



EUROPEAN CENTRE FOR HEALTH ASSETS AND ARCHITECTURE

Developing project business cases for matched funding

(Consistency factors across the health sector)

Contents

- **1. The tactical and strategic dimensions of business cases (including concept development)**
- **2. Capital and Service synergy (the translation of service need into capital solutions)**



Strategic capital investment Structural aid and match funding Does it make a difference?

- No matter the source the bottom line is the same:
 - Responding to individual health needs
 - Improving the health status of populations
- National governments, health in relation to:
 - The individual - *individual outcomes*
 - The population - *health status and equality*
 - The economy - *adding value (or cost containment)*
 - Affordability and sustainability - *prioritising expenditure*
 - **Politics**
- EU, health in relation to:
 - Health inequalities
 - 'Health is wealth'
- Business cases need to be sensitive to these differentiations, and
 - Business realities
 - Economic realities

Capital investment as a concept

Why Invest and Build?

“The purpose of capital expenditure is to ensure that, together with working capital, fixed assets will be available to support the agreed plans of the organisation, demand will normally exceed funding availability, so expenditure should focus on projects which deliver the greatest benefit”

The Control and Oversight of Capital Expenditure within Unilever,
by L. G. Norton and J. E. Wall © 1953 [Blackwell Publishing](#)

“and have minimal negative impact”

Samsø, CONCEPT, Norway, 2008

How do we know it represents value? (OECD, UNISAID, EU et al)

- **Relevance – suitability for target group**
- **Efficiency – qualitative and quantitative**
- **Effectiveness – attainment of objectives**
- **Impact – positive and negative changes**
- **Sustainability – continuity of benefits, triple bottom line**
 - **Social value**
 - **Economic contribution**
 - **Environmental factors**
- **A useful template and course correction checklist**
- **For healthcare we should add Reliability and Confidence* - public expectation**

* Capital / workforce synergy and symmetry



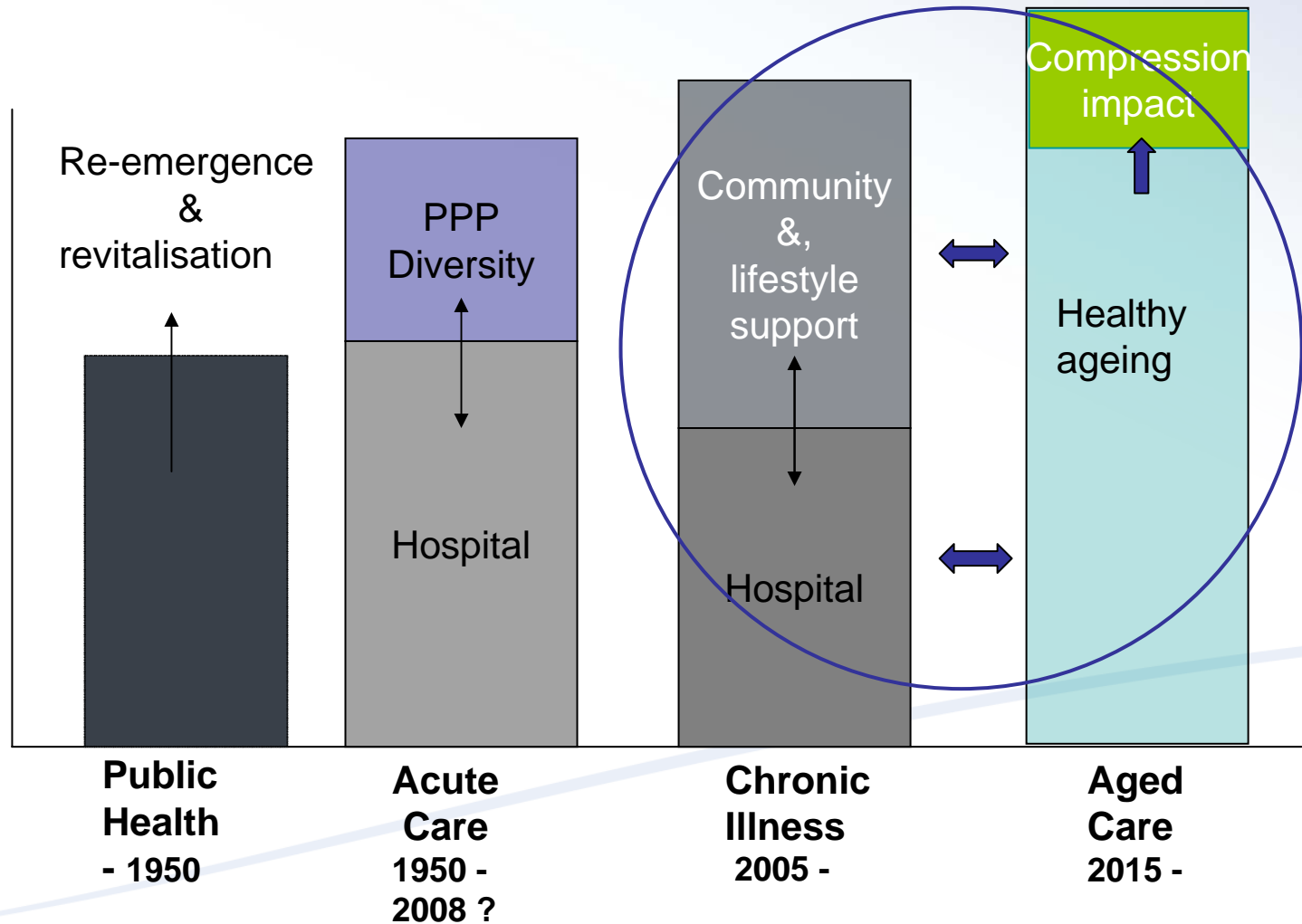
The healthcare context: a useful observation from the OECD

