

THE POWER OF ARCHITECTURE

Hennu Kjisik
Architect SAFA, Dr.Tech., professor
Harris-Kjisik Architects and Planners, Helsinki
University of Oulu

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REMEMBER!

- Design costs = 0,1 units
- Capital cost = 1 unit
- Maintenance costs (first 25 y) = 100 units
- Running costs (first 25 y) = 400 units

REMEMBER ALSO...

A hospital complex consists of:

13% industrial space

36% office space

27% hotel space

24% hospital space (hot floor)

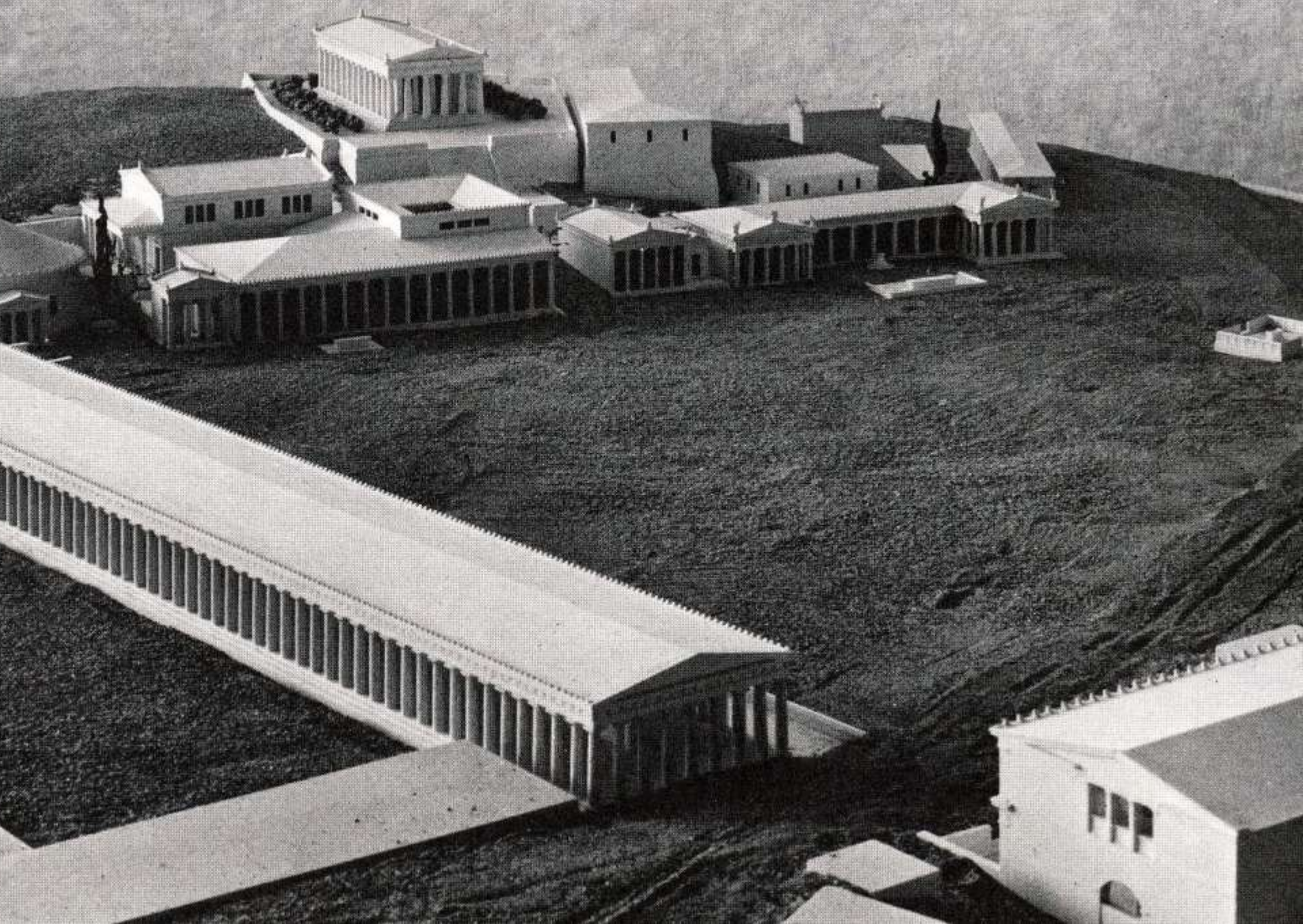
Ref.: Bouwcollege, Utrecht

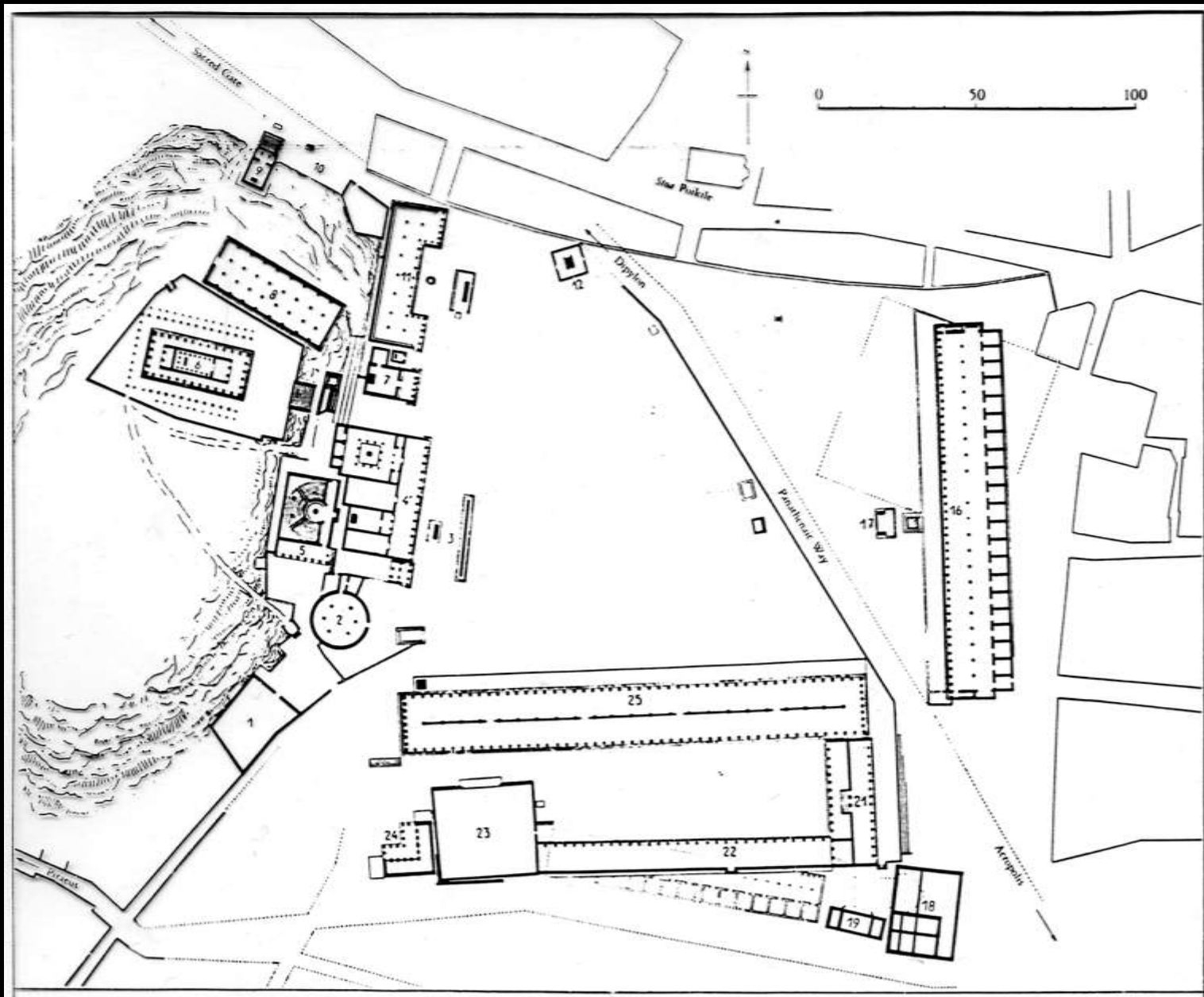
What went wrong?

- Too many norms and regulations
- Short-sighted thinking - "for me, just now!"
- No understanding for lifecycle costs
- Insufficient knowledge of the past
- Too much specialisation and mystification
- Not enough high-quality architecture

Ancient Greece

- "Healing environment"
- Fresh air, views, daylight
- Fine arts, drama etc. cultural activities
- Activation of patients
- Generic buildings

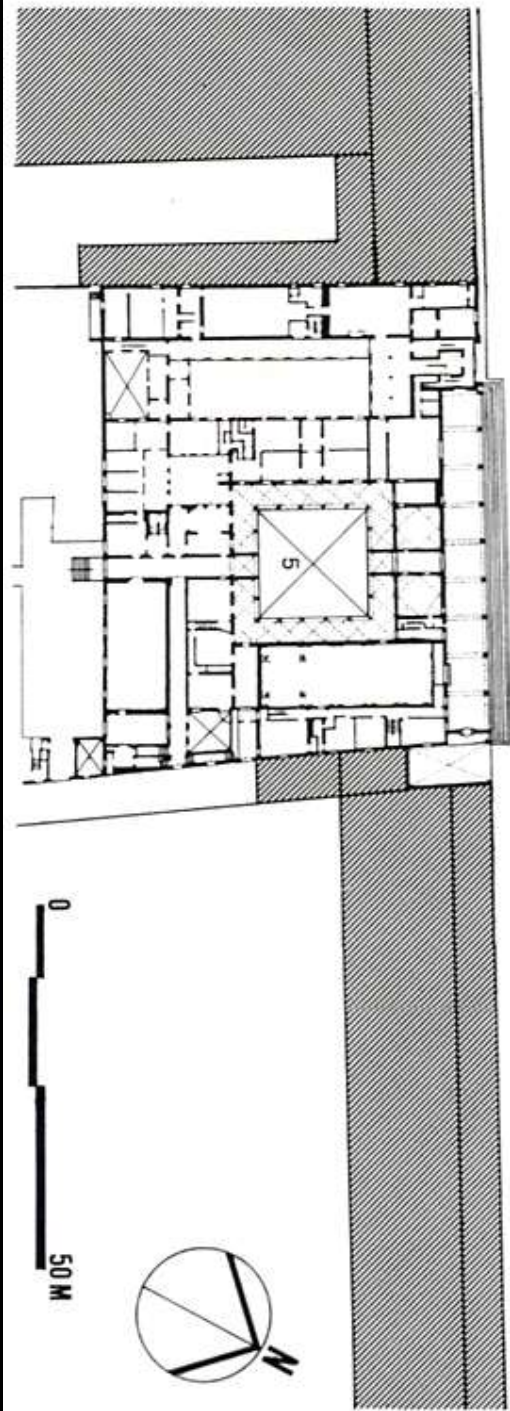
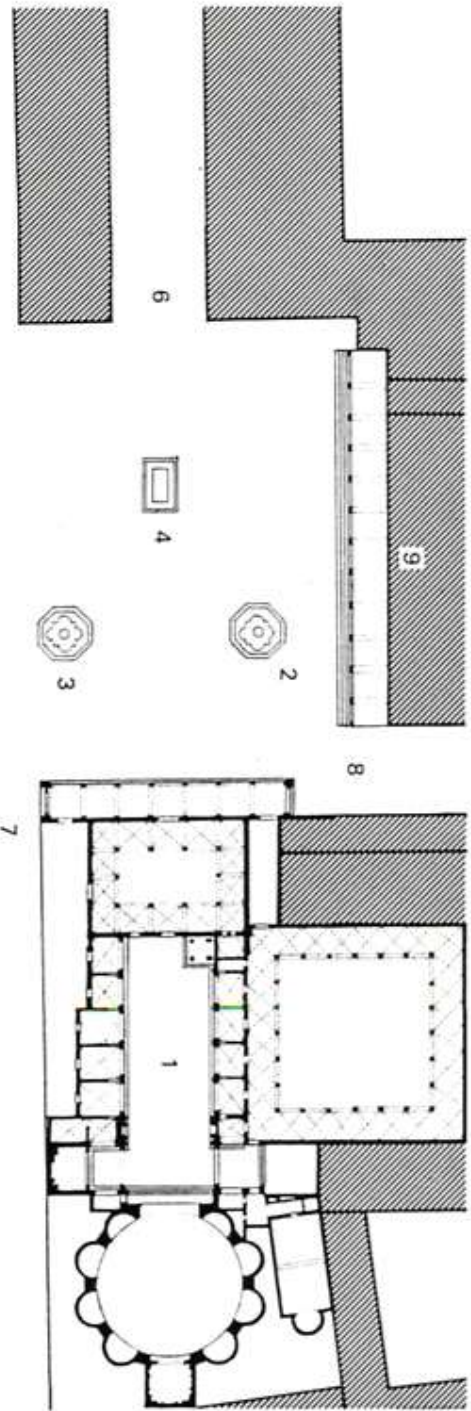




Renaissance

- Relationship with the surrounding city
- Generality and modularity
- Sustainable architectural quality

