

# THE POWER OF ARCHITECTURE

Hennu KJISIK, architect SAFA  
Dr.Tech., professor  
Harris-Kjisik Architects and Planners  
Oulu University School of Architecture

EuHPN Bologna October 2011



## LESSON 1

# **LEARNING FROM PAST SUCCESSES**

# Ancient Greece

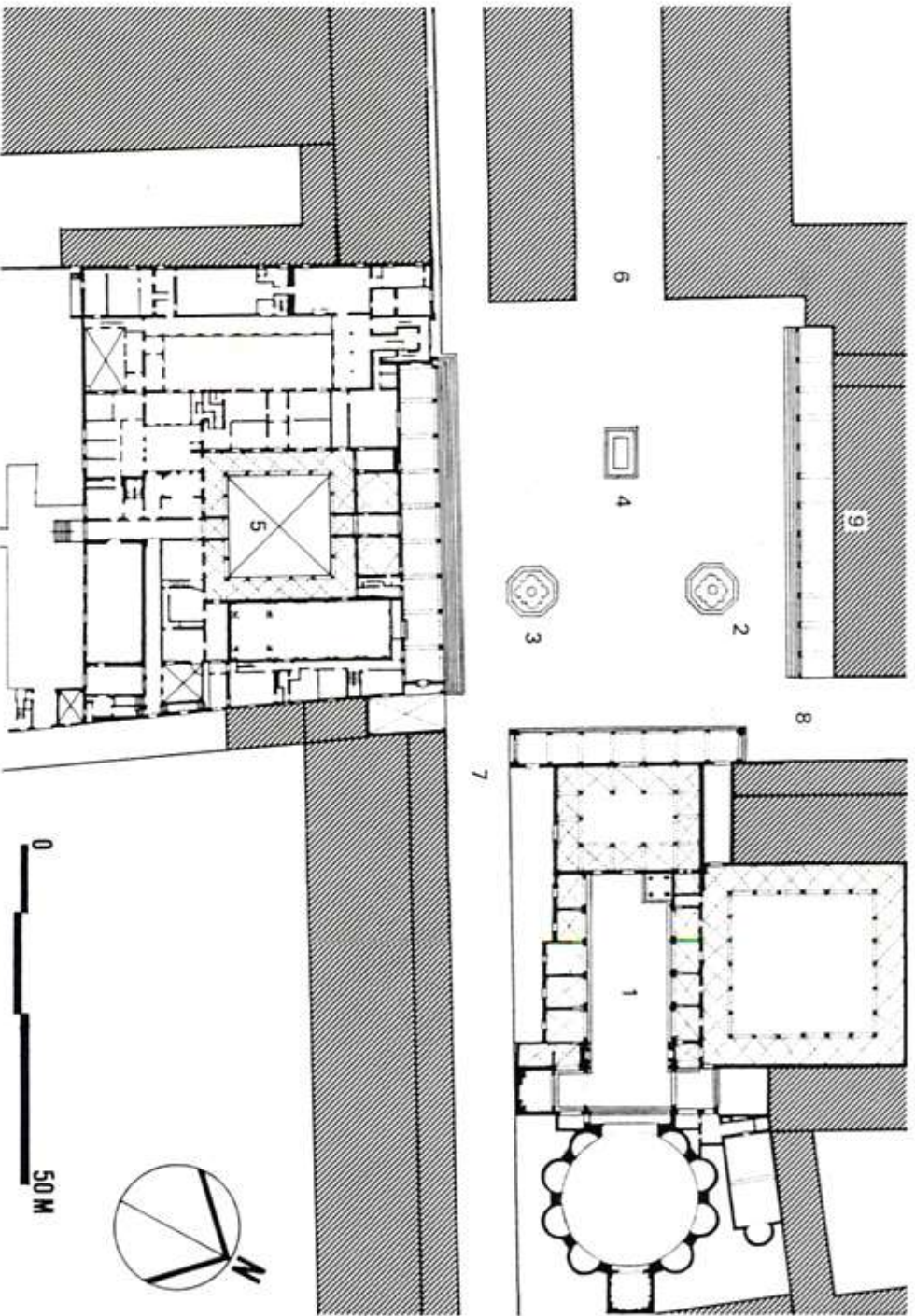
- Therapeutic environment
- Fresh air, daylight, views
- Fine arts, drama, physical exercise
- Activation of patients
- Generic buildings



# Renaissance

- Relationship with the surrounding city
- Generality and modularity
- Architectural quality and sustainability

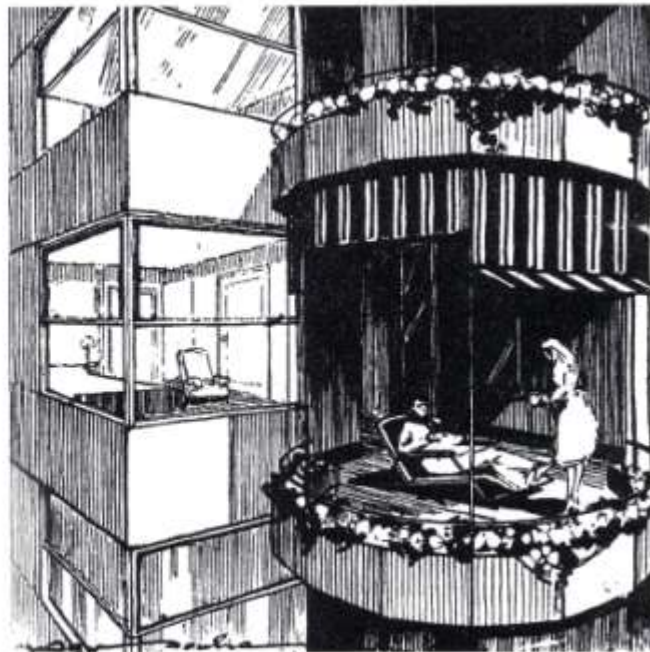
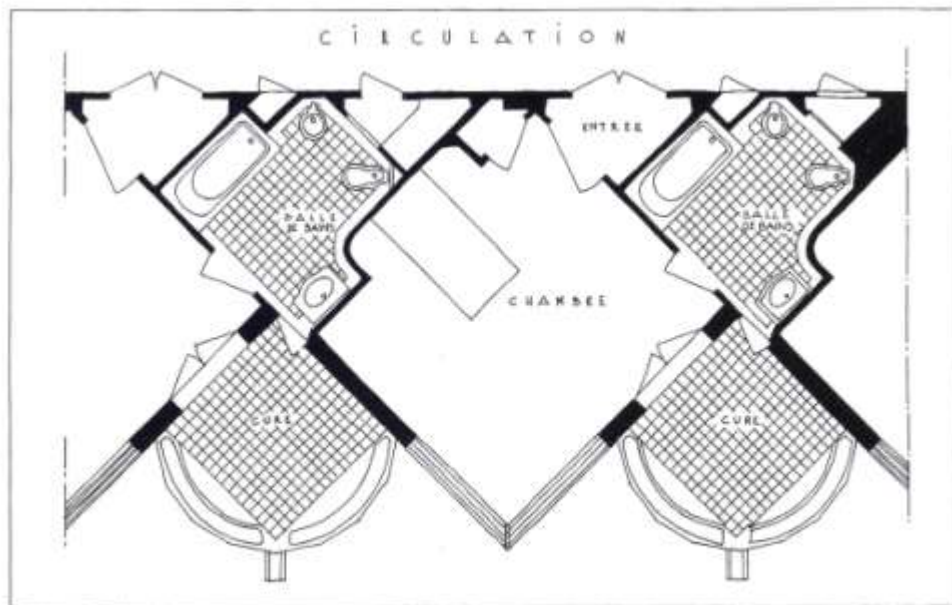




# The Tuberculosis Sanatoria

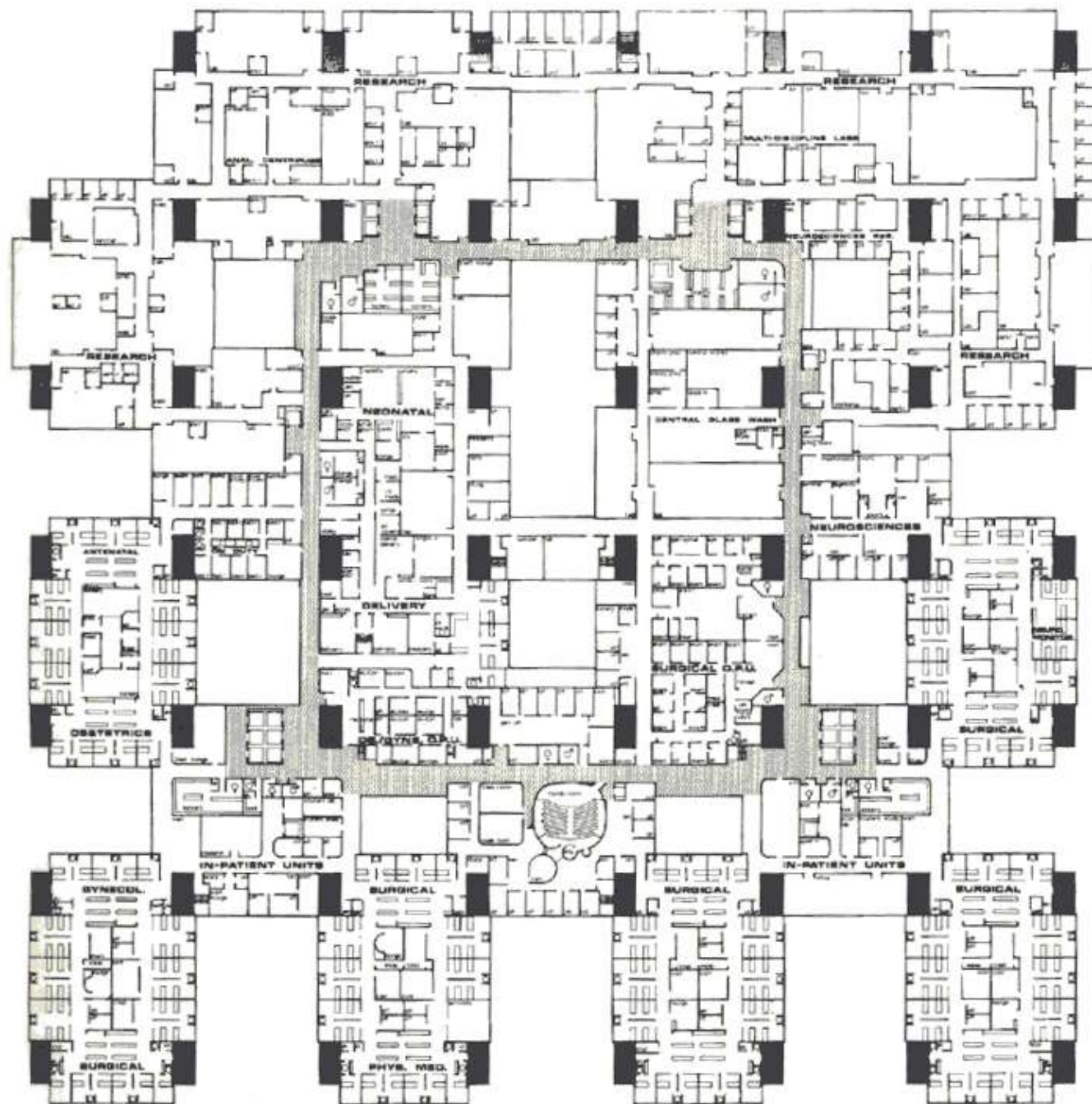
- Healing environment - fresh air, views
- Experimentation and innovation
- Social commitment of designers

