Norwegian hospital planning tools

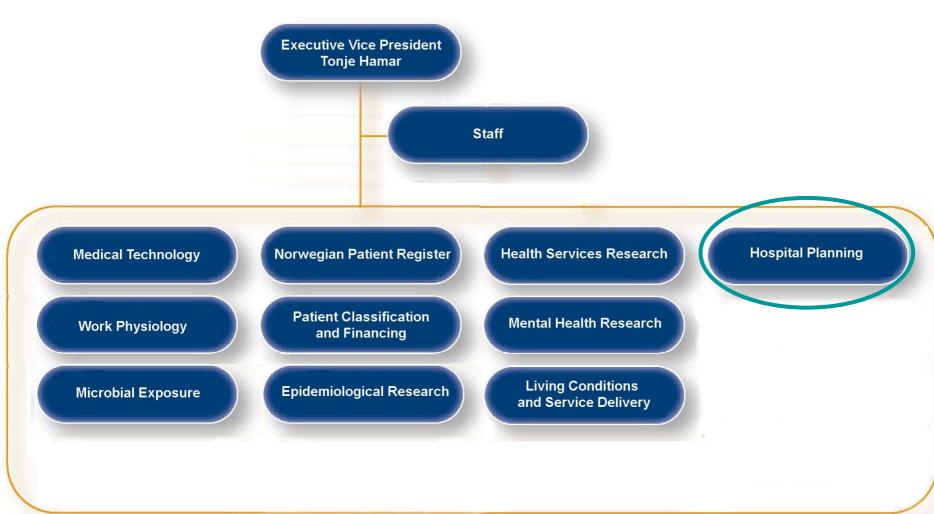
Knut Bergsland SINTEF Health Research Espoo, Dec.1.2006



SINTEF Health Research Research for improved health and a better quality of life



SINTEF Health Research Organisational structure



SINTEF – strong brand name

SINTEF Health Research - reputation for:

- Doing critical, applied R&D in health services research,
- Doing consultancy with upfront models
- Premise provider, most cited organisation in National health budget documents



SINTEF Health Research - Hospital Planning:

- Consultancy 75 % -reduction?
- Research and development 15 % growing
- Secretariat governmental Hospital planning network 10 %
- Major customers:
 - Directorate of health & Social Affairs
 - Regional Hospital Trusts
 - Hospital trusts



What do we do?

- Strategic facilities capacity planning/ scenarios and projections – (Regional Hospital Trusts)
- Hospital and whole systems processes (Clinical pathways)
- Models for predicting future hospital use
- Planning process systems development
- Functional programming (Hospital trusts)
- Evaluation of hospital design

Developing planning tools and models—important in being at the frontline



Opportunities for jumping together?

Frame of reference for tools development:

.



Competence Network for Hospital Planning (KNS)

Goal:

Contribute to competent and efficient planning, development and construction of somatic and psychiatric hospitals and other health care buildings through

information and exchange of experience.

Ownership:

Directorate of Health and Social affairs + 5 Regional Health Boards

Secretariat: SINTEF Health Research

Competence Network - activities

- develop and operate the web portal www.sykehusplan.no
- gather and communicate competence between hospital projects and planning communities
- develop co-operation with specialist environments and research communities, nationally and internationally
- develop and spread guidance material
- assist in evaluation and approval of hospital projects
- initiate and implement conferences, workshops and seminars on hospital planning
- initiate and implement research and development projects within hospital planning



<u>www.sykehusplan.no</u> – organiser and vehicle

- Information portal for Hospital planning in a very broad sense. Covers most countries
 - Projects, guidelines, planning informations, tools, links, etc
- Norwegian and English versions
- Unique visitors from 70 countries, 1200 2000 per month
- New items 3-4 times per week
- Newsletter
- Running costs: 0,25 manyear
- Database solution
- Relating similar objects