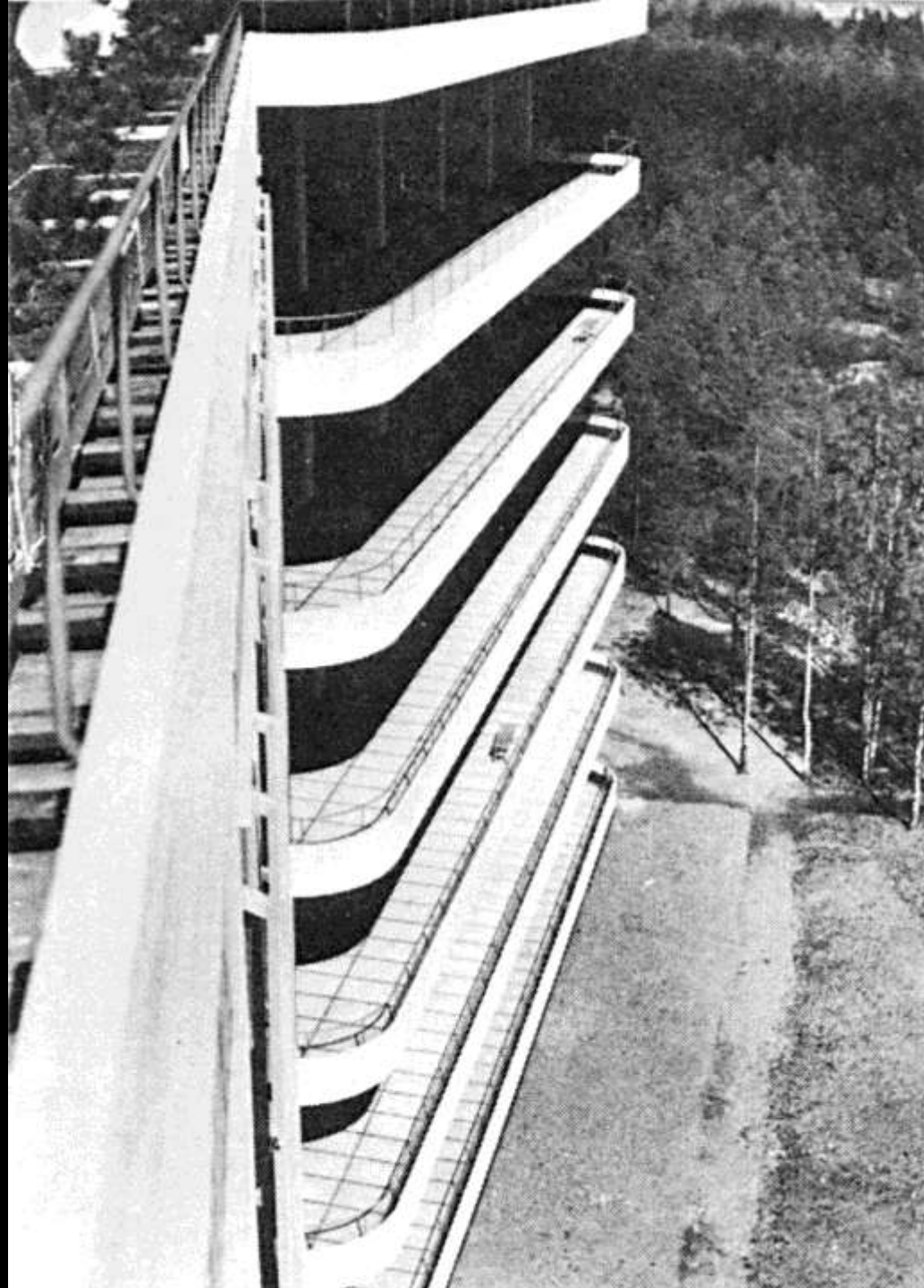


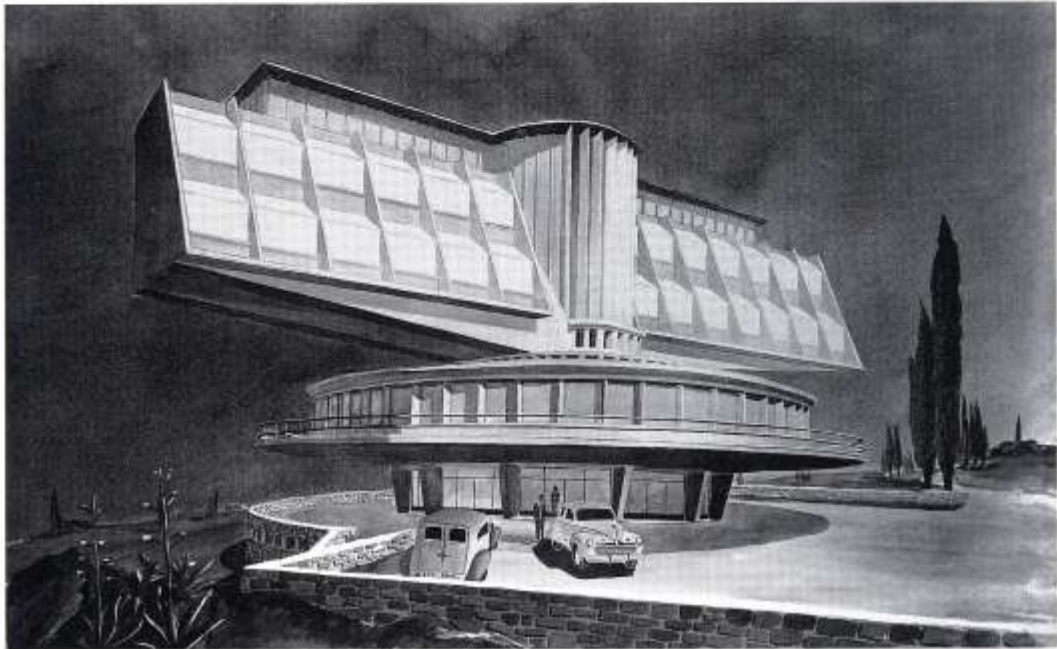
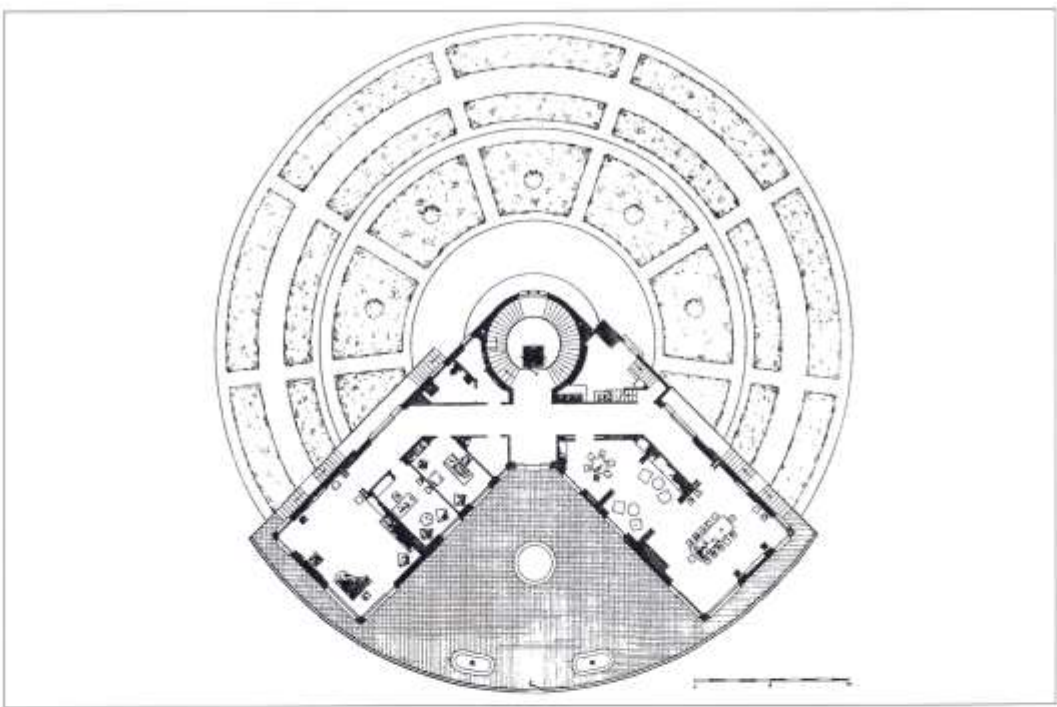


Tuberculosis sanatoria

- "Healing environment"
- Experimentation and innovation
- High level of social consciousness and responsibility of the designers