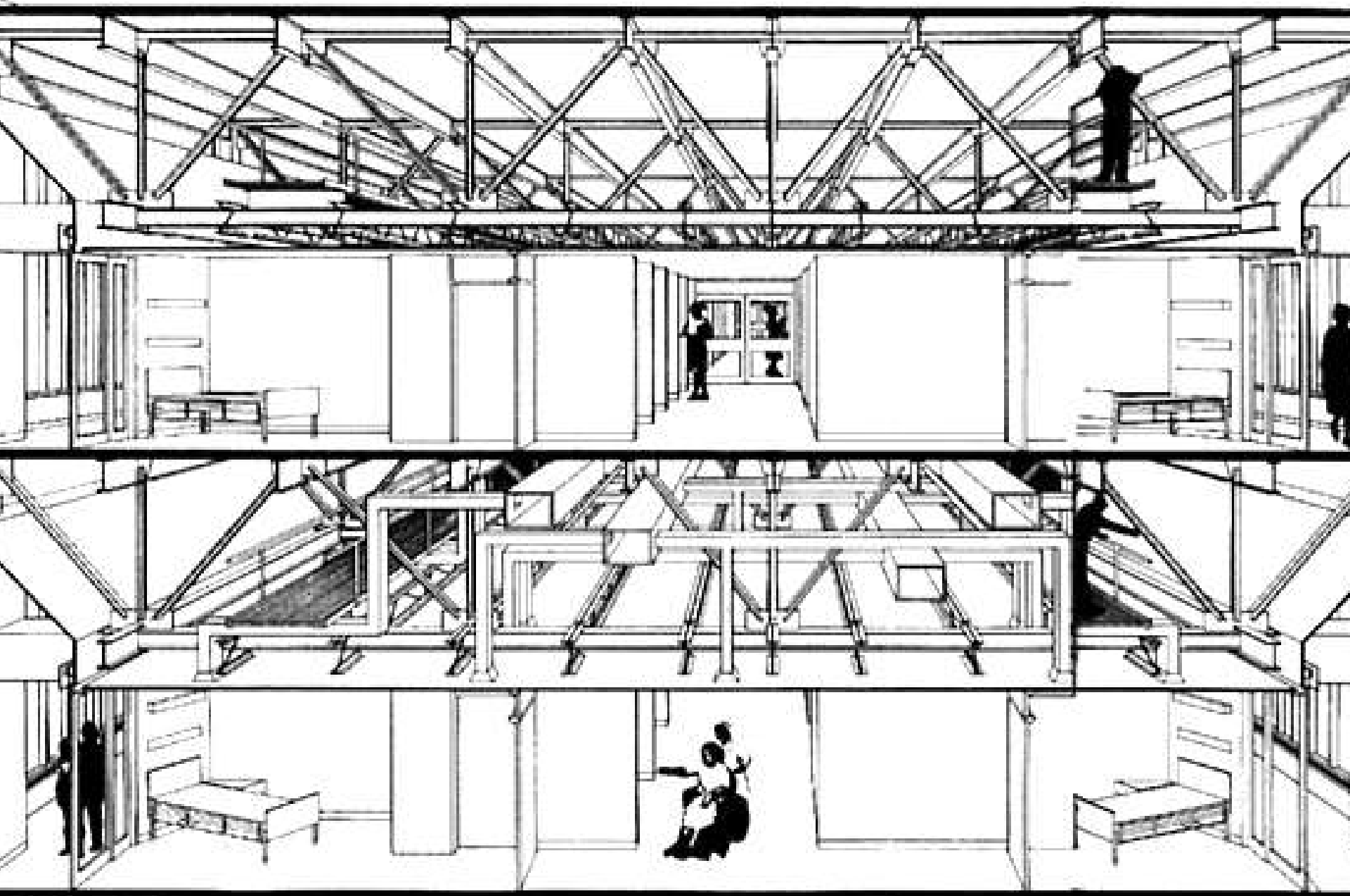




# **The "Heroic era" of the 1960s and 1970s**

- Flexibility – adaptability- modularity
- Technical innovations - interstitial floors, "plug-in" solutions
- Avant-garde of general architectural trends
- Utopias





# LESSON 2

## **LEARNING FROM PAST MISTAKES**

# What's been going wrong?

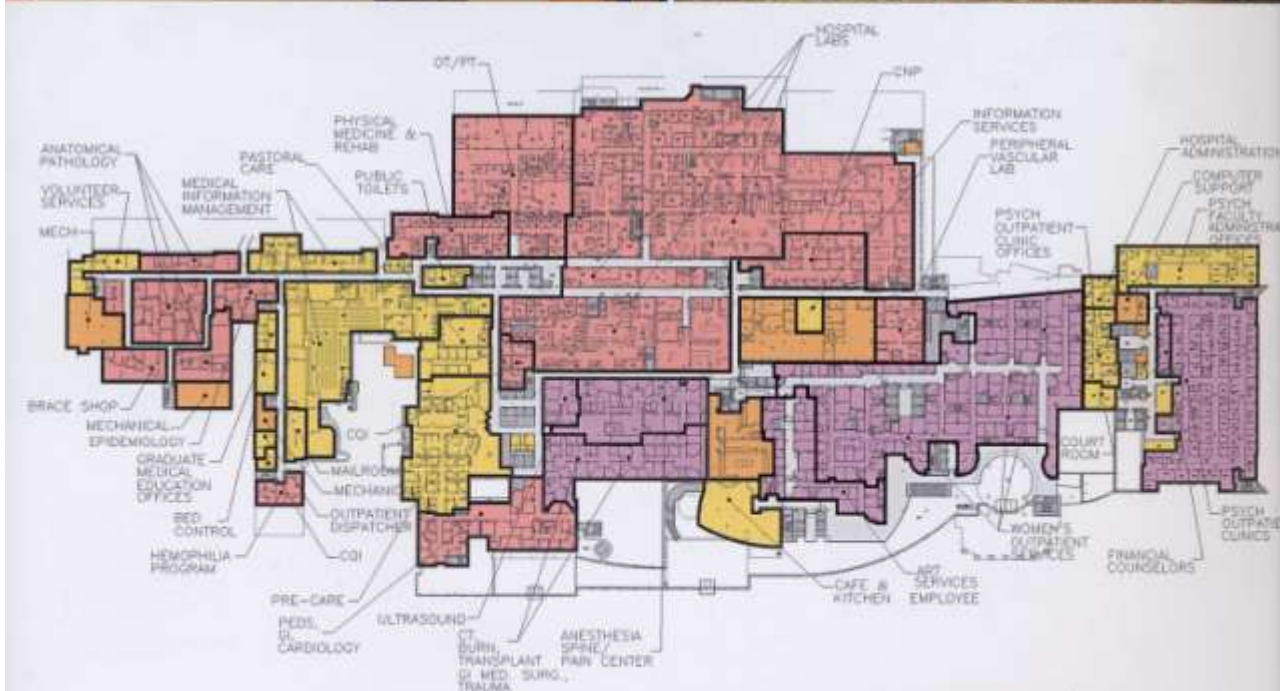
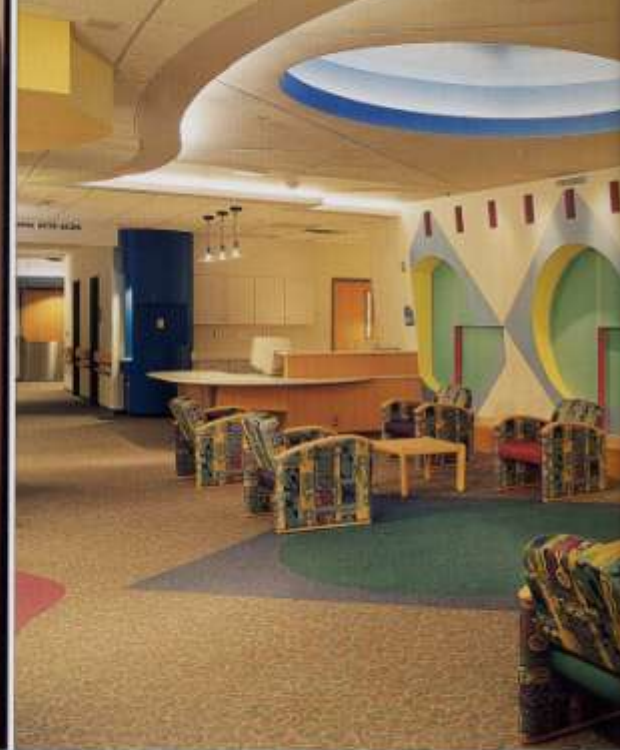
- Too many rules and regulations
- Short-sighted visions – "for me, now!"
- Insufficient understanding of lifecycle costs
- Too much specialisation and mystification
- Not enough high-quality architecture



# Healing environment and Evidence-based Design

- Ethocentricity – cultural aspects lacking
- Too much emphasis on irrelevancies
- Many results are painfully obvious
- Is "healing" art by definition second rate?
- Is evidence-based design by definition backward looking?





