCH AS OPERATIONAL PLANNING AND THE USE OF RESOURCES

TASKS RELATED TO MATERIAL MANAGEMENT TO **REDUCE WASTE** AND **FREEING UP NURSING RESOURCES**

BRING **NEW COMPETENCIES** TO AUH IN TERMS OF OPERATIONAL OPTIMIZATION AND PLANNING

STRENGTHEN THE ORGANIZATION AND ENSURE THE WELL-BEING AND **ENGAGEMENT OF THE EMPLOYEES**

**INTERNATIONAL BENCHMARKING,** COLLABORATION AND **EXCHANGE OF KNOWLEDGE** WITH OTHER UNIVERSITY HOSPITALS

# A MATHEMATICAL APPROACH FOR OPERATIONAL SCHEDULING
## PLANNING OF ACUTE NEUROSURGERY OPERATIONS IN AN ELECTIVE PROGRAM

Phase 1

Phase 2

### Acute operations in an elective program

- Achieve at least the same patient turnover
- Reduce number of cancellations
- Introduce a more structured way of planning

### Results

- +14,5% increase in no of patients
- -46% reduction in cancellations
- New rules and responsibility for planning introduced

### Semiacute cancer patients
(ikke omfattet af akut hasteklassifikation)

- Coherence between work plans and dedicated OR time for cancer patients
- Optimised patient planning and resource allocation for the dedicated ORs

### Results

86 % of cancer patients are operated on the right time (increase of +187%)

# ABOUT DANISH NEUROSCIENCE CENTER

Dansk Neuroforsknings Center

DNC is an **integrated part** of Aarhus University Hospital and the result of a close collaboration with Aarhus University.

DNC is **world leading** in a number of research areas, which have helped promote new technologies and patient treatments.

**It is our vision** to create **the best treatment in the world** for patients with disorders of the brain.



AARHUS UNIVERSITY

Aarhus Universitetshospital

Medtronic

# OUR AMBITIONS

Dansk Neuroforsknings Center

We want to build **an iconic neuro research building** for the benefit of our patients and their families.

We aim to be ranked as the **10th best** hospital worldwide.

Close **integration** of psychiatry and somatic research.

# COLLABORATION WITH BJARKE INGELS GROUP

Dansk Neuroforsknings Center

The design proposal is ready:

**- an architectural gem** conceived by Bjarke Ingels Group (BIG) **celebrating the brain** and designed to foster integrative research.

Building site **near the patients and clinicians** in the neuro departments.

Focus on **sustainability**, **functionality**, and **working environment**.

AARHUS UNIVERSITY

Aarhus Universitetshospital

Medtronic

Dansk Neuroforsknings Center

# DNC RESEARCH

- We have already made **discoveries that have led to paradigm shifts** in treatments for patients world-wide.
- We intend to become **a center of excellence** and carry out more ground-breaking research on the function of the normal brain and how diseases can be prevented, detected, and treated.
- **State-of –the-art labs** and clinical examinations rooms and closeness to clinicians & patients.

AARHUS UNIVERSITY

Aarhus Universitetshospital

Medtronic

# DNC – MORE THAN RESEARCH

**Open to the public:**

- public lectures & events with dissemination of brain research
- exhibition areas
- experimentarium with cafe
- play & learning labs that focus on children
- space for patient organizations & other stakeholders
- innovation

# INNOVATION

Dansk Neuroforsknings Center

## DNC wants to stimulate:

- New spin-outs
- Collaborations with private partners
- Fast-track from idea to patient treatment.

Cercare Medical

**Diagnostics & treatment – globally**
Acute treatment of stroke

Philips Global Healthcare Breakthrough winner 2018

AARHUS UNIVERSITY

Aarhus Universitetshospital



17

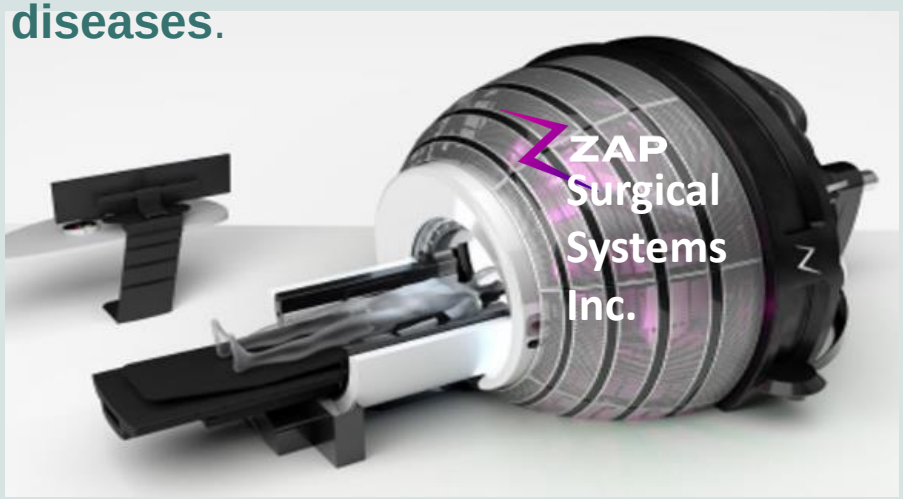
UDENRIGSMINISTERIET
*Ministry of Foreign Affairs of Denmark*

Stanford University

Dansk Neuroforsknings Center

**2016:**
**Neurosurgery & neurobiology**
**large animal models of neurological and**

**2018:**
**New start-up company needing to test new radiation therapy for brain cancer, neurological and psychiatric diseases.**




2021:
2 patents
2 PhD dissertations
10 publications
New projects in pipeline

SCIENTIFIC REPORTS
nature research

**Radionecrosis and cellular changes in small volume stereotactic brain radiosurgery in a porcine model**

Hamed Zaer[1,2], Andreas Nørgaard Glud[1,2], Bret M. Schneider[3,5,6], Slávka Lukacova[2,7], Kim Vang Hansen[8], John R. Adler[3,5], Morten Høyer[4], Morten Bjørn Jensen[2,7], Rune Hansen[2,7], Lone Hoffmann[2,7], Esben Schjødt Worm[2,7], Jens Chr. Hedemann Sørensen[1,2] & Dariusz Orlowski[1,2]

AARHUS UNIVERSITY
Aarhus Universitetshospital


18

Aarhus Universitetshospital

Danish Neuroscience Centre

# THANKS

Poul Blaabjerg, CEO, Aarhus University Hospital
poul.blaabjerg@rm.dk