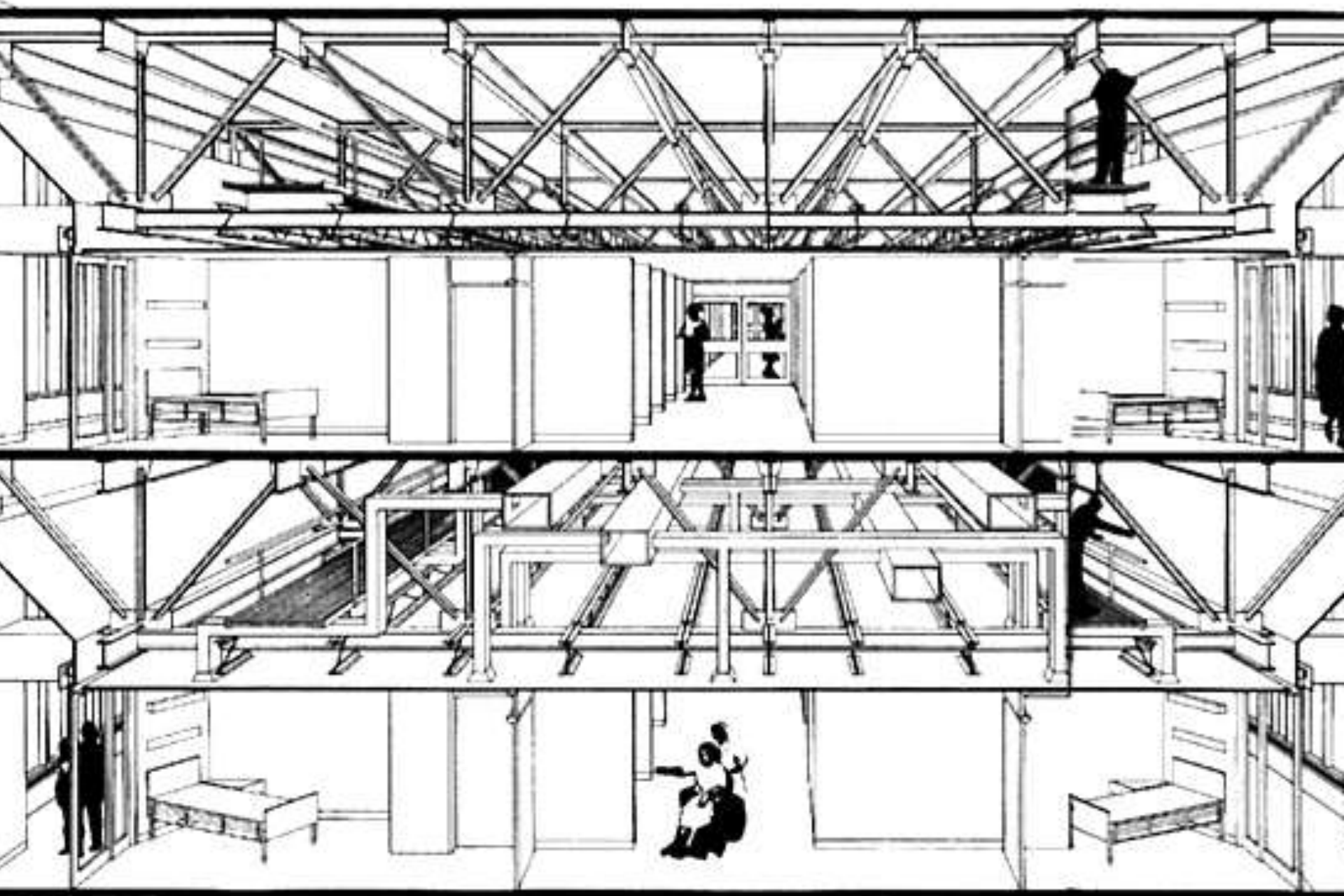


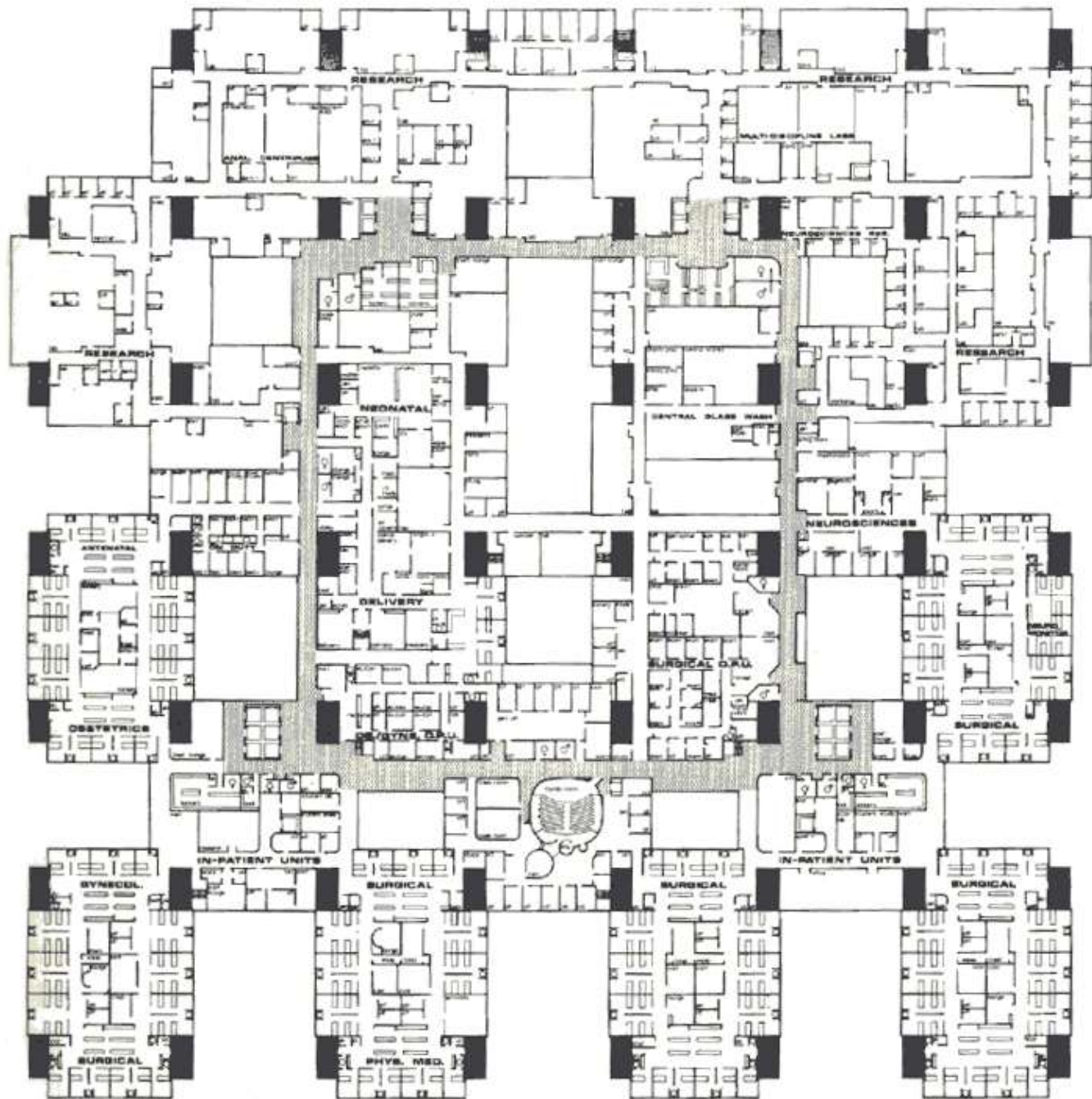


”The Heroic Era”

1960s and 1970s!

- Flexibility, adaptability, agility, modularity
- Technical innovations – interstitial floors, “Plug-in” solutions
- Hospitals in the avant-garde of architectural trends









OPPORTUNITIES AND ASSETS

- The City / Hospital analogy
- Ambulatory solutions
- Future proofing



麻雀
四名村専門店
B1

マイリスナ
4F

TOP
ATON

Poker
C.28-740
4F

Le Cafe
07c 53c
TEL 03-5287-1

楽
B1

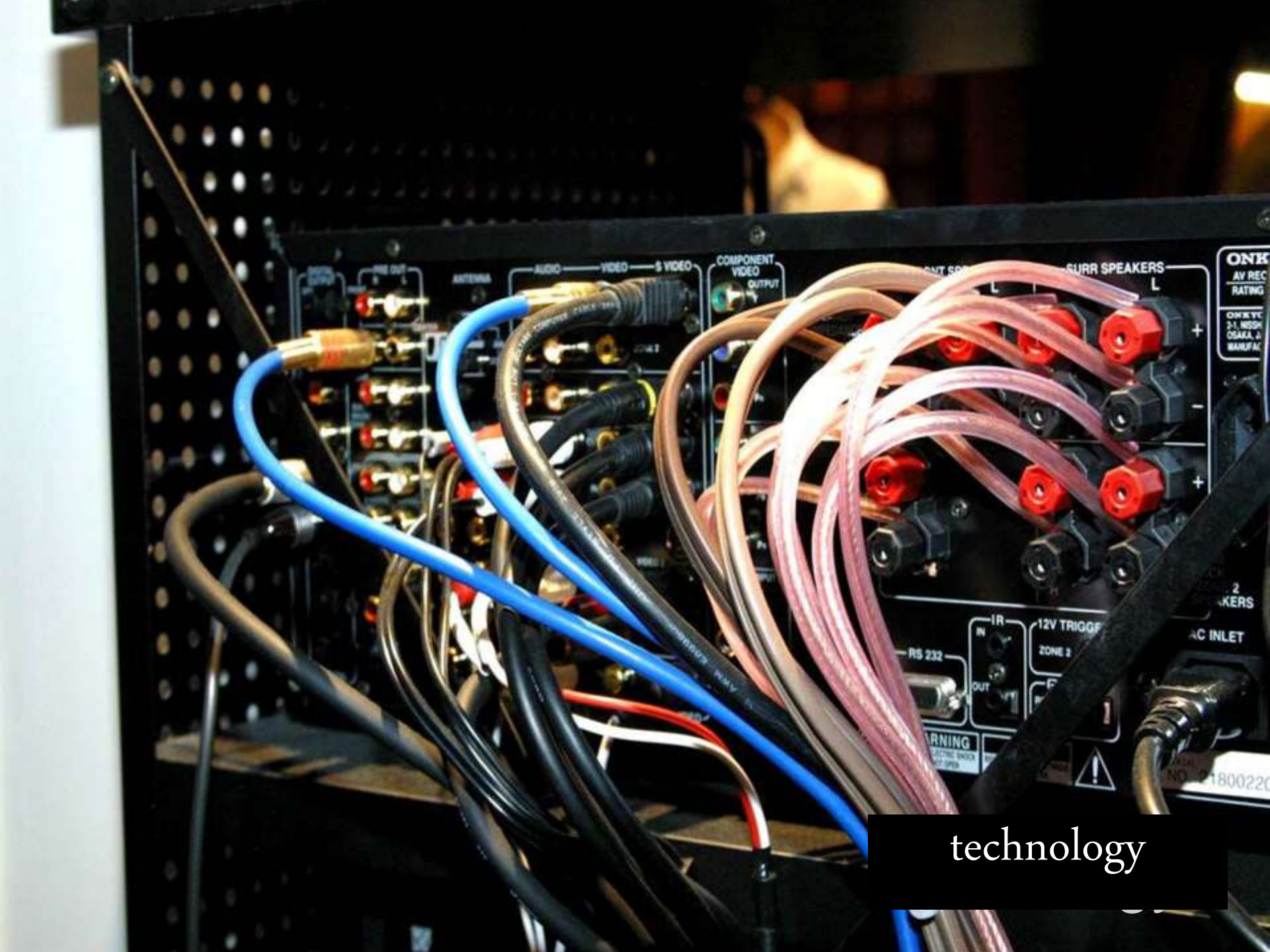
MILDSEVEN

Le Cafe
07c 53c

megacity



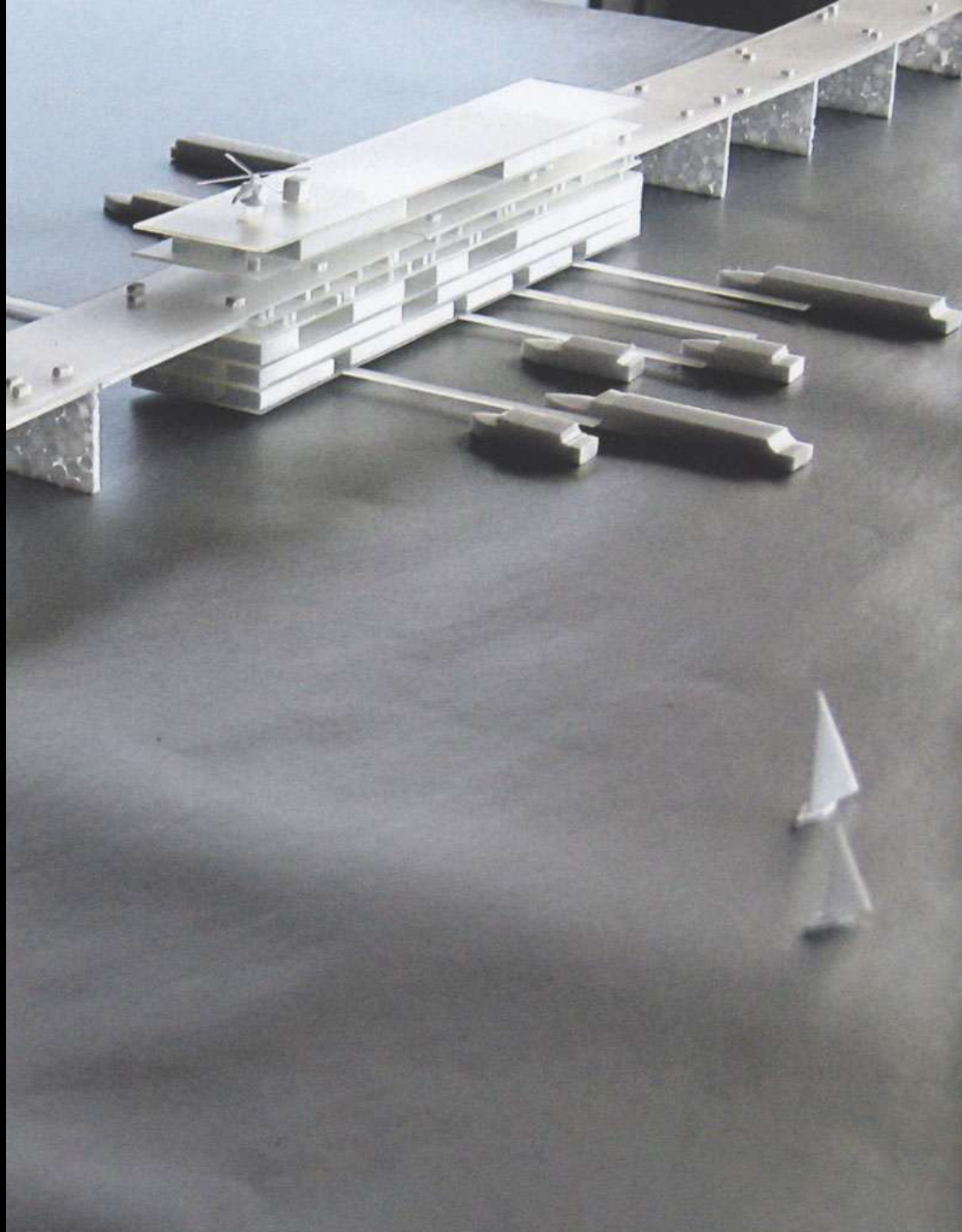
monastery

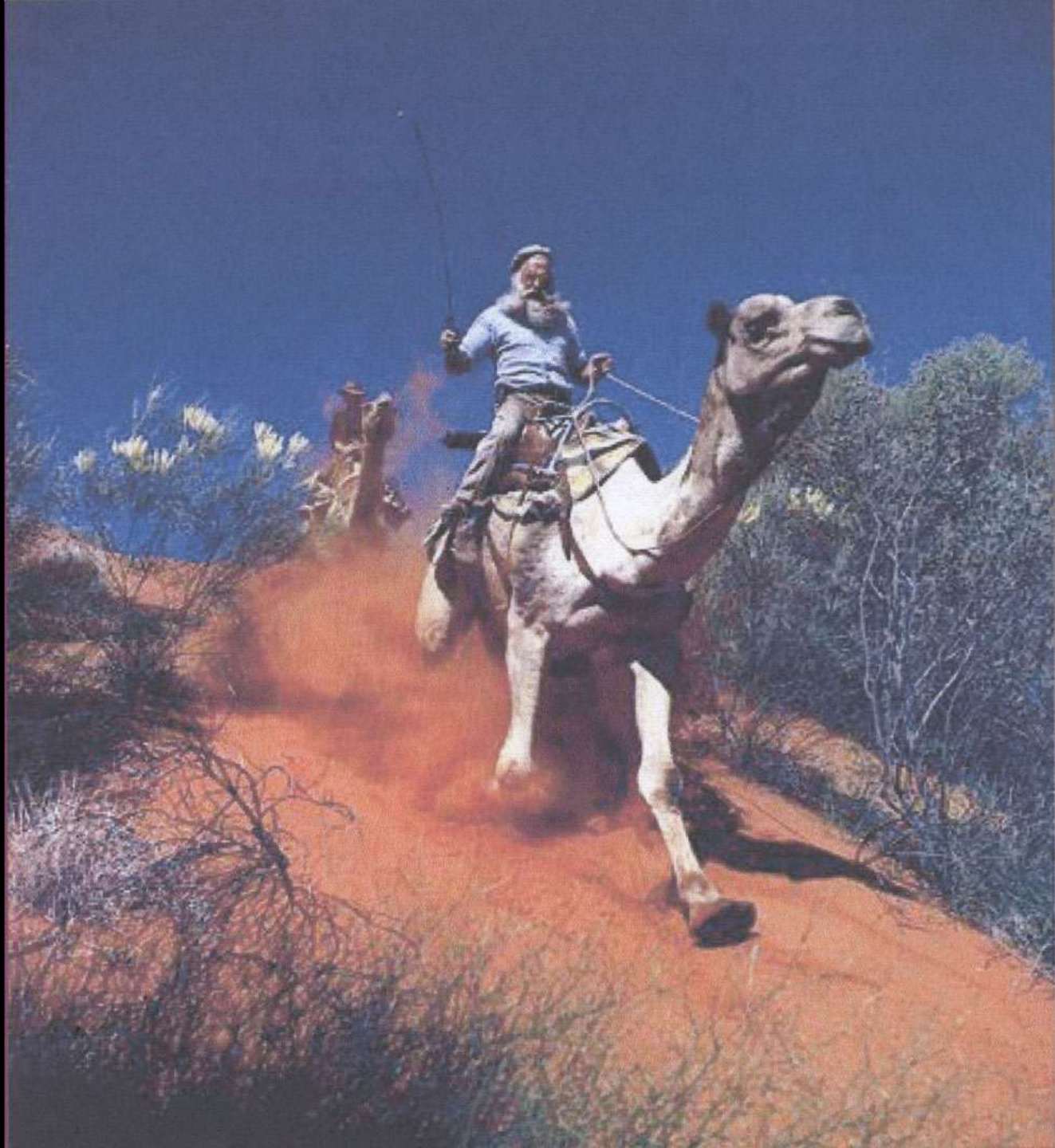


technology

A white bus is shown from a side profile, parked on a grassy area. The word "CAREVAN" is printed in large, bold, black, sans-serif capital letters across the middle of the bus's side. The bus has a dark horizontal stripe running along its lower edge. On the roof, there is a satellite dish on the left and three small, dark, rectangular protrusions on the right. The background is a clear, light blue sky.

