Advances in Project Management

Benefits realization – building on (un) safe foundations or planning for success?

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Research consistently finds that organizations struggle to demonstrate a return on their investments in change - for example, the OGC report that, *"Deficiencies in benefits capture bedevils nearly 50% of government projects"* [i]. The issue is not peculiar to the public sector – Nobel prize winner Daniel Kahneman notes that, **"***Most large capital investments come in late and over budget, never living up to expectations. More than 70% of new manufacturing plants in North America, for example, close within their first decade of operation. Approximately three-quarters of mergers and acquisitions never pay-off…And efforts to enter new markets fare no better"* [ii]. Similarly, change management 'guru' John Kotter says, "*Up to 70% of change initiatives fail to deliver on the benefits that they set out to achieve."* [iii]

Research also indicates that in many cases the causes of failure can be traced back to the business case, and in hindsight the problems are all to obvious. Why might this be? Psychologists and other researchers have identified a series of cognitive biases and organizational factors that adversely impact the production of accurate and reliable benefits forecasts and business cases. These cognitive biases are firstly examined, before we consider the organizational factors that can also work against accurate and reliable forecasting. We then review strategies and techniques that can be used to overcome both factors.

Cognitive biases affecting benefits forecasting

Lovallo and Kahneman argue in the Harvard Business Review that forecasters suffer from, *"Delusional optimism: we overemphasise projects' potential benefits and underestimate likely costs, spinning success scenarios while ignoring the possibility of mistakes."* [iv] The table below identifies five of the main cognitive biases and how they can impact on benefits forecasting.

Cognitive bias	Impact on benefits forecasting
Expectation or Confirmation bias	The tendency for forecasters to select evidence that confirms existing beliefs and assumptions, and discount or ignore evidence that conflicts with these beliefs.
The Planning Fallacy	The belief that, whilst being aware that many similar initiatives have failed to realize the forecast benefits in the past, this won't affect our current initiative. This bias is illustrated below by the results from a survey of Senior Responsible Owners (SROs).
The Framing effect and Loss aversion	The tendency to value losses avoided more than equivalent gains. Hastie and Dawes [v] note that, *"most empirical estimates conclude that losses are about twice as painful as gains are pleasurable*". Thus business cases that are framed in terms of what might go wrong if

Cognitive bias	Impact on benefits forecasting
	the initiative were not to proceed, appear more compelling than if the same initiative's business case is prepared on the basis of the positive outcomes obtained.
Anchoring and adjustment	In preparing forecasts we 'anchor' on, and give disproportionate weight to, the first estimate (no matter how reliable or relevant) and then make insufficient adjustment to reflect the specific circumstances. For example, Collins and Bicknell argue that [vi], *"Not all computing projects fail – only most of them. Now and again serendipity sees a company or government department buying and implementing a system that does as much as half of what was originally intended."* 10% contingency is therefore unlikely to be sufficient.
Groupthink	The tendency to confuse knowledge with assumptions – and this tendency is reinforced when the majority of those involved share the same set of beliefs and values. Thus we become overly confident in our forecasts and ignore counter information.

Note that what makes such cognitive biases so powerful is that:

- Firstly, despite the evidence of past forecasting errors, we are often unaware of them. Research by Moorhouse[vii] found, "*Only 10% of SROs feel business cases and benefits realisation are adequately understood on programmes across Government and industry, however over 60% feel the understanding on their own programmes is adequate."* - an example of the Planning Fallacy in action.

- Secondly, many are linked and reinforcing.

- Thirdly, they affect experts as well as the general population.

- Fourthly, many probability estimates (which affect our assessments of risk and the likelihood of benefits realization) appear counter-intuitive - for example, the odds that at least two people in a room of 24 people will share the same birthday are better than one in two, and the odds rise to over 90% when as few as 36 people are present.

But another explanation for estimation errors has also been proposed – and it is one where the cause lies less in the cognitive biases that affect us as individuals, and more in organizational factors that mitigate against accurate and reliable forecasting.

Organizational pressures affecting benefits forecasting

Professor Bent Flyvbjerg at Oxford University has undertaken extensive research of transportation infrastructure projects – research with a global reach. He concludes that forecasts are, "*highly, systematically and significantly misleading (inflated). The result is large benefit shortfalls*". The cause is what he terms, "*strategic misrepresentation*" which is defined

as, "*the planned, systematic, deliberate misstatement of costs and benefits to get projects approved*." In short, "*that is lying*"[viii]. This is not restricted to transportation initiatives – comparative research finds the same issues apply to a wide range of initiatives: concert halls, museums, sports arena, convention centres, urban renewal, power plants, dams, IT systems, oil and gas exploration, aerospace projects, new product development etc. [ix]

Other academics have reached similar conclusions – for example, in Australia, Lin et al (2005)[x] report that 26.2% respondents to their survey admitted to regularly overstating benefits in order to get their business cases approved. Ward reports an even more depressing situation in Europe, with 38% of respondents in one survey undertaken by Cranfield University, openly admitting to overstating benefits to get funding[xi] with the traditional investment appraisal process being, "*seen as a ritual that must be overcome before any project can begin*".[xii]

The cause is, according to Professor Flyvbjerg, either because it's in the economic interests of those making the case, or because it is expected by the project sponsor in support of 'pet' projects. In short, benefits are used to help justify the investment in a preferred solution – and so the emphasis is on identifying benefits, not as a basis for managing their realization, but in order to justify the costs required.

