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HEALTH FACILITY GUIDELINES AND HEALTH PPPs

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OUTLINE OF TOPIC

- CHAA and its research
- Introduction to Health Facility Guidelines
- Implementing Australasian health facilities guidelines – lessons learned
- Australasian approach to health facility design: what are the advantages and disadvantages of using a standardised approach?
- Is national benchmarking realistic: what have we learned from the evaluation of the recent health projects?
- Whole life value for health projects
- Parameters for effective capital spending for healthcare

CENTRE FOR HEALTH ASSETS AUSTRALASIA AND ITS RESEARCH

Thank you for the opportunity to talk to you today and for allowing me to introduce CHAA and its major areas of research to give you some background to the topic that I am covering.

The Centre for Health Assets Australasia is a UNSW Research Centre within the Faculty of the Built Environment. Its principal supporters are the Health Capital Asset Managers' Consortium of Australia and New Zealand and the University of NSW. It was established at the beginning of 2005 to undertake research into health facility management with Australia and New Zealand. Its major programs of work are:

1. Health Facility Standards and Guidelines – NSW and Australasian projects
2. Benchmarking and post occupancy evaluation
3. Capacity building and knowledge management for the health facility management industry.

Today, I will be talking about the Australasian Health Facility Guidelines project, although the process of development for this is very similar to that which resulted in the development of the NSW Health Facility guidelines (for which we acknowledge the Vic DHS project which contributed the Victorian guidelines that were first developed in this type of database and online format to the NSW and national projects).

HEALTH FACILITY GUIDELINES – AN INTRODUCTION

The use of health facility (design) guidelines for health projects has had a long, somewhat fraught history in Australia. Various States in Australia have developed their own version of guidelines; however they tended to vary not only in quality and comprehensiveness, but also currency and cost of use. This paper will not address this history in any detail other than to say that 'stop and start' efforts have always characterized the development of guidelines. All Australian States involved in development have found the cost of developing and maintaining guidelines high and usually prohibitive. The disbandment of the NSW based Hosplan in the early 1990's reflected an attitude that once developed, guidelines were too costly to maintain and resources were better focused elsewhere.

As repeat clients who undertake many projects within large capital works programs, most public sector health clients support the use of design guidelines for their projects. In a world of changing expectations, increasing use of technology, increasing costs of health care and

pressured capital budgets, they believe that they can experience a greater level of certainty in achieving high quality health facility design (and better cost control of, it must be said) through the use of guidelines.

On the other hand, many health architects and designers don't like guidelines especially where they are forced to negotiate departure from these for specific project-related purposes. In many cases, these designers believe that guidelines restrict their creativity, and perhaps more importantly their ability to satisfy the end users of their projects. Most importantly they often believe that guidelines may compromise the delivery of high quality projects that demonstrate their particular talents and abilities (often the source of their commercial advantage) and that this may work against achieving innovative design outcomes that may better meet the needs of the paying client, end users and perhaps the wider community.

In reality, the truth probably lies somewhere in between. Design guidelines are not intended to provide a template for every design problem, nor are they necessarily the problem that architects sometime make them out to be. This presentation will argue that guidelines are an effective method for passing design experience from project to project; embodying evidence available from associated research and from the peer review processes that occur during their development.

Design guidelines are only one part of the evidence base used by designers to produce health facility projects. They incorporate knowledge from many health project stakeholders – it should be recognised that these stakeholders represent a wider group than just health facility designers. This group includes health facility managers (FM), OHS officers, Infection Control experts, health service manager, clinicians, health service officers, patients, their families, and others. Translating the knowledge of these stakeholders into guidelines readily understood and useable by designers and their project teams is a major challenge and one that continues to be refined.

This paper will briefly discuss the development of Australasian Health Facility Guidelines to illustrate the breadth and depth of knowledge encapsulated within them, their use in practice, and their evolving nature over time. It will also discuss how guidelines fit within the overall scheme of information sources used by health care designers, and then look at how guidelines may positively impact on the PPP design process.