CAREVAN



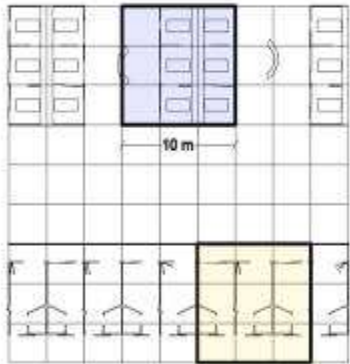


FUTURE PROOFING

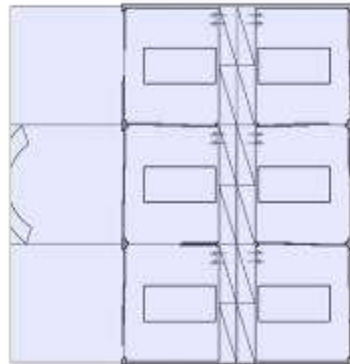
("Future proof – not future ready")

- flexibility
- adaptability
- extendability
- modularity
- back to the "heroic years"
- generality
- sustainability
- elasticity
- more generous dimensioning
- "open building"/ the INO-project

THE MODULES

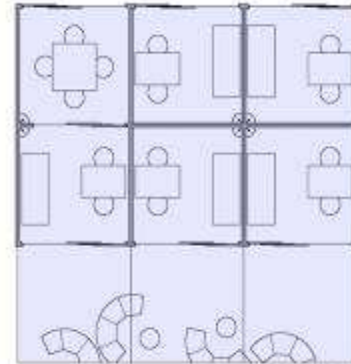


1:300



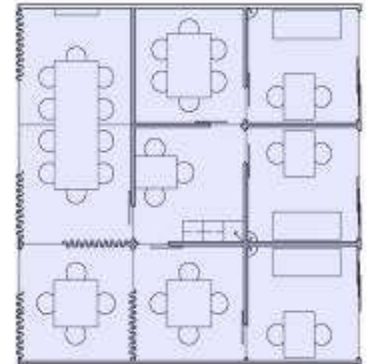
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**OBSERVATION
(TREATMENT CENTRE)**



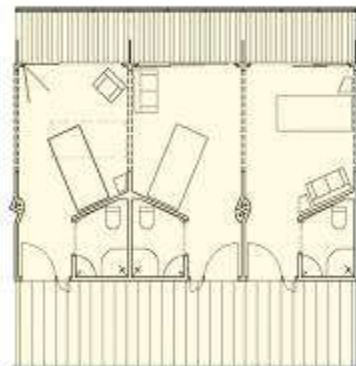
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**CONSULTATION / EXAMINATION
(CONSULTATION CENTRE)**



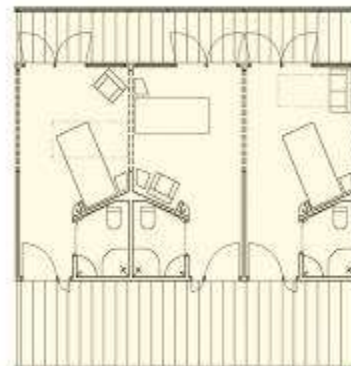
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**DOCTOR'S CONSULTATIONS
(KNOWLEDGE CENTRE)**



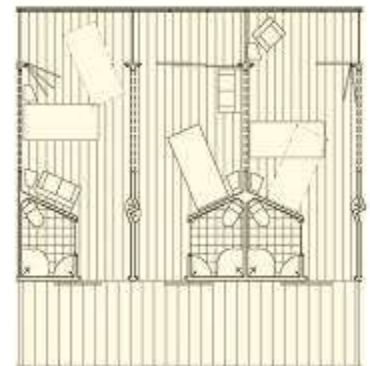
1:100

**FRESH AIR AND OPENNESS
(NURSING CENTRE)
EXT. CONTINUOUS COMMUNAL
WINTER-GARDEN**



1:100

**INTENSIVE OBSERVATION
(NURSING CENTRE)
EXTERNAL OBSERVATION &
LOGISTIC CORRIDOR**



1:100

**PRIVACY AND INDEPENDENCE
(NURSING CENTRE)
EXT. PRIVATE BALCONIES**

**PAPERLESS
WIRELESS
WALL-LESS
BEDLESS!**





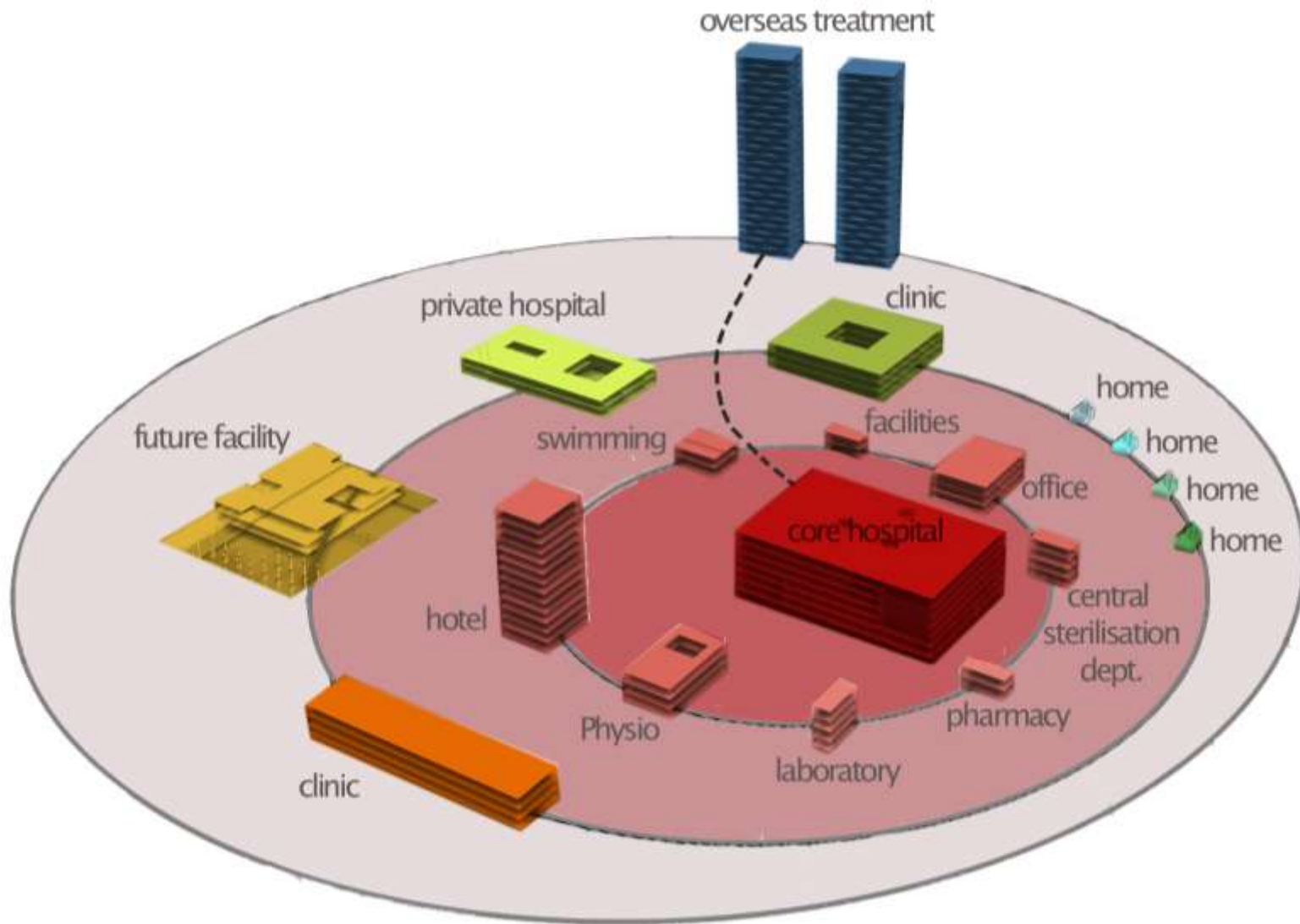






”Care - Cure - Core”

- Varying requirements
- Only 25% is ”hospital”, the rest is just any old ”building”
- The relationship between generic and specialized space
- Does everything need to be in the same place?



core hospital



AMSTERDAM - Oosterpark





UNIVE...TE...LL...MIERE LYON 2

IUT Feyssine

HEALTH CARE 2025- Building(s) for the future

International architectural competition 2007
Organiser: Bouwcollege (Netherlands Board for
Health Care Facilities)

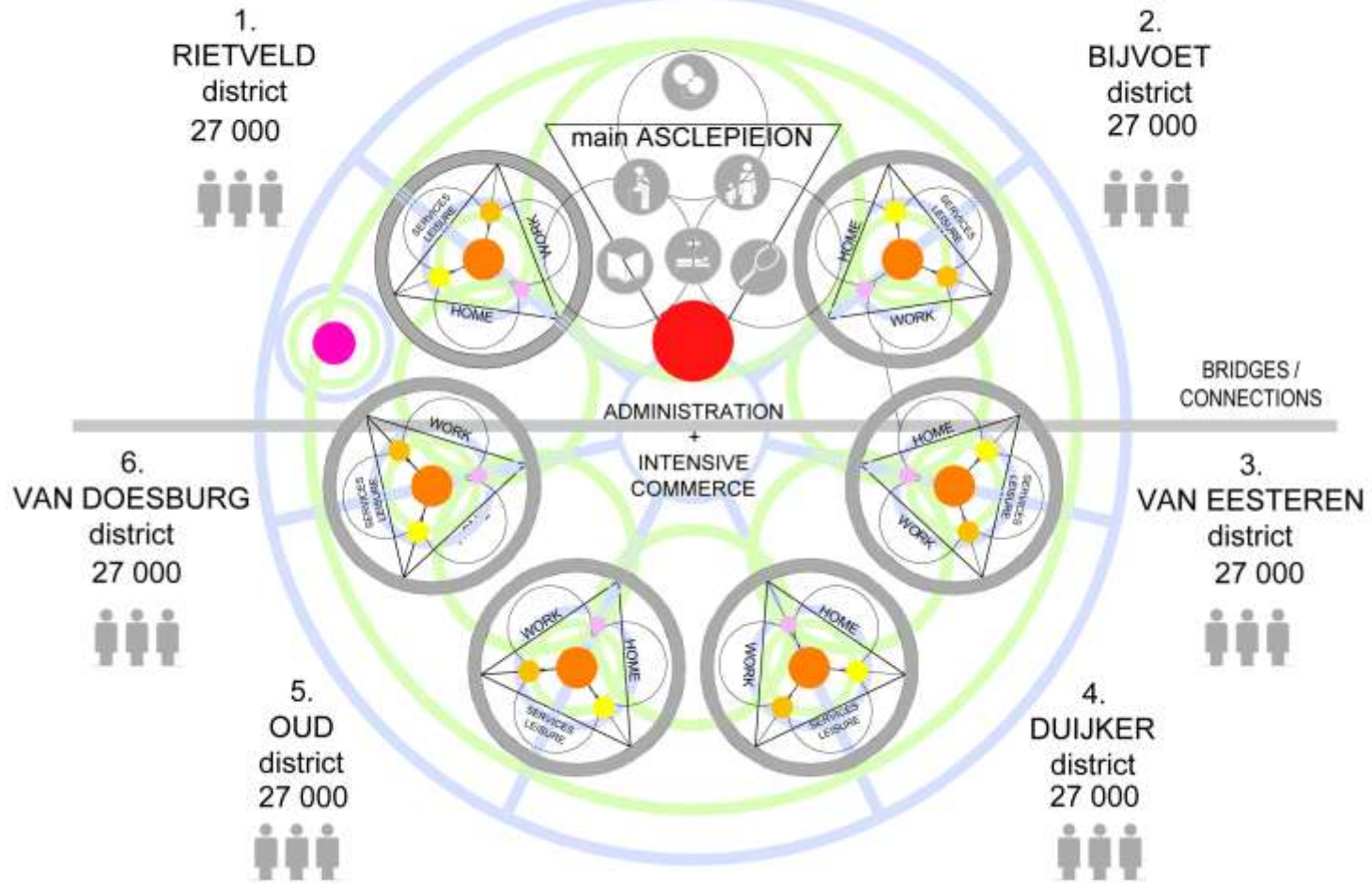
1st prize ex aequo

Motto "Fair care – Care Fair"