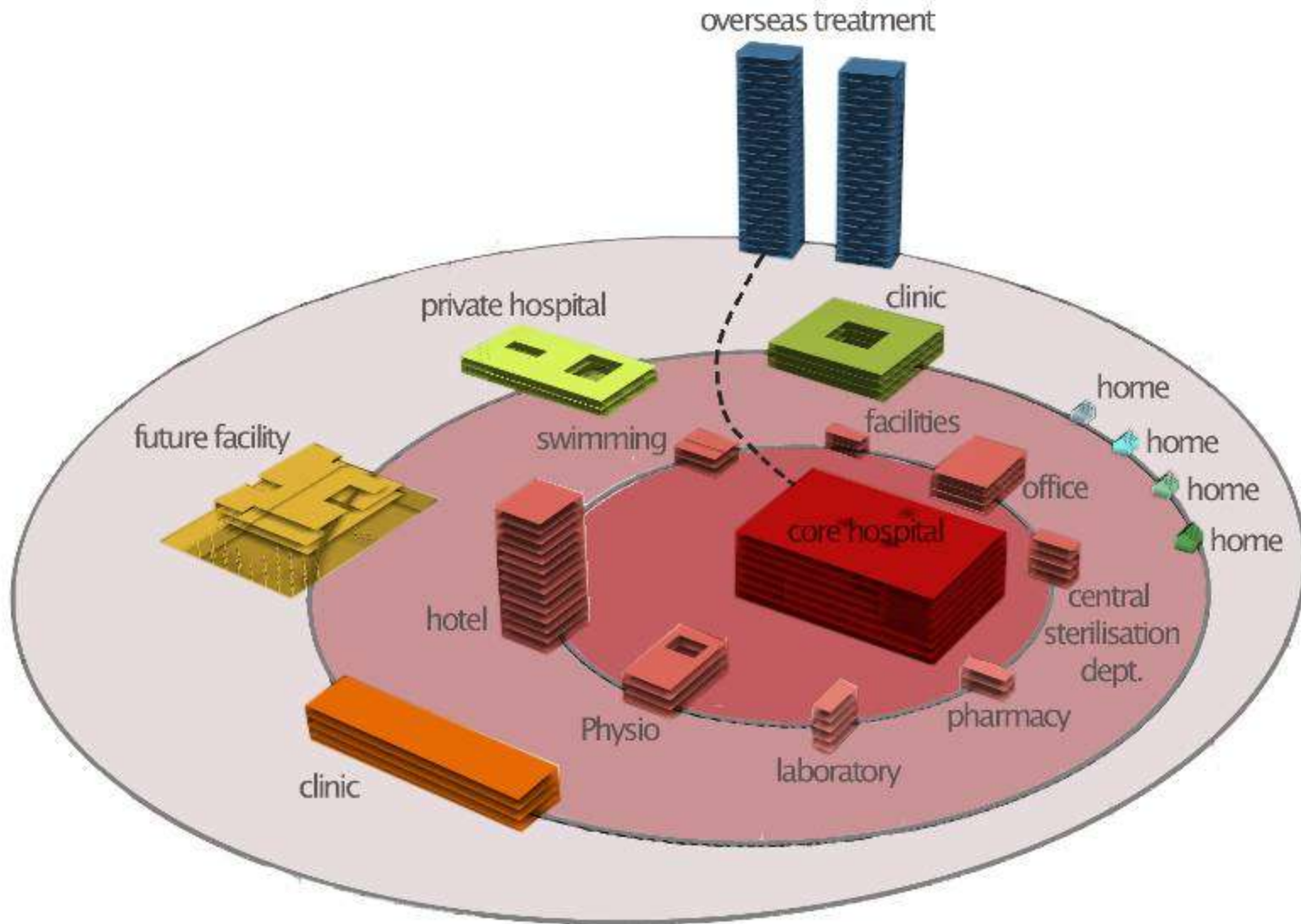
# LESSON 3

## **LEARNING FROM PRESENT BEST PRACTICES**

# **New functional units**

- The "core hospital"
- Other new organisational models
- Community rehabilitation hospitals
- Day hospitals
- Knowledge centres
- Generalised wards and patient hotels





core hospital



# Relationship with the urban environment

- Hospital as part of the city
- Urban structure as a starting point of design
- Normalisation of the patient environment
- The hospital as an important public building



zorg 2025: gebouwen voor de toekomst

healthcare 2025: buildings for the future

f a i r   c a r e



c a r e   f a i r

### HARRIS-KJISIK ARCHITECTS

Hennu Kjisik, architect SAFA

Trevor Harris, professor, architect SAFA RIBA

Marta de Abreu, architect OASRN

### HELSINKI UNIVERSITY OF TECHNOLOGY SOTERA RESEARCH INSTITUTE

Erkki Vauramo, professor, senior researcher

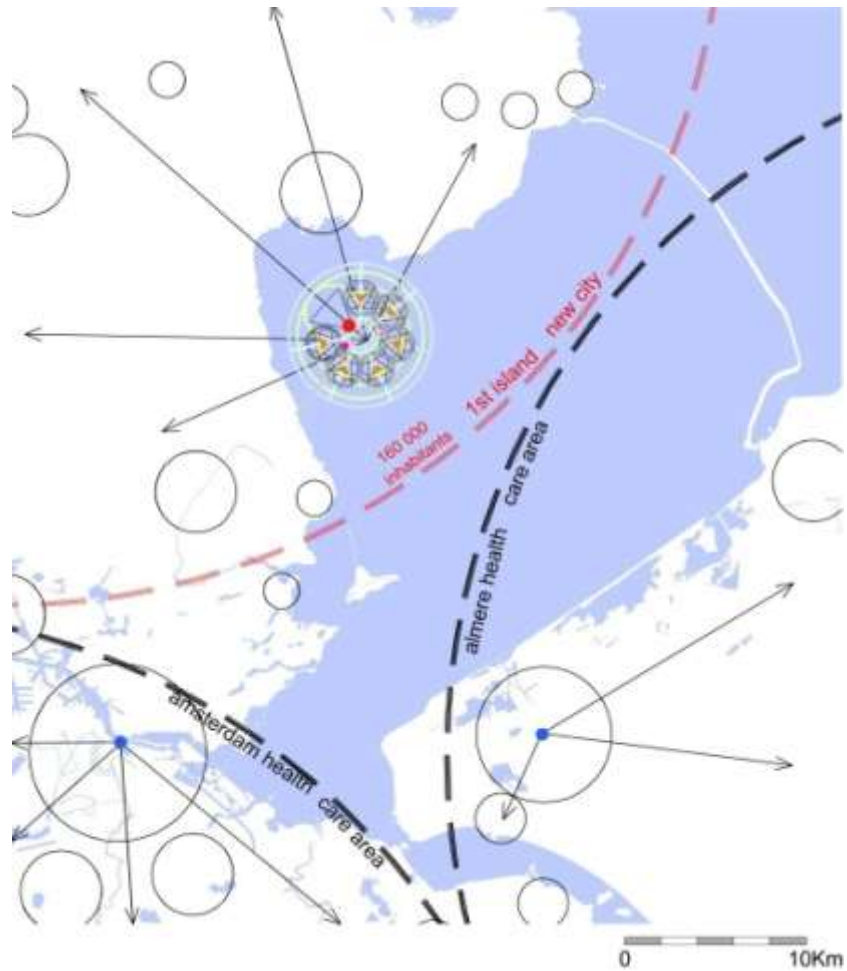
Antti Autio, architectural student

Urpo Alanko, M.D.