OECD societies are healthier than ever, but health inequalities and variances persist

- **For policymakers, the question is simple: is the rise in cost affordable and are health care systems becoming more efficient, delivering better value for money?**

- **The key effectiveness and economic priorities**
 - **Continuing to reduce inequalities**
 - **Managing demographic & epidemiological transitions**
 - **Focusing resource for best effect – e.g. technology diffusion**

What do we mean, transitions?



The silent epidemics 1

- **Musculo / Skeletal degeneration** e.g. Osteoporosis
 - In 2000, estimated number of osteoporotic fractures in Europe was 3.79 million. By 2050 frequency will more than double to over 8 million and costs increase to €6.7 billion
 - The incidence in Northern and Eastern Europe is 4 X Southern Europe
 - 24% women, 33% men die within one year of fracture
- **Neurological disease and degeneration** including Alzheimer's;
 - The Estimated number of people living with dementia in the EU is between 5.3 and 5.8 million people, around 1.2% of all European citizens.
 - By 2050: Figures will double in Western Europe, and Treble in Eastern Europe
 - New thinking will be needed about their needs - in the community, and hospital

“People should not suffer from Dementia, they should be supported to live with it, it is a normal part of ageing, too many are being hospitalised because their needs are not well enough understood” Britt Ostland, Lund University

By the time you read this slide

- 30 people will have suffered fractures
- 10 will die as a consequence

The silent epidemics 2

Diabetes

- Europe has 48 million diabetes sufferers, the highest incidence worldwide.
- In 2003, 7.8% of Europe's population had diabetes.
- Among the 40-59 age group the prevalence of diabetes is at its highest.
- By 2025 cases will increase to increase to 10.9% of Europe's population

Associated conditions

- **According to the WHO. Diabetes has become one of the main causes for morbidity and mortality in Europe.**
- *visual impairment, blindness,*
- *nerve damage,*
- *renal failure, and lower limb amputation.*
- *In addition, about 50% of people suffering from diabetes die of cardiovascular diseases,*

Cost of diabetes

- People with diabetes need to consult doctors on average 2-5 times more often
- 2.5% to 15% of annual health budgets are spent on the direct costs of diabetes-related illnesses.
- About €2,834 was spent on each patient each year.

Project planning for these needs (and all the others)

- **The data is mostly available - if you know where to look**
- **The needs are evident**
- **There is good evidence about better ways of meeting these needs**
- **There are good examples for reference**
- **People are willing to share experience**
- **There is an underlying ethos of solidarity in healthcare**