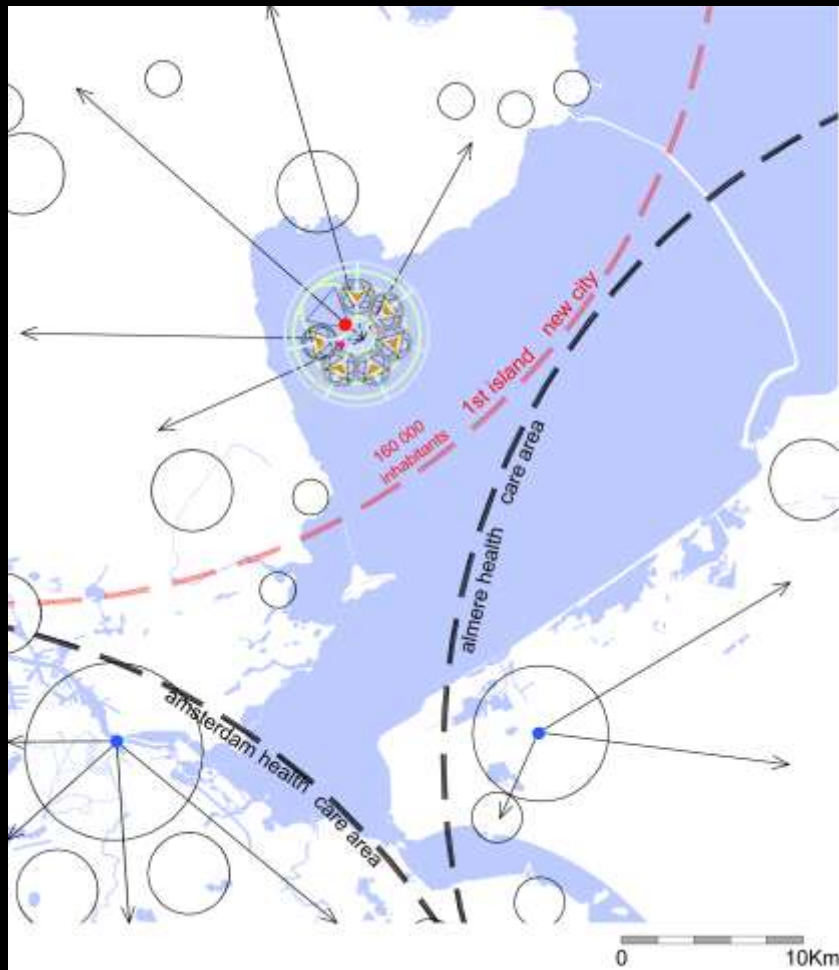
Harris-Kjisik Architects Helsinki and
Aalto University SOTERA Institute



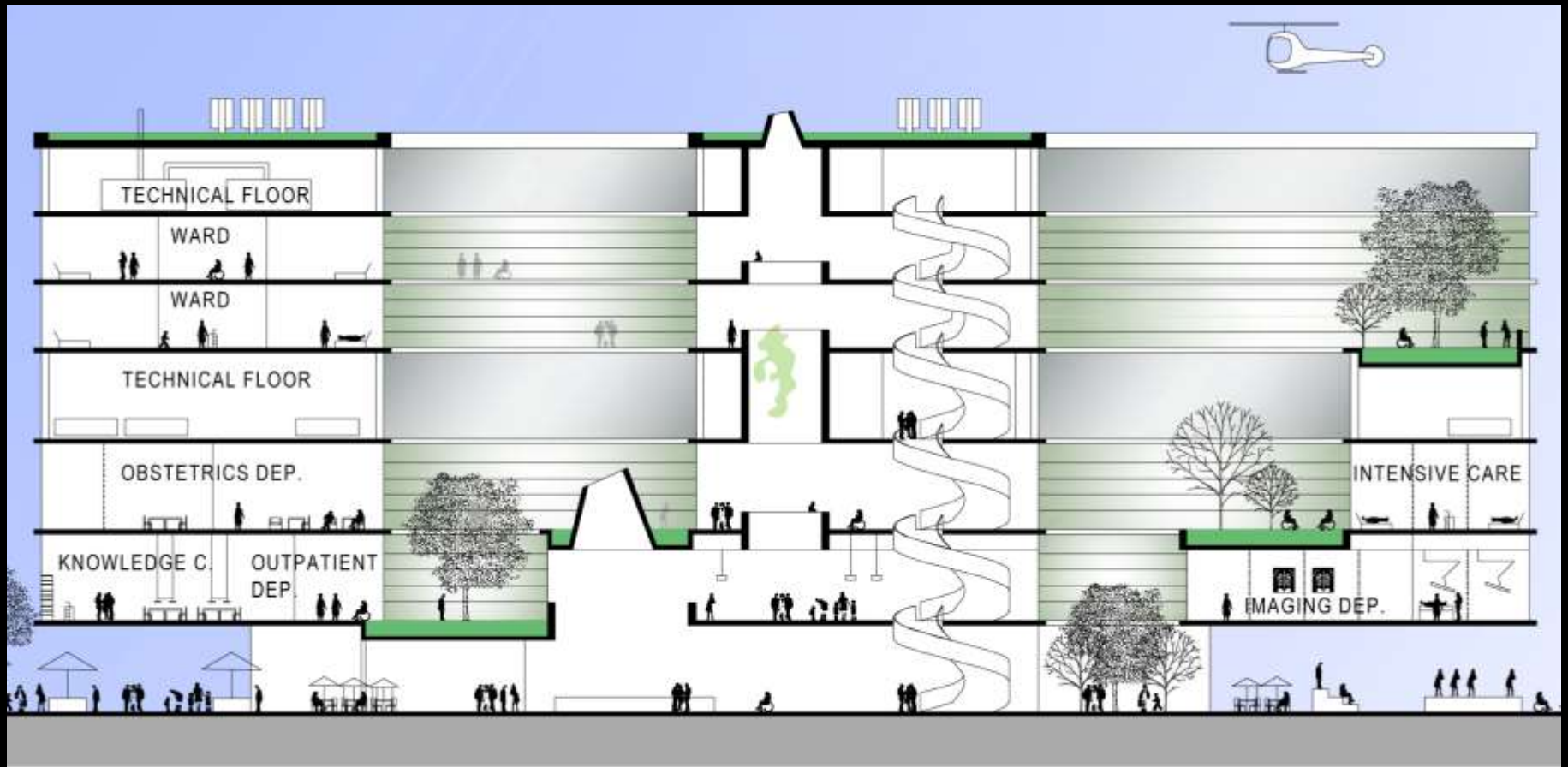
the city-island ELYSIADAM



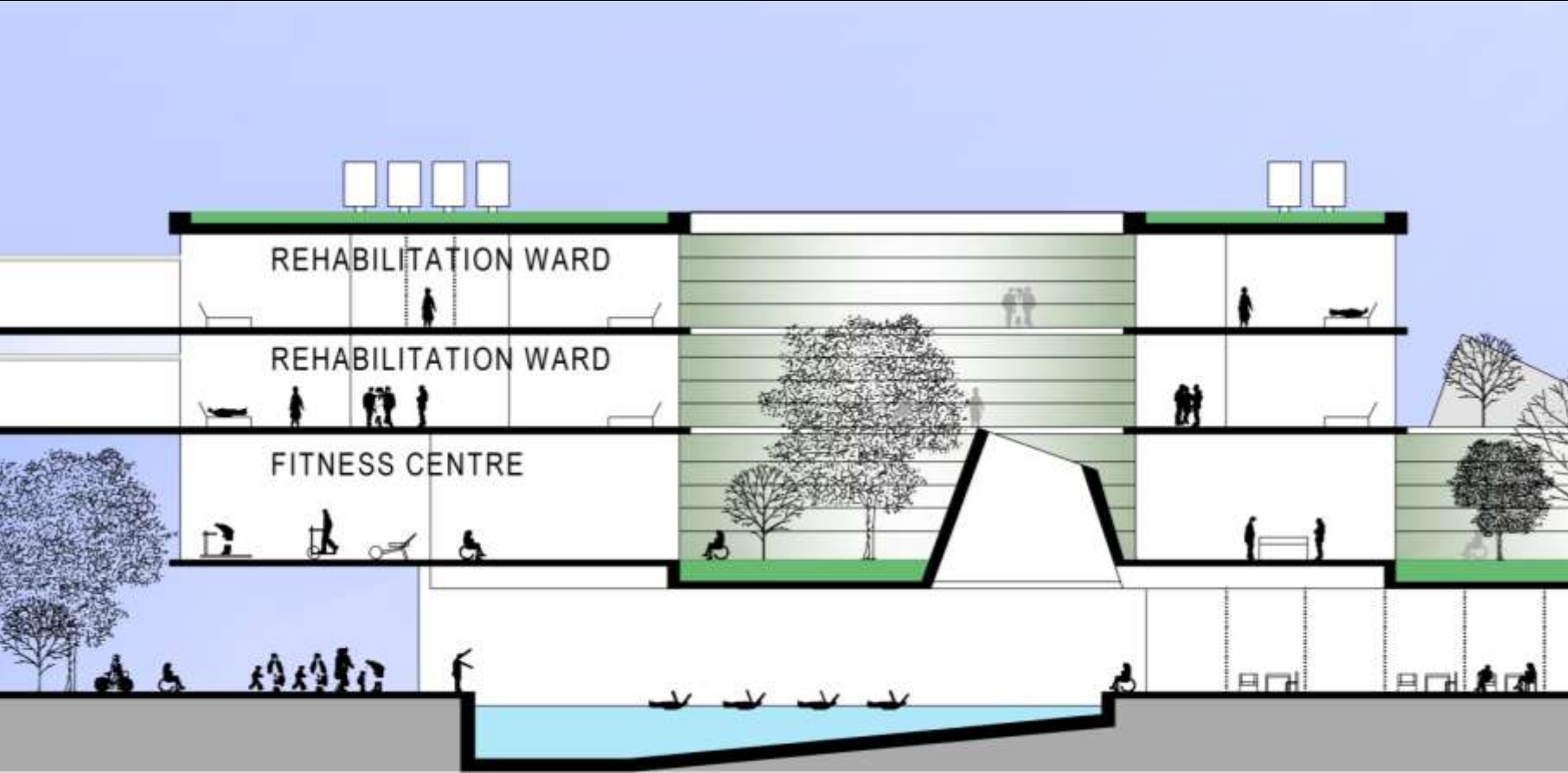
the region



the buildings – central hospital ●



the buildings – community care hospital ●





Näkymiä asuinalueesta kallion laella



Arkkitehtitoimisto Harris - Kjisik Oy
Kalevankatu 31 A 5
00100 Helsinki
tel. +358-(0)9-3211261
email: office@h-k.fi
www.h-k.fi

VenhoevenCS
architecture & urbanism
Hoogte Kadijk 143 f15
1018 BH Amsterdam
tel. 0206228210
email: info@venhoevencs.nl
www.venhoevencs.nl



