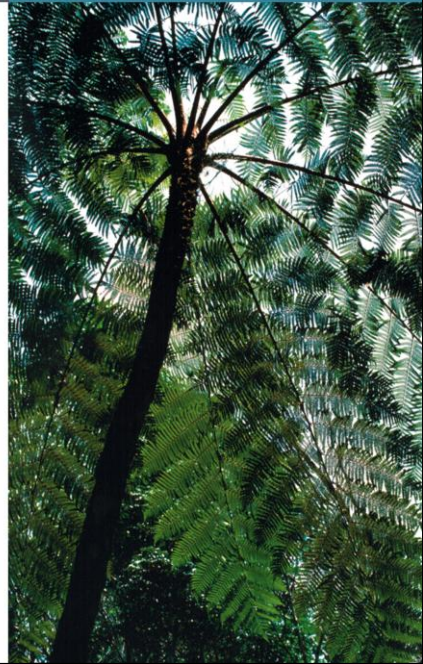


Improving the 'sustainability' of our projects

- To include thinking out side the box – such as making buildings more flexible and adaptable

By David Rowley Director of Design Research and Innovation, Nightingale Associates
April 2012

NIGHTINGALE
associates ■■■■■



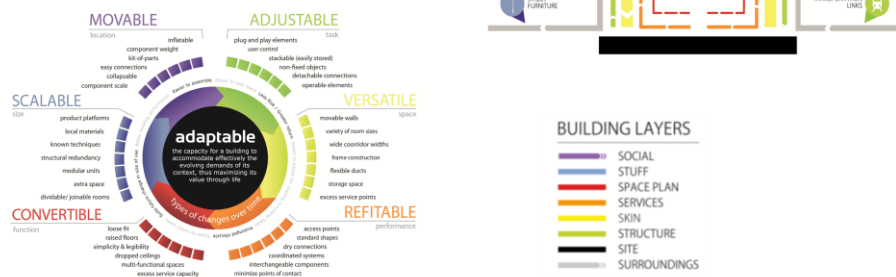
Nightingale Associates have produced a sustainability strategy to help improve the sustainability of their projects. Addressing adaptability is one of their actions towards this. Though not covered by environment assessment tools, adaptability is an important part of sustainability. Architects can have a large influence on this.

Photo :Tioman island, Malaysia by David Rowley

Adaptability / Flexibility

Nightingale Associates has signed a Collaboration agreement with Loughborough University (UK) to be part of their knowledge transfer project to develop Adaptable Futures Toolkit for use in design.

www.adaptablefutures.com



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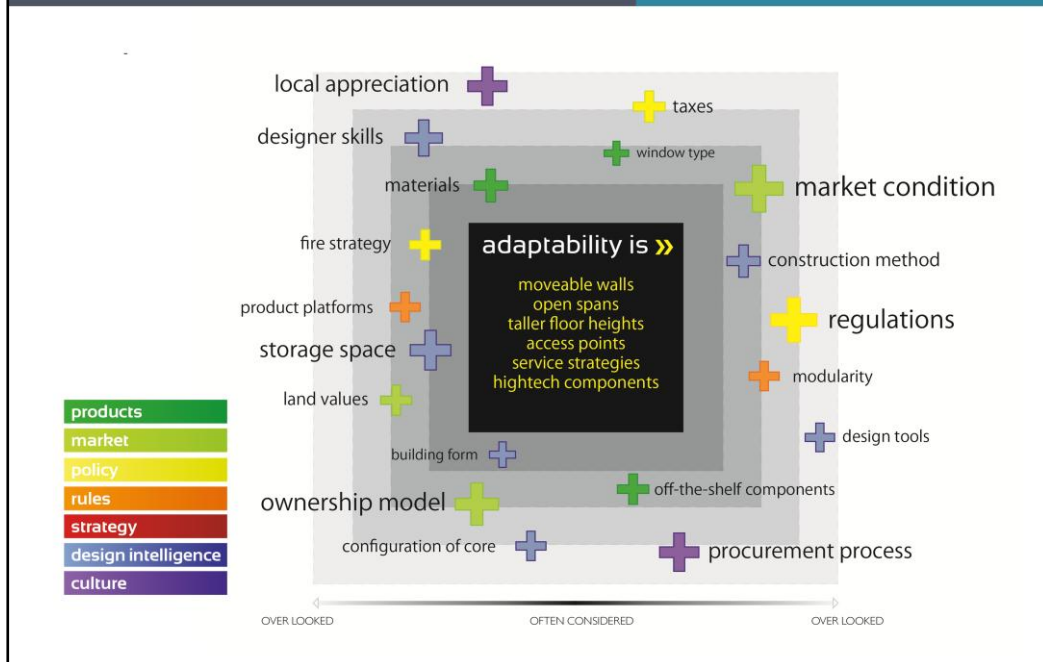
As one of Nightingale Associates THiNK Sustainability initiatives, to improve the adaptability and flexibility of their buildings, They have signed a collaboration agreement with Loughborough University (UK) to help develop an Adaptable Futures Toolkit for use in design.

