

Use of A3 Reports¹ in Design Governance

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Introduction

We were looking to establish a design authority as part of the governance model for a large integration programme. I had run a couple of such bodies over the preceding years and was familiar with their function and operation. They act as the conscious of the organisation to ensure the integrity of the solution from a holistic perspective and as such typically have a membership drawn from all the functional areas involved in the programme of work.

One issue that I had had with the operation of these bodies is ensuring effective decision making without getting bogged down in endless detail and discussion. I should note that discussion is essential but there has to be a structure to ensure that a conclusion is reached. To address this issue I wanted to see if there was a more effective way of making decisions but one that also ensured that all voices were considered.

Approach

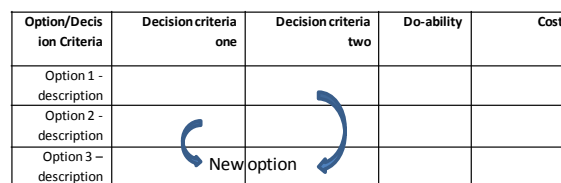
A3 reports were something that I was aware of from my research into lean manufacturing and development processes but it wasn't until a conversation with Clarke Ching [ref 1], who mentioned Sobek and Smalley's orange book [ref 2] and how useful he had found it, that I considered using them. This started me thinking that maybe this would be an effective way to support design governance. I was also influenced by Mankin's HBR [ref 3] article on making decisions from two perspectives - one is that decisions need to be made based on all the information that is available and that all options need to be considered. He quotes Brian Pittman, then chairman of Lloyds TSB, as saying that you need to understand what you have rejected as much as what you are approving.

This provides a structure for design proposal and a framework for development of the solutions but I also wanted to wrap into this some of Barbara Minto's thinking [ref 4]. Her pyramid approach is widely used within the consulting community and provides a structured approach to outline the situation and complications that need to be addressed. This provides the structure to the framing part of the A3 report - left column as it's normally referred to. The contents of these sections will be the background and then the current situation which includes the complication, the issue. The background is important and often overlooked. It is important as it provides the context and the starting point. In Minto's approach she then goes on to answer the questions that the situation/complication have given rise to until they have all been addressed. Here I decided to draw on Dialogue Decision Process to ensure that all voices are considered to support the decision making process.

¹ The term A3 Report comes from the size of the paper and the fact that the report uses only one side of a single sheet of paper.

As part of my research I had also had come across Vincent Barabba's use of a technique developed by Stanford Research Institute in the 1970s called Dialogue Decision Process². I could find little material on the web with regards to the approach and found the best reference to be the chapter on leading contained in his book [ref 5]. This jelled with me as what he was advocating was using changes in the decision process to improve the governance of an organisation. His experience is that this has a profound effect on the operation of an organisation, far more than any structural changes. I was also during this period reviewing the draft for David Anderson [ref 6] forth coming book on Kanban based system delivery in which he mentions a similar experience that he had Coris through making changes to the work prioritisation process. The CEO had noted a much more open interaction between his executives and believed that the changes in the development process prioritisation was the reason.

The DDP process is based on active engagement of the stakeholder to ensure that all the key decision criteria are identified and this is consistent with the philosophy of A3 reports where in the stakeholder management is undertaken as part of the development of the proposals. The presentation is based on the key decision criteria that are relevant to the stakeholders and may include criteria such a delivery and cost. These will differ from organisation to organisation and proposal to proposal. The key is to ensure that all options are presented and analysed. Evaluation of the original options may result in another being identified based on the decision criteria – this is the dialogue part of the process where the stakeholders are engaged.



Option/Decision Criteria	Decision criteria one	Decision criteria two	Do-ability	Cost
Option 1 - description				
Option 2 - description				
Option 3 - description				

Dialogue Decision Process Table

The use of DPP is primarily intended to ensure stakeholder engagement but I also believe it is effective at avoiding group think as all parties' options are evaluated. Alfred Sloan said - "Gentlemen, I take it that we are all in complete agreement on the decision here. Then, I propose that we postpone further discussion ... to give ourselves time to develop disagreement and perhaps gain some understanding of what the decision is all about."³

Although DPP does not, itself, require a recommendation, as this is supposed to come from the discussion, I prefer there to be one as this ensures that the proposer has developed the options sufficiently to feel confident in recommending one. This is also consistent with the original concepts of A3 reports. A3 reports support a pulled based authority model [ref 7] which is consistent with acceptance that you cannot delegate responsibility - you can only delegate authority.

² In fact the technique can be traced back to Ron Howards original work in the 1960s on decision analysis and the formation of the SRI's Decision Analysis Group in 1966.

³ Herodotus, writing in the fifth century B.C., reported that the Persians used a version of Sloan's techniques to prevent group think - whenever a group reached a decision while sober they later reconsidered it while intoxicated.

The rest of the A3 design proposal follows a typical structure with an implementation and outstanding issues sections. These are important as they outline how the proposal will be realised and therefore ensure that delivery has been considered and that there is an open disclosure of any outstanding points. The later is important from two perspectives – one we are focusing on making a decision based on good enough information as we will never know everything and secondly we are being open about anything that we have not considered in detail and that therefore could lead to change. This later point is also important as standard A3 do not contain assumptions as these are typically just design points that have not been resolved yet and therefore they are just get out clauses.

Title	Author: Date: Version:
Background	
Current Situation	
Analysis/Proposal	
Implementation	
Outstanding Issues	

A3 Report Outline

Experience

In practice this approach has worked very well, allowing a cadence to be established that was lacking from previous forums and proving scalable as the functional leads provide the proposal review. The author presents the proposal and it typically takes 10 to 15 minutes. Decisions have to be unanimous and if not the proposal is deferred and an action assigned to the proposer to address any points raised. Over a period of six months the large majority of proposals have been accepted due to the level of due diligence the process ensures. There have been only a couple of proposals deferred, the first to allow time for one of the design authority members to consider the proposal in more detail and the second needed to be revised. What is more significant is that no additional options for evaluation were indentified from discussion. This is significant as it is the first time that I have seen this happen over this period of time.

I have received feedback that this is just design done properly. It may well be the case but the effect has been significant as we have been able to move forward with a high degree of confidence that is typically lacking from such programmes. I also found out from Hal Macomber's talk at the Sept 2009 UK Lean Conference [ref 8] that the lean construction industry has been using A3 reports to investigate design options over the last couple of years so there are other people who have had success with such an approach.

To date this approach has only been used to explore the design element of delivery but as with Toyota's use of the A3 report I believe it could be extended.

References

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8. Hal Macomber, UK Lean Conference September 27th-29th 2009