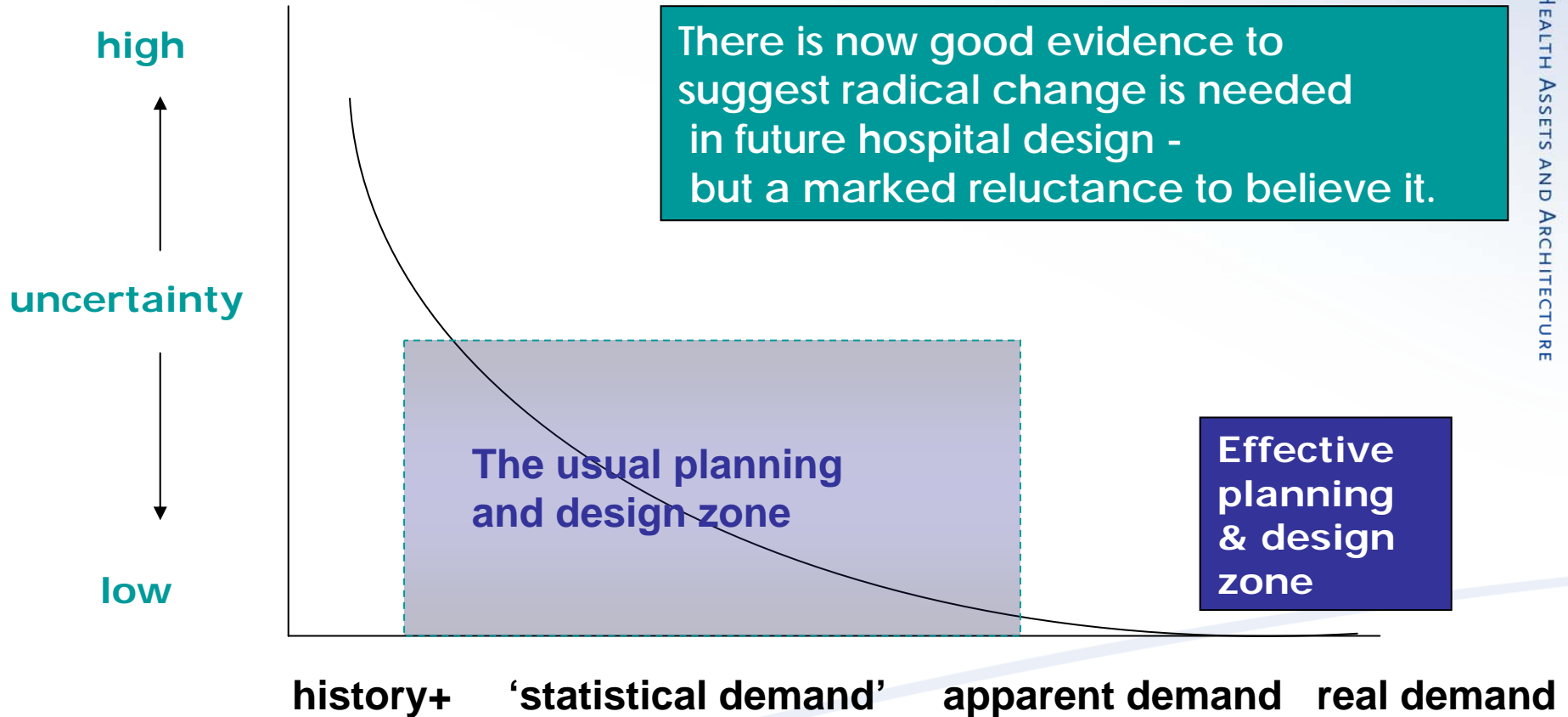
But

- **Why do we keep failing to achieve better results**

The rush to certainty - a problem with icons

- There is often only a narrow window of investment opportunity
- Tactical positioning is quicker and easier than strategic redesign
- We like tried and trusted formulae – we do not like dramatic change, despite the evidence
- History, experience and incremental performance efficiency projections are compelling – measurable targets are comforting
- Relevant data is often dilute, diverse and held in the wrong places
- We tend to lack the methodologies, systems and incentives for joined up thinking
- Some capital models are counterintuitive to clinical and care needs
- Robust and penetrating risk assessment is not very comfortable
- Shrinking hospitals to invest elsewhere is difficult and dangerous
- This all contributes to *active inertia* and the *rush to certainty* models of project development that are all too conspicuous

The reality of most current hospital planning



Predictive care pathway principles provide the bridge towards the future

Some other reasons for failure

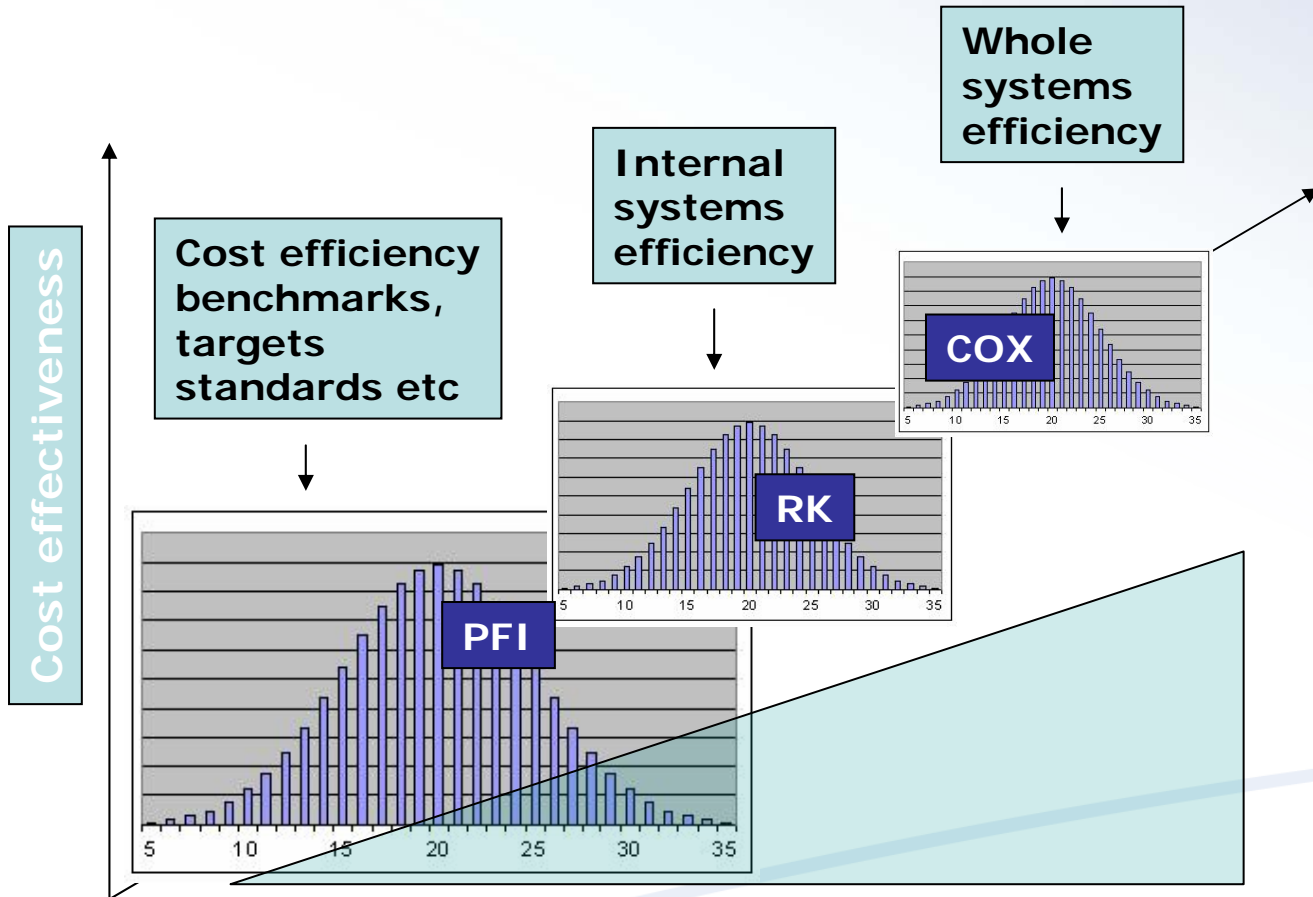
- **Too little time allowed for strategic visioning and planning**
- **Failure to engage stakeholders positively**
- **Weak methodologies**
- **Lack of street wise tactical acumen**
- **Failure to demonstrate strategic benefit e.g.**
 - **The wrong outcomes - divorced from the core purpose of medicine = wellness vs productivity, and**
 - **The cost efficiency / effectiveness issue**
- **Underestimation of project logistics**
 - **Bidding process**
 - **Specification**
 - **Procurement process**
 - **Contingency planning**
- **Unwillingness to accept and adapt to change of circumstance**
- **Naiveté about competition**
- **Lack of trust**