Use of guidelines to enable a more standardised approach to health facility design will also be discussed, the advantages of this approach and the pitfalls. Finally the use of guidelines in developing benchmarks will be considered and some approaches to benchmarking health projects developed in Europe and other countries will be noted.

IMPLEMENTING AUSTRALASIAN HEALTH FACILITIES GUIDELINES – LESSONS LEARNED

In developing and implementing Australasian Health Facility Guidelines, we have learnt many lessons. Not the least of these has been appreciating the need for defining the purpose, the necessary extent and limitations of guidelines especially as they interact with the ways in which design teams work, notably during the briefing phases of a project.

In reality, without careful consideration of these issues it is impossible to determine the manner in which guidelines are implemented and used in practice. Of course use of guidelines can be enforced or required by government or other client. However there may be some unfortunate and unintended consequences associated with such an approach.

Thus whether guidelines status is defined as 'advisory' or 'mandatory', specific appreciation of the consequences is needed if 'mandatory' status is required. Fortunately, the status of guidelines throughout Australia is most commonly strongly 'advisory' and rarely mandatory unless referenced by legislation in a Private Hospital Act. In other words, for most health projects, the use of the Australasian HFG is encouraged with departure discouraged unless a clear benefit for this departure can be demonstrated.

In practice, some architects may regard this as the same as mandated status but this is not the case in most situations. As guidelines are not mandatory (for very good reasons) in most jurisdictions and health systems, determining where health facility guidelines actually sit within the scheme of other resources used by designers including legislation, codes, standards, 'research', experience, evaluation of previous projects becomes important.

There are at least two important issues that are affected by this. The first is the need to ensure that the guidelines complement and do not conflict with legislation and codes that override them e.g. the BCA, private hospital acts, standards referenced in legislation e.g. disability codes, legislation such as the DDA, etc

In developing the HFG, in conjunction with the project steering committee, the CHAA team has had to determine how the various sections and parts of the guidelines should be used in practice. In order not to conflict with the legislated building code, the BCA, the Australasian HFG have been developed in a manner that enables clear parallels to be drawn to the BCA terminology and methods of application wherever possible. These issues will continue to be considered in future development and review processes. The following diagram illustrates how various parts and components of the HFG may be used in practice.

HFG Part/ component	Guidance (G) <i>'How to do it'</i>	Performance Requirements (P) <i>'What it should do'</i>	Advisory (A) <i>'Examples of how to achieve it'</i>
Status	Not mandatory	May be 'mandatory' or recommended'	Not mandatory but may be: normative' or 'informative'
Part A Introduction & Instructions for Use	How to Use the Guidelines, Outline of structure, content and purpose of each section, Terms of Reference, Tables of abbreviations, glossary, References and further Reading	Not applicable	Not applicable
Part B Briefing and Planning	Section 80 General Requirements (whole section) All HPU sections: -Introduction -Planning Principles	All HPU sections: -Design -Components of the unit: general provisions	Section 90 Standard Components All HPU sections: -Non Standard Components -Schedules of accommodation -Functional Relationship Diagrams -Security Issues/checklists -Other checklists (if produced) -Room Data Sheets -Room Layout Sheets
Part C Access, Mobility, OHS and Security	Introduction Planning	Space Standards and Dimensions Human Engineering Signage Safety and Security	Checklists
Part D Infection Control	General Requirements Construction and Renovation References	Building elements – hand washing Surfaces and Finishes	Checklists
Part E Engineering Services	Introduction (under construction)	Other Sections (under construction)	Checklists (under construction)