### ITU DESIGN

Robin Wycherley, architect RIBA

the region





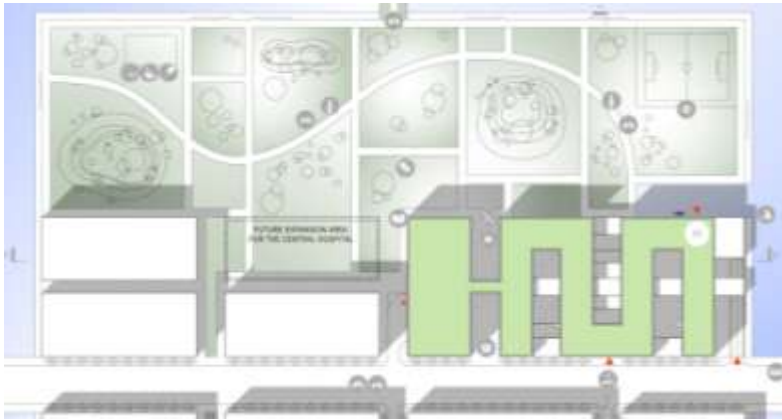


# the asclepieion concept

MAIN  
ASCLEPIEION



CENTRAL  
HOSPITAL



BEACH  
ASCLEPIEION



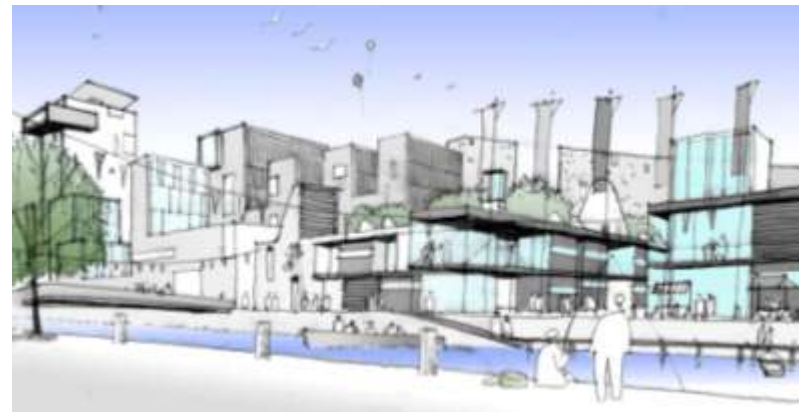
COMMUNITY  
CARE  
HOSPITAL



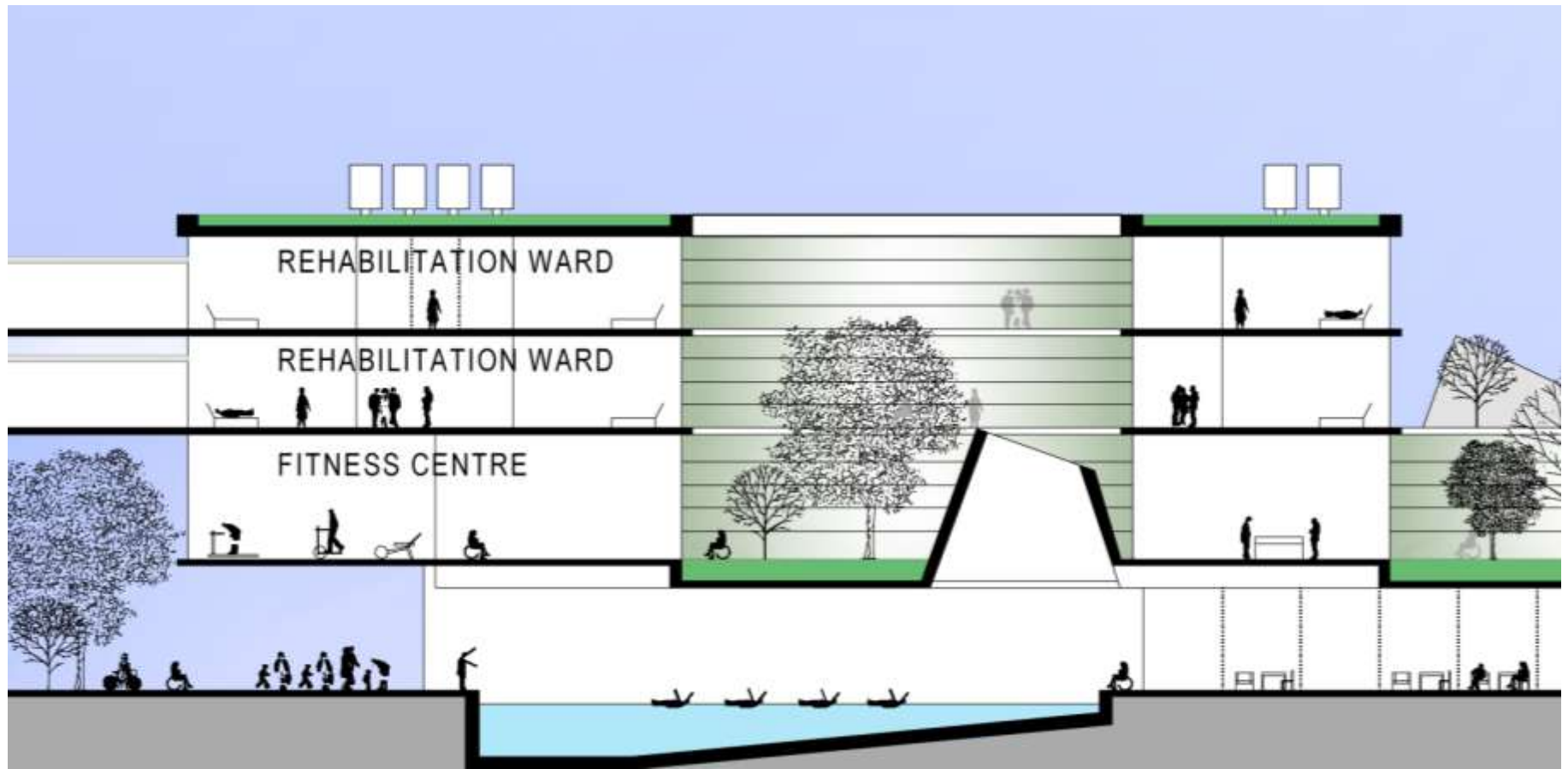
MINI  
ASCLEPIEIONS



DISTRICT  
CENTRES  
SOCIAL CARE  
SERVICES  
ELDERLY  
CARE  
SERVICES



the buildings – community care hospital ●





# **Flexibility Adaptability Wall-lessness**

- Flexibility
- Agility
- Adaptability
- Transformability
- Elasticity
- Versatility
- Changeability
- Convertibility
- Repeatability
- Modularity
- Generality
- Future-proof!



**PAPERLESS  
WIRELESS  
WALL-LESS  
BEDLESS!**



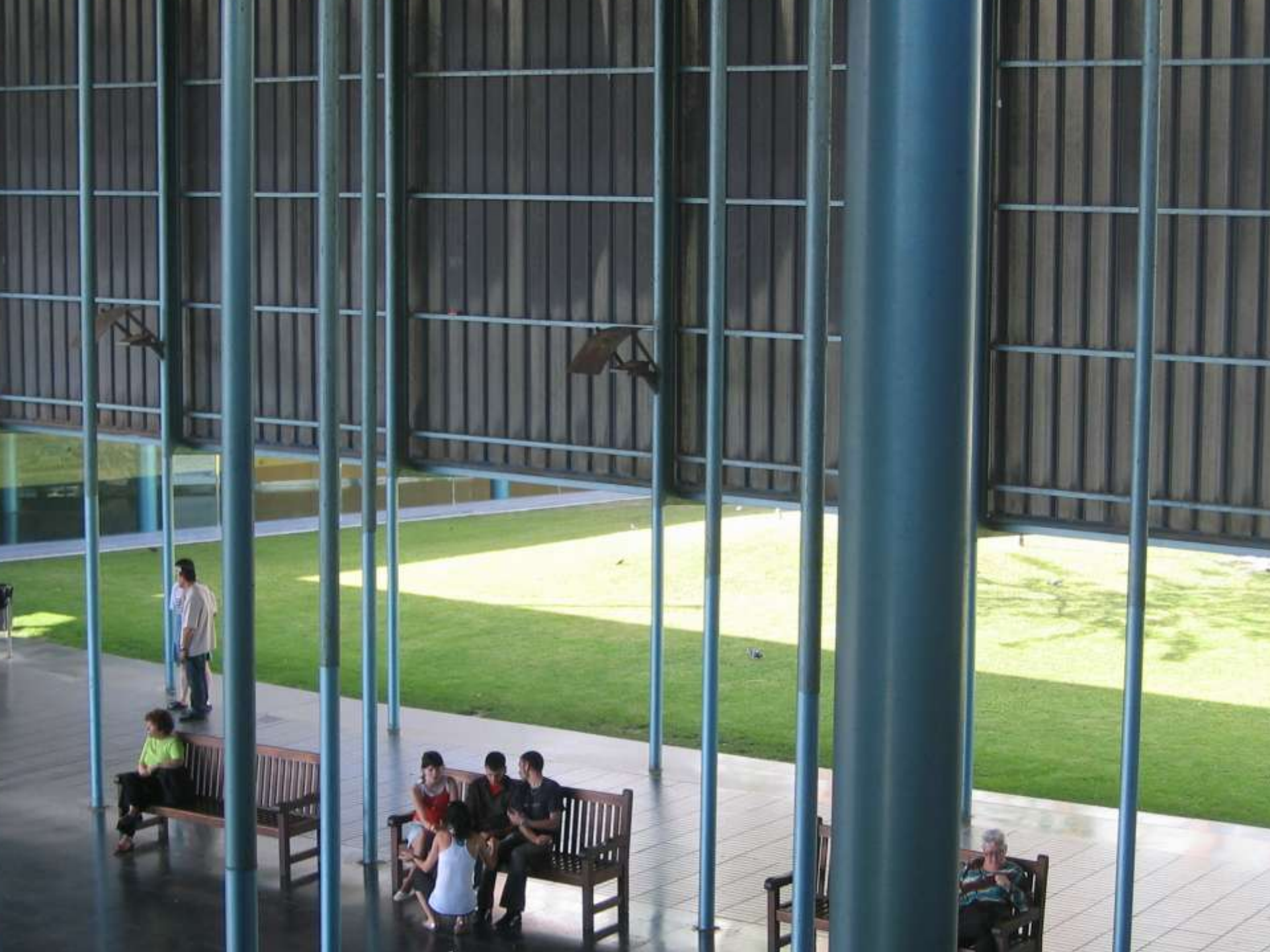
# SOME ENCOURAGING EXAMPLES

- The "monospace" of Arras
- The public areas of Del Mar, Barcelona
- The urbanism of Cognacq-Jay, Paris
- The "buzz" of Deventer
- The knowledge centre and wards of Sittard
- The elegance of De Luz, Lisbon □
- The luxuriance of public areas in Mestre













# ENTER ZIEKENHUIS









Paul Groenendijk, Piet Vollaard  
Rook & Nagelkerke

# Architectuurgids Nederland (1980–nu) Architectural Guide to the Netherlands (1980–Present)

010 Publishers

- 075 Haverleij Den Bosch Soeters Van Eldonk-Ponck 1995–2010  
085 IJburg Amsterdam Palmboom & Van den Bout 1995–2010  
045 Stationsgebied Arnhem un Studio 1996–2010  
047 De Veranda Rotterdam Soeters Van Eldonk-Ponck,  
R.H.M. Uytendaele 1998–2010  
045 Science Park Amsterdam KCA 2001–2010  
042 Wateringseveld Den Haag pso 1995–2011  
016 Oostendijkland Amsterdam E.L.J.M. van Egeraat 2001–2011  
035 Leidse Rijn Utrecht avk, Makwan, H+N+S 1993–2012  
095 Ypenburg Den Haag Palmboom & Van den Bout 1994–2013  
003 De Blauwe Stad Winschoten De Zwarte Hond 1999–2013  
034 Brandevoort Helmond Krier & Kohl 1996–2017  
042 Zuidas Amsterdam P.B. de Bruijn 1995–2010

