EUROPEAN CENTRE FOR HEALTH ASSETS AND ARCHITECTURE

The Capital Study – an evidence base for design
Some critical case studies

Icons - where next ?

Healthcare infrastructure

Accommodates and shapes services that are of key relevance to society and socio-economic activity

- Objectives imposed are multi-dimensional
  - Suitability
  - Reliability
  - Availability
  - Affordability
    - High resource commitment
    - Specific elements have little 'other' value
    - Expenditure will always flow through time – healthcare need is market and weather resistant
  - Considerable degree of future uncertainty
    - Functional demands and continuing relevance
    - Money supply and performance value
- Policy and regulatory conditions will always be applied
- Infrastructure of itself is a stimulant and contributor to local economies
  - Employment
  - Urban / *rural* regeneration
  - Social cohesion

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Trends in Global health policy development

- From a curative to an avoidance strategy
  - The revitalised public health agenda
- From hospital centricity to whole systems integration
  - From treatment episodes to disease (care) pathways
  - Patient Partnerships - the patient as a co-producer of care
  - Public Private Partnerships – increasing diversity
  - Central government devolution, local ‘ownership’ and autonomy
- The shift to markets – better value choice
  - Commissioners and Providers e.g. Netherlands
  - The patient choice agenda, UK, France, Finland, Estonia, Spain, Germany etc
- Better health and economic value
  - Measuring the health gain value - direct / indirect
  - Achieving asset lifecycle value

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Two useful case studies

- Coxa, Finland - redesign of a regional joint replacement service
- Rhoen-Klinikum, Germany - public private partnership delivery of hospital healthcare, a trend towards service integration and localised care

Coxa, Tampere, Finland

Specialist elective orthopaedic facility

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Coxa Hospital - the problems

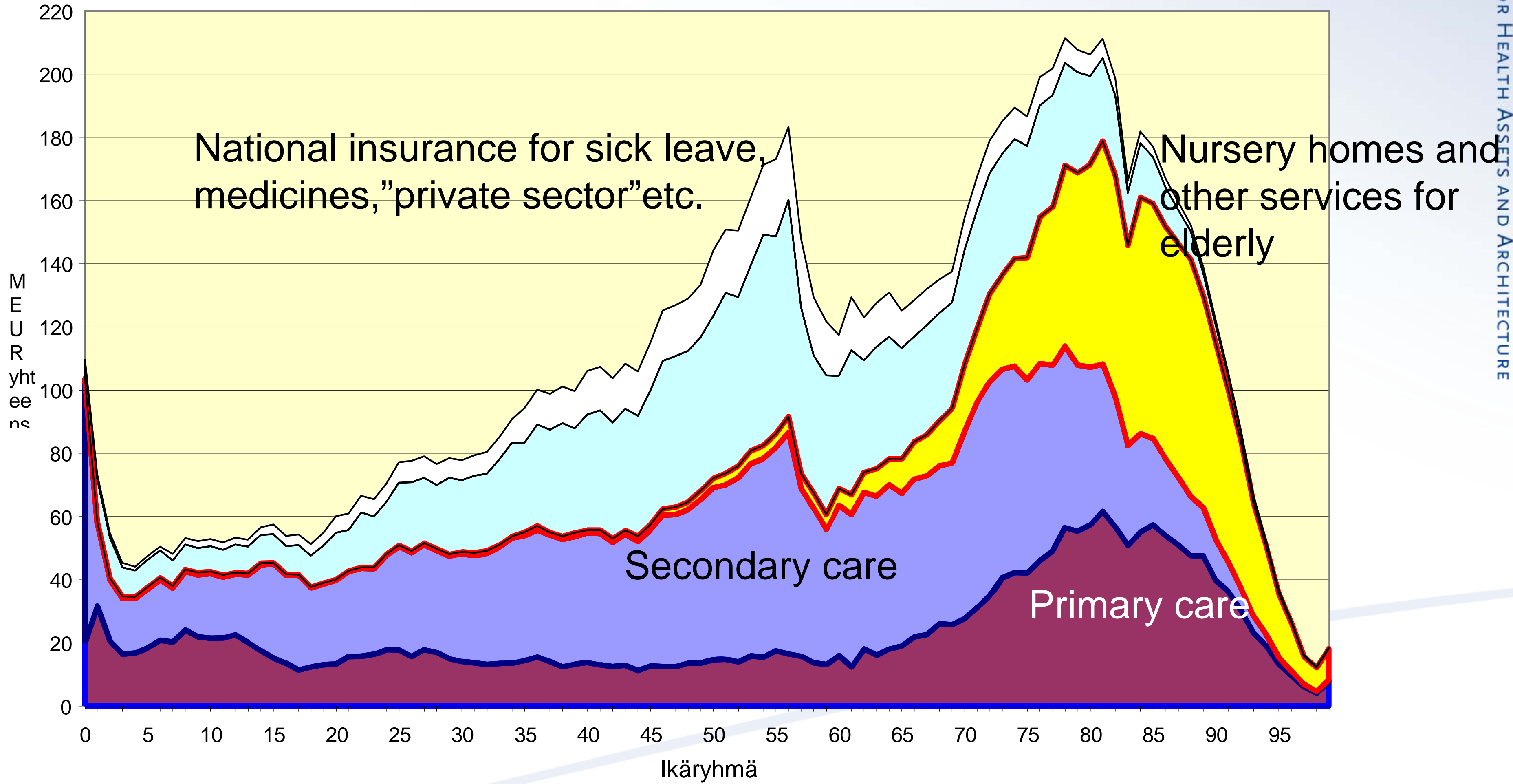
The problem for the Region

- Increasing waiting times for treatment
- Medium to long-range "*explosion in demand*"
- Shortage of resources, revenue and capital
- Health inequalities and variable outcomes
- Duplication of services - *too many hospitals*

The problem for the hospital

- Waiting for capital
- Poor quality outcomes
- Rising demand
- Danger of losing staff
- Region-wide competition for services
- Budget pressures

A typical Finnish regional profile



Pekurinen ym. 2004

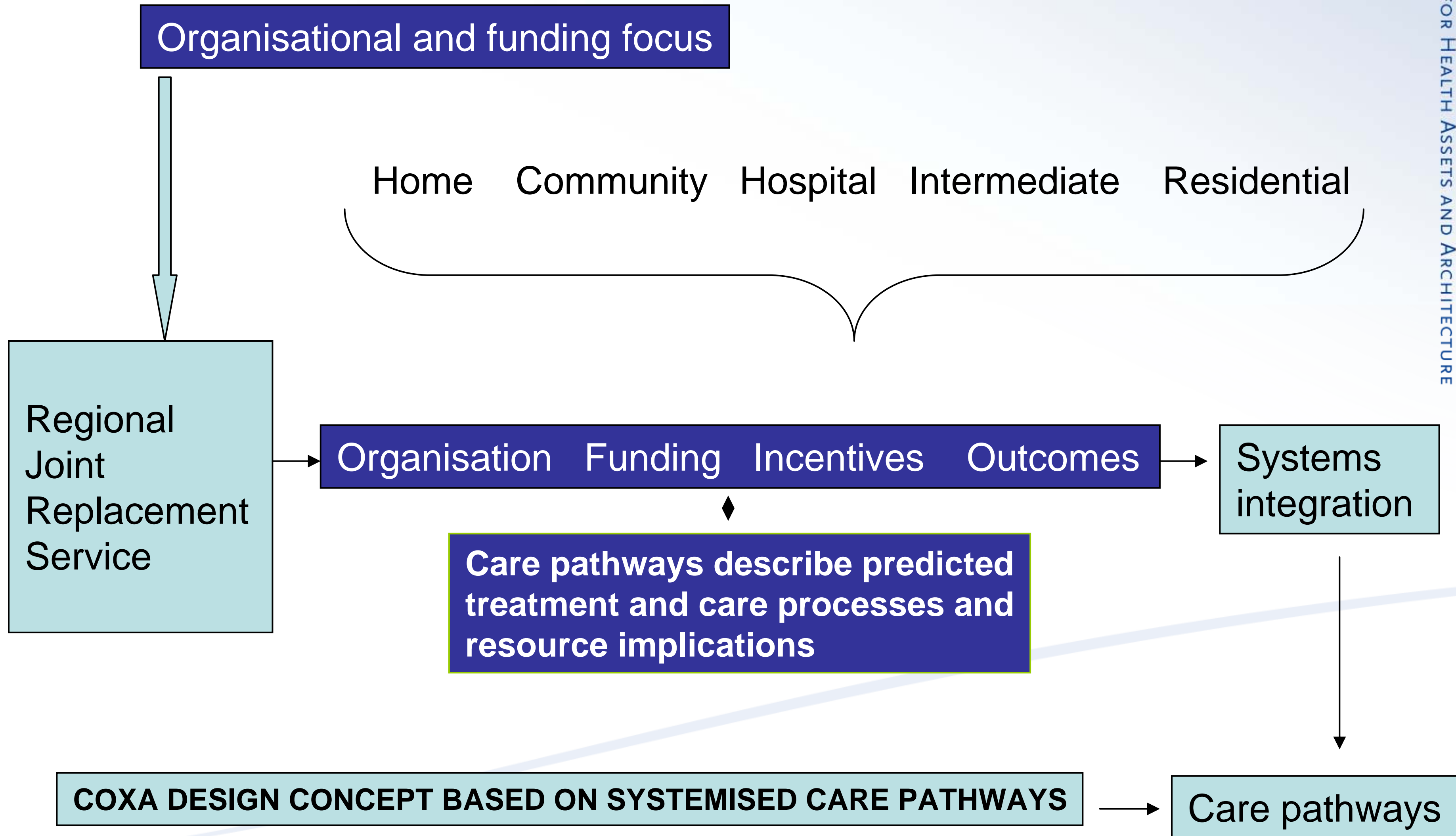
What would you do next ?