Australasian Health Facility Guidelines – status of different parts

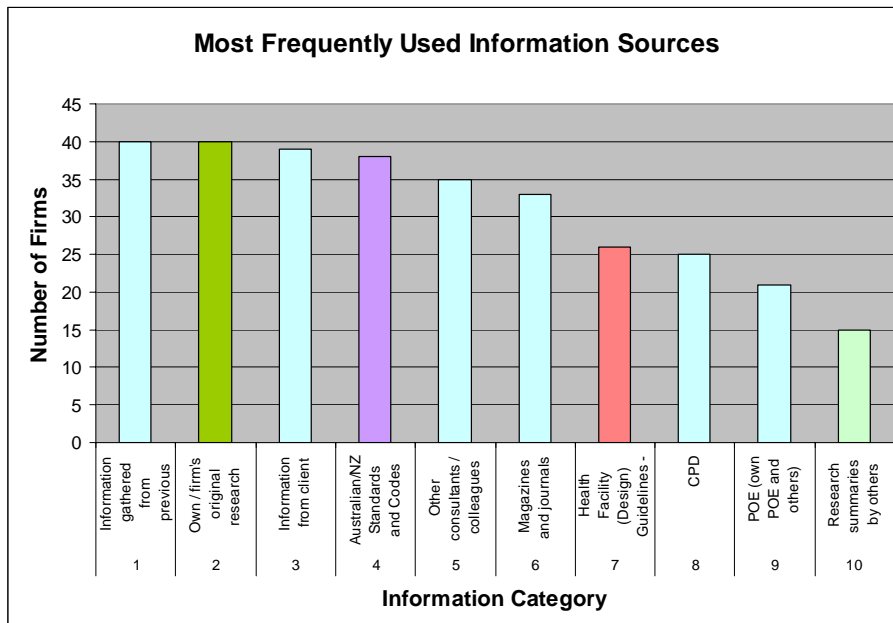
The second issue is the need to understand the current use of guidelines and where they fit within all the resources used by healthcare designers, so as to better influence the range and effectiveness of their use now and in the future. In 2005/6, CHAA undertook a joint research project with the RAIA which surveyed the use of information resources by healthcare designers. The results demonstrated that guidelines were only one of many resources used by designers, and did not rank very highly overall in terms of 'useful resources'. This fact may perhaps be disappointing for those producing guidelines and especially for those funding them. However, it should be noted that the survey was undertaken at an early stage of the current guidelines project prior to issue of Australasian HFG which only occurred in late 2006. In reality these findings provide a baseline for future evaluation of the project including the reach and impact of the Aust HFG in practice.

Guidelines are the result of, yet also form part of, the 'evidence base' behind design decisions made on healthcare projects. 'Evidence based design' is the current catch cry of the health design profession. Often equated as being necessary for the design of 'healing environments', various definitions of the term exist, but the general purpose behind adopting this stance towards the design process is to ally it with the scientifically based 'evidence' that should in theory underpin and drive modern medical practice. However, many clinicians would accept that not all medical practice is truly 'evidence based', yet this remains for many a strived-for goal and its logical outcome seems to be 'best practice' health service delivery.

Whether all medical practice can ever be evidence driven is a separate question. However the general principle behind the drive towards it is also being increasingly applied to the architectural context. 'Evidence based design' is in the eyes of many the (only) path towards better healthcare facility design and 'healing environments' however these are defined in practice.