## Overheidsgebouwen - Government buildings

- 001 Stadhuis Lelystad J. Hoogstad 1976–1984  
033 Gemeentehuis Tielsteradeel A. Bonniema 1979–1985  
045 Stadhuis Almere C.G. Dam 1979–1986  
048 Stadhuis Delft J.M.J. Coenen 1984–1986  
014 Stadhuis Amsterdam W. Holstbaer, C.G. Dam 1979–1987  
020 Arbeidsbureau Veghel H.A.J. Henket 1984–1987  
020 Tweede Kamer Den Haag P.B. de Bruijn 1981–1992  
016 Ministerie van VROM Den Haag J. Hoogstad 1986–1992  
002 Stadhuis Apeldoorn H.J.M. Ruijsendaers 1988–1992  
037 Gemeentehuis Wehl H.A.J. Henket 1990–1992  
013 Stadhuis Den Haag R.A. Meier 1988–1995  
035 Politiebureau Vast W.M.J. Arens 1993–1995  
012 Waagstraat Groningen A. Nalati 1991–1996  
014 Raadhuis Terneuzen K.J. van Velsen 1993–1996  
019 Rijkskamer Den Haag A.E. & H. van Eyck 1991–1997  
034 Wilhelminahof Rotterdam C.G. Dam, Kraaijanger Urban  
1994–1997  
016 Justitie Den Bosch Ch. Vandenhoef 1992–1998  
036 Stadhuis Schiedam H.J.M. Ruijsendaers 1992–1998  
030 Stadhuis Zuylen Th.M. Rau 1994–1999  
001 Stadhuis Utrecht E. Miralles 1997–2000  
003 Gerechtsgebouw Lelystad Dam & Partners 1998–2001  
095 Stadhuis Alphen E.L.J.M. van Egeraat 1997–2003  
018 Ministerie OCW Den Haag Kohn Pedersen Fox 1998–2003  
021 Tweede Kamer Den Haag H.J.M. Knippen 1996–2004  
017 Stadhuis Den Bosch D.J. Postel 1997–2004  
001 Stadhuis Breda Claus & Kaan 1999–2004  
009 Stadhuis Middelburg Th.M. Rau 1999–2004  
027 Gemeentehuis Tynaarlo Claus & Kaan 2000–2004  
044 Stadhuis Rotterdam J.D. Bekker 1999–2005  
002 Gemeentehuis Slochteren 2014 2003–2005  
014 Huis voor Cultuur en Bestuur Nijental Claus & Kaan  
2003–2007  
019 Stadhuis Grave E.L.J.M. van Egeraat 2002–2008  
030 Stadhuis Zaandam Soeters Van Eldonk 2004–2010

## Onderwijsgebouwen - Buildings for education

- 001 Willemsparkschool Amsterdam H. Hertzberger 1980–1983  
001 Montessori College Amsterdam H. Hertzberger 1980–1983  
042 Rijksakademie Amsterdam K.J. van Velsen 1982–1992  
038 Laboratorium Wageningen Mecanoo 1990–1992  
035 De Polygoon Almere H. Hertzberger 1990–1992  
047 Academie Maatschappij W.M.J. Arens 1990–1993  
044 Basisschool Papendrecht H. Hertzberger 1992–1994  
034 Huiscollege Silvius Mecanoo 1990–1995  
008 Faculteit Economie Utrecht Mecanoo 1991–1995  
035 De Bombardier Almere H. Hertzberger 1993–1995  
028 Haagse Hogeschool Den Haag Atelier Pro 1990–1996  
014 Educatorium Utrecht 014 1992–1997  
037 Onderzoekcentrum Wageningen S. Behnisch 1992–1998  
028 De Witte Dame Eindhoven Dirix Van Wylick 1994–1998  
013 Minnaertgebouw Utrecht Neutelings Riedijk 1994–1998  
010 Huis van de Architectuur Groningen J. Huisinga, J. Koek  
1994–1998

- 043 Montessori College Amsterdam Architectuurstudio  
Hertzberger 1995–1999

- 055 Ichthus Rotterdam E.L.J.M. van Egeraat 1996–2000  
021 Vonderschool Groningen Atelier Pro 1996–2000  
030 De Brink Laren Smidder Compagnons 1996–2001  
043 De Vijver Den Haag M.Chr. Rohmer 1998–2001  
003 Triade Den Helder D.E. van Gerner, B. Meesterbroek  
1998–2001  
001 Vertigo Eindhoven H.H.L.M. Dirix 1997–2002  
018 Rekencentrum Groningen Inbo 2000–2002  
009 De Kleine Kikker Utrecht Drost & van Veen 2001–2003  
044 ARTEZ Arnhem H.A.J. Henket 2001–2004  
032 Scheepvaart- en Transportcollege Rotterdam Neutelings  
Riedijk 2000–2005  
029 Brede school Utrecht Verhoeven 2001–2005  
009 A.A. Hijnans van den Bergh Gebouw Utrecht E.L.J.M. van  
Egeraat 2002–2005  
021 De Kikker Amsterdam E.M. van der Pol 2000–2006  
059 Instituut Amsterdam J.P. Th. Dekkers 2000–2006  
035 Metz Oosterschelde E.L.J.M. van Egeraat 2002–2006  
056 Alliagebouw Wageningen R. Vidyol, Van den Oever Zastjer  
2002–2006  
021 Sim-Lucas Boxtel RAT Architecture 2002–2006  
055 Forumgebouw Wageningen Quist Wintermans 2002–2007  
030 Kinder Cijfer Utrecht VMK Architects 2002–2007  
045 Juniorcollege Julianadorp SEAC 2004–2007  
042 Fifty Two Degrees Nijmegen Mecanoo 2004–2007  
013 De Matrix Harderwijk M.Chr. Rohmer 2004–2007  
018 Bernoulfborg Groningen De Zwarte Hond 2004–2007  
032 High Tech Campus Eindhoven Inbo, JHK 1997–2008  
043 Leerpark Dordrecht Diverse architecten 2003–2008  
014 Researchlaboratorium Groningen un Studio 2003–2008  
014 Faculteit Groningen RAU 2003–2008  
054 Radiagebouw Wageningen 054 2003–2009  
018 Faculteit Groningen R.H.M. Uytendaele 2004–2009  
045 Faculteit Amsterdam R.H.M. Uytendaele 2001–2010  
045 Science Park Amsterdam KCA L.L.M. diverse architecten  
2001–2010

## Gebouwen voor de gezondheidszorg - Health service buildings

- 034 De Donsbergen Duizel C.G. Dam 1975–1988  
026 Sterreboos Roosendaal C.J.M. van de Ven 1980–1989  
025 Medisch centrum Hagert W.M.J. Arens 1988–1989  
034 Gezondheidscentrum Almere A.E. & H. van Eyck 1989–1993  
009 Ronald McDonaldhuis Utrecht Bosch Haslett 1996–1999  
001 Ronald McDonaldhuis Houthem F. Hunderwasser 1987–2007  
030 Groot Klimmendaal Arnhem K.J. van Velsen 1997–2009

## Kantoorgebouwen - Office buildings

- 004 RABO-bank Utrecht Arcon 1978–1983  
019 Zwolsche Algemeene Nieuwegein P.J. Gerssen 1982–1984  
034 OEF Leeuwarden A. Bonniema 1978–1985  
053 Welzijnssamenleving Heerlen J.M.J. Coenen,  
P.A.M. Meertens 1983–1985  
034 RYO Leeuwarden A. Bonniema 1980–1986  
007 WTC Rotterdam Grootman Partners 1981–1986  
051 Nieuw (NVC) Amsterdam Alberts & Van Hout 1979–1987  
016 High-Tech Center Nieuwegein capendo 1984–1987  
004 Meka Vooruit Den Haag H. Hertzberger 1979–1990  
070 K&S Amersfoort A. Cahen 1976–1988  
018 Willemswerf Rotterdam W.G. Quist 1983–1989  
008 ESTEC Noordwijk A.E. & H. van Eyck 1985–1989  
012 Eigen kantoor Amsterdam S. Soeters 1988–1989  
035 Ministerie Den Haag H. Hertzberger 1979–1990  
008 Hoofdkantoor FTT Groningen F.J. van Gool 1983–1990  
053 Randstad Rotterdam W.G. Quist 1987–1990  
007 Effectenkantoor Amsterdam M.A.A. van Schipdijl  
1988–1990  
011 Havenkantoor Groningen G. Daan 1989–1990  
003 Siemens Zoetermeer G.R. Standke & R. Dierker 1989–1990

"The rules of hospital design left less freedom, and it became regarded as a building type that was worthy and dull, more or less lost to architecture"

*Peter Blundell-Jones, 2002*

"Aalto, Corbusier and Lubetkin placed health care firmly at the heart of the Modernist agenda. If they were practising in Britain today would they simply walk away?"