Coxa Structure and Status
A new Regional joint replacement service

Proposal for the establishment of a co-ordinated regional service - directed and managed by Coxa Hospital

- Withdrawal of hospital from State ownership
- Creation of Public Private Partnership, with mixed shareholding
  - Municipal
  - Other Hospitals
  - Equity and venture capital
- Freedoms
  - Capital
  - Workforce
- Risk
  - Transfer and ownership
  - Management

The transforming principle - region-wide systemised care delivery



Planning and negotiating change

- Demonstrating added value to stakeholders
- Persuading other hospitals to:
  - Give up some of their work
  - Become part of a “Coxa” network
- Persuade GPs and Social services to:
  - Take on additional work (diagnosis, care planning and rehabilitation)
  - Become part of a ‘Coxa” network
- Introduction of work process systemisation (over 200 care pathways) - and clinical governance
- Commitment to improving:
  - Quality
  - Responsiveness
  - Cost effectiveness
- Open and transparent evaluation and accountability

- Critical factor - regional interests and coherence overcame institutional (parochial) interests, and helped manage harsh realities of sustainable funding

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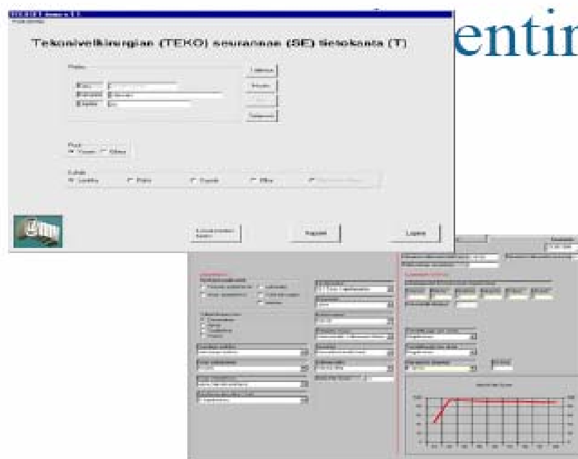
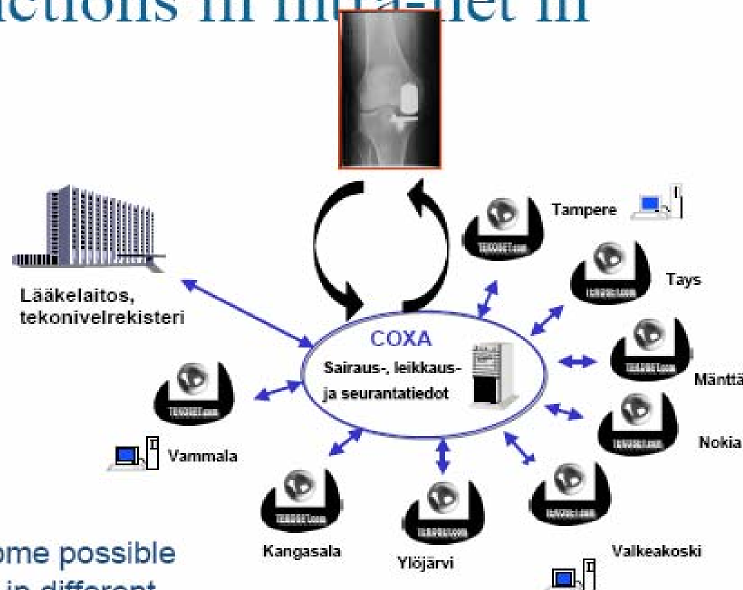
Technology as a factor in changing health systems and structures

Computerized networked database for total joint replacements, TEKOSET functions in intra-net in ... entir





•With the Tekoset-system it has become possible to decentralize the follow-up controls in different Hospitals and health centres of the health district

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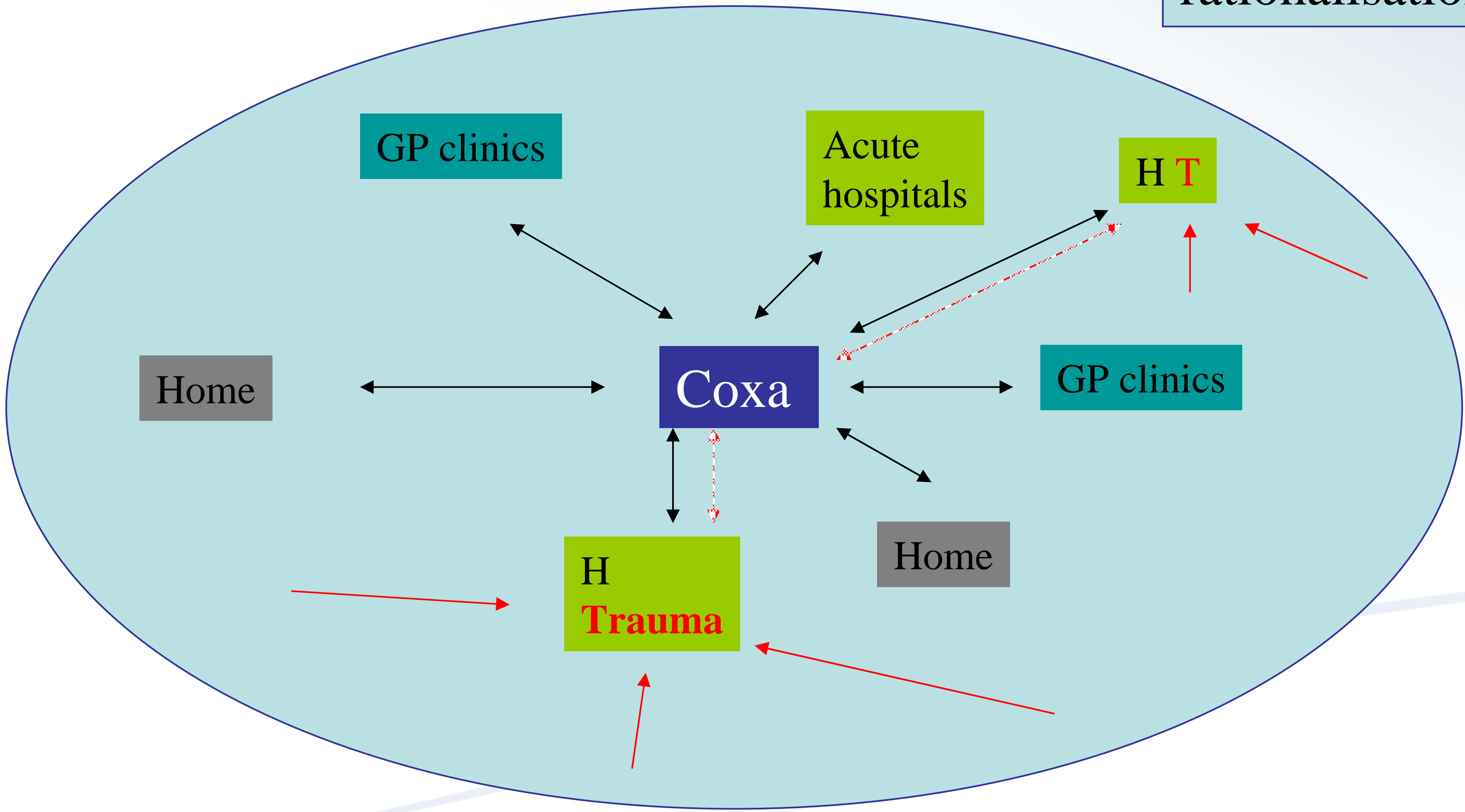
New regional framework