These are 2 of the diagrams from the toolkit. *By Loughborough University*

The toolkit will seek to encourage designers to think about the issue of adaptability throughout the design process and help facilitate conversations with clients and other stakeholders.

This follows a four-year study by the Adaptable Futures group at Loughborough University on designing for adaptability. Their study included identifying existing good practice on adaptability and generating new insights into how buildings can be designed to accommodate change.

As part of their study they undertook case studies on 68 buildings

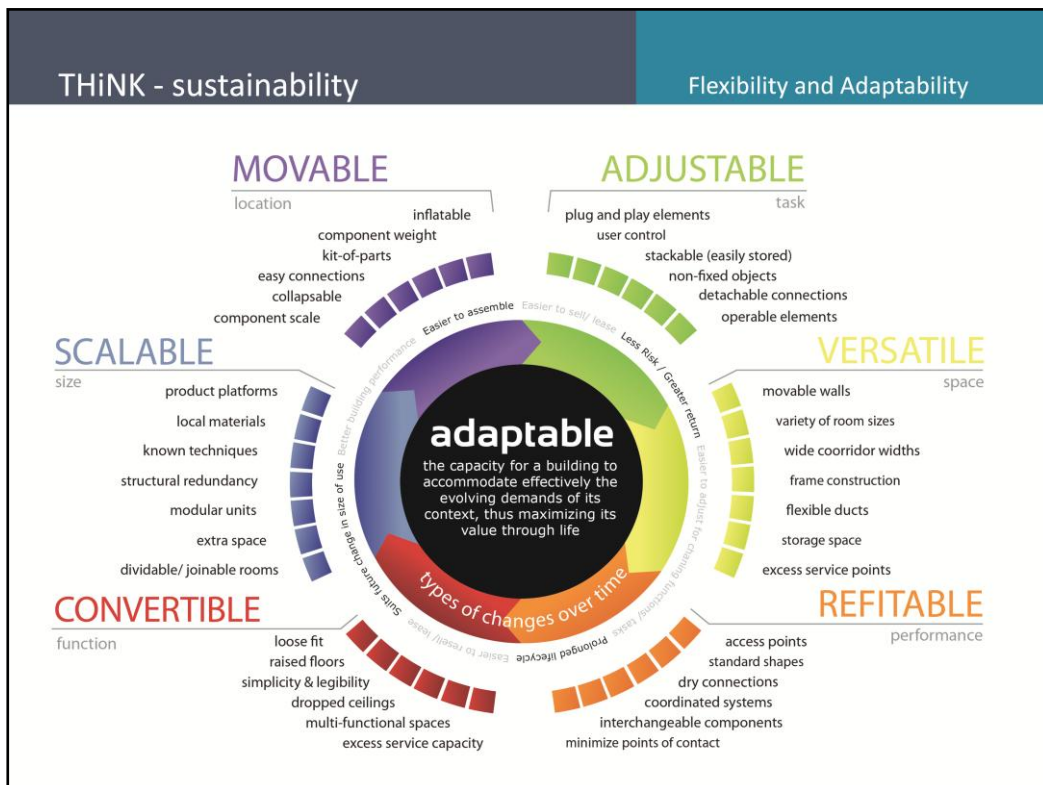


So one way of talking is to think about **breaking out of the common boundaries of discussion**. Get **OUTSIDE THE BOX OF THE CONVENTIONAL SOLUTIONS** such as moveable partitions, open spans, service voids and the like. These have their place but we know there is more too it than that..

Other **PHYSICAL VARIABLES** play their part such as material choices, sizes of openings and building form.

And more **INTANGIBLE SOCIAL FACTORS** are also influential including market conditions, regulation and the models of ownership and financing.