*Isabel Allen, 2003*







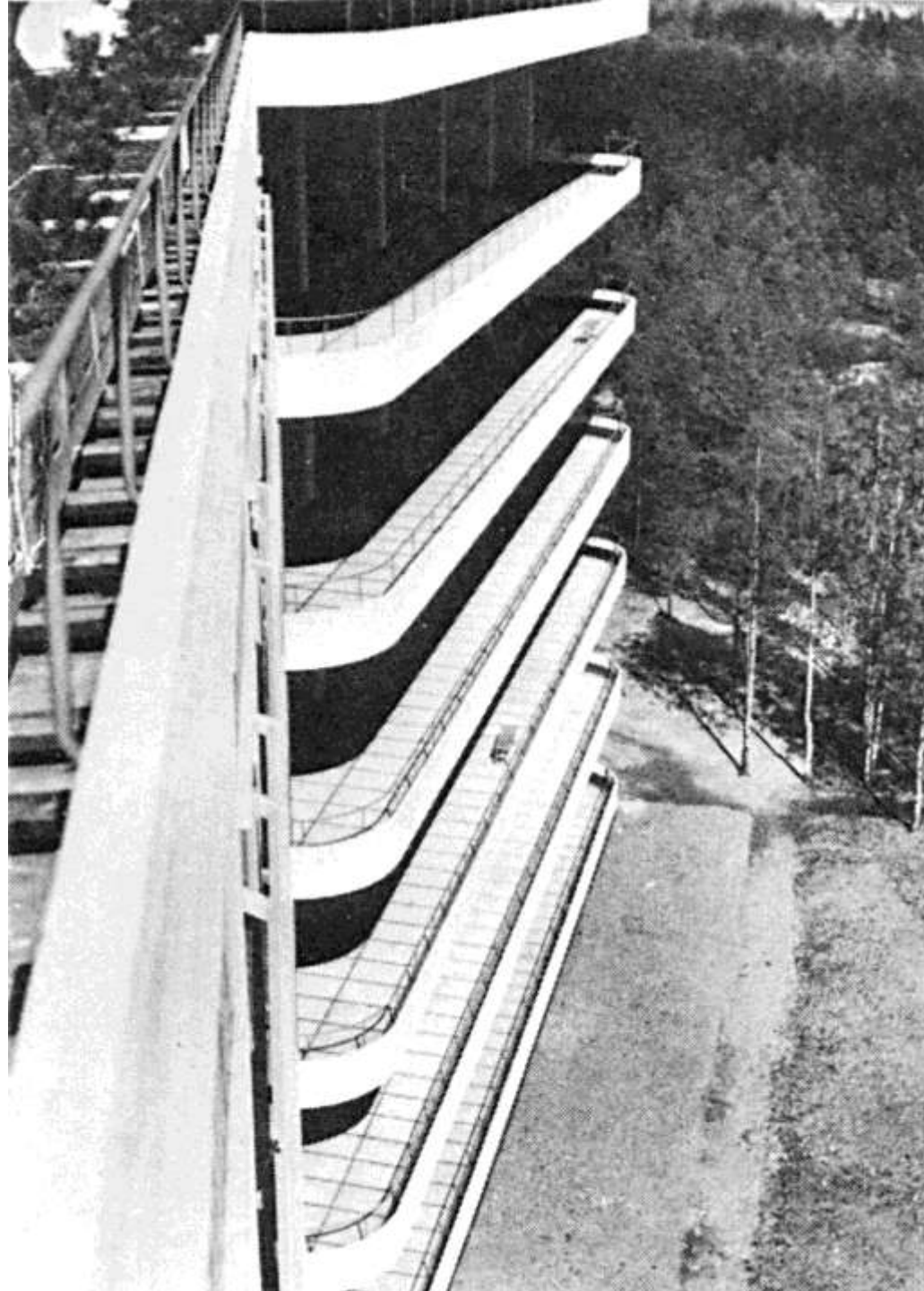




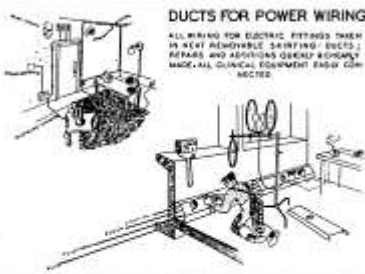
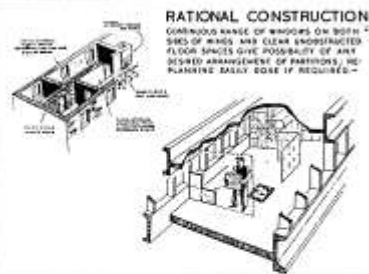
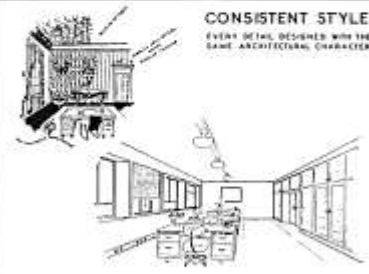
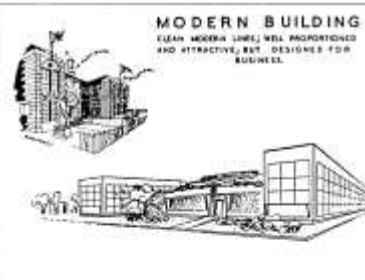
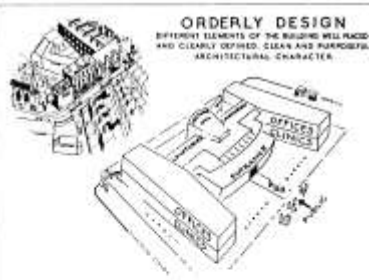


















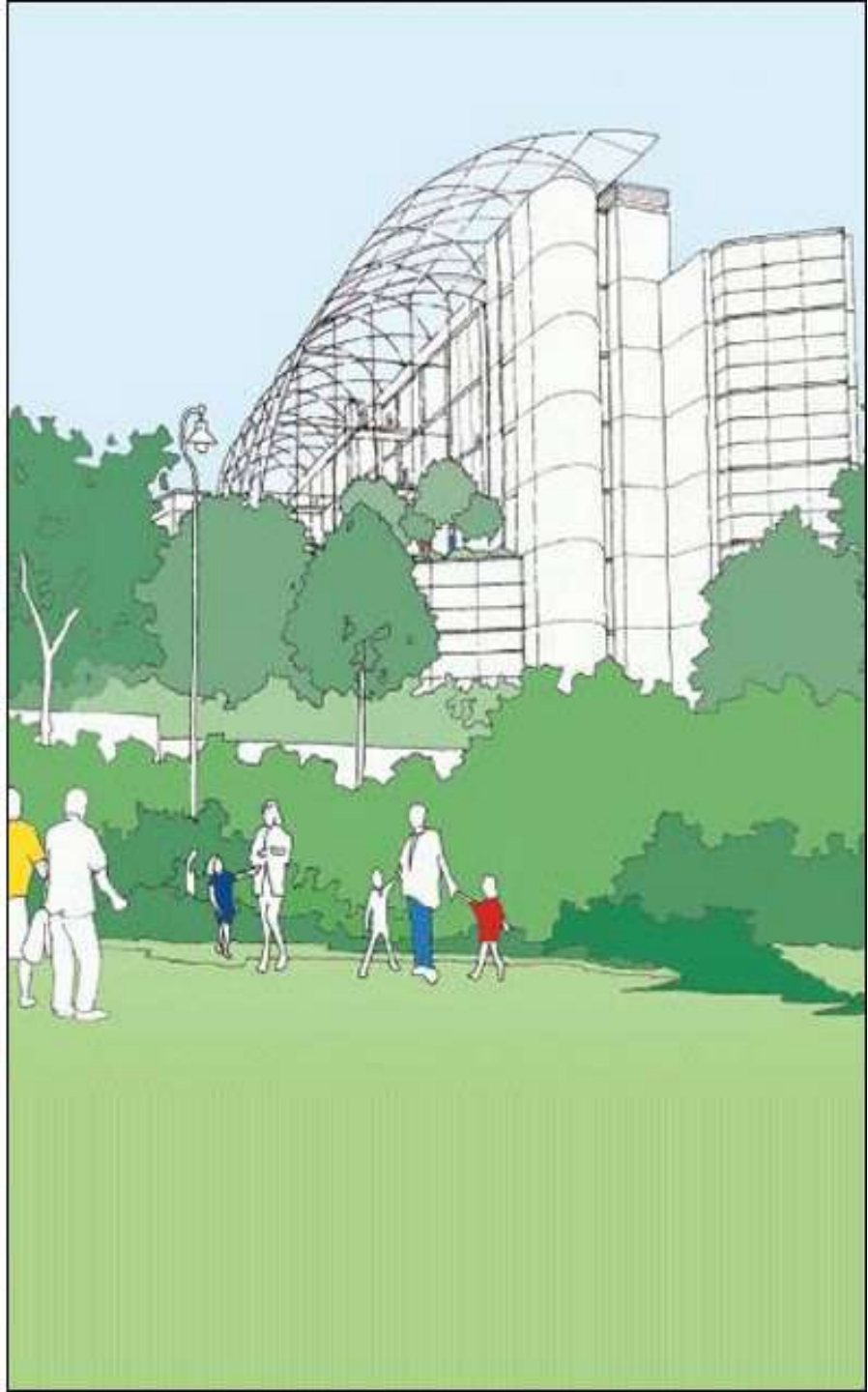
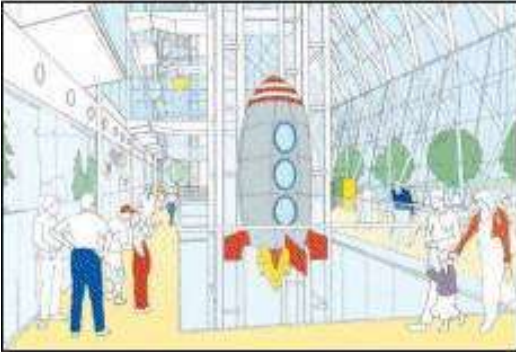
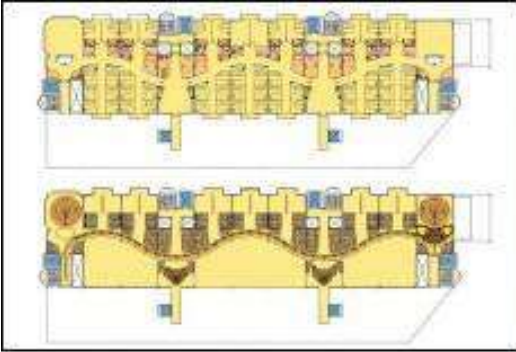












# HEALTHCARE

RANK		PRACTICE	COUNTRY	INCOME (US\$ MILLION)
08	07			
1	1	HKS Inc	US	92.0
2	4	Perkins & Will	US	64.3
3	3	RTKL Associates	US	62.3
4	7	Perkins Eastman	US	62.0
5	6	HOK	US	61.4
6	5	NBBJ	US	60.9
7	8	Cannon Design	US	59.1
8	—	Stantec Architecture	Canada	49.4
9	17	Nikken Sekkei	Japan	43.9
10	11	Zimmer Gunsul Frasca Architects	US	38.0

## LESSON 4

**ORGANISE ARCHITECTURAL  
COMPETITIONS TO PROCURE  
FRESH IDEAS!**

# WHAT IS A GOOD DESIGN COMPETITION LIKE?

- It is completely open to all-comers
- No pre-registration is required
- The submission does not include anything to do with money (building costs, fees etc.)
- The prize money is sufficient to attract the best
- The programme is logical, the required documents are clearly defined
- The process is COMPLETELY anonymous
- The Jury has a sufficient number of architect members (including some well-known ones) but also representatives of all user groups, major civil servants and local politicians