Twin criteria
- elective
- trauma

rationalisation



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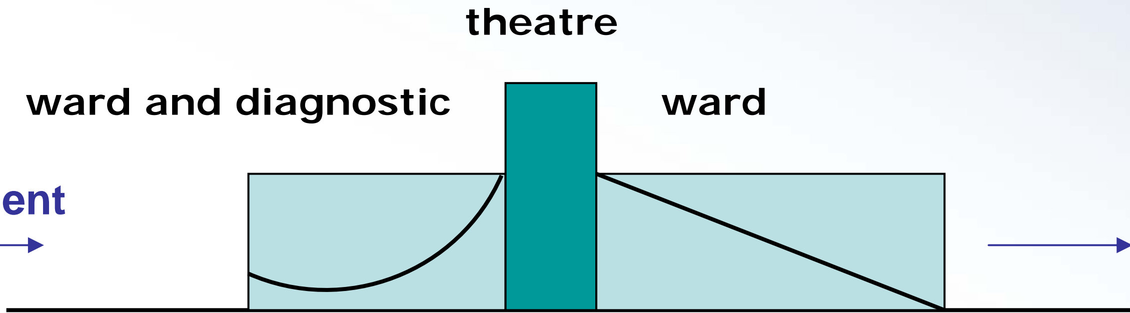
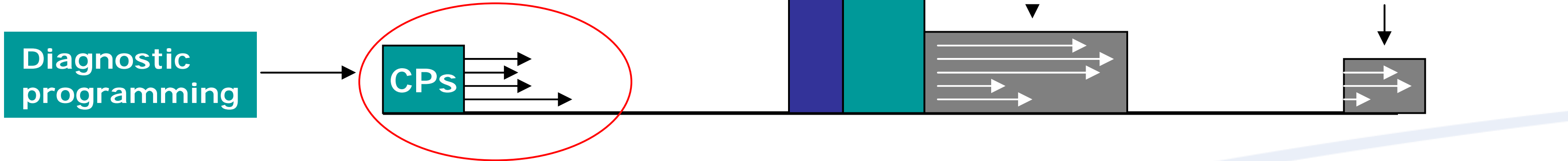
COXA whole service / capital integration

before



Individual treatment modalities

after



Coxa Hospital and patient flow, 90+% compliance with predictive care programmes

Local diffusion- Hyvinka Hospital GS - from 129 beds to 69, same output

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Performance

- Throughput increase, 1494 in 2004 to 3,700 in 2008
- Activity performance
  - 2.0 average day stay (including hip replacements)
  - 90% same day operation – all have pre-planned pathways
  - 70% of patients are transferred for rehabilitation to primary care led facilities and services – others to local hospitals
- Complication (infection) rates < .1%
- "outstanding" (independent assessment) for workforce and patient satisfaction
- Financial performance has allowed
  - 10% Price reductions in 2008
  - Self-financed sustainable capital development

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Coxa - Investing for the future

- A second phase has now been built - tripling capacity
- Space leased to other clinical specialities until needed
- An international market has been created for cross border and private patients

- Tampere University Campus
  - Cardiology to go PPP in 2010
  - Eye Hospital PPP in 2011
  - Laboratory already (international) PPP

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Coxa - Critical success factors

- Clear definition of the problem
- Designing an optimal solution - applying new knowledge and technology to unlock the problem
- Clinical commitment
- Vertical and horizontal REGIONAL integration, incorporating
  - Whole systems engagement of:
    - Regional and municipal governments
    - Former competing hospitals and primary care agencies
- Region wide systemised care pathway structures - as the precursor to change
- Capital investment as a catalyst for change
- PPP as a means of creating freedom of action
- Ownership of risk – corporate and individual
- Public accountability and transparency
- High quality leadership – aligned with the clinical workforce

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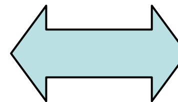
How would it look for SF bidding ?

Regional

- Better services
  - Quality
  - Accessibility
  - Convenience
  - Affordability
  - Sustainability
- Regional coherence and integration
- Regional stakeholding

National

- Above, and
  - Gov-manifesto
  - Health impact
  - Economics
  - Diffusion
  - Ideology



EU

- Direct health
  - Over time - health impact - reducing inequality
  - Employment / training
  - Cross border
  - (diffusion)
- Indirect
  - Economy
    - Research
    - Competitiveness
    - Investment
  - Employment
    - Training (int)

Rhoen Klinikum

German Private Hospital Corporation

46 hospitals – small community to large scale teaching

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Rhoen Klinikum - Germany

The problems

- Failing German Public Hospitals
- Underinvestment in healthcare facilities
- Regions facing economic pressures and indebtedness
- Shift in attitude of regions - trend away from operational role and direct accountability - towards promoting strategic direction
- Company with new concept model wishing to exploit potential

Rhoen Klinikum

Key issues

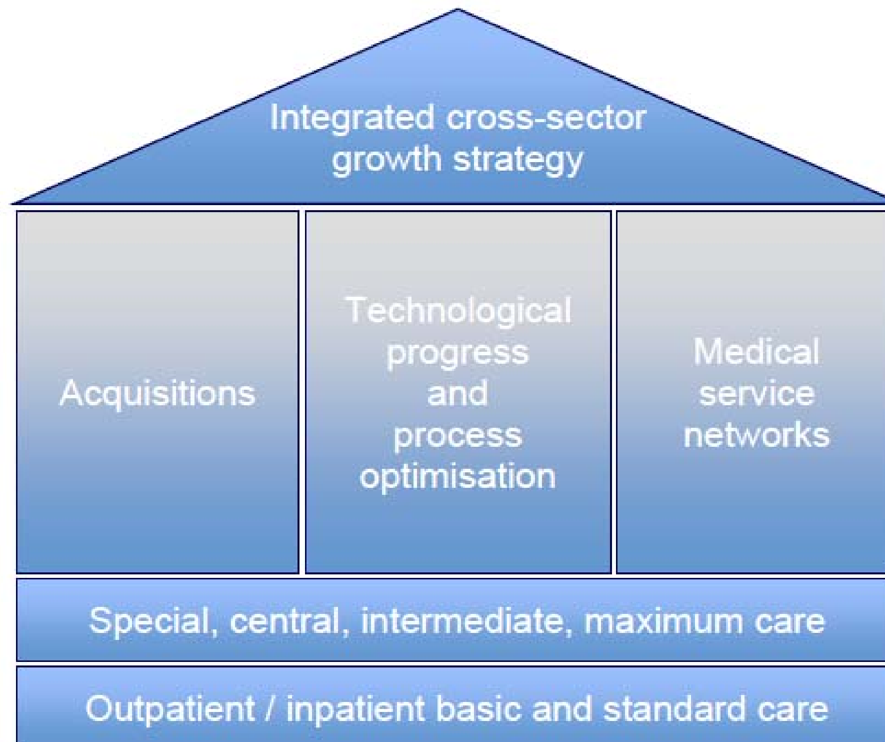
- Growth by acquisition
- Growth by service innovation
- Managing the impact of a deteriorating economic outlook
- Quality and accessibility of services
- Responsiveness to changing clinical and care needs
- Shareholder value

Rhoen Klinikum – the solution

- Creation of a public equity company – with stock market listing
- Core business model
  - Growth by acquisition
  - Turn around expertise based on –
  - Systemised care models - "quality through standardisation and service volumes"
  - Workforce rewards linked to performance
  - 'Return on investment' driven capitalisation
  - High level ICT networking
- Market share – towards whole systems integration
  - Speed and ease of access
  - Digital portals
  - Polyclinics

RK Integrated growth strategy

Expansion of outpatient-inpatient basic and standard care



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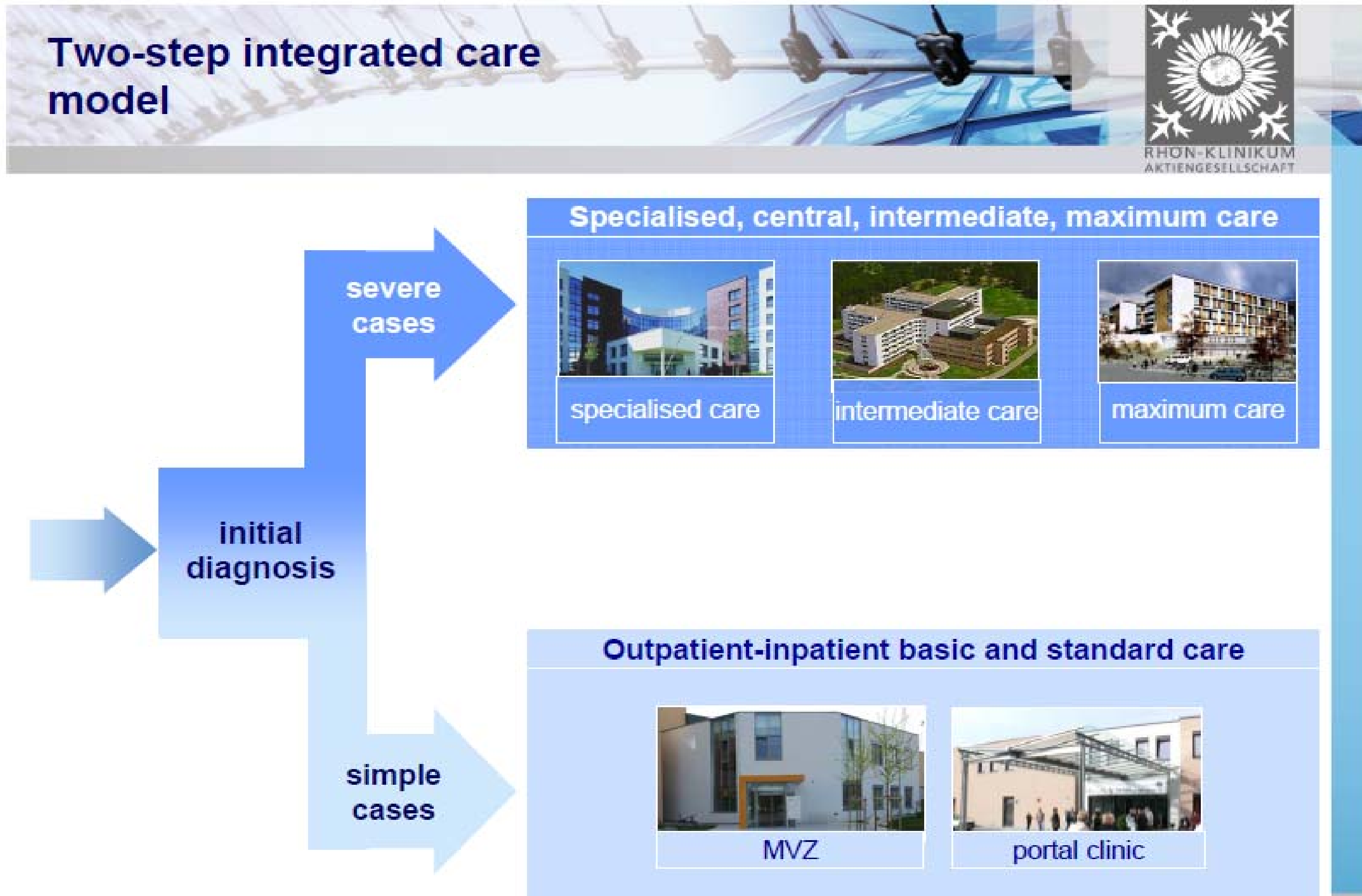
RK Integrated performance strategy