By Loughborough University

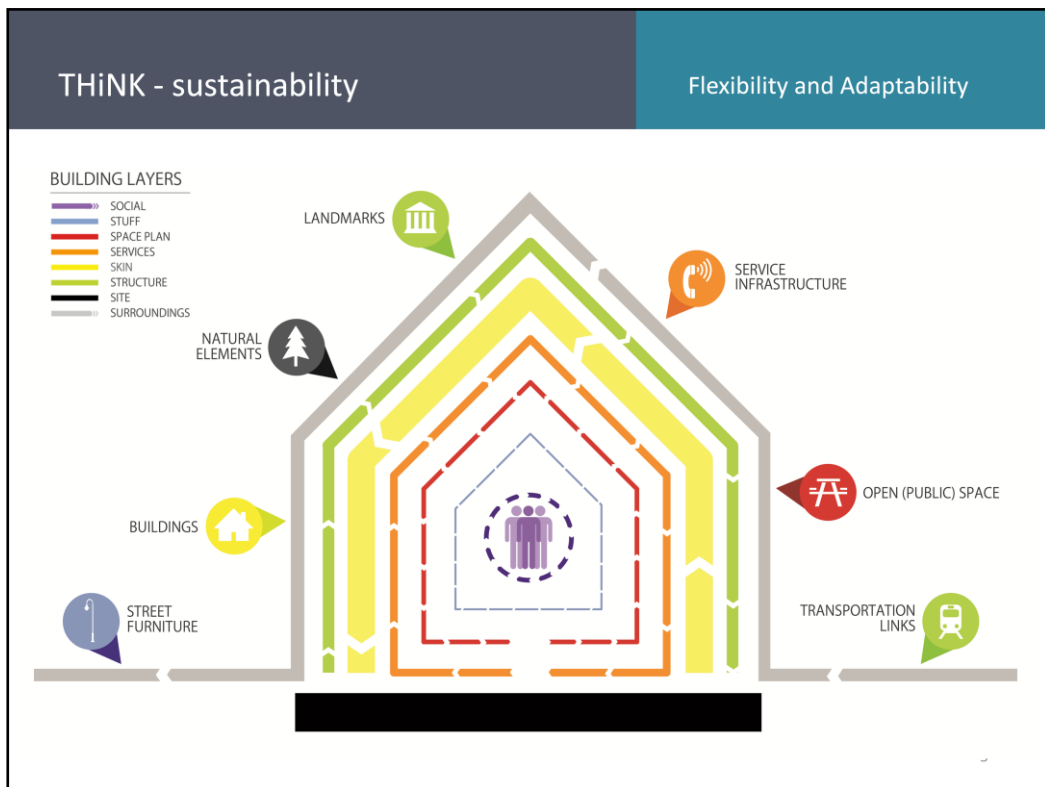


This first diagram illustrates the AF teams definition for adaptability at the centre. The definition works as an umbrella term for understanding change and the six strategies that move around the circle articulate specific types of change or **MOTIVATIONAL GOALS**. They develop, clockwise, from relatively high-frequency changes on a daily scale to those that occur, if at all, over decades. Such a comprehensive vocabulary can assist **BRIEFING** and clarify **GOAL-SETTING**.

CLICK – We can indicate the types of **OUTCOMES** that might be sought..

CLICK – and also illustrate potential **SOLUTIONS** in terms of products, systems or operations.

By Loughborough University



A second of their core thinking diagrams is to envision the building as a series of shearing **LAYERS**. Different rates of change create **shears** between components and the more the layers are connected, the greater the difficulty and cost of adaptation.

CLICK - a **SOCIAL** layer – emphasizing the users and

CLICK a **SURROUNDINGS** layer..

CLICK .. that embodies the physical context of the neighborhood that also changes over thick time. The elements of this layer also have different cycles (colour coded).

By Loughborough University

Participating Organisations

Loughborough University
 Nightingale Associate
 3D Reid Architects
 Assistant
 Buro Happold
 FAT
 The Royal Danish Academy of Fine Arts
 The University of Tokyo
 Vandkunsten



(Source: Hertzberger, 1991)

unpredictable use of space?

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Participating Organisations for the LU knowledge transfer project to develop Adaptable FuturesToolkit for use in design.

Photo - (Source: Hertzberger, 1991)

We know humans are adaptable as we can see from these two lovely ladies. The problem is our needs generally change in unpredictable ways. So the research cannot be about predicting the future; but about easing the capacity for unforeseen changes to occur...

NA actions completed and ongoing:

- Case studies for Gateway College and King's College Jubilee Wing – with a summary on Adaptable Futures website.
- Case study for Malaysian Hospital. NA has presented the adaptable thinking on this project at the initial AF meeting . Discussions with Loughborough since. Still to be reported on AF web site.