Sisätilat



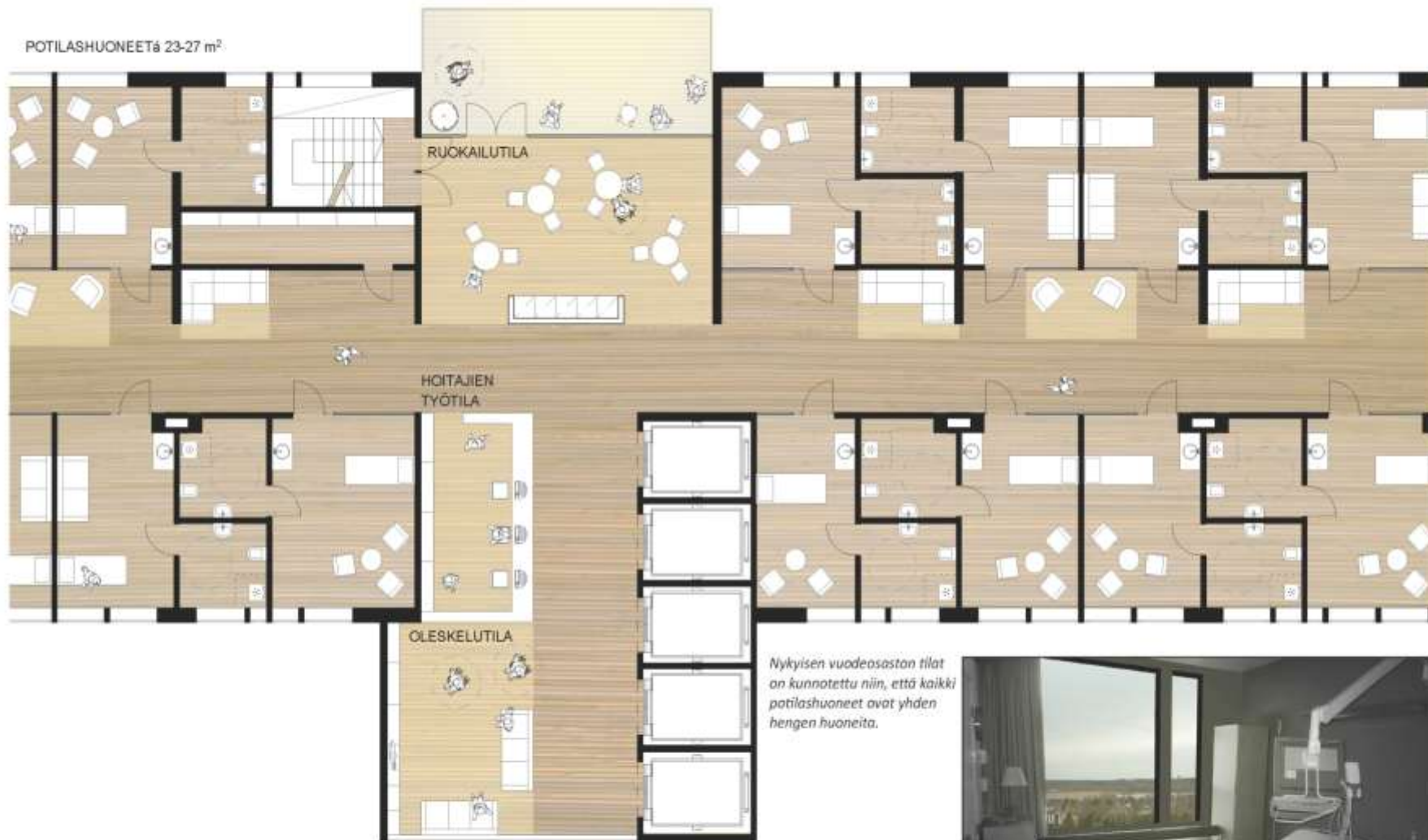
Näkymä ydinsairaalaista



Näkymä vastaanottoaulasta

Tarkastelualue 3 vuodeosasto 1:150

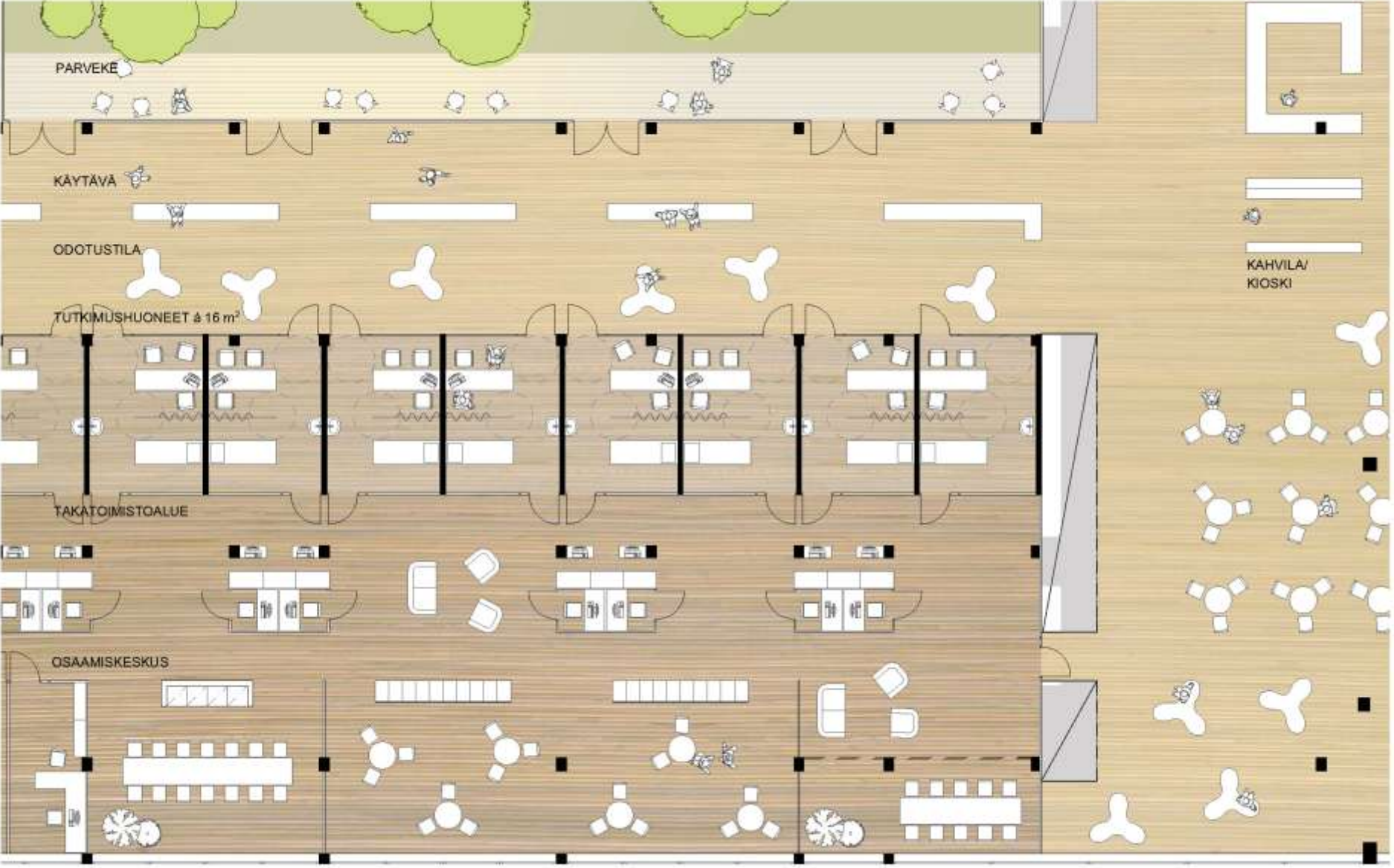
POTILASHUONEET 23-27 m²

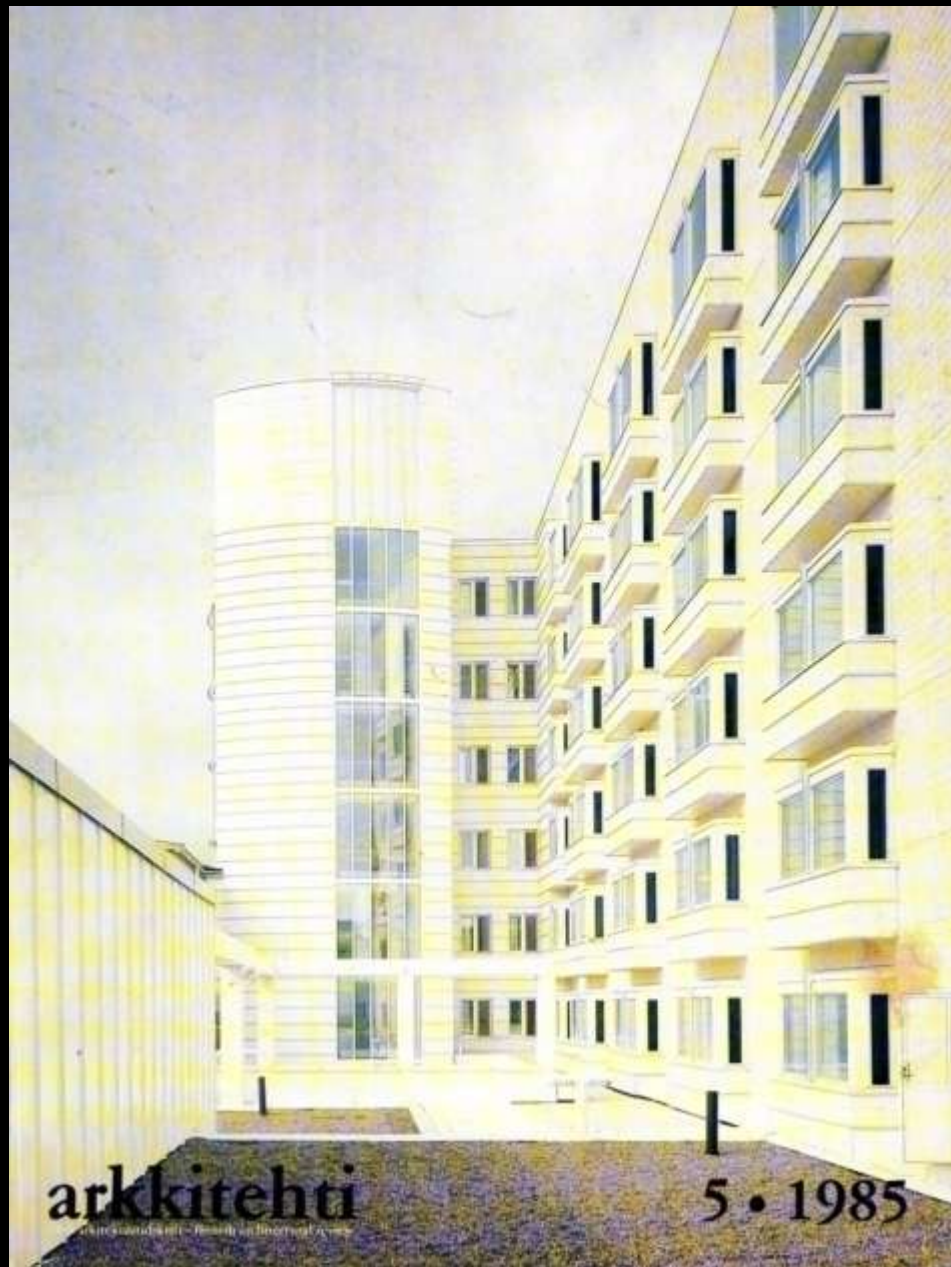


Nykyisen vuodeosaston tilat on kunnatettu niin, että kaikki potilashuoneet ovat yhden hengen huoneita.



Tarkastelualue 2 ajanvarauspoliklinikka 1:150





arkkitehti
Suomen Arkkitehtiliiton julkaisu

5 • 1985

Paul Groenendijk, Piet Vollaard
Rook & Nagelkerke

Architectuurgids Nederland (1980–nu)

Architectural Guide to the Netherlands (1980–Present)

010 Publishers



- 075 Havenleij Den Bosch Soeters Van Eldonk Poncet 1995–2010
- 055 IJburg Amsterdam Palmboom & Van den Bout 1995–2010
- 043 Stationsgebied Arnhem van Studio 1995–2010
- 067 De Veranda Rotterdam Soeters Van Eldonk Poncet, R.H.M. Uytendaele 1998–2010
- 045 Science Park Amsterdam KCA 2001–2010
- 042 Wateringseveld Den Haag O&O 1995–2011
- 016 Oosterdokseiland Amsterdam E.L.J.M. van Egeraat 2001–2011
- 035 Leidsche Rijn Utrecht AVR, Maxvan, H+N+S 1993–2012
- 005 Ypenburg Den Haag Palmboom & Van den Bout 1994–2013
- 003 De Blauwe Stad Wimschoten De Zwarte Hond 1999–2013
- 034 Brandevoort Helmond Krier & Kohl 1996–2017
- 062 Zuidas Amsterdam P.B. de Bruijn 1995–2030

Overheidsgebouwen - Government buildings

- 001 Stadhuis Lelystad J. Hoogstad 1976–1984
- 033 Gemeentehuis Tjeerkersteradeel A. Bonniema 1979–1985
- 040 Stadhuis Almere C.G. Dam 1979–1986
- 040 Stads Kantoor Delft J.M.J. Coenen 1984–1986
- 014 Stadhuis Amsterdam W. Holzbauer, 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
- 056 Ministerie van VROM Den Haag J. Hoogstad 1985–1992
- 062 Stadhuis Apeldoorn H.J.M. Ruijsenaars 1988–1992
- 037 Gemeentehuis Wehl H.A.J. Henket 1990–1992
- 071 Stadhuis Den Haag R.A. Meier 1985–1995
- 055 Politiebureau Vaux W.M.J. Arets 1991–1995
- 012 Waagstraat Groningen A. Natalini 1991–1996
- 078 Raadhuis Tienhoven K.J. van Velsen 1993–1996
- 059 Rekenkamer Den Haag A.E. & H. van Eyck 1991–1997
- 054 Wilhelminahof Rotterdam C.G. Dam, Kraaijvanger Urbis 1994–1997
- 076 Justitie Den Bosch Ch. Vandenbroucke 1992–1998
- 056 Stadhuis Schiedam H.J.M. Ruijsenaars 1992–1998
- 030 Stadhuis Zutphen 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 1998–2005
- 021 Tweede Kamer Den Haag H.J.M. Krijppers 1995–2004
- 017 Stads Kantoor Den Bosch D.J. Postel 1997–2004
- 001 Stads Kantoor Breda Claus & Kaan 1999–2004
- 069 Stads Kantoor Middelburg Th.M. Rau 1999–2004
- 027 Gemeentehuis Tynaarlo Claus & Kaan 2000–2004
- 044 Stadsdeelkantoor Rotterdam J.D. Bekkering 1999–2005
- 002 Gemeentehuis Sluiswachter 2014 2003–2005
- 054 Huis voor Cultuur en Bestuur Nijverdal Claus & Kaan 2003–2007
- 070 Stadhuis Grave E.L.J.M. van Egeraat 2002–2008
- 070 Stadhuis Zaandam Soeters Van Eldonk 2004–2010