The myth of ‘direct’ productivity as a principal route to value?

- **NHS performance management*** - but
“The NHS has seen a year-on-year fall in productivity despite the billions of pounds of investment in the service”, latest figures** show:
 - A fall of 2% a year from 2001 to 2005 across the UK.
 - “New Health Minister promises cull of NHS targets in favour of a people-centred service” - the Treasury may not be listening
- * <http://www.productivity.nhs.uk>
** National Audit Office 2009
- **Finland on productivity - SITRA 2006**
“*Productivity, innovation ability and innovative procurement*”
 - “It is not an exaggeration to say that the future of the welfare society depends on attaining increased productivity in the public sector.” says Jukka Yliherva, D.Sc. (Tech.), the author of the report.
 - “In the public sector, innovations are nearly always related to a change in modes of operation, which requires reorganisation of work”

From technical efficiency to systems effectiveness – a progressive trend

Bell curve areas relative to scale of adoption in Europe



Scale and nature of Care Pathway development = improvement in service cost efficiency & effectiveness

Case studies – a surprising finding

Tendency to public sector obsession & stasis*

Institutional efficiency performance targets

Home Community Hospital Intermediate Residential



Systems Organisation Funding Incentives Outcomes

Systems integration

Tendency to accelerating private sector innovation

- RK
- Coxa
- La Ribera

Care pathways describe predicted treatment and care processes and resource implications