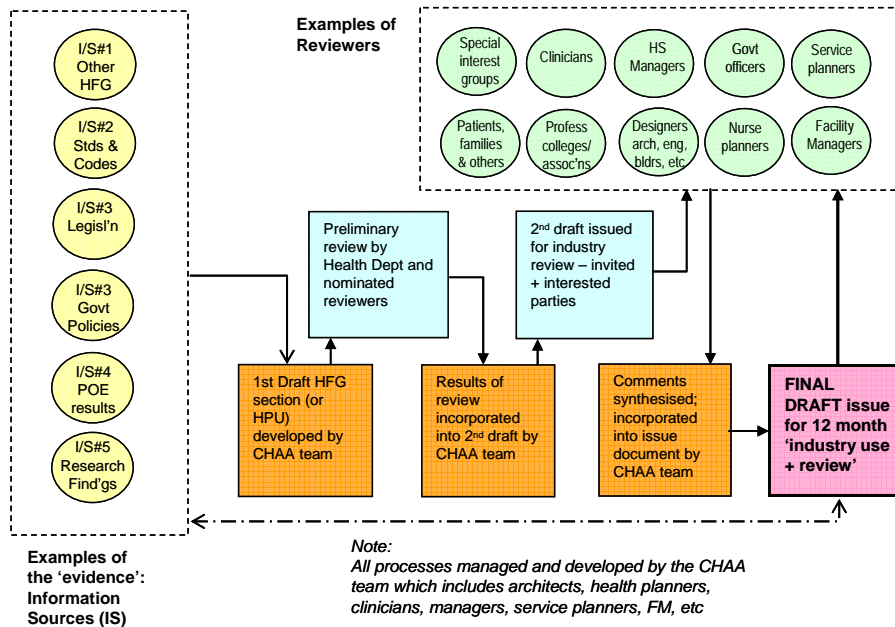
Our study of the resources used by healthcare designers suggested a fairly broad definition of the term 'research' and by extrapolation 'evidence' when used by architects and other designers, and one that rarely coincided with the more commonly defined scientifically based research approach. As a result of our study, we also became clear that for designers, 'research' also includes 'experience on previous projects', 'consulting with colleague(s)', going on 'study tours', looking at 'architectural journals', and a range of other activities that gather information for their projects.

The following diagram illustrates the findings from the RAI-UNSW research study by showing the ten most commonly used categories of resources. For example, health facility guidelines from a variety of sources within Australia and New Zealand were combined into one category – Health Facility (Design) Guidelines, as were Standards and Codes from these same locations.



Information Resources Used by Healthcare Designers – 10 Most Used Categories
 (RAIA_UNSW Survey of Healthcare Designers, 2006)

Health facility guidelines are an embodiment of much of the evidence used by designers for their health projects. They are written using a process of expert development and peer review. An outline of the development process illustrates this point in the following diagram.



Australasian HFG Development Process

DEVELOPMENT OF AUSTRALASIAN HEALTH FACILITY GUIDELINES

The development process begins with preliminary work by industry experts working as the CHAA team who base their initial guidelines development work (first draft) on the available 'evidence' from a range of key sources as illustrated in the diagram above. The first draft is reviewed 'in house' by Health Department officers and other key reviewers as nominated by these officers. These people usually include recognized experts in the field, who may be researching associated issues, or who may have recently completed projects in the area being studied or have other highly relevant credentials. With the benefit of this preliminary review, a very good second draft is then formulated which will achieve greater acceptance when it goes out for wider industry review.

Following this wider review by invited reviewers and others in the field who have expressed an interest in reviewing key guideline components, CHAA receives, records and analyses the commentary offered. A final draft is then prepared, reviewed and endorsed by the project steering committee, then issued as a final draft for industry use and review for an initial 12 month period.

Thus it can be seen that the guidelines are developed and issued with the benefit of an extensive and comprehensive industry review process, which effectively forms a peer review process. Note that the final draft issue has a dotted line back to the 'evidence' block as it now forms part of this evidence base that will influence both future guideline development and facility design processes that depend on the available 'evidence' for the design of health facilities.

The process takes place within a clear and articulated governance framework illustrated by the following diagram. It includes the input of a project Steering Committee and a Working Committee, with representation from all Health Capital Asset Managers' Consortiums (HCAMC) jurisdictions. HCAMC is the major funder of CHAA in collaboration with UNSW.