# CASE STUDY

**TWO-STAGE INTERNATIONAL  
COMPETITION FOR A NEW  
REHABILITATION HOSPITAL  
IN ESPOO, FINLAND 2008**



# ESPOO COMPETITION FACTS AND FIGURES

- Organised by the City of Espoo
- 1st stage 14.1 - 30.4.2008
- 2nd stage 4.7 - 1.10.2008
- Results announced 12.12.2008
- 48 entries submitted for first stage
- 6 entries chosen for the second stage

# ESPOO ROOM SCHEDULE

## **MAIN UNITS (WITH TOTAL M2) (PREFERABLY TO BE LOCATED IN THE NEW BUILDING):**

ENTRANCE AREA 340  
REHABILITATION WARD 10580  
OUT-PATIENT REHAB CLINIC 2005  
PRIMARY CARE UNIT 1365  
DENTAL HEALTH 445  
LABORATORY AND IMAGING 450  
CATERING AREAS 850  
STAFF SOCIAL AREAS 745  
OTHER PUBLIC SERVICE AREAS 430  
MAINTENANCE 190  
MORGUE 100  
TECHNICAL AREAS 5000

## **MAIN UNITS (WITH TOTAL M2) (PREFERABLY TO BE LOCATED IN THE EXISTING BUILDING):**

DISPENSARY 600  
MEETING AND TRAINING AREAS 1500  
ADMIN AND GUIDANCE 700  
APARTMENT UNITS  
("LIFE AND LIVING") 7500 – 9000  
HOME HOSPITAL UNIT 100  
COMMUNITY CARE  
AND ACTIVITY CENTRE 600  
PHYSICAL EXERCISE AREA 1000  
CENTRAL STORE 800 – 2000

**TOTAL FLOOR AREA APPR. 40000M2**

# REQUIRED DOCUMENTS

## 1ST STAGE:

Site plan 1:1000  
Floor plans 1:400  
Elevations and sections 1:400  
Perspective drawings  
Written description

## 2ND STAGE:

Site plan 1:500  
Floor plans 1:200  
Axonometric drawing 1:400  
Floor plan fragments 1:100  
Elevational and  
sectional fragments 1:50  
Perspective drawings  
Written description  
Scale model 1:1000

# ESPOO JURY

## **Appointed by the organisers:**

Juha Metso, MD, Deputy Mayor (health)  
Maria Guzenina, Chair of S & H committee  
Lars Hagman, City Architect  
Tuula Heinänen, MD, Director of Health  
Hennu Kjisik, architect  
Elina Kylmänen, Project Manager  
Heikki Laukala, Director of Real Estate  
Olavi Louko, Deputy Mayor (technical)  
Kari Moilanen, architect, Chief Planner  
Pekka Rantanen, MD, Chief of Geriatrics  
Veronica Rehn-Kivi, architect  
J-J. Särkijärvi, architect, M.P.  
Marjatta Varsila, Deputy City Architect  
Ton Venhoeven, architect, professor

## **Appointed by SAFA (Finnish Association of Architects):**

Selina Anttinen, architect  
Markku Hedman, architect, professor

## **The following experts were consulted:**

Tom Bremer, mechanical engineer  
Pertti Hakamäki, structural engineer  
Sirpa Sivonen, architect, town planner  
Aulikki Torniainen, architect  
Veli-Pekka Tynkkynen, electrical engineer  
Erkki Vauramo, professor

# ESPOO RESULTS

1st PRIZE 65 000 EUR:

Kimmo LINTULA, Niko SIROLA,  
Mikko SUMMANEN / K2S Architects, Helsinki

2nd PRIZE 45 000 EUR

Ilmari LAHDELMA /  
Lahdelma & Mahlamäki, Helsinki

PURCHASE 15 000 EUR

Veijo MARTIKAINEN, Timo MERTSALMI /  
Martikainen Architects, Espoo

PURCHASE 15 000 EUR

Manuel BRULLET, Albert de PINEDA,  
Alfonso de LUNA, Laia LARA SANS /  
Brullet-Pineda Arquitectes, Barcelona

PURCHASE 15 000 EUR:

Jari LEPISTÖ, Sari NIEMINEN, Jukka SAINIO  
Helsinki

PURCHASE 15 000 EUR

Vesa NIKKILÄ, Jussi PALVA, Riina PALVA  
Ilkka SALMINEN / Verstas Architects, Helsinki

HONOURABLE MENTION

Petri SARELAINEN, Teemu SEPPÄLÄ, Helsinki

HONOURABLE MENTION

Antoine BUISSERET, Maeve NAESSENS,  
Loïc RION, Inès NOBLIN / Groupe 6,  
Grenoble / Paris

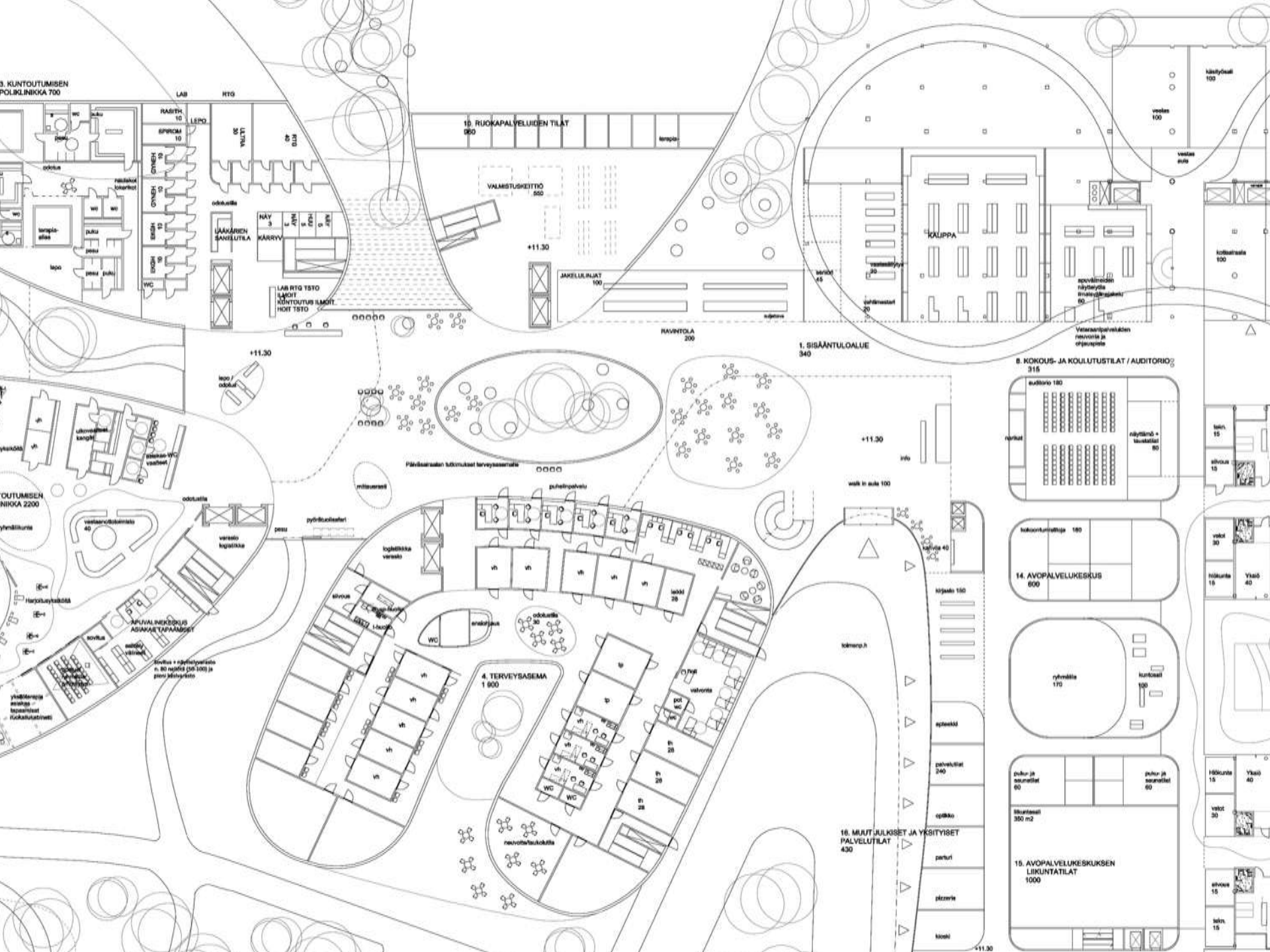
HONOURABLE MENTION

Asmo JAAKSI, Teemu KURKELA,  
Samuli MIETTINEN, Juha MÄKI-JYLLILÄ /  
JKMM Architects, Helsinki