Flow resourcing & management

* PFI presents a particular problem

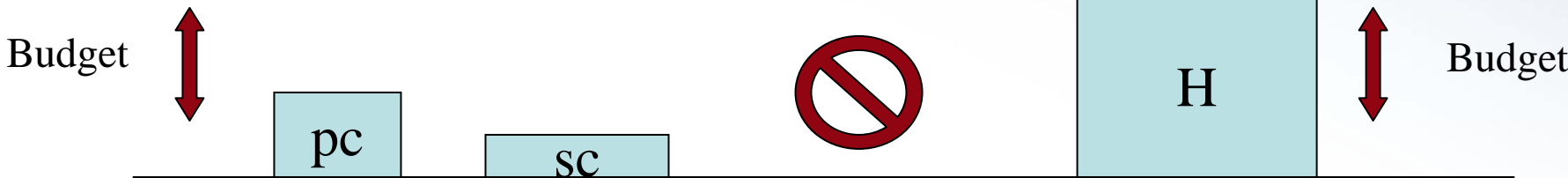
Care pathways / disease management

An integrated way forward

Asthma care - reconstruction

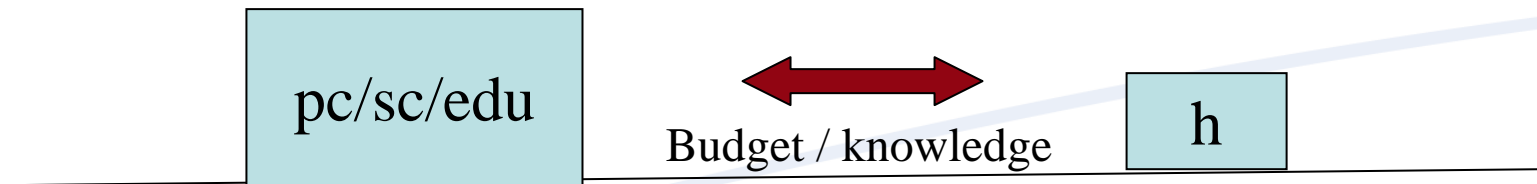
Before

Hospital reactive reliance

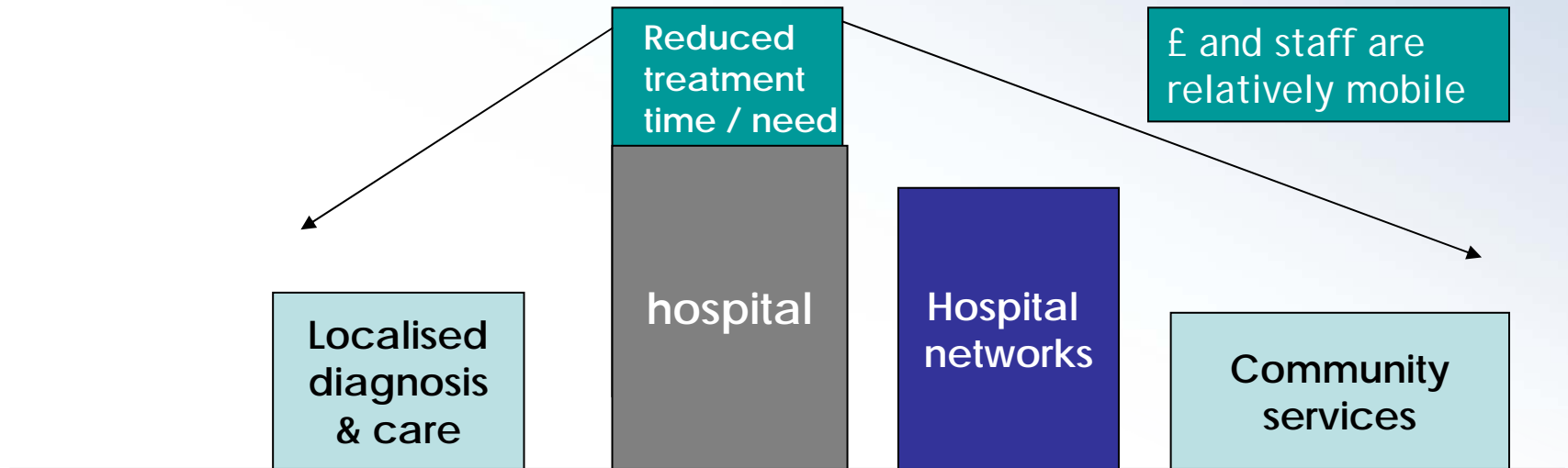


After

- risk avoidance - diagnosis / trigger factors
- local competence / local trust
- front line (backed up) response



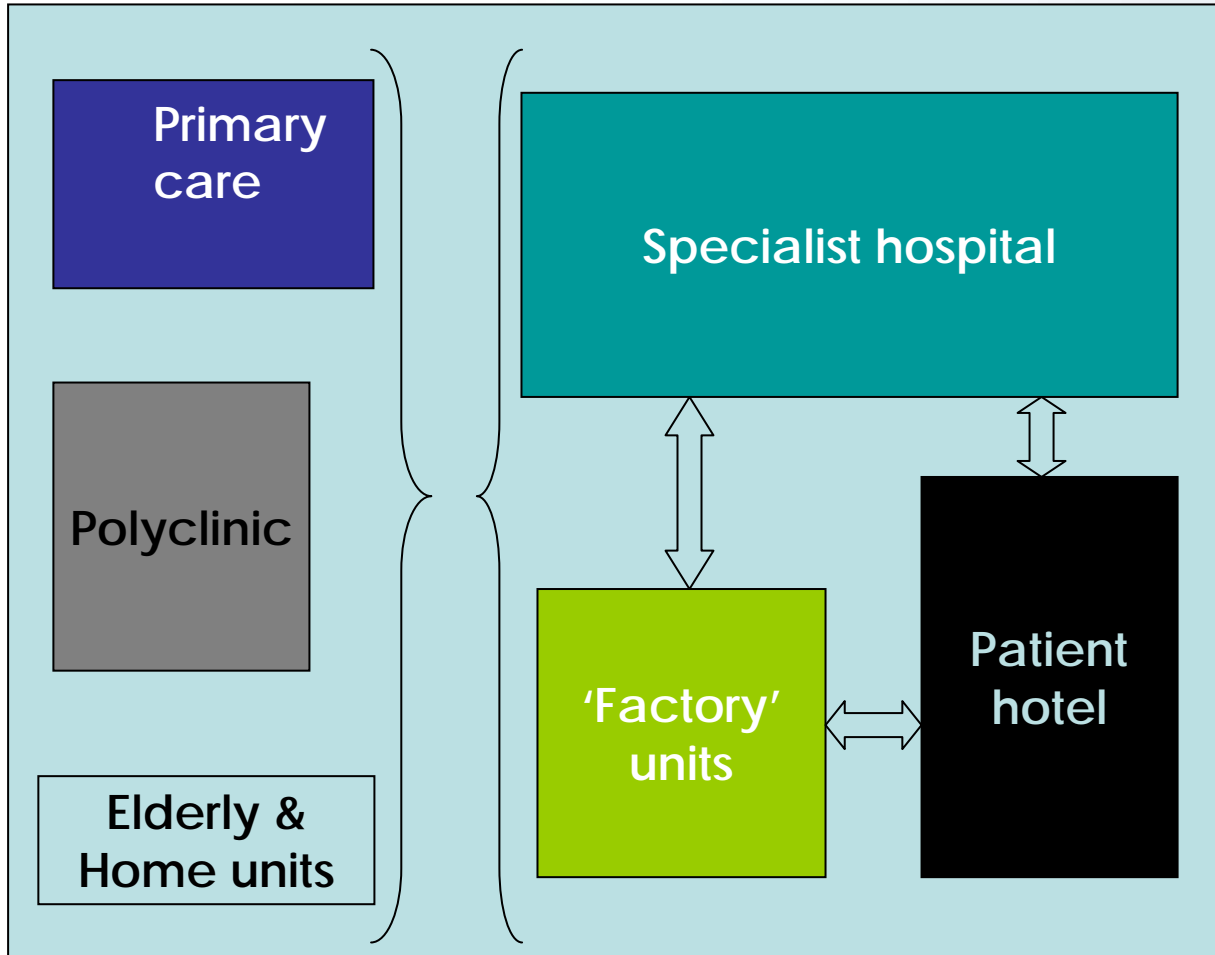
The changing outlook



New regional strategies to integrate primary and acute care

- diagnostic and treatment portals
- hospital networks
- polyclinics
- community and rehabilitation development
- whole systems integration / linkage e.g web-based patients records