Why is all of this important? Some say so long as all business cases are based on inaccurate forecasts it doesn't matter. But it is important because, firstly if we don't know the benefits to be realized from our investments, we can't make best use of the funds at our disposal – the 'good' lose out to the 'bad' but well presented proposals. Secondly, it's taxpayers' and shareholders' money that we are investing, and it is therefore incumbent upon those making such investments that they are able to demonstrate effective stewardship of the funds entrusted to them and a commitment to realizing all potential benefits. Lastly, if we don't know where the benefits are we cannot manage them – and so the benefits management regime is built on unstable foundations.

Whether the cause is cognitive bias or strategic misrepresentation (or indeed both in combination) the result is benefits forecasts that are unlikely to ever be realized in practice. So the relevant question is how can we address this and what techniques can be applied to ensure benefits forecasts are accurate and reliable, and so lay the basis for their actual realization?

Solutions to more reliable benefits forecasting

The first step is to be aware of the psychological and organizational traps that can compromise forecasting accuracy. The trouble is that even where we are aware of these issues, we can fall victim to them. Consequently more formalised strategies are also required. Fortunately there are a range of techniques available that can help promote more accurate and reliable benefits forecasts – ten examples are outlined below under three categories.

Category 1. Organizational and cultural factors

1. **'Start with the end in mind' with benefits-led change initiatives** i.e. initiatives where the solution is designed to deliver the required benefits. Here there is less incentive to overstate benefits as they are the rationale for the investment rather than being used to justify a preferred solution.

2. **Stronger leadership.** The NAO[xiii] highlight the importance of senior management, "*setting the tone by encouraging honesty in estimates, challenging optimism bias and assumptions and being willing to stop projects which no longer make sense."*

3. **Effective accountability** frameworks that hold people to account for results, by tracking performance through to benefits realization – if forecasters know that robust post-implementation reviews will compare forecast with actual performance, then there is more of an incentive for them to ensure their forecasts are realistic.

4. Requiring benefits forecasts to be **validated prior to investment**, and wherever possible, 'booked' in budgets, business plans, performance targets etc.

Category 2. Challenge and scrutiny

5. Deliberately seek **disconfirming evidence** and ensure all business cases include both the evidence for and against the case – with credible alternative options being included wherever possible.

6. Linked to the above – ensure forecasts are subject to robust and **independent challenge and scrutiny**. A diversity of perspectives is crucial to help overcome 'groupthink'. Internal Audit and Non-Executive Directors can play an important role here.

7. **Regular review** – ensure regular stage or phase gates are held at which the benefits case is subject to review and apply the technique of staged release of funding – with continued investment subject to review of the investment rationale and re-commitment to the benefits case, so there are no 'orphan' projects.

Category 3. More reliable forecasting methods

8. **Reference class forecasting** – where forecasts of an initiative's duration, costs and benefits are derived from what actually occurred in a reference class of similar projects. Taking such an 'outside view' (as opposed to the 'inside view' where forecasts are built up by considering the initiative in detail) has been found to produce more accurate forecasts, by avoiding both the cognitive biases and organizational pressures identified above.

9. **Stochastic rather than deterministic forecasts** - using probability-based rather than single point forecasts.

10. Apply **the Delphi technique** – Surowiecki [xiv] has demonstrated that groups often make better estimates than individuals – the so-called 'wisdom of crowds' effect. The Delphi technique makes use of this by seeking consensus from a panel of experts over several rounds of questioning, with the results of the previous round being fed-back to the panel anonymously. In this way the members of the panel are able to revise their conclusions in the light of the views of others. But what is crucial is that the group making the forecasts are diverse and independent – as Surowiecki says, "*the best collective*

decisions are the product of disagreement and contest, not consensus and compromise."

Where does this get us? Well adopting such strategies helps address the twin dangers of cognitive bias and strategic misrepresentation – and in doing so, helps lay the foundations for more effective benefits realization management based on the concept of 'planning for success'.

Note: A 'Managing Benefits - Community of Interest' has recently been set up on Linked In and is open to all - http://www.linkedin.com/groups/Managing-Benefits-4493501?gid=4493501&trk=hb_side_g

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