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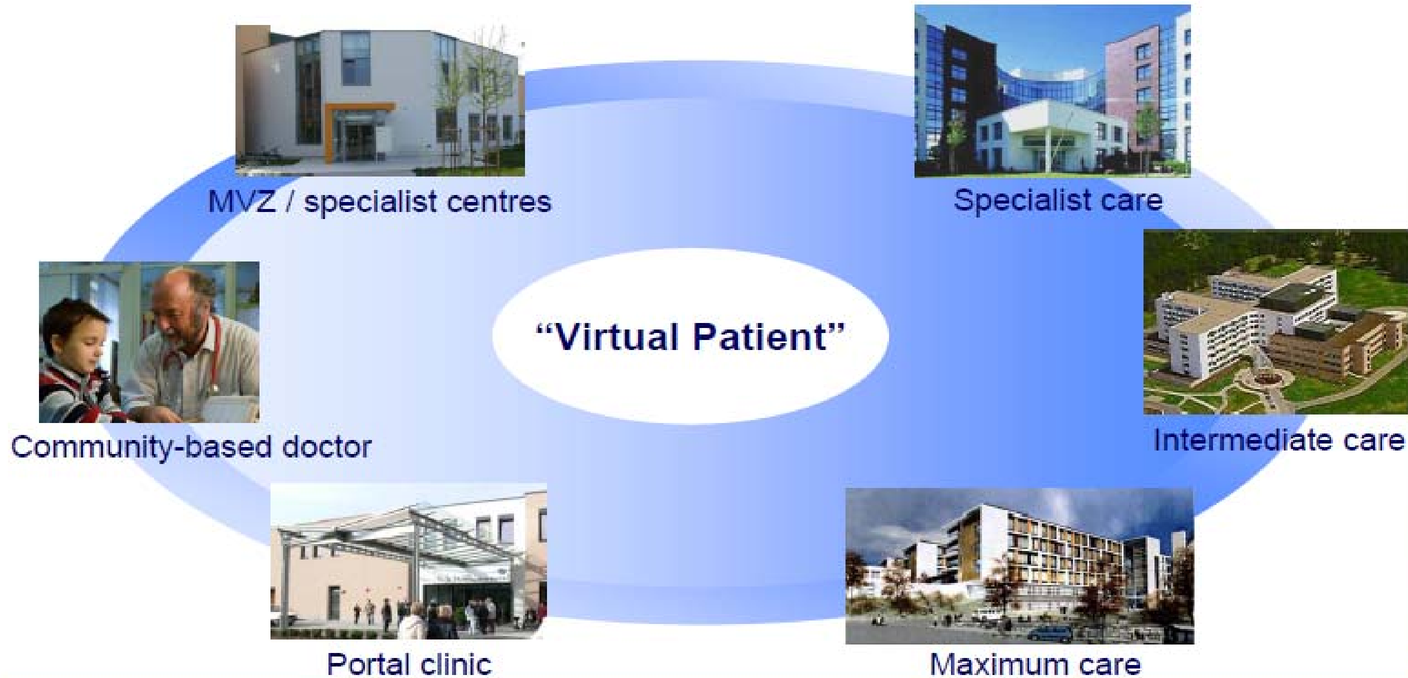
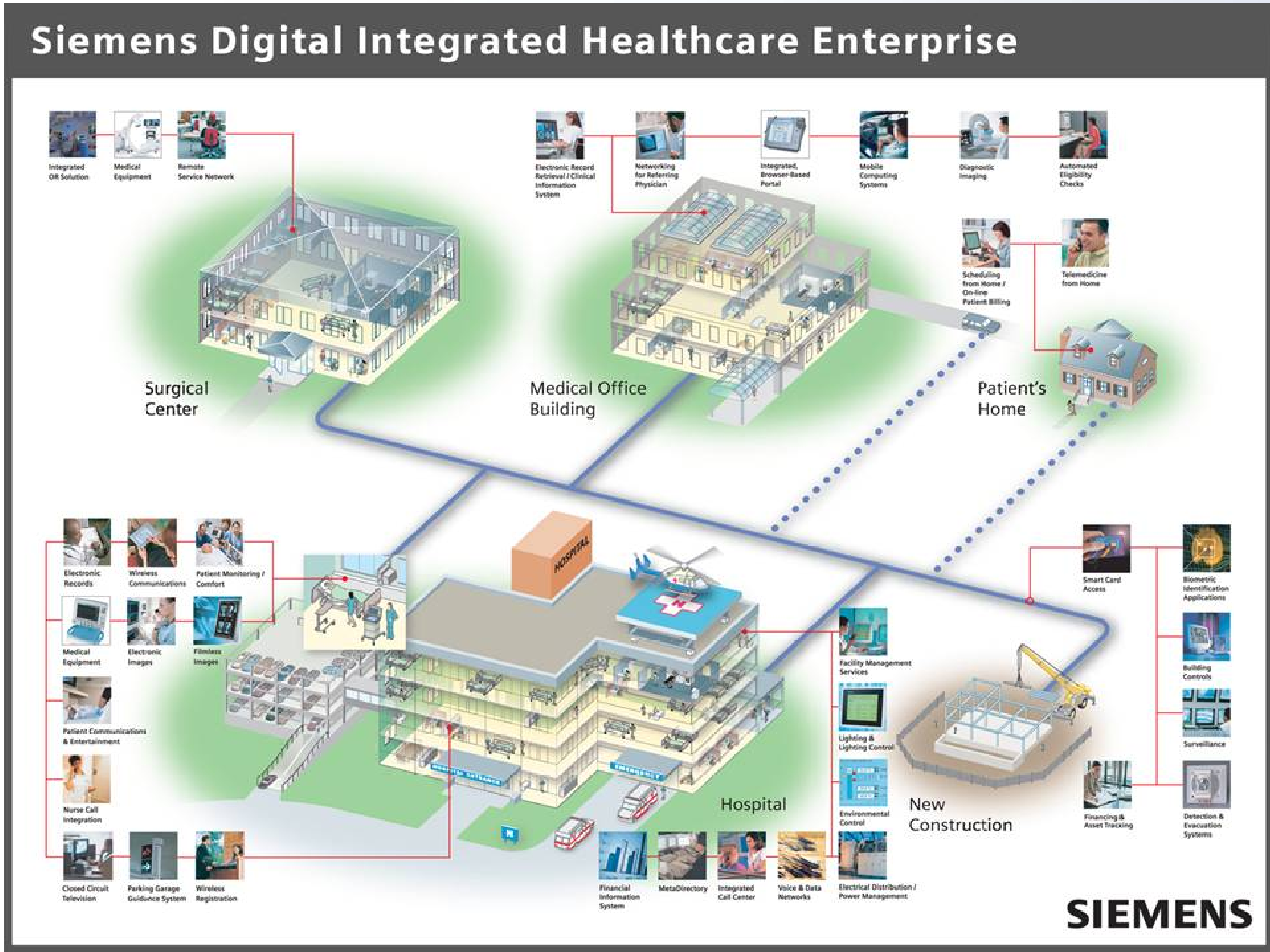
Whole systems integration



Making technology diffusion work for you



Rhoen Klinikum – Aim:
Quality through standardisation & service volumes

A wholly integrated multi-disciplinary model

- Emergency
- Diagnosis
- Theatres
- Hot floor technologies

Community portal Polyclinic

- High intensity care
- High level care
- General care
- Rehab

Patient treatment and discharge pathway

Quicker and better community support

Core principle - progressive patient flow, multi-discipinary systemised care pathways, design synergy

RK – capital investment synergy

A pivotal issue

Public Hospital

- Average Cost per case Euro 3,600
- Average capital element 270
- Total cost 3,870

RK

- Average Cost per case Euro 1,940
- Average capital element 720
- Total cost 2,660

RK refinancing strategy = replacement of capital assets over 10 year cycle – accelerated investment in new technologies