The same but different

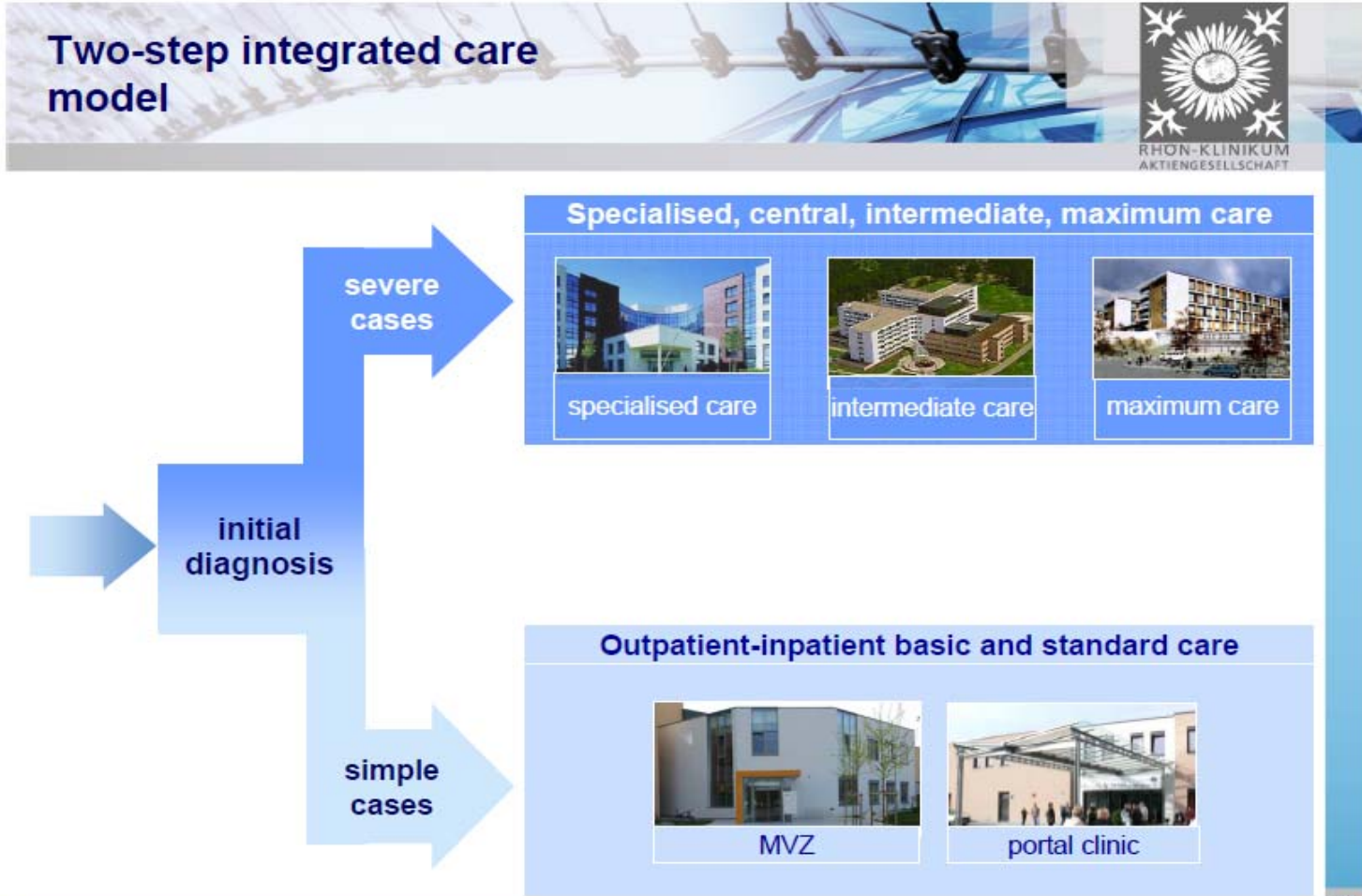


Facilities will need characteristics that provide flexibility adaptability and the arrival of short-life interchangeable buildings

*New technology diffusion will dispense with the need for geographical proximity
Care pathways will provide the new basis for planning and resource integration*

RK Integrated performance strategy

➔
What the private sector saw coming
The acute general hospital squeeze
➔





The systems route to salvation and sustainability – the capital dimension

The most significant innovation in health service efficiency and effectiveness looks to be the trend away from an obsession with institutional performance efficiency towards whole systems effectiveness.

- Rethinking tactical and strategic balance
- Portfolio capital strategies
- Applied technology diffusion



Service to capital translation

In healthcare, what does the hospital (still) uniquely do? How are these functions changing?

- Surgery: operating theatres
 - Fast acting anaesthetics
 - Minimally invasive surgery
- Imaging: radiology
 - Telemedicine
 - Ultrasound
- Diagnostics: laboratories
 - Near patient testing
 - Micro-arrays



Plus hospitals are not just settings for treatment - economies of scope (if not scale): training, R&D, urban regeneration



If function follows form, what would normally be the form when (hospital) function is changing so fast?