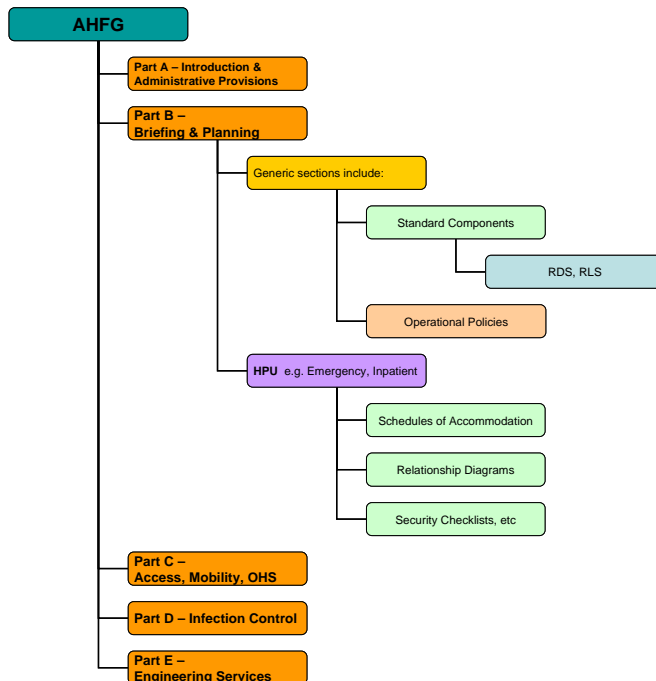
STRUCTURE OF THE HFG, REVIEW AND VARIATION PROCESSES

The Australasian HFG have been developed in accordance with a clear structure that allows consideration of issues that affect the design of all health facilities to be covered once and not repetitively in discussing individual Health Planning Units such as Inpatient wards, operating suites, etc. They are available from a website www.healthfacilityguidelines.com.au and at present are free to download and use. They are created in a MS Access database and then published in PDF format. In NSW and other States that use the NSW Health Facility Briefing

System, they provide content for use in that system but it is important to note are quite separate to that system and managed by a different party – the University of NSW.

The guidelines will undergo regular review with ‘sunset dates’ applied to all sections. Commentary is received in a common form to enable comments received to be understood and processed. The standard format also provides an audit trail for commentary received so that in the future it will be possible to know who commented, when and what was done in response to that commentary.

Where health jurisdictions require that departure from the guidelines for a specific project be requested and justified, variation processes (and the reasons given for justifying departures) also form part of the evidence behind guideline development and review. Other CHAA projects also provide input to the guidelines including benchmarking and post occupancy evaluation, culture and health study, healthcare acquired infection research studies, etc. The guidelines in fact undergo a process of continuous improvement and in reality will never be 100% finished.



Australasian Health Facility Guidelines - Structure

AUSTRALASIAN APPROACH TO HEALTH FACILITY DESIGN: WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF USING A STANDARDISED APPROACH?

At a macro level standardization enables the achievement of a minimum or acceptable standard for all health facilities. Reason suggests that most health facilities have more in common than there are differences, especially where they are of a similar size and offer similar mixes of services. Therefore it makes sense to offer a standard approach to room sizes, equipment fitout, building services and layout.

It also makes sense to offer standard layouts for a standard conglomeration of these rooms i.e. a schedule of accommodation fit for the mythical ‘standard hospital’. These conglomerations demonstrate the mix of rooms required to ensure a healthcare department will work and support service delivery needs of a ‘standard’ type. In other words, they demonstrate metrics such as ‘for every one of these, you need two (or three or four) of these.’

There is some evidence to suggest that standardized room layouts, and indeed even unit layouts, reduce the number of medical errors that take place due to clinical staff being familiar with and able to predict the layout of their working environments. In particular where all

patient rooms have the same layout, staff can move from patient to patient and know where to find equipment and other necessary resources especially in an emergency situation. It also makes it easier for staff to work across different facilities without extensive reorientation to their physical environment.

Note the repetition of the word 'standard' – and where is the 'standard hospital', you may well ask? If it doesn't actually exist, why try to reproduce it? Of course, a 'standard hospital' does not exist. Yet the 'standard' approach does demonstrate principles and an acceptable level of design practice. Note that the word used is 'acceptable', not 'optimal', or 'best' or even 'world's best' practice. Those levels of practice, whatever they may mean, are left up to the designer to achieve. The guidelines will never do this job for them, nor will they substitute for the services of an experience healthcare architect or designer. It is mischievous and ill informed to suggest otherwise!