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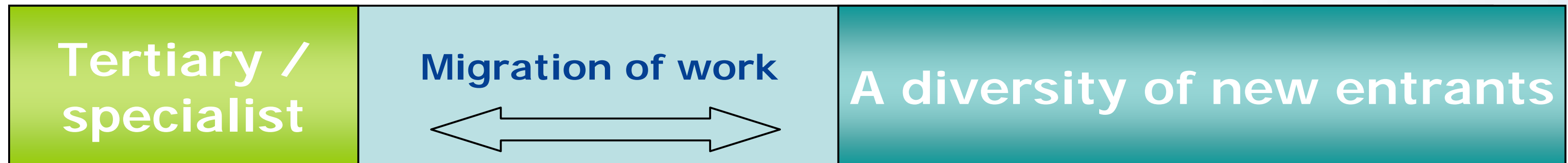
Trends in acute (general) hospital pressures

The acute general hospital squeeze



Primary care and community settings
&
Illness prevention

Aged care and chronic illness will be key drivers, as will be -
the alternative shift towards high degrees of specialisation for acute illness

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RK Changing the focus

Whole systems networking

Technology diffusion

Local ambulatory care

Variable, often existing community sites : regeneration

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Some common factors - capital related

- Long-range strategic visioning
- Short-term tactical positioning
- Risk management strategies
- Synergy between service and capital investment strategy
- Synergy between workforce practice and building design
- Adaptable design
- Flexible funding models
- Technology diffusion
- Leadership and innovation
- Dynamic organisational cultures and structures

- Population focussed investment - (regional) - economies of scale and scope

Some common factors - doctor related

- Awareness of clinical culture
  - Education and training
  - Expectation
    - Professional fulfillment vs material reward
    - Political influence
- Managing clinical cultures
  - Motivation
  - Rewards
  - Expectations
  - Accountabilities
- Fulfilling clinical ethos, and
  - Weeding out the mercenaries, by
  - Open transparent clinical governance

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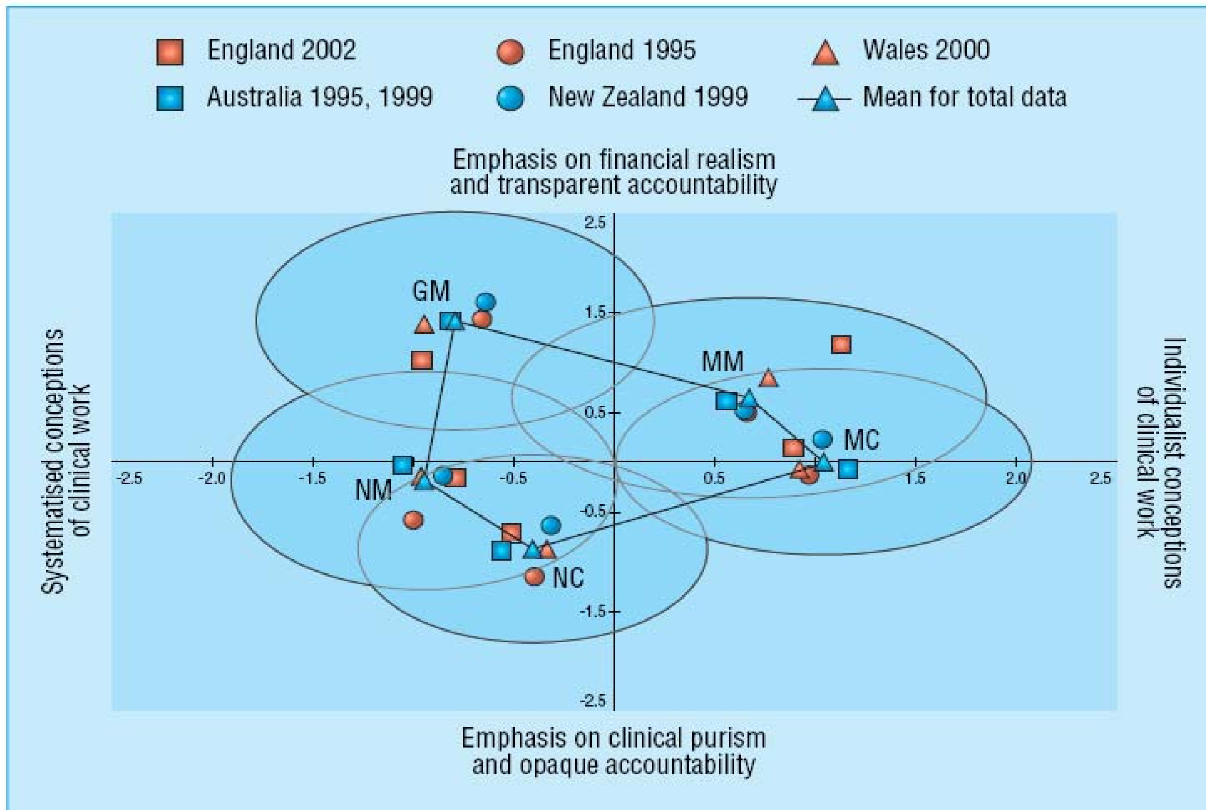
Cultural positioning of key healthcare professionals - a global study of over 8,000 'clinicians'

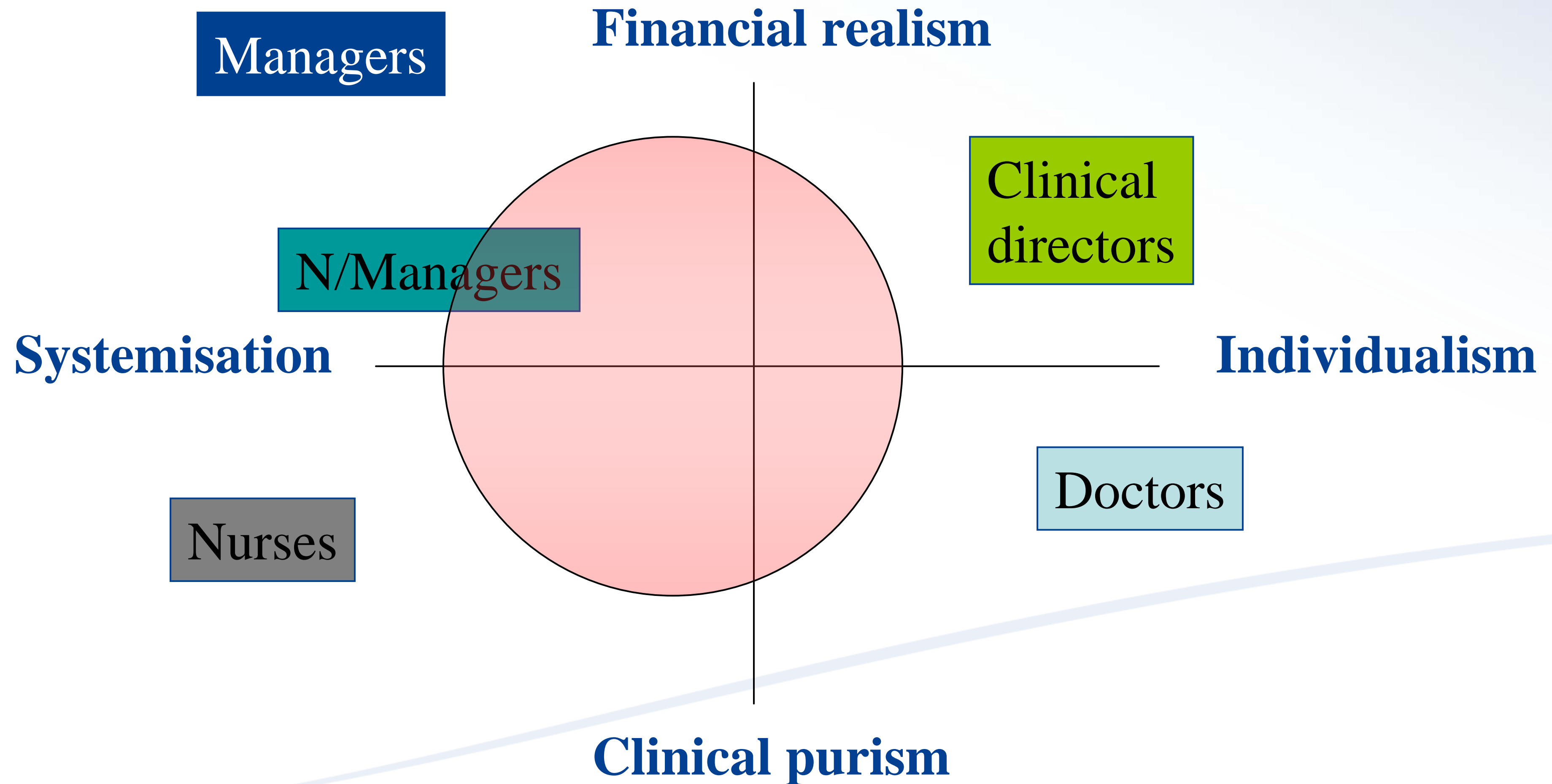


Profile of healthcare professionals' conceptions of clinical work. MC=medical clinicians, MM=medical managers, GM=general managers, NM=nurse managers, NC=nurse clinicians. Ovoids represent 1 standard deviation from mean (69% of each professional group fall within that area)