Some options are the historic norm:

- Maintain or increase asset base of bed numbers (per 1000 population)
- Sweat the asset base by raising bed utilisation rates ($\geq 90\%$)
- Add medical technology in existing hospital specialties & departments
- In other words - little changes except performance pressure and quality deterioration - beyond well understood ratios and scale the law of diminishing returns kicks in.

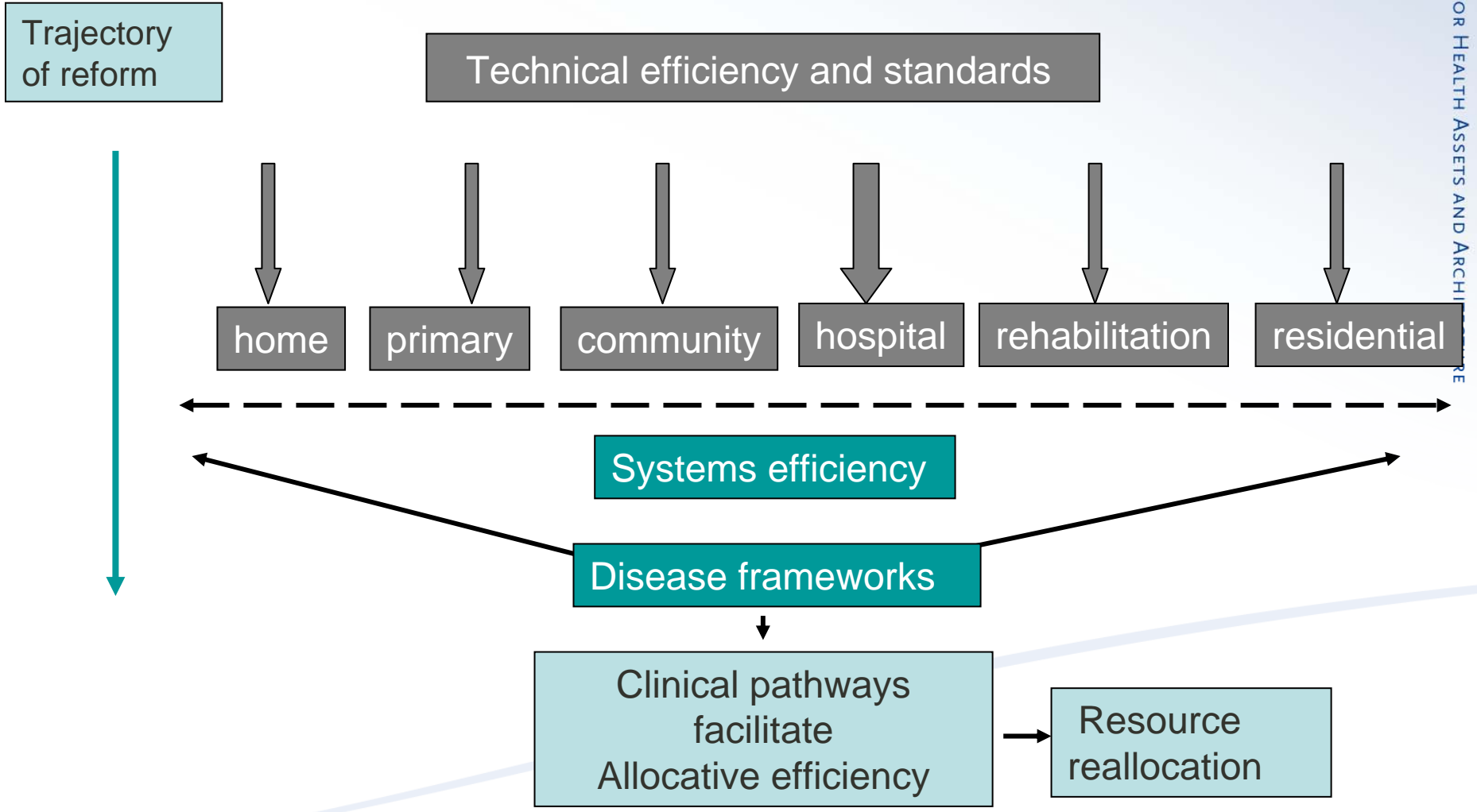


If form follows function, what should be the design principles for form when (hospital) function is changing so fast?

There may be a better approach:

- Develop & articulate models of care based on systematised care processes
- Treat such clinical pathways as **flows** for a patient **across the system** viewed as a **network**
 - multiple paths via nodes
 - non-linear
 - reversible
- Build the appropriate **capacity** for those flows
- This will lead to a variety of new models - e.g. decentralisation, mergers, consolidation - and above all coherent population based investment planning - unifying systems and agencies are critical