We should not let architects hide behind guidelines use as an excuse for not doing better design, let alone using guidelines as a reason for not incorporating innovation in their projects. The UK gov't found that abandoning guidelines when simultaneously engaging in a PFI initiative did not achieve the outcomes that were desired. Many critics of the process subsequently pointed to substandard space provision, poorly equipped and laid out spaces that may have been avoided if the NHS had continued to develop and use its previously excellent design guidelines. The proof must be in the resurgence of production of guidelines in that system. This resurgence suggests that lessons have been learnt re the need to seek reassurance that a minimum standard of space provision and layout will be delivered – something that the PFI process did not always achieve, possibly traded off against greater team profits gained via a reduction in capital costs.

IS NATIONAL BENCHMARKING REALISTIC: WHAT HAVE WE LEARNED FROM THE EVALUATION OF THE RECENT HEALTH PROJECTS?

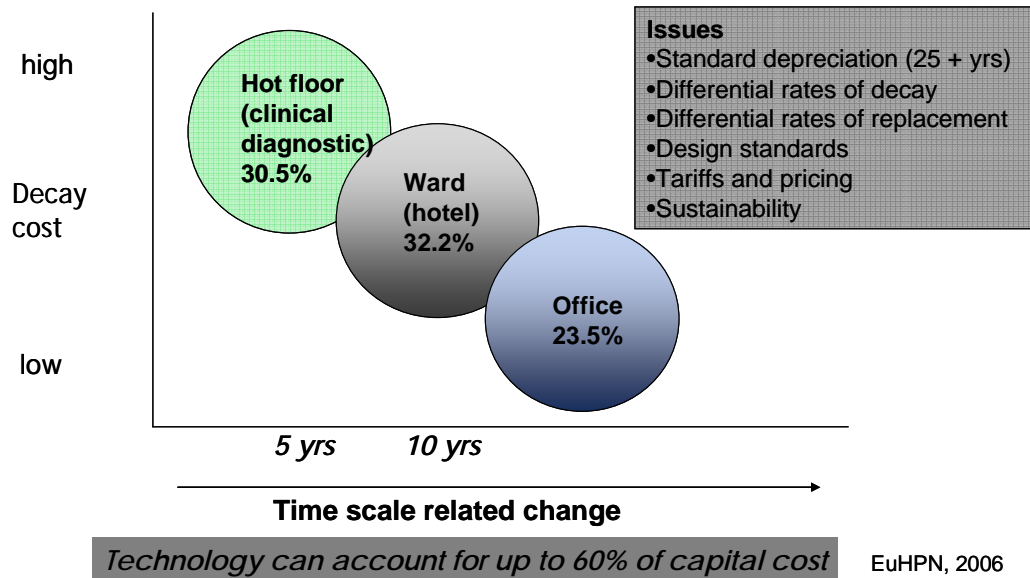
It is possible in theory to develop national facility benchmarks, but clearly very difficult to do in practice. In a country like Australia divided into States and Territories which are not always cooperative, it is extremely difficult to compare projects across the various health systems. Data terminology and categories are not consistent – even the production of project estimates and accounts are inconsistent. Couple this with the fact that some States will not provide data for reasons of confidentiality then the situation becomes dire for those attempting benchmarking!

In addition, unfortunately not many projects have been evaluated recently. There is a supreme reluctance to do this and to circulate the results of these evaluations to a wider audience. There are many reasons for this which I do not have time to go into today. However, where evaluations are undertaken, these form part of the evidence base for guideline development, and also the opportunity to commence building a benchmarking database.

CHAA is attempting to establish a health projects register that will capture information about health projects being developed or recently completed across Australia and New Zealand. Negotiations are currently underway with a US-based centre that is undertaking a similar exercise. If a collaborative effort is established, the opportunity exists to benchmark projects not only across Australia but to link into a database that provides information about international projects as well.