Pieter Degeling, Sharyn Maxwell, John Kennedy and Barbara Coyle

BMJ 2003;326;649-652
doi:10.1136/bmj.326.7390.649

Simplified culture model



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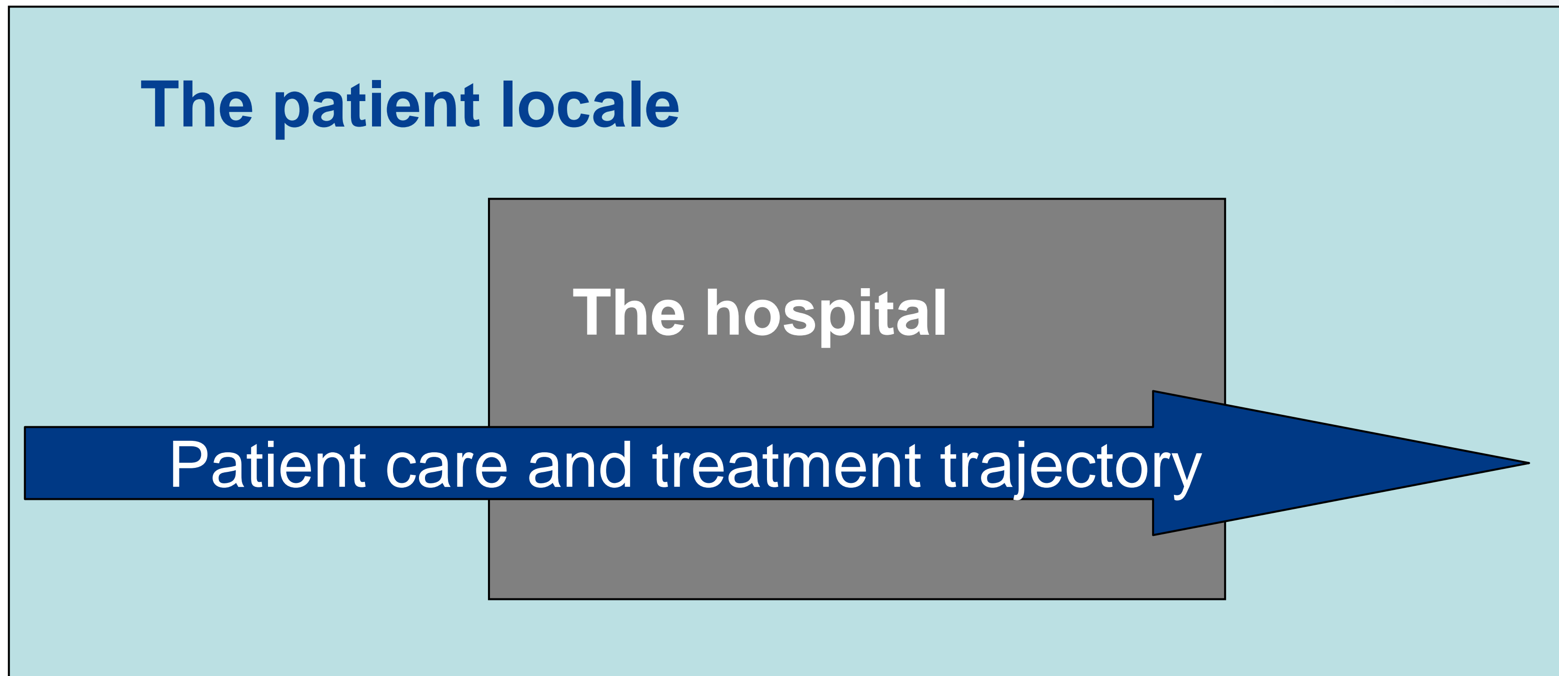
Core principles

Care (clinical) pathways as a basis for planning and investment

- A predictive description of clinical / care systems
- Measurable inputs and outcomes
- A means of translating changing demographic and epidemiological health needs into a service language that is essential for service and capital asset planning
- A means of clinician participation in planning
- A means of economic planning and control

Care pathways - a simple concept



Care pathways: service to capital language translation

- Clinical pathways are fundamental to clinical practice improvement
- They are an essential input to service delivery design
- High-quality service delivery models are an essential input to effective capital asset planning
- Capital investment planning and design must be adaptable to support continuous pathway development

Hindle, Dowdeswell, et al. (2004). A Survey of Clinical Pathways and Strategic Asset Planning in 17 EU Countries. Utrecht, Netherlands Board for Hospital Facilities.

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Capital adaptability

Managing changing demands

- Concept based
- Construction based

- Elasticity - changes in volume
- Functionality - changes in functional need
- Sustainable value - changes in nature of property use

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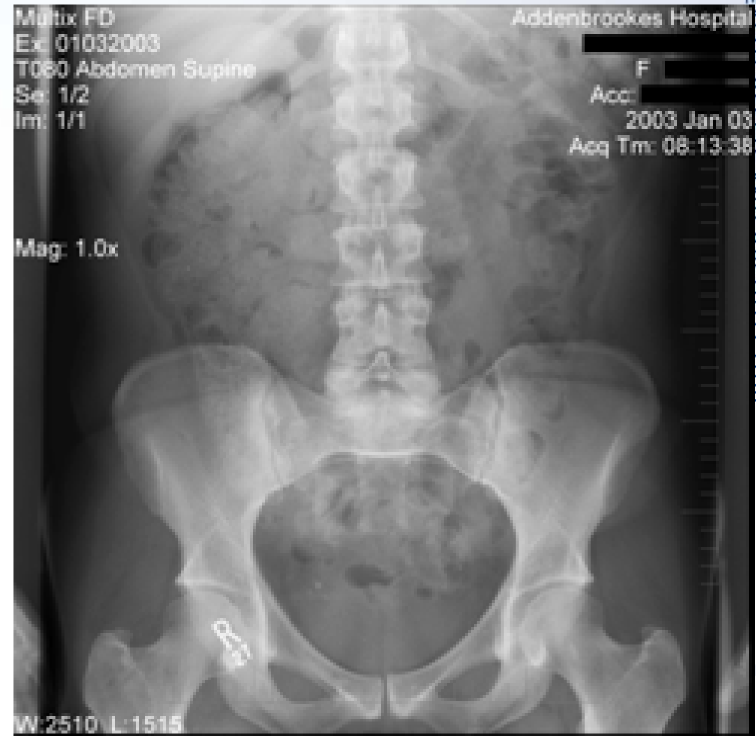
Diagnostics - unlocking mobility of care

