



Beyond Budgeting  
Institute

White Paper 1

# Beyond Budgeting and Dynamic Resource Allocation

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## Introduction

It has been nearly two decades since the 12 Beyond Budgeting (BB) principles were first articulated, but for much of the intervening years other management innovations such as 'Lean' and 'Agile' have attracted more of the limelight. But it is important not to see these ideas as in competition with BB. In fact, not only do we see them complementary, we argue that BB is a necessary enabler for the successful implementation of Lean and Agile at the organisational scale.

Very often Lean and Agile initiatives fail to get traction beyond the point when they run up against traditional budgeting practices with which they are practically and philosophically at odds. And, looking through the other end of the telescope, Agile and Lean methodologies can help operationalise and embed BB principles.

So, we see BB as something that delivers value in its own right, but which delivers even more by enabling and enhancing the value that the application of Lean and Agile practices can generate.

The key 'battleground' in the fight for the soul of an organisation is often the field of resource allocation, which is where Lean and Agile operational practices bump up against corporate steering processes. The need to allocate resources dynamically, rather than as part of an annual ritual is a key component of the BB model as part of its mission to do away with traditional budgeting. And it is the dynamic nature of the process and the associated organisational culture that makes BB such a good fit for Lean and Agile practices.

The objective of this series of White Papers is to explore the practical implications of important BB principles and describe a set of resource allocation methods that enable the BB philosophy to be applied in a rigorous way. In the process, we will demonstrate exactly how both Lean and Agile practices are enabled by BB.

## Beyond Budgeting and Resource Allocation

One way of characterising BB is as a system to direct and regulate the consumption of resources – the financial input into an organisational system – in order to achieve desired goals. One important goal, especially for 'normal' commercial enterprises, is the generation of value in the form of profit, cash or growth (the financial output of the system) since without these things the enterprise will not remain viable over the long term.

It is helpful to distinguish between two different kinds of resource allocation process that regulate the inputs into the system:

- Continuous – in support of business processes
- Discontinuous – in support of business projects (which can be capital or expensed).

Traditionally, both process and project resources are allocated as part of the annual budgeting process. In other words, it is based on:

- A fixed annual horizon
- A fixed annual cadence
- An assumption of good knowledge expressed in the form of detailed (costed) plans.



In practice, the annual horizon is likely to be too long or too short, and in a dynamic environment the annual cycle is likely to be too infrequent, depriving the business of the flexibility to respond to emerging threats and opportunities.

For the same reason it is often not possible to allocate resources rationally, because we usually do not have the knowledge to do so sometimes over a year in advance. As a result, and because there is often very limited scope to change once budgets are set, the traditional process of resource allocation can become drawn out, fraught and politically charged.

This, and the sense of entitlement that budget holders have once budgets have been fixed, drives a series of dysfunctional behaviours, whereby people try to negotiate the largest budget possible (to provide themselves with some capacity to respond to unforeseen events) and then to spend it all to strengthen their negotiating position for the next budget cycle. As a result, budgeting doesn't help keep costs down, it helps drive them UP.

For these reasons, BB advocates that resources be allocated continuously in response to demand, based on real needs as and when they become clear and the level of spend can be justified. The test applied before money can be spend therefore shifts from: 'is it in the budget?' to 'is this the right thing to do?' and 'can we afford it?':

'What we can afford' is a relatively easy question to answer providing that we have a robust forecasting process (designed in accordance with BB principles) that helps us quantify the level of available resources. Determining what is 'the right thing to do' can be more difficult, not least because both types of resource allocation are associated with a set of operational practices that fit with traditional budgeting but not with BB. So, we need to rethink more than just the resource allocation process – we need a new set of costing and project management practices.

Fortunately, just as BB has evolved in response to the emerging needs of 'information age' businesses, Lean and Agile practices have been developed to enable organisations to manage operations and projects respectively in a more effective manner. And, because all three management movements have grown in response to the same set of environmental and organisational pressures, they have developed complementary practices underpinned by a similar set of organisational principles and values.

The aim of this series of White Papers is to define how, at a practical level, BB accommodates and enables Lean and Agile practices, such that they collectively form a coherent and integrated framework for the day-to-day management of businesses.

Before getting into detail I will set the context by explaining what the words 'Lean' and 'Agile' mean and show how, in general terms, they are synergistic with BB, starting with Lean and the process dimension.

## Lean Practices

Lean is a term invented by US management thinkers to describe a set of practices based on the Toyota Production System (TPS). Its primary focus is the management of continuous processes – how products are made, or services delivered. Ironically, although the TPS is often characterised as a manifestation of Japanese cultural traits, it was born out of the work done by US quality gurus such as W. Edwards Deming and Joseph



Juran as part of the US Government sponsored efforts to reconstruct the Japanese economy after the Second World War.

Traditional 'western' operational practices were born in an earlier era at around the same time that traditional budgeting practices were codified. Traditional practice is based on mass production methods, which promote big batches and a high level of specialisation and standardisation in order to drive down the unit cost of production. Traditional budgeting and related practices such as forecast driven planning, standard costing, overhead recovery grew to fit the methods of mass production.

