



A HEALTHY OPTION

Skanska has again turned to design management tool ADePT to help with the construction of a new Midlands hospital

Walsall Hospitals NHS Trust's plans for the £170m redevelopment of Manor Hospital laid down a broad challenge for bidders. It called for a diagnostic and treatment centre, combined women's, children's and young person's centre linked to the existing maternity unit, and a new multi-professional education centre.

So when the trust appointed Skanska Innisfree as its preferred bidder in November 2006, Skanska decided to implement ADePT to help the project design manager plan and control the design production process.

The firm was no stranger to ADePT: it had used it on previous projects, albeit on a smaller scale. Having signed up again to ADePT, a detailed programme was developed between the designers and Skanska, identifying all areas of cross-disciplinary working. This was linked to Skanska's construction and procurement schedules to ensure that design information could be delivered in line with them.

The design consultants remained engaged throughout the planning process so that the programme issued to the team was based on their definitions of scope and dependencies between

activities, and their own terminology.

ADePT has now been in use for 15 months to monitor design delivery against the programme and record any changes to the programme. The design programme itself is updated on a regular basis, usually monthly, to reflect the latest progress and changes. This uses a graphic dashboard to demonstrate progress and summarise any issues that have arisen.

Skanska's design director on the project, Martyn Flowers, is in little doubt about ADePT's value. "As a management operation we get to clearly see how the design team is performing against our integrated project programme and what issues are preventing them from delivering," he says. "We also get to see trends in performance over time, which can be very informative."

He concludes: "The technique is powerful in improving the designers' ability to deliver to the programme and in their performance in general. It has also contributed to Skanska's efforts to continuously improve. We find ourselves in a much stronger position to deliver key procurement and construction information."

The project is due to complete in May 2011.



WHAT IS ADePT?

One of the few things we can be sure of in the world of construction is that delays in delivering design information hit the contractor's ability to build the asset. Figures from the Department of Business and Regulatory Reform show that while the proportion of design commissions delivered on time increased between 2003 and 2007, 42% of projects still finished behind schedule last year.

Construction is a sequential process: progress can be seen in a completed building and performance can be measured in terms of materials and installation rates. But the design process fundamental to that is not sequential. It involves the revisiting of decisions, periods of reworking and progress does not always manifest itself as physical output. Small wonder then that design is difficult to control.

ADePT is a technique for planning and managing the design stages of projects. Implemented over the past six years, the technique uses a matrix approach to account for

the iterative, information-driven nature of design and produces design programmes that integrate the activities of the design disciplines with cost checking, approval, procurement and construction processes. The technique is then used to ensure that the delivery of design information is controlled, and the design disciplines' performance is measured in terms of their ability to deliver information as required.

Until now ADePT has only been available as a form of consultancy. But the critical tools behind the technique are now being made available by Adept Management Ltd.

- ADePT Design Builder is used to define design processes, optimise the sequence of activities and generate programmes.
- ADePT Design Manager is used to generate short-term work plans, monitor design delivery and control performance.

Adept Management Ltd is a partner of project management software provider Primavera, so both products are compatible with Primavera 5.0 or 6.0. Its products are also compatible with Asta Powerproject.

IMPACT OF USING ADEPT: CAPITA SYMONDS

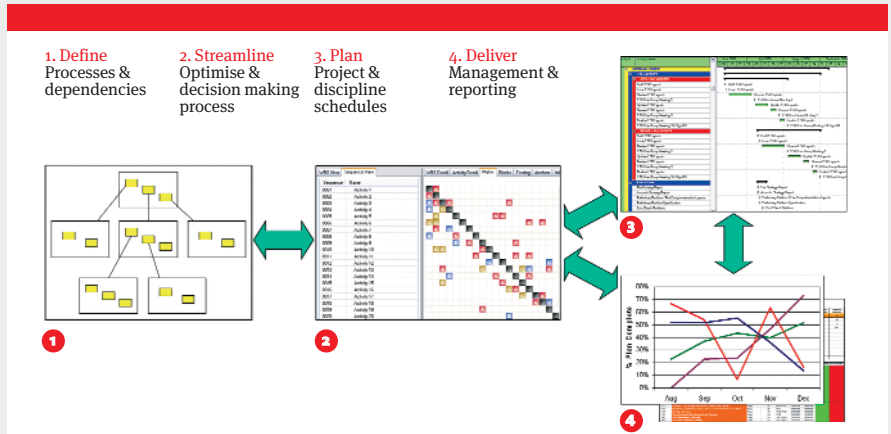
Evidence of ADePT's impact on two projects has been gathered by consultancy Capita Symonds. Project managers were interviewed from Taylor Woodrow, working on St Helens & Whiston Hospitals PFI, and Costain, working on PalaceXchange in Enfield, north London. Although the two projects are very different – one a £380m healthcare project, the other a £35m retail development – and undertaken by different teams, several common areas of ADePT's impact were identified:

- ADePT identifies and removes turbulence from the project process
- It provides greater certainty of design co-ordination and improves collaboration between the design team members
- It offers an ability to better prioritise design work

- It integrates subcontractor design with consultant design more effectively
- ADePT makes it easier to manage changes in design
- Better workflow control focuses the team on completing the task
- The relationship between delivery of outputs and design fee is made clearer.

WHO ELSE USES ADEPT?

- **Kent BSF programme**
Kier
- **University of North Staffordshire Hospital**
RyderHKS
- **North Middlesex University Hospital**
Bouygues
- **Ministry of Defence Corsham**
Laing O'Rourke
- **Walsall Manor Hospital**
Skanska
- **Camana Bay Development, Cayman Islands**
Cayman Shores
- **Stratford City development**
Westfield
- **Sheffield BSF programme**
Taylor Woodrow
- **W Hotel, Dubai**
Al-Futtaim Carillion
- **Pinderfields and Pontefract Hospitals PFI**
Balfour Beatty
- **Lewisham Schools BSF**
Costain



The study demonstrated that better co-ordination led to a 32-week time saving on the design of one complex work package involved in the projects. In addition, at least five man-weeks were saved through more effective change management and a £75,000 saving was identified where design fees were linked to outputs.