Move information not patients

Use technology to assist connectivity, share expertise, manage peaks in demand

Network to support earlier diagnosis



Increase local access

Factory concepts

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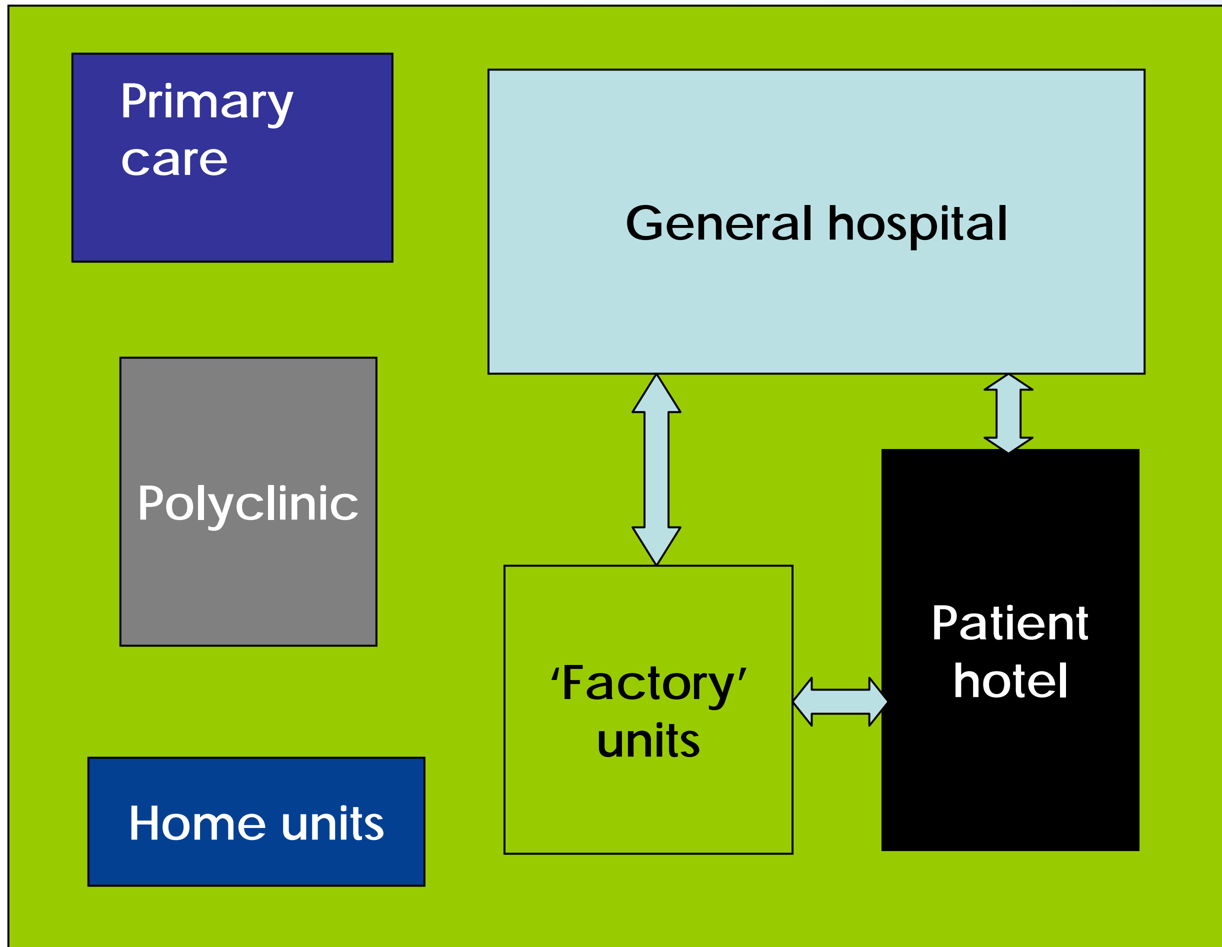
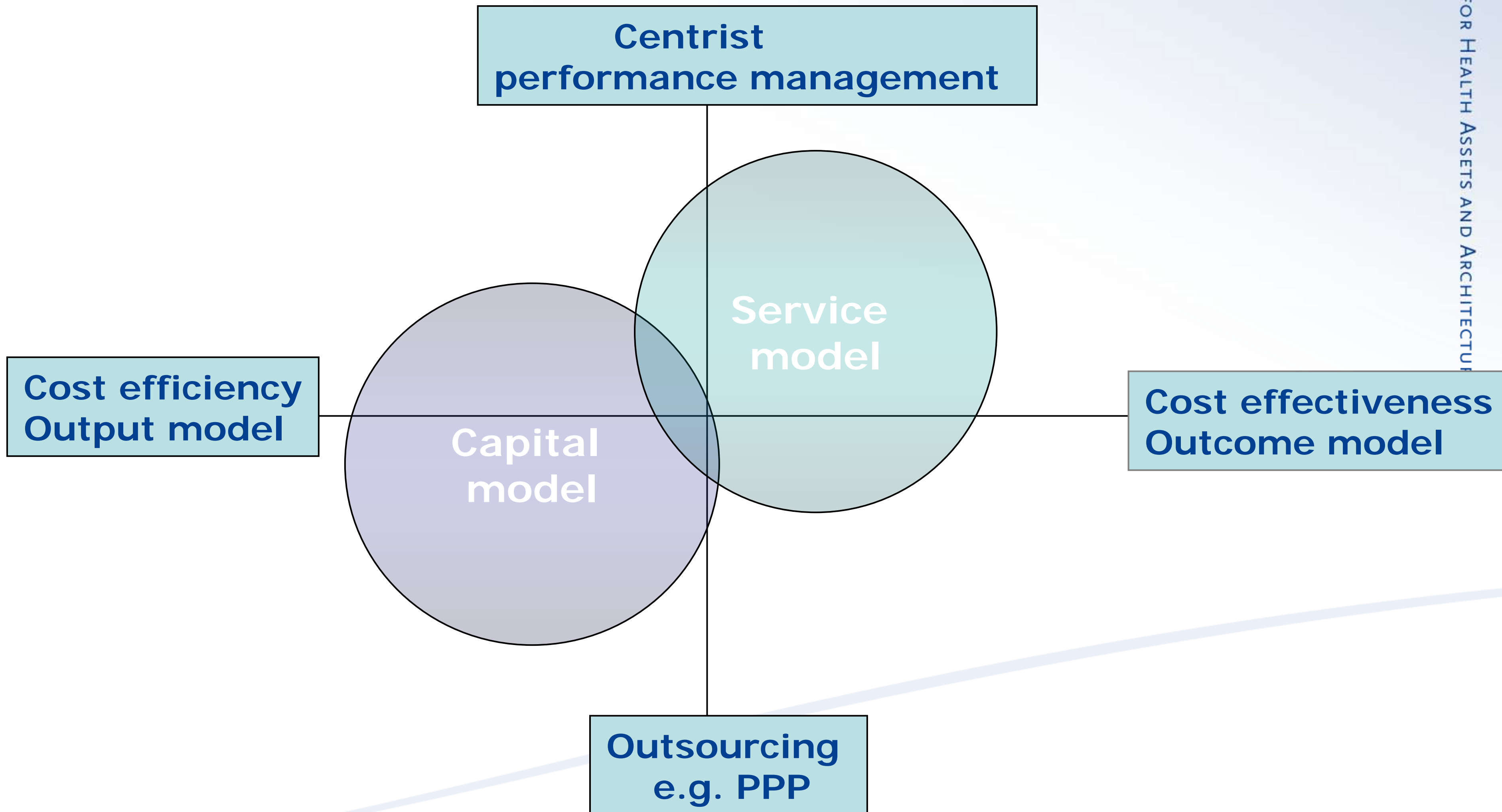
Think differently



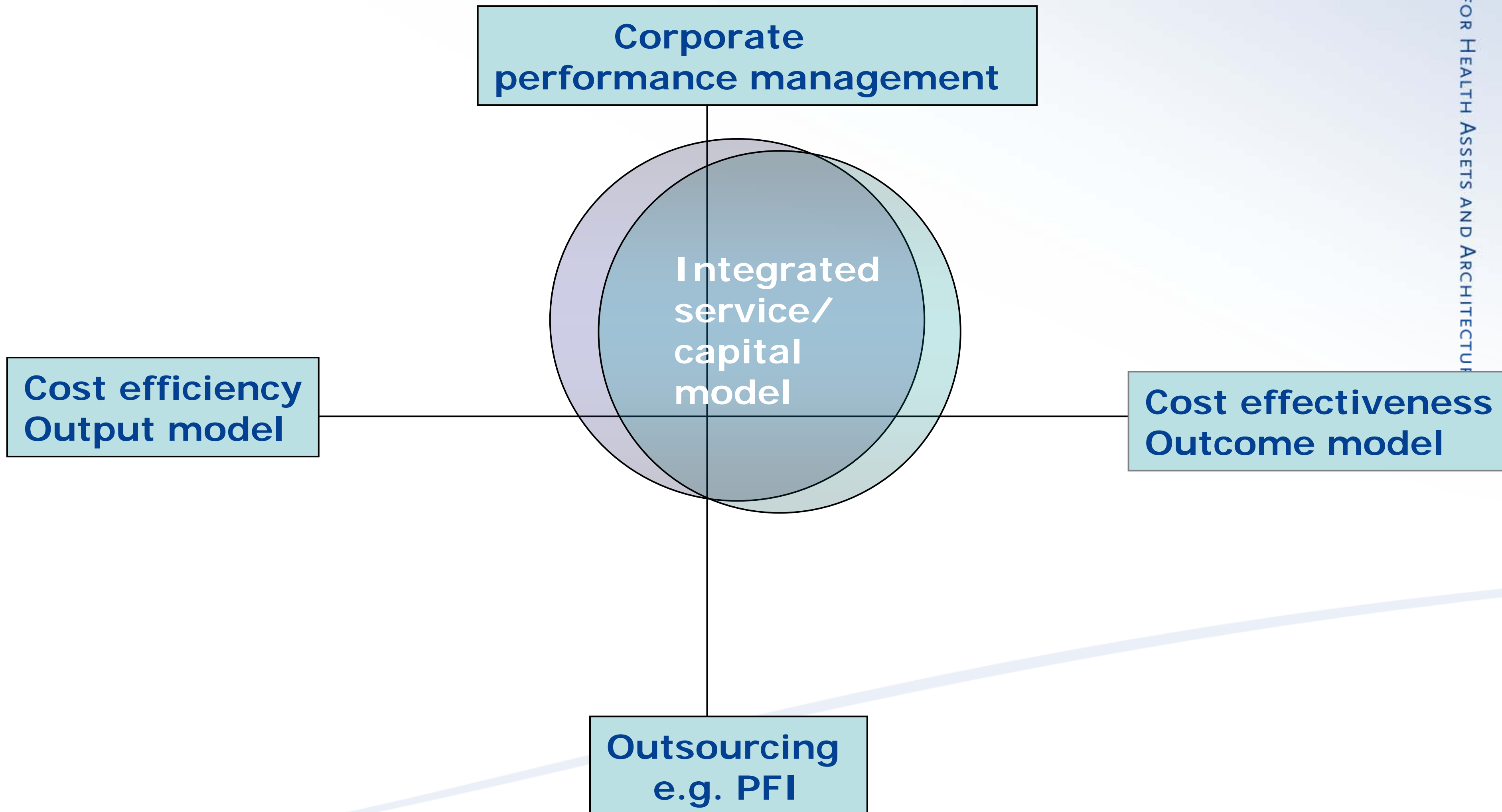
Facilities can have modular characteristics to provide flexibility

New ICT technologies e.g. telemedicine allows many of these to be dispersed

Capital / service Asymmetry – the norm !