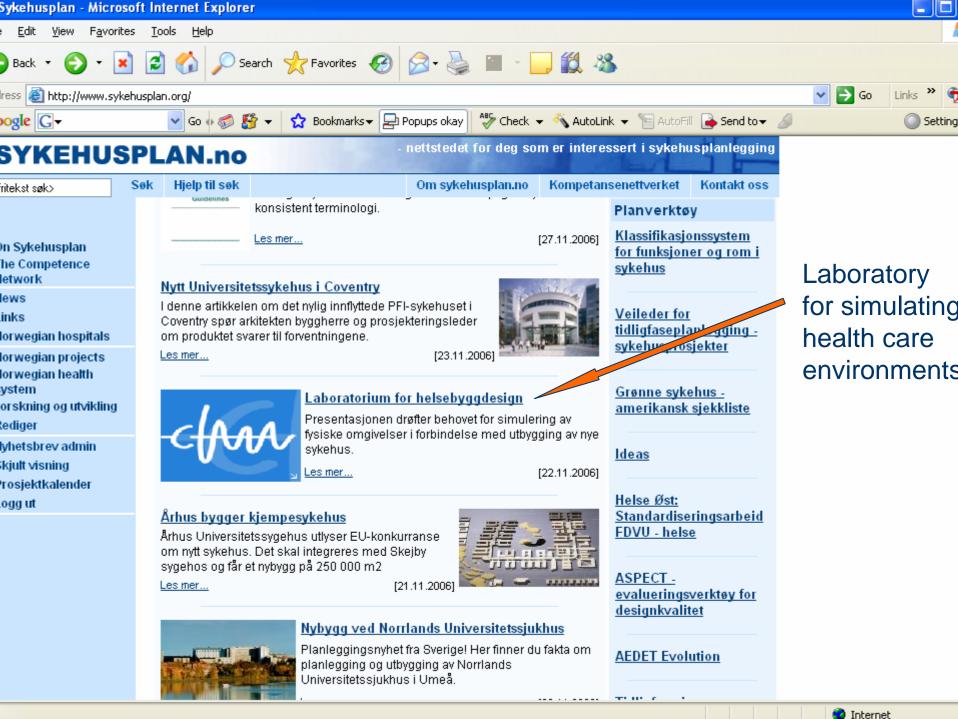
Information should be public and free

- Free flow of information raises the quality of the whole hospital planning community.
- Keeping your professional secrets is only a short term gain

We needed:

- a vehicle for free information on the most important aspects of hospital planning
- someone to gather and present the information.
- A stamp of approval but not in the name of the Government.





A web portal for Nordic hospital planning and design?

A vehicle for showing our strengths to the world?

- Sweden: Forum för Vårdbyggnadsforskning wants to cooperate with Sykehusplan to establish a stronger Swedish website.
- Denmark: We receive
- Finland: We invite you to submit projects (English/ Swedish material)

Competence network: Tools

Tools so far:

- Space classification system, existing hospitals for comparison of similar functional units/ hospitals (functions, space use from room level to whole hospital level)
- Guidelines for the planning process from the idea phase to final planning phase - adopted by all Regional health boards
- Guidelines for functional hospital planning (DoH)
- Guidelines for equipment planning (DoH)
- Follow-up system for planning of projects



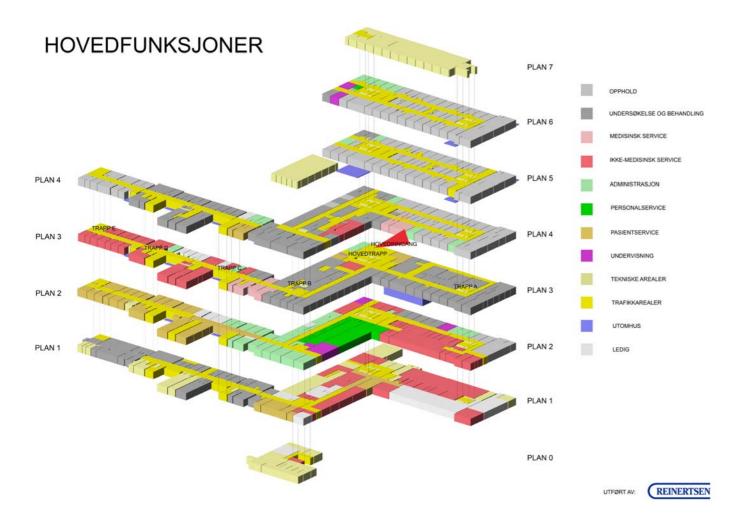
Tools: Use of hospital space

Tools linking space use and activity:

Space classification system, existing hospitals (functions, space use from room level to whole hospital level). Somatic and psychiatric