3. KUNTOUTUMISEN  
POLKULINNOA 700



4. KUNTOUTUMISEN  
POLKULINNOA 2200



5. KUNTOUTUMISEN  
POLKULINNOA 700



6. KUNTOUTUMISEN  
POLKULINNOA 700



7. KUNTOUTUMISEN  
POLKULINNOA 700

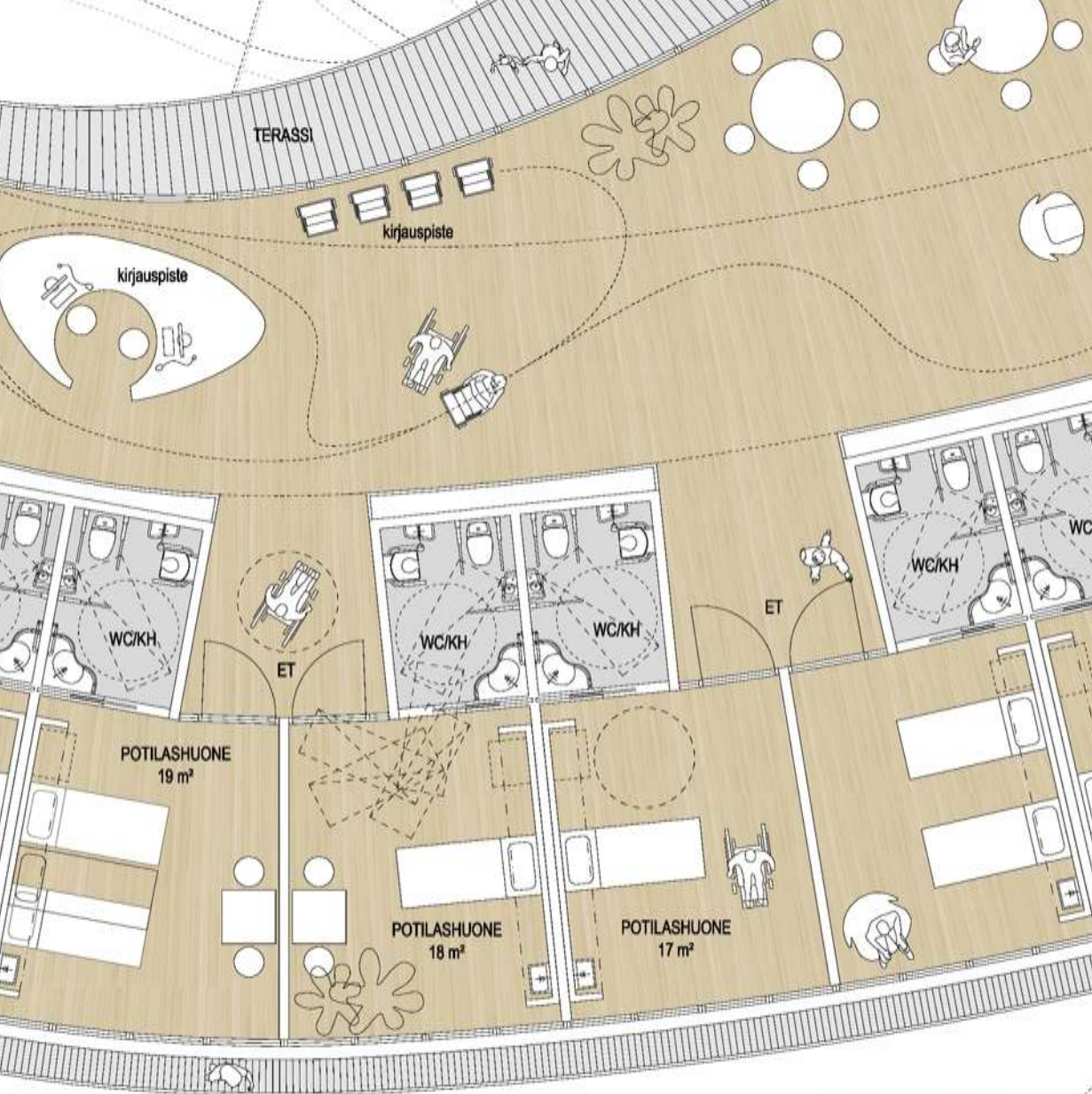












PUISTO



















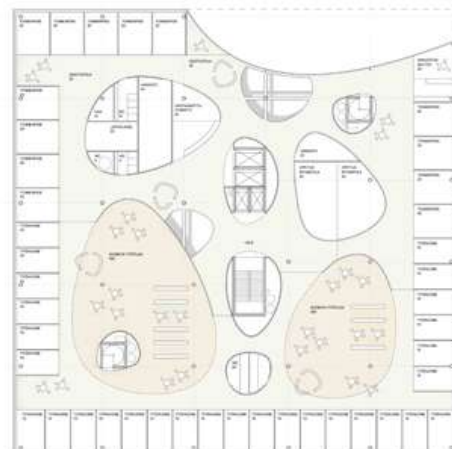
KUNTOTUULIKAMERAPOLKUMAKKA 1:200  
 SUURA TERVEYSTUULIKAMERAPOLKUMAKKA  
 5. KRS



KUNTOTUULIKAMERAPOLKUMAKKA 1:200  
 6. KRS



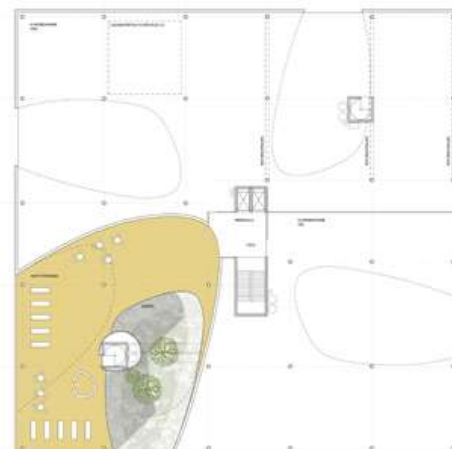
KUNTOTUULIKAMERAPOLKUMAKKA 1:200  
 3. KRS



KUNTOTUULIKAMERAPOLKUMAKKA 1:200  
 8. KRS



KUNTOTUULIKAMERAPOLKUMAKKA 1:200  
 11. KRS















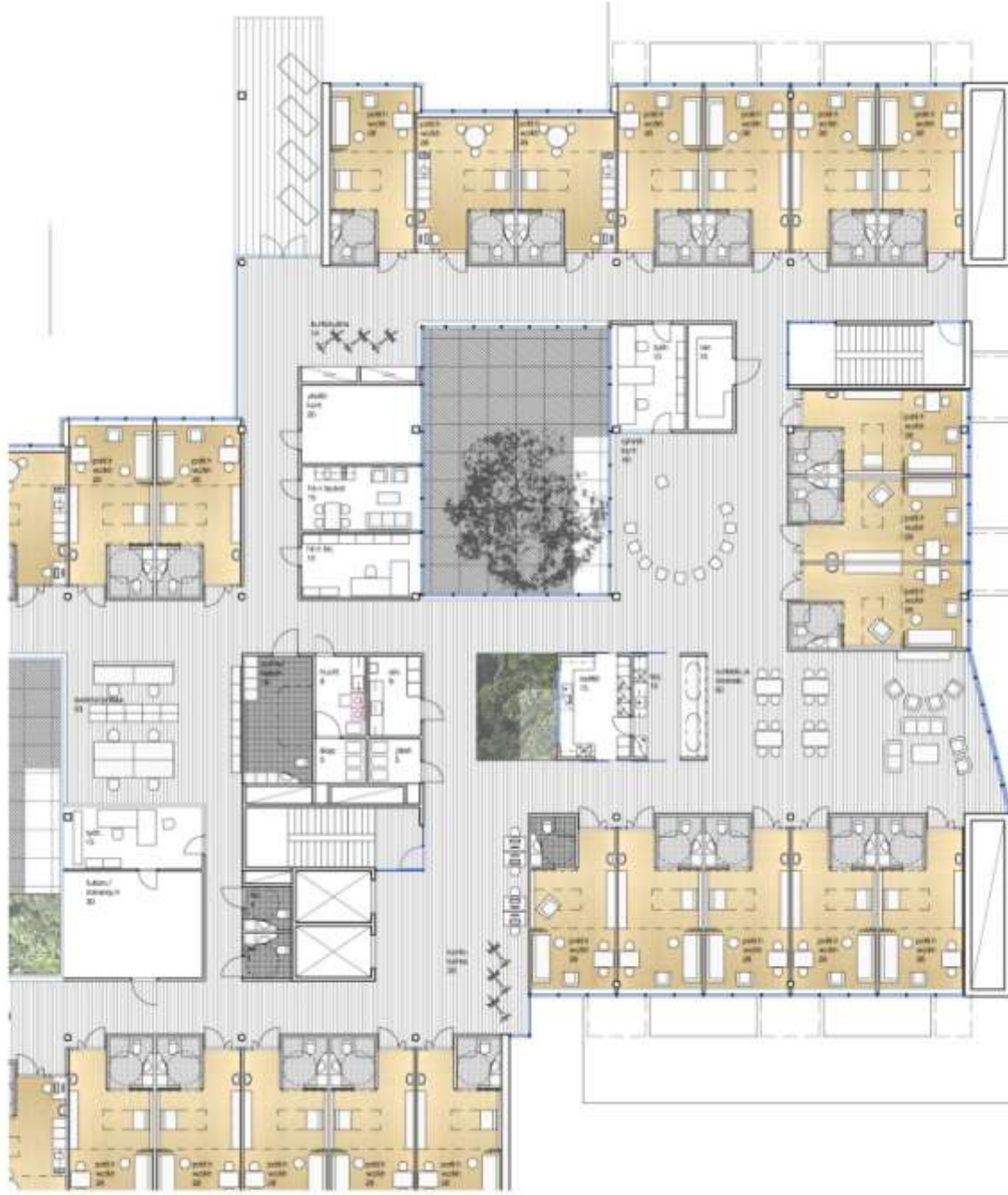
INTERIOR VIEW OF THE COMMUNAL SPACE



VIEW OF THE COURTYARD FROM THE REHABILITATION WARD



















"There is a myth that healthcare architecture is so highly specialised that only the initiated can enter. You may not need experience but you do need staying power"

*Richard Burton, 2004*

"Universal design issues – circulation, legibility, space, light – all are still of paramount importance. Technological and environmental requirements are simply components in the age-old architectural discipline of marrying function to form"

*Isabel Allen, 2003*



# Better hospitals for better cities

- Demystification needed
- Breaking the stronghold of "specialists"
- Attract better architects
- Organise open architectural competitions
- Make hospital design a "sexy" subject among young talented designers



*"Good design is in itself healing"*

Prof. Bas Molenaar, Den Haag, 2004

*"A Smart Hospital is a well-designed hospital"*

Prof. A. Kotsiopoulos, Thessaloniki, 2004

*"Architecture is also the spiritual needs of people as well as their material needs. It has to do with optimism, joy and reassurance; of order in a disordered world; of privacy in the midst of many; of light on a dull day"*

Norman (Lord) Foster, London, 2002

# MORE INFO

- [hennu.kjisik@h-k.fi](mailto:hennu.kjisik@h-k.fi)
- [www.h-k.fi](http://www.h-k.fi)
- [www.tkk.fi](http://www.tkk.fi)
- [www.safa.fi](http://www.safa.fi)
- [www.espoo.fi](http://www.espoo.fi)
- Finnish Architectural Review 3/2009  
competition supplement (Espoo Hospital)