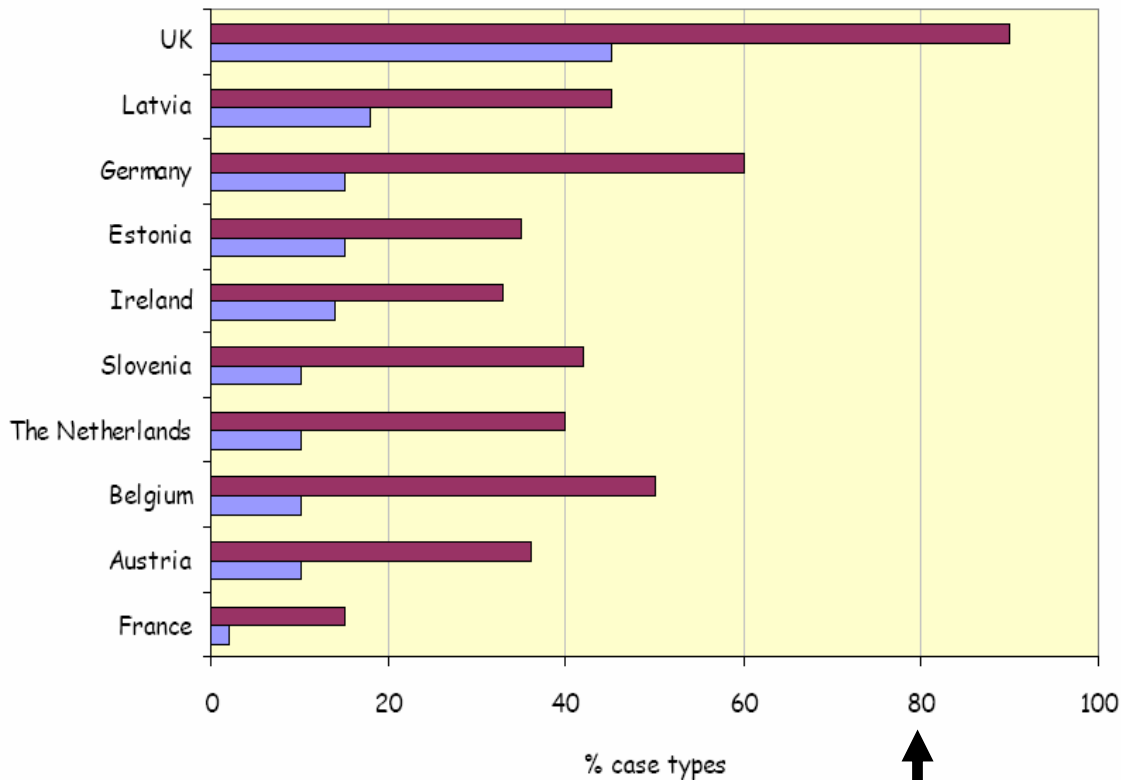
Integrated flow



Integrated disease management/clinical pathways (“whole systems”) are:

- **Fundamental to clinical & management improvement**
- **Essential input to service delivery (re)design**
- **Valuable if only as communication & learning mechanism**
- **Key to effective strategic asset planning**
- **Immediately applicable *within* hospitals, but possibly have most impact *across* settings**
- **Increasingly applied for large numbers of patients, especially chronic with co-morbidities**

Clinical Pathways: actual penetration



Key: Bottom bar (blue) – actual
Top bar (red) – projected

Caution over reliability of these statistics! No country has reliable records

Source: EuHPN, Survey of Clinical Pathways and Strategic Asset Planning in 17 EU Countries, 2004

↑ A reasonable maximum?

Not there yet, but the direction of travel - & the potential - are clear

Learn from industry (1): two kinds of industrial process

Batch:

- At one time, all “manufactories” like this
- Craft industry still is
- Leads to intermittent flows
- Lots of hospital work is currently like this!



Flow:

- Edward Deming & Henry Ford assembly lines, & true process industries (minerals, hydrocarbons)
- Systematisation
- 80/20 rules of thumb
- Hospital care to some extent is, & in the future should increasingly, be managed like this
- Extends beyond hospital, before & after patient episode

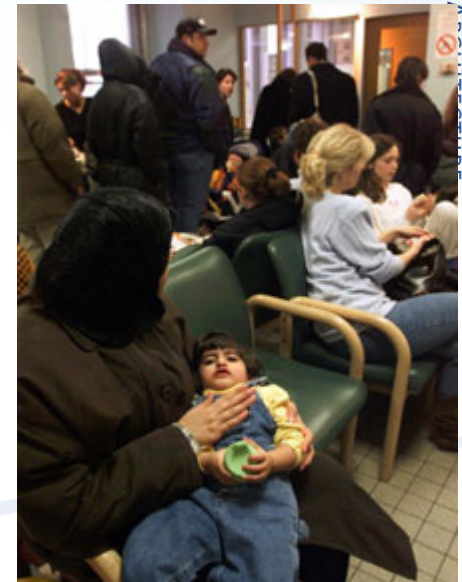


Lifts versus escalators: flow capacity is more forgiving than batch 29

Learn from industry (2): lean production (beyond assembly line)

Production should never be a black box:

- Every step should add value to customer (need to define who that is)
- Aim for “Zero defect” quality
- Align contractual relationships
- Minimise waste (money, time, materials, mistakes, unplanned readmission, inventory) rather than add technology, buildings, labour
- Waiting rooms, & wards, are the ultimate inventory (patients’ time has no cost)



What is “flow”?

In the healthcare context, **flow**:

- Groups similar patient processes, not similar ailments
- Relates to the number of activities undertaken, not number of patients
- Is best grouped by complexity, not acuity
- Keeps types of flow – patients, staff & goods – separate from each other
- Keeps elective flows also separate from emergency ones (which are more predictable, statistically)
- Nobody said this was going to be easy - but there are case studies available as a learning resource

Where next

- Session to follow – what the capital study is telling us about design – some demonstrations of these trends



- **Thank You**
- barrie.dowdeswell@echaa.eu
- www.echaa.eu