In the meantime, CHAA is working with the Vic DHS and other States to develop a range of benchmarks for health projects in this country. Likewise we are gathering results of POE to add to this database and to continue to inform the development of Health Facility Guidelines.

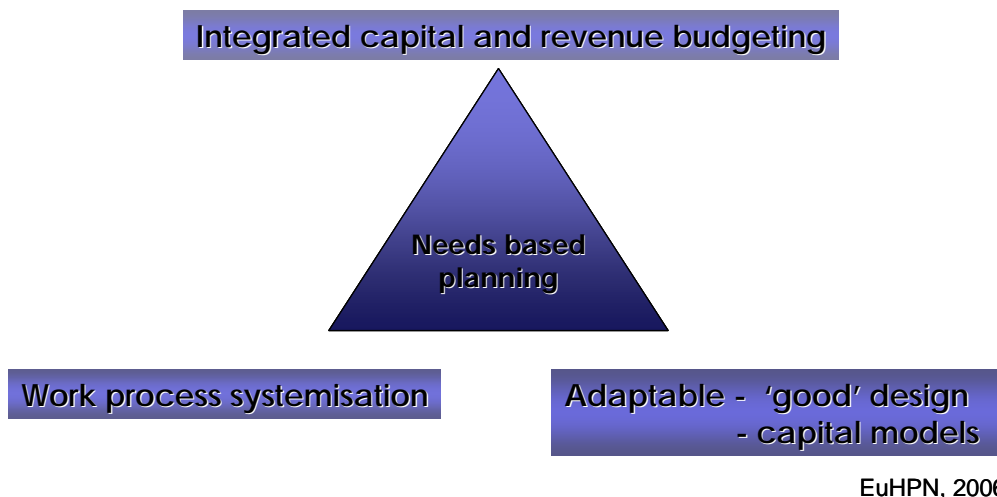
Looking outside Australia to projects in other parts of the world such as the European Union, others are also attempting to look at benchmarking the cost and other dimensions of health capital projects. In terms of a worldwide focus on procurement methods such as PPP/PFI, achieving value over the whole life cycle of a health facility is becoming an increasingly prominent area of interest. Issues of adaptability and ability to cope with differential rates of decay, replacement and change are being studied in terms of cost profiles.



Whole Life Value – Understanding the Cost Profile

The diagram above shows current thinking regarding the components parts of a typical hospital and the likely time scale for change – replacement, refurbishment, etc. This shows that it may be helpful to consider that different parts of a health facility have different rates of decay, with hot floors i.e. clinical and diagnostic areas requiring refurbishment or replacement much sooner than wards or office based components. Clearly this makes sense given the rate of technological change and developments in clinical practice. Wards are much less likely to change from one year to the next although additional technology may be required for monitoring, communication, etc. Finally the offices are the least likely to require replacement or refurbishment although once again technology may impact on this. The note that technology can account for up to 60% of capital cost reflects the European situation and is likely to be very similar in Australia and New Zealand over the next few years.

TOWARDS IMPROVED CAPITAL EFFECTIVENESS



Capital Effectiveness – Three Main Parameters

The diagram above illustrates the point that neither design nor capital models sit alone in the planning of health facilities. The focus must be on needs based planning, in other words on the service needs that require a facility for the delivery of health services. Work processes and capital and operational costs are the other sides of the process. These plus the provision of appropriate designs, both good design that is both flexible and adaptable must work

together to ensure effective capital expenditure on health facilities. This is a key part of risk management for such projects.

CONCLUSION

Health Facility Guidelines are but one of many tools to be used by those engaged in the process of providing healthcare facilities. They have an important role to play in ensuring acceptable standards of facilities are achieved. On their own, they are no panacea for poor service planning processes, inadequate attention to operational models, and poorly thought through procurement methodologies that do not link recurrent and capital costs in the lifecycle costing of a health facility.

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