Capital / Service Symmetry – Common sense



Joined up thinking

- From - Cost saving and standardised guidelines and processes
- To – **Service synergy, lifecycle value and sustainability**

Flexible integrated capital and revenue budgeting

Health impact

Clinical process systemisation

Adaptable capital assets

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Health inequalities - a bottom line

http://209.85.129.132/search?q=cache:uEY2QgxIBX0J:ec.europa.eu/health/ph_determinants/socio_economics/documents/ev_060302_rd05_en.pdf+europe+health+inequalities&cd=13&hl=en&ct=clnk&gl=uk

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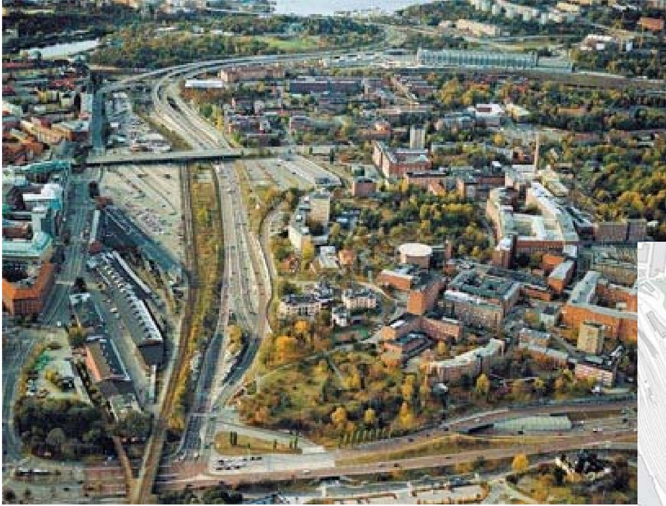
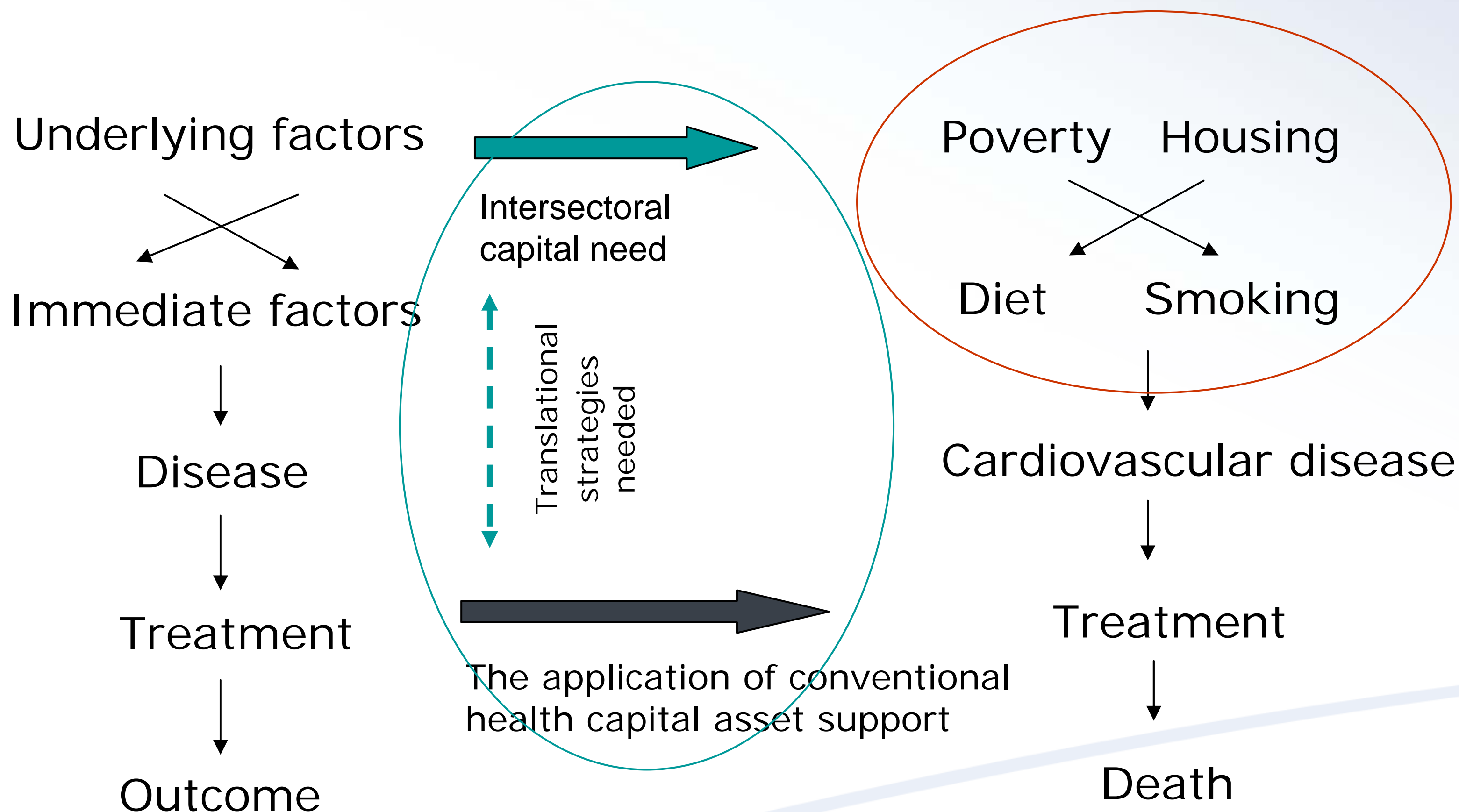
Adding societal value - Karolinska



"This new urban area around Norra Station will, in a unique environment, unite the advantages of the city with leading edge research, enterprise and housing in Europe's most exciting growth region"

Where next ?
Intersectoral investment



Netherlands - 46% avoidable deaths - reactive clinical intervention
- 44% avoidable deaths - prevention (and rising)

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Effective capital investment requires difficult choices

Thank you for your attention

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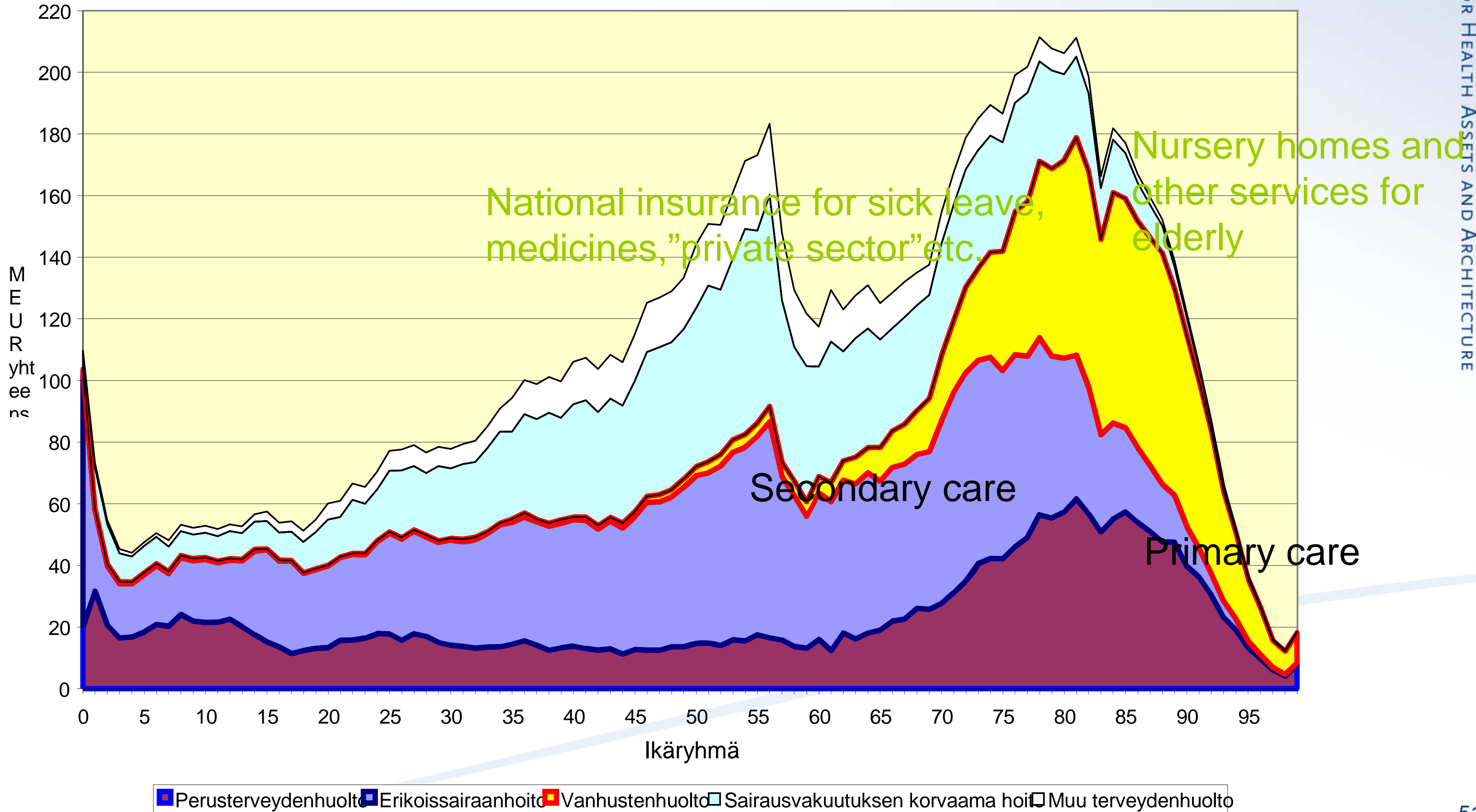
Finland Lahti Region



Pekurinen ym. 2004