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Nightingales Associates are encouraging adaptable / flexibility thinking generally, but particularly in their main design sectors Healthcare, Education and Science.

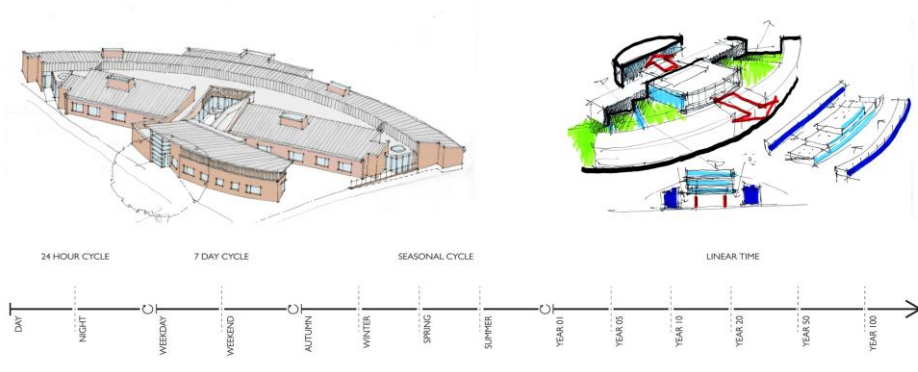
So far:

NA have listed some of the adaptable thinking aspects of two completed NA projects Gateway College and King's College Jubilee Wing – a summary of these with some images can be seen in the case study section of Adaptable Futures website <http://adaptablefutures.com/our-work/case-studies/>

A further case study on a Malaysian Hospital design project is current being compiled. A presentation on this project was given at the inaugural meeting of the Participating Organisations for the AF project.

Design stage

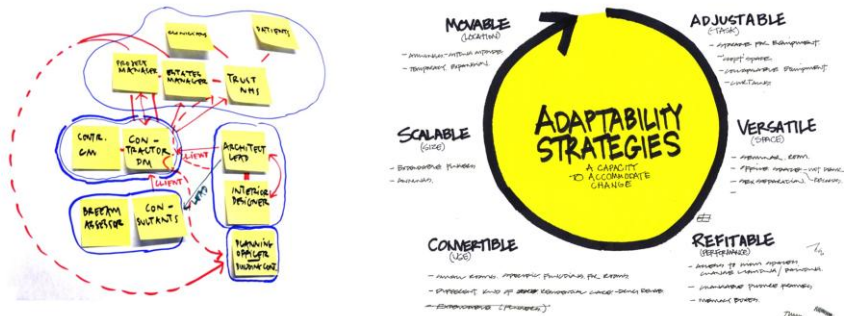
- The Healthcare design project - St. Mary's Hospital, Kettering - Old Persons Unit. is to be studied in more detail by the AF team through the design process. So far this has taken the form of a Workshop and regular skype discussions.



Visualising the relative scenarios on a timeline for a specific project.

Design stage

- To encourage application in Nightingale Associates Education and Science sectors, they have held one off workshops with the LU - Adaptable Futures group on Baron Road Primary school and Bio innovation Centre laboratory building.



Actions cont.

- In 2011 a representative of the AF team presented their Adaptable Futures project at Nightingale Associates Sustainability Conference. A recording of this will soon be available on the internet via Vimeo. Loughborough have also given talks on AF to staff in 3 Nightingale offices.
- NA's lead for this collaboration has been asked to be a judge for Designing for Adaptable Futures student competition. Completing 1st June 2012.
- An associated group at Loughborough University are studying the adaptability of Hospital Accident and Emergency depts. NA are to provide access to some of their completed projects.



For more information on NA's involvement see the AF web site blogs and events.

Feedback from Robert Schmidt III Loughborough University
on Nightingales involvement so far.

"NA's knowledge of adaptability has brought additional insights to the research and has provided significant direction in transferring the research into practice."

"The team of architects at NA has engaged with the research in the most ideal way we could have hoped – supporting, provoking and appropriating the work as part of the design process."

"We have had a number of collaborators throughout the life of the project and NA's enthusiasm, advocacy and understanding of adaptability (and more generally sustainability) has made them a top-tier collaborator."



The Adaptable Futures web is a useful resource and well constructed. They have been good at attracting people to visit the site, with blogs, twitters etc and involvement at conferences.

We hope this initiative will help encourage more adaptability/flexibility THINKing.

'A sustainable building is not one that must last forever, but on that can easily adapt to change'
(Royal institute of Australian Architects)