

Integrated Design Planning and Control: What are the benefits of implementing ADePT?

ADePT is a highly structured approach to planning, and subsequently managing, the design activities within a project. The approach is aimed at development of a design schedule which is fully integrated across the design disciplines and sub-contractors and based on the critical flows of information between members of the design team. Subsequent management of information flows is regarded as a much better way of controlling the design process than simply monitoring production of deliverables or rate of fee spend. There are three stages to planning with ADePT, and a further management stage.



Background

In mid-2007 the Project Management division of Capita Symonds was commissioned to evaluate the impact of use of the ADePT approach on projects. Two representative projects were selected for evaluation.

Capita Symonds have wide experience of this type of impact assessment, specifically around evaluation of process improvement measures, such as ADePT. They were ideally placed to call upon their experience in this evaluation.

The projects evaluated were selected because they were undertaken by different contractors and involved completely different design teams, and were different in nature and size: one was a £30M retail development and the other was a £380M hospital project. The projects also involved different consultants representing Adept Management.



Independent assessment of ADePT's impacts

- o Independent review undertaken by Project Management Consultancy
- o Senior representatives from two projects interviewed
- o Represented two different AML customers
- o Projects valued at £30M and £380M
- o Findings and quotes confirmed by project representatives

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Capita Symonds' team interviewed senior representatives from each project team. Their findings and quotes recorded, described below, were confirmed by those representatives.

Benefits

- ADePT identifies and removes “turbulence” from the project process - the removal of uncertainty and enhancement of predictability has been long sought after by Project Managers.
- It provides greater certainty of design co-ordination - much of the uncertainty in design occurs around the co-ordination of the design process and output, so this is a significant benefit.
- It offers an ability to better prioritise design work - understanding the true priorities among many seemingly competing priorities is a difficult task, which ADePT can help with.
- It integrates sub-contractor design with consultant design in an effective way - this is the result of planning all design in an integrated way, across all stakeholders.
- Management of design change is more effective than is typically the case - by understanding the design process and dependencies between activities, the impacts of change can be assessed.
- Collaboration between design team members is improved - an integrated process plan demonstrates to the team where they are required to work collaboratively and where they can work independently.
- Workflow control focuses the team on task completion - task completion equates to complete and co-ordinated design information which is key to removing uncertainty from the design process.
- It fosters a ‘self-policing’ design team - the team members understand the context of their work in the overall project and can work together to deliver the project as a whole.
- The relationship between delivery of outputs and design fee is made clearer - fees can be linked to achievement of outputs and not just to expenditure of effort, which do not necessarily equate to each other.

Benefits Identified

- o Identification and removal of “turbulence”
- o Greater certainty of design co-ordination
- o Ability to better prioritise design work
- o Focus on task completion
- o Effective integration of sub-contractor design
- o Better change management
- o Improved team collaboration
- o Self-policing design team
- o Design fee validation

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Some Specific Impacts

Specific Impacts

- o 32 week saving on achieving co-ordinated design in just one complex area of the project
- o £75K saving where design fees linked to achievement of design outputs
- o At least 5 man-weeks saved in avoiding the knock-on effect of a change

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Three stark examples of the impacts which were quantified:

- Design co-ordination - design, associated with two work packages, which was undertaken before and after the introduction of ADePT was compared. Where ADePT was used to identify the need for collaborative working between team members a co-ordinated design solution was achieved in two team workshops. This compared to a nine month iterative design process where ADePT had not been used - a 32 week saving on achieving co-ordinated design outputs.
- Design outputs - the contractor was able to reclaim £75K of design fees where they were able to establish that delivery of outputs was behind schedule; the result of a resource shortage.
- Change management - the team was able to identify the full impact of a proposed design change and assess the whether the benefit arising from the change outweighed the cost of implementing it. In one particular instance it was deemed that a change was not sufficiently beneficial and at least 5 man-weeks was then saved in dealing with the effects of the change.

Conclusion

It is clear from these examples that there are significant benefits to be derived from the implementation of the approach. Of course, these benefits are not derived without any sacrifice on the part of the project team. The team must be prepared to invest in the adoption of a new approach. This means staff time contributing to the design planning process and the costs of expert advice, training and the supporting tools to deploy the technique. However, even with an investment cost, the returns are significant. Even in just the three examples above there is a return of around 80% over a 9 month detailed design process.

Quotes

- o "ADePT gives more certainty of success as you have a defined process." Project Director
- o "It helps get designers to achieve a better understanding of interdependencies." Project Director
- o "The fact that we were achieving outputs meant that process was working well - [management of] interdependencies and information flow was working well." Project Director
- o "ADePT helped us capture and manage the impacts of changes." Senior Design Manager
- o "The project went well because the use of look-ahead reports encouraged the design team to discuss blockages in the immediate future, to think ahead and make sure they had all the information to be able to complete the next design package in a timely and efficient manner." Project Director
- o "The ADePT schedules got us there: we met and bettered every deadline, the job finished early." Senior Design Manager
- o "As far as design planning goes, ADePT is by far the most effective tool I've come across." Project Director
- o "Would I feel comfortable without ADePT on my next project? No." Project Director

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