Onderwijsgebouwen - Buildings for education

- 001 Willemsparkschool Amsterdam H. Hertzberger 1980–1983
- 041 Montessorischool Groningen H. Hertzberger 1980–1983
- 042 Rijksakademie Amsterdam K.J. van Velsen 1987–1992
- 058 Laboratorium Wageningen Mecanoo 1990–1992
- 058 De Polygoon Almere H. Hertzberger 1990–1992
- 047 Academie Maastricht W.M.J. Arets 1990–1993
- 054 Basisschool Papendrecht H. Hertzberger 1992–1994
- 054 Isalacollege Silvolde Mecanoo 1990–1995
- 008 Faculteit Economie Utrecht Mecanoo 1991–1995
- 055 De Bombardon Almere H. Hertzberger 1993–1995
- 028 Haagse Hogeschool Den Haag Atelier Pro 1990–1996
- 012 Educatorium Utrecht OMA 1992–1997
- 057 Onderzoekscampus Wageningen S. Behnisch 1992–1998
- 026 De Witse 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 1993–1999
- 055 Ichtus Rotterdam E.L.J.M. van Egeraat 1994–2000
- A21 Venserschool Groningen Atelier Pro 1996–2000
- 039 De Brink Laren Snelder Compagnons 1996–2001
- 043 De Vijver Den Haag M. Chr. Rohmer 1998–2001
- 063 Triade Den Helder D.E. van Gameren, B. Maastebroek 1998–2001
- 031 Vertigo Eindhoven H.H.L.M. Dirix 1997–2002
- A18 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
- 071 De Kikker Amsterdam E.M. van der Pol 2000–2006
- 059 Instituut Amsterdam J.P.Th. Dekkers 2000–2006
- 035 Metro Doetinchem E.L.J.M. van Egeraat 2002–2006
- 056 Atlasgebouw Wageningen R. Viholm, Van den Oever Zaaijer 2002–2006
- 021 Sint-Lucas Boxtel FAT Architecture 2002–2006
- 055 Forumgebouw Wageningen Quist Wittermans 2002–2007
- 030 Kinder Cluster Utrecht V&M Architects 2002–2007
- 066 Juniorcollege Julianadorp 2004–2007
- 042 Fifty Two Degrees Nijmegen Mecanoo 2004–2007
- 013 De Matrix Hardenberg M. Chr. Rohmer 2004–2007
- A18 Bernoulliborg Groningen De Zwarte Hond 2004–2007
- 032 High Tech Campus Eindhoven Inbo, JWK 1997–2008
- 003 Leerpark Dordrecht Diverse architecten 2003–2008
- A14 Researchlaboratorium Groningen van Studio 2003–2008
- A14 Faculteit Groningen RAU 2003–2008
- 054 Radixgebouw Wageningen O&A 2002–2009
- A18 Faculteit Groningen R.H.M. Uytendaele 2004–2009
- 045 Faculteit Amsterdam R.H.M. Uytendaele 2001–2010
- 045 Science Park Amsterdam KCA P.L.M. diverse architecten 2001–2010

Gebouwen voor de gezondheidszorg - Health service buildings

- 024 De Donksbergen Duzel C.G. Dam 1975–1988
- 076 Sterreboer Rosendaal C.J.M. van de Ven 1980–1989
- 025 Medisch centrum Hapert W.M.J. Assen 1988–1989
- 034 Gezondheidscentrum Almere A.E. & H. van Eyck 1989–1995
- 009 Ronald McDonaldhuis Utrecht Bosch Hallett 1996–1999
- 001 Ronald McDonaldhuis Houthem F. Hunderwasser 1987–2007
- 050 Groot Kimmendaal Arnhem K.J. van Velsen 1997–2009

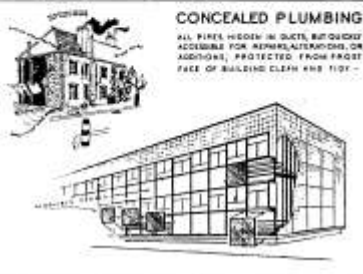
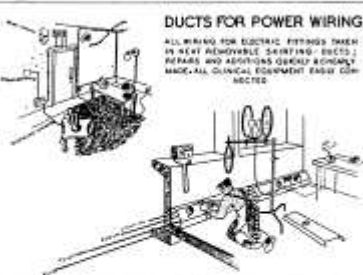
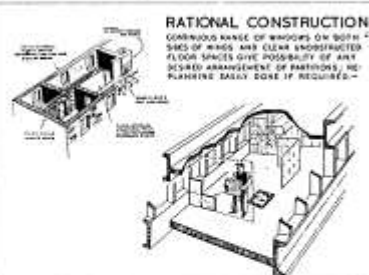
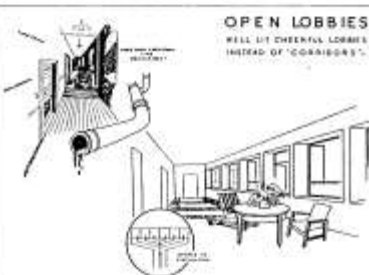
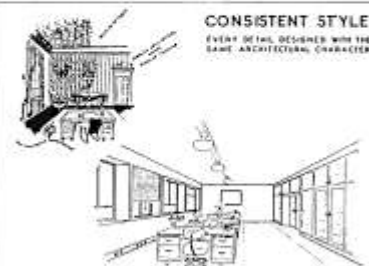
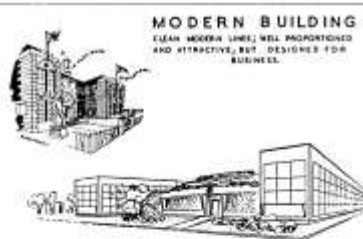
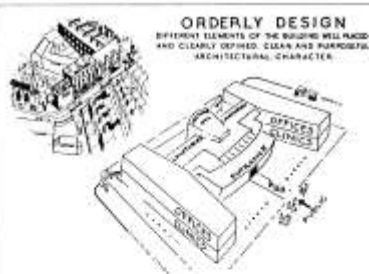
Kantoorgebouwen - Office buildings

- 004 Rabo-bank Utrecht Artcon 1978–1983
- 019 Zwolsche Algemene Nieuwegein P.J. Gerssen 1982–1984
- A34 O&F Leeuwarden A. Bonniema 1978–1985
- 053 Welzijnsaccommodatie Heerlen J.M.J. Coenen, P.A.M. Mertens 1983–1985
- A34 F&D Leeuwarden A. Calhen 1976–1986
- 007 WTC Rotterdam Groosman Partners 1983–1986
- 051 IUSA (1985) Amsterdam Alberts & Van Hout 1983–1987
- 016 High-Tech Center Nieuwegein cepezed 1984–1987
- 004 Mexx Voorst R.A.M. Stern 1985–1987
- 070 K&N Amersfoort A. Calhen 1976–1988
- 018 Willemswerf Rotterdam W.G. Quist 1983–1989
- 098 6374C Noordwijk A.E. & H. van Eyck 1983–1989
- 012 Eigen kantoor Amsterdam S.J. Soeters 1988–1989
- 035 Ministerie Den Haag H. Hertzberger 1979–1990
- A08 Hoofdkantoor TTG Groningen F.J. van Gool 1983–1990
- 053 Ramstad Amsterdam W.G. Quist 1987–1990
- 007 Effectenkantoor Amsterdam M.A.A. van Schijndel 1988–1990
- A11 Havenkantoor Groningen G. Daan 1989–1990
- 003 Siemens Zoetermeer G.R. Standke & R. Diesterle 1989–1990







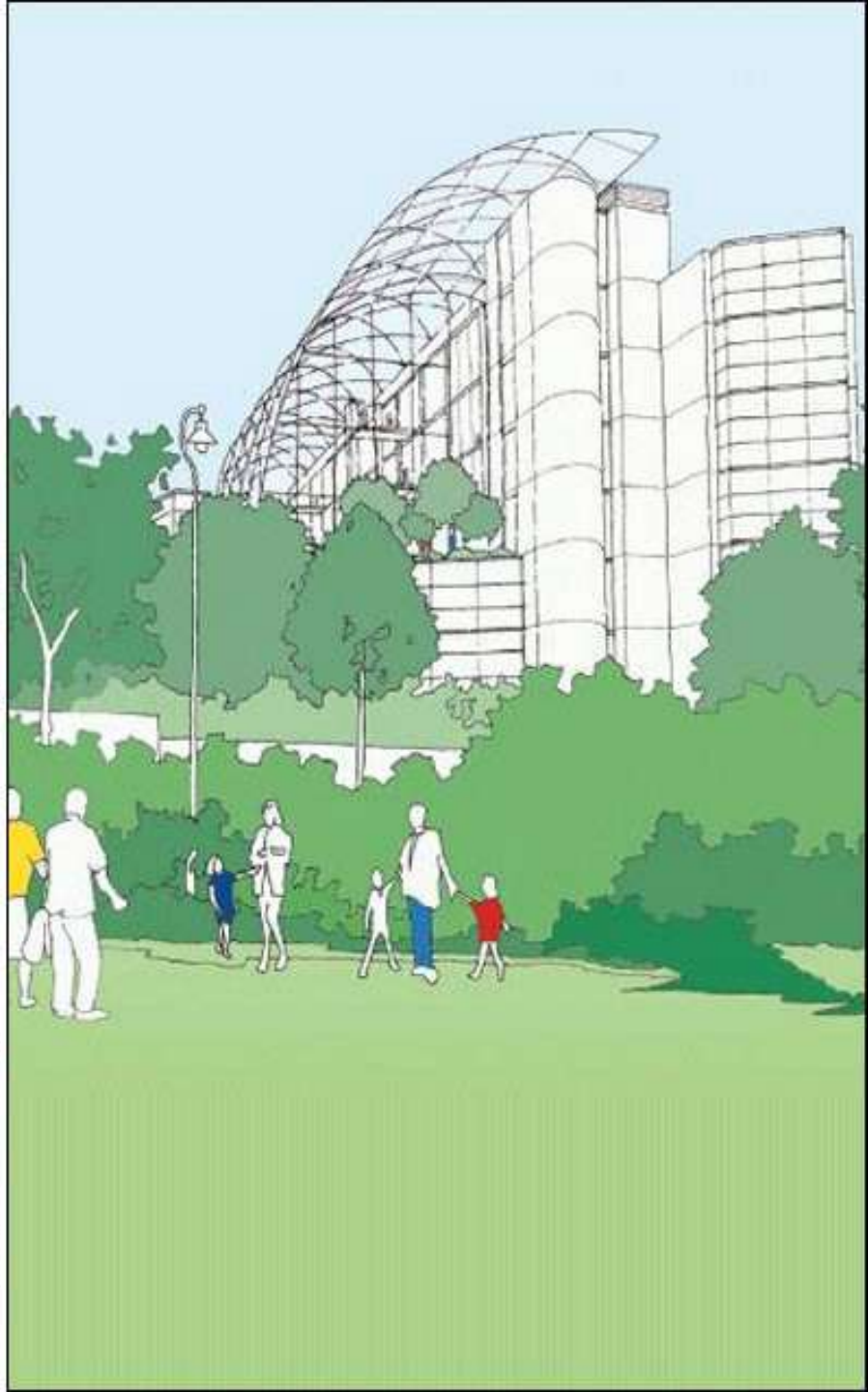
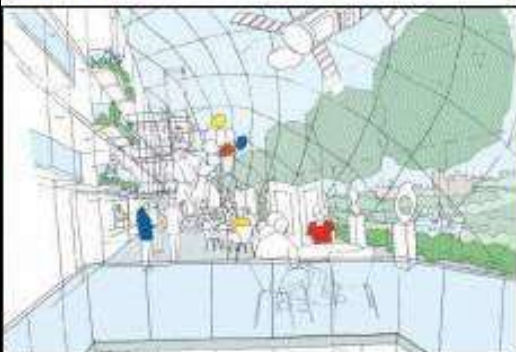
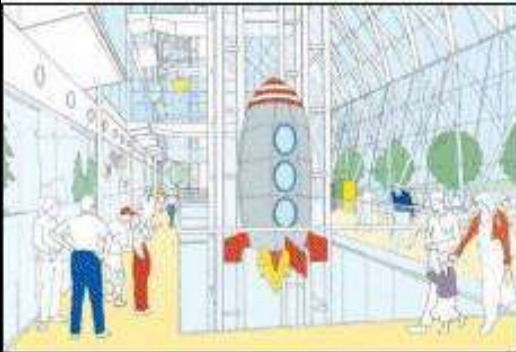
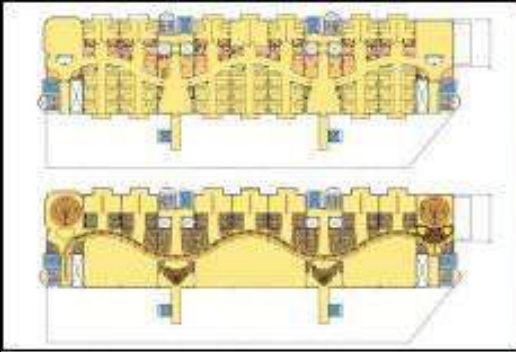












HEALTHCARE

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

"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?"