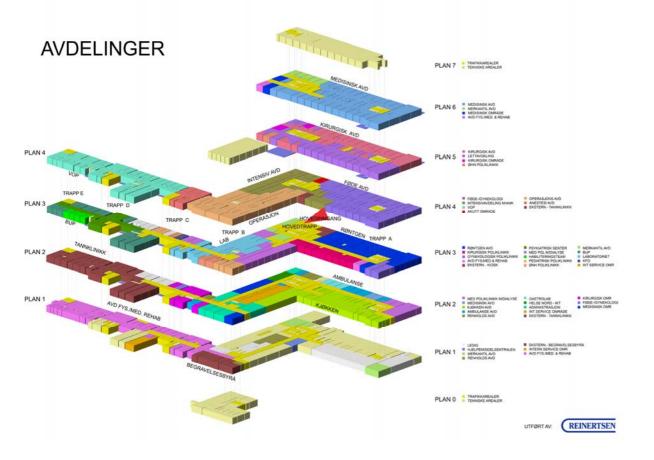
coupled with:

- Activity data from patient records and official sources on patient/ personnel levels (SAMDATA- yearly statistics)
- Utilisation of space over-/ under use of room and space capacity



Easy grasping the whole picture?

Main hospital functions – 12 categories, visualisation

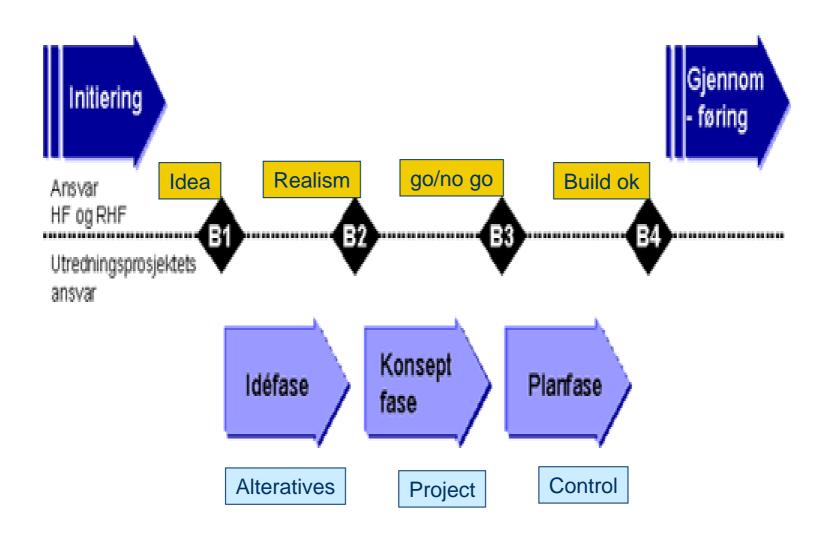


Easy to grasp the whole picture?

Would an international colour coding system help?

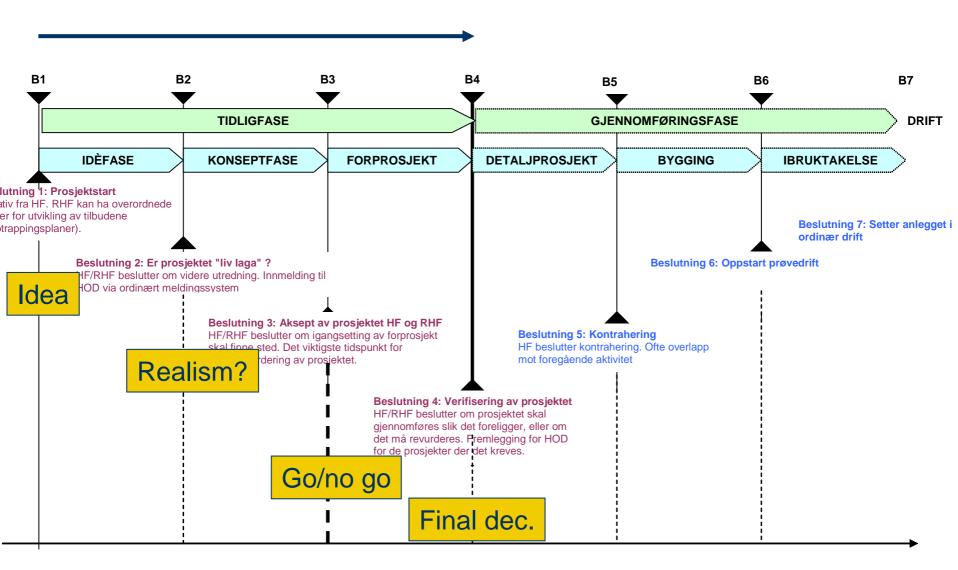
Departemental structure

Guidance for Decision making process – planning phase





Guidance for the decision making process of hospital projects – planning phase



Guidance for planning of Hospital projects

Guidance for Master plan development (2000)

- Contents and checklists
- Main principle: Transparency and reproducability

Guidance for Masterplan equipment (2001)

- Planning process, goals, cost calculus principles
- Strategies for choice use of existing equipment

Revisions neccesary – adopting to G. for planning process

Follow-up evaluation model for projects (2005)

Model for continuous follow-up of hospital project planning to influence quality of the content and implementation.