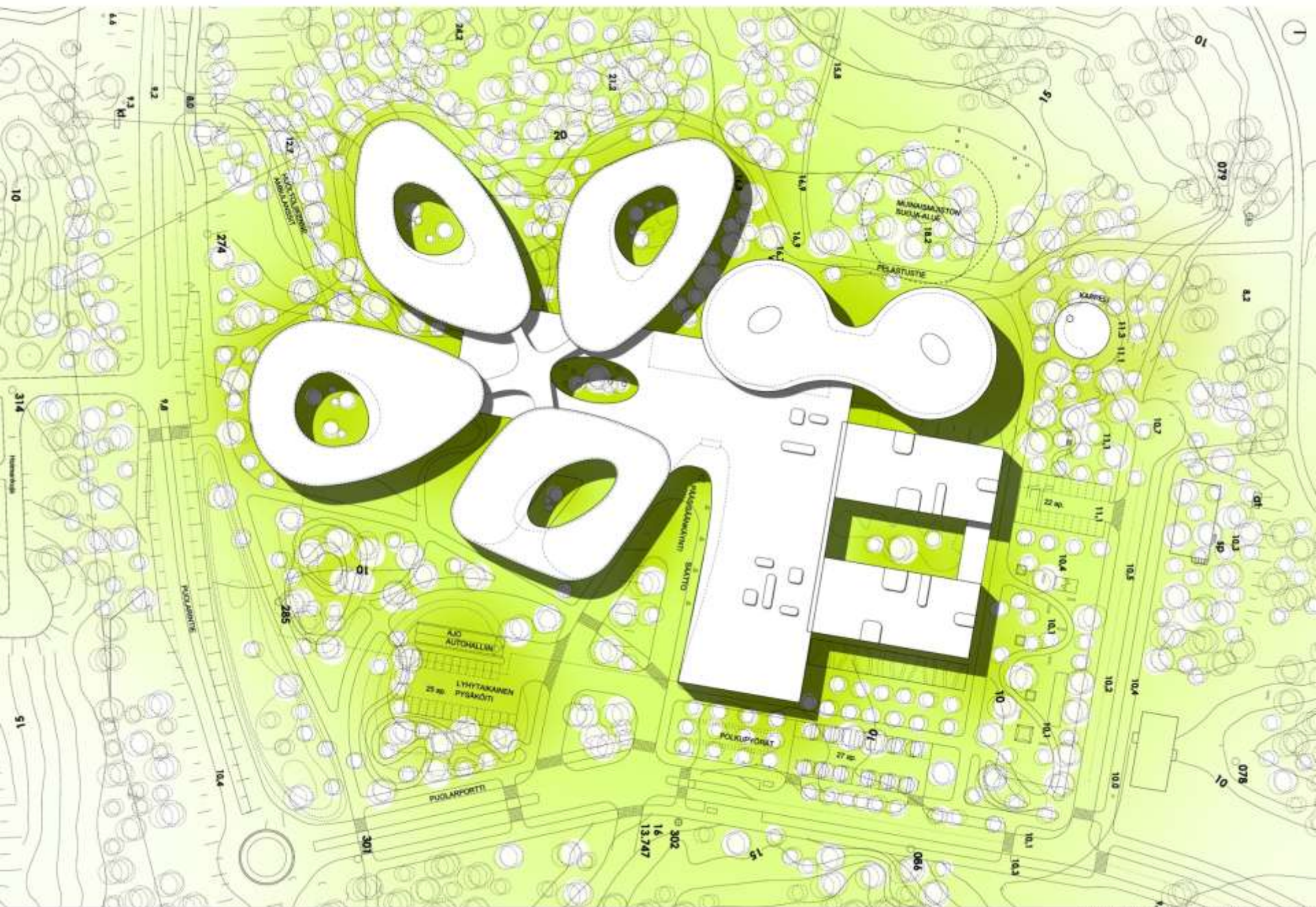
Isabel Allen, 2003

GOOD IDEA FOR COST
EFFECTIVENESS, FAIR PROCUREMENT
AND HIGH QUALITY:

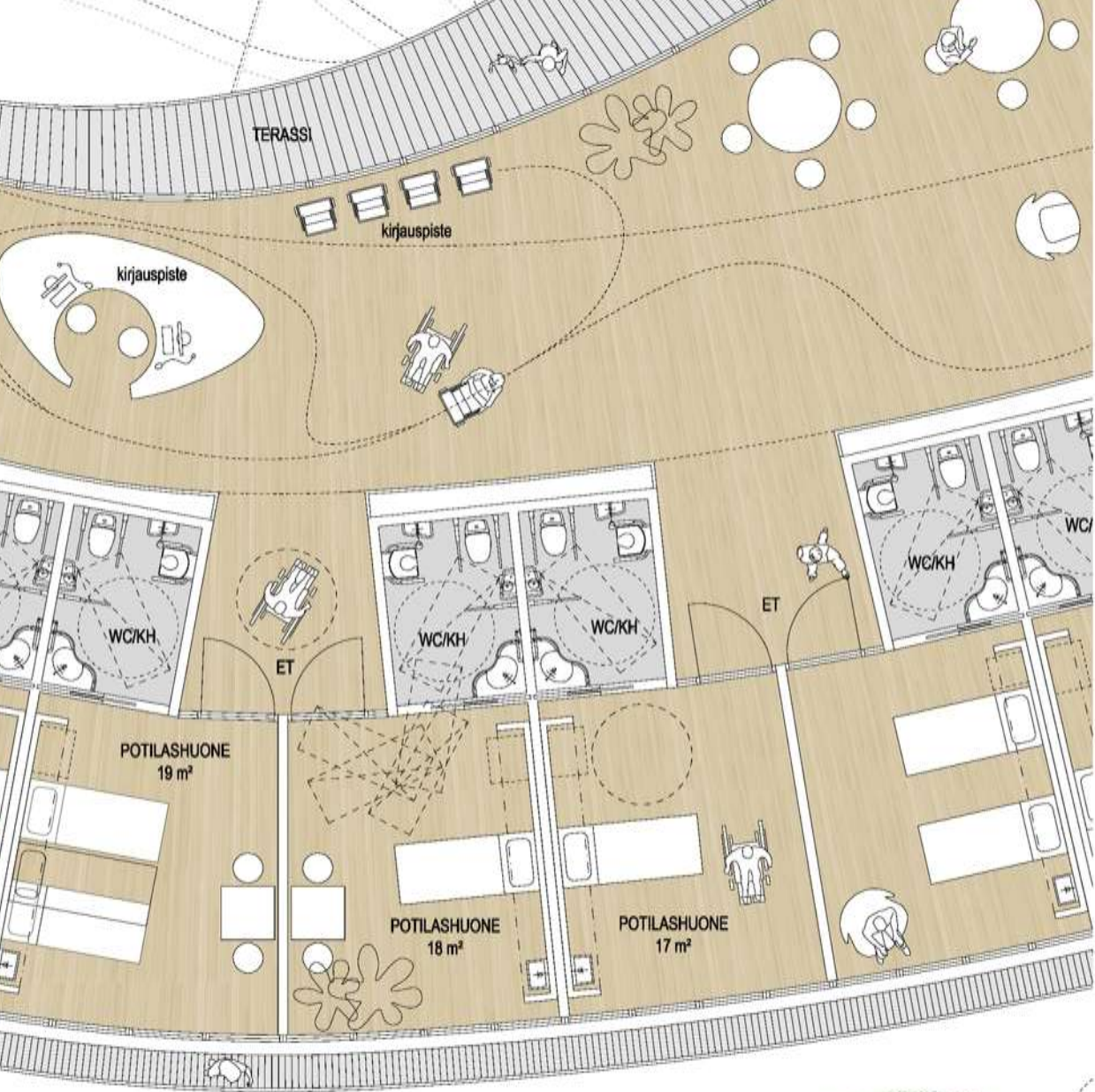
ORGANIZE ARCHITECTURAL
COMPETITIONS, PREFERABLY
OPEN AND INTERNATIONAL

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







PUISTO



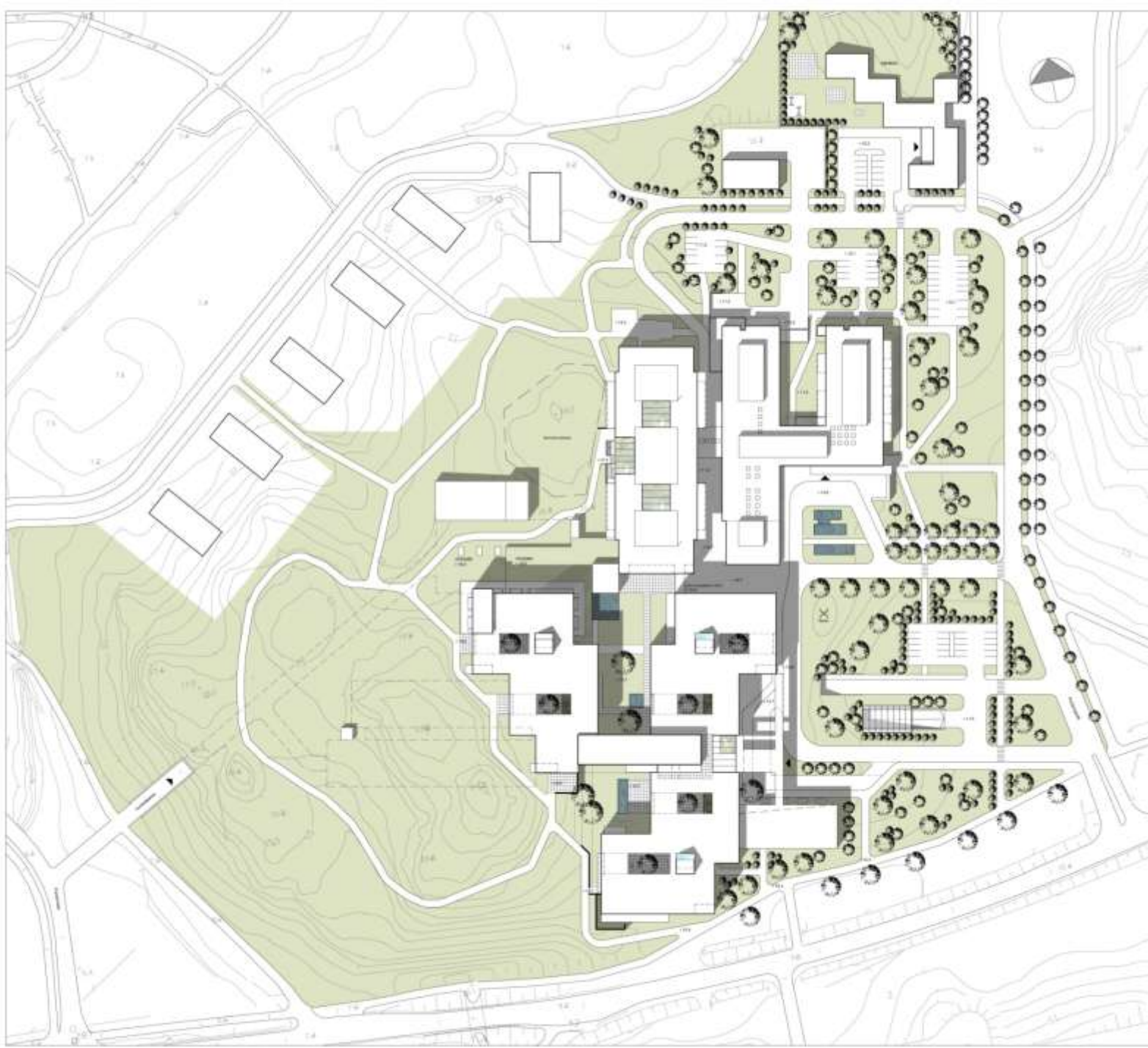
















”There is a myth that healthcare architecture is so highly specialised that only the initiated can enter. You may not need experience but you do need staying power”

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

CARE AND CURE 2025

THE BED IS NO LONGER THE MAIN FOCUS!

Optimal physical accessibility and optimal ergonomics are taken for granted

- Solving social and cultural accessibility is in the forefront
- Environmentally sustainable development is taken for granted
- Socially, culturally and economically sustainable issues are in the forefront

IN 2025 IT HAS ALSO AT LAST BEEN UNDERSTOOD THAT...

- ...more attention should be given to architectural quality
- ...hospitals should be located in city centres and not beyond ring roads out in the bush
- ...best way to save in running costs is NOT to save in investment costs and particularly NOT in design costs

THANK YOU

AND LET ALL OUR
ENVIRONMENTS BE HEALING
FROM NOW ON!