- External QA- activity by use of third-party evaluator Two forms/ roles:
- External evaluation: Is the process according to rules? more objective – less influence
- Participating evaluation: Do you do things according to good/ new ideas?
 - Less objective more influence



SINTEF Tools development:

Project:

"Facilities as a strategic tool for effective health care services"

(Multiconsult/ SINTEF)

- Methods/ models for capacity planning that build on both health care needs and facilities/ asset needs
- Methods/ models for strategic planning of buildings including Life Cycle Economy. (Multi Map)

Possible project:

Simulating hospital capacity planning



Possible interfaces, Levels (1?),2,3,5

User Requirements Management Tool: HospiTool-EcoProP

• links + information produced by the project Includes specific levels:

- Level 1 = target = scenario = HospiTool
- Level 2 = existing good practices
- Level 3 = recommendations, e.g. Building Information Files,
- Level 4 = free for comments/complaints
- Level 5 = e.g. building regulations = minimum

Expert knowledge from different sources

HospiTool partners

literature, web

User knowledge

- hospitals
- Universities of Applied Sciences
- others
- · experience, gained

- tool set
A development

platform for products and environments/

HospiTool

Virtual environment of HospiTool

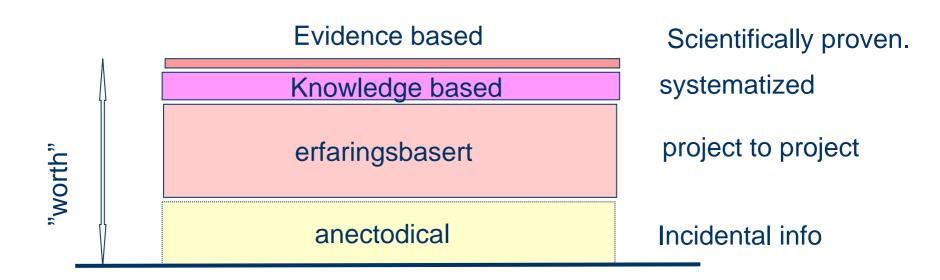
User participation

- User participation should be user involvement.
- Participation: Too often formal, not always the right people (RH)
- Involvement means:
 - empathy from the user
 - Assurance that she will have practical influence on the end product
- Attempts at getting users understand space needs, functionality, when decisions shall be made – at the right level.
- Does the real life mock-up tell the full story at the right time?
- Can the virtual representation stand alone?

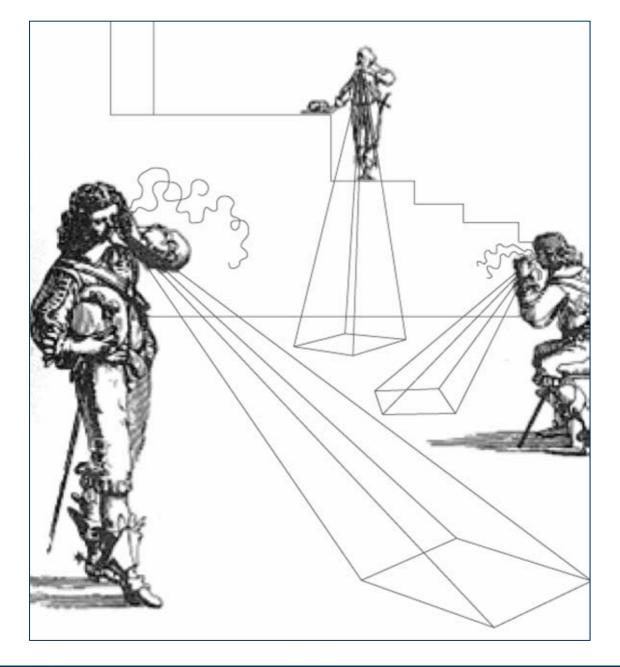


Evidence based design- for hospital designers

Basis:







Norway – and Finland

Differences in perspective may give fruitful collaboration

knut.bergsland@sintef.no

.