Whereas mass production aims to optimise resources by exploiting the economies of scale, Lean practices seek to optimise flow.

In practice this means that rather than creating large 'production' units focussed on optimising each individual part of the system, Lean operations seek to optimise flow across the whole 'production' system (or Value Stream). This is done using small batches ('one piece flow') and synchronising operations (comprised of 'cells' within a Value Stream) as closely as possible with customer demand.

As a result, actual demand 'pulls' what is required from the system in contrast to conventional mass production methods where a forecast is used to 'push' product through the system to meet anticipated demand.

And rather than focussing on cost reduction directly, Lean methods seek to maximise customer value, specifically aiming to continuously improve by eliminating 'waste' – defined as anything or any activity which has no value to the customer. So 'waste' can take the form of waste material, but equally it could be inventory, unnecessary activities or simply wasted time when nothing of value is being done. This contrasts with conventional methods where fixed annual budgets are used to restrict costs.

In summary, both Lean and BB complement each other well since they are both continuous (dynamic) processes tailored to be responsive to the environment.

## Agile development

Agile development methodologies (of which there are many) emerged from the software development 'industry' and so are aimed at the management of discontinuous processes, usually manifest as projects.

Prior to Agile, software projects were managed using traditional 'waterfall' project management methods based on a simple linear progression in a series of well-defined steps.

Traditional project management starts with a detailed specification, then proceeds through design, build and implementation and finally testing phases. Like traditional budgeting, this approach assumes a high level of advance knowledge about the desired outcomes and exactly what needs to be done to achieve them. The world of software, particularly where the software IS the product, is however characterised by a high degree of technical and economic uncertainty. As a result, software projects managed in a traditional way and focussed on managing compliance to fixed project plans are often plagued by delays, cost overruns and a failure to deliver the promised benefits.

Agile methods have emerged as response to working in an environment of uncertainty (about the means of delivery and the demand for specific deliverables) and the associated need for speedy delivery.



While there are many 'flavours' such as 'Scrum' and DSDM, all Agile methods are based on practices organised around small, largely self-sufficient teams where the results emerge from a series of rapid iterations and feedback from customers or end users. Through a process of managed self-organisation, the project converges on an outcome which maximises the value to the customer, subject to the constraints of time and resource set at the start of the project.

More recently we have seen the cross fertilisation of thinking and methods between Agile management and that of business start-ups<sup>1</sup>, which also operate in an uncertain business climate.

Traditionally, resource allocation is based on annual budgets. If a project was not 'in the budget', its chances of being approved are small. In addition, different approaches are often applied to capital projects and those which are 'expensed'. Expensed project costs are charged to the profit and loss account with its fixed annual budget. Subjecting projects to the annual budget process is problematic even for traditional waterfall projects that bridge financial years, but it is completely inappropriate for Agile projects which require resources to be allocated in a rapid and flexible way in response to emerging needs.

Moreover, the traditional approach to appraising investment in projects of any sort typically involves using discounted cash flow (DCF) methods which, given the difficulty of predicting outcomes in an uncertain and volatile world, is also problematical. This is because they assume that it is possible to fix the cost of, and estimate the return on, projects a long time in advance – sometimes up to 10 years beforehand! As it only attempts to predict costs and revenues one year ahead, traditional budgeting seems positively enlightened in comparison.

In order to deal with unavoidable uncertainty over costs, contingencies are usually built into project budgets, which tends to drive up costs since spare money is typically always spent. And, by placing a risk premium on the discount factor where the returns are particularly uncertain, projects are actively discriminated against, even if much of the 'risk' is on the upside. Also, risks attached to returns are often ignored or understated to provide a commercial justification for the spend, safe in the knowledge that it is difficult to hold anyone accountable when timescales are so long.

On the other hand, BB is well aligned with Agile practices since it advocates allocating resources 'on demand' based on whether it is the right thing to do at the time rather than as part of an annual process. And new methods of investment appraisal, based on Options Thinking, allow us to deal explicitly with the unavoidably high level of uncertainty attached to investments and the impact of managerial flexibility that Agile and BB provide. The second and third papers in this series set out how these methods can be knitted together in practice.

## Organisation and Culture

While processes are important, BB recognises that an adaptive organisation needs a complementary set of organisational practices, founded upon devolved decision making and a culture of trust.

Lean and Agile also have equally strongly held positions on the humanistic side of the equation, expressing almost exactly the same sentiments using different words. This reflects the fact that modern organisations

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<sup>1</sup> For example, see Eric Reis "The Startup Way", Penguin, 2017.



employ educated, well-intentioned employees who are capable of contributing more than just time and effort and are motivated by more than the need for money to survive. But the emphasis on devolved decision making and trust is also an acknowledgement that it is simply not possible to manage large and complex organisations in a dynamic environment by centrally imposed fiat or fixed plans. It is essential that there be structure and practices in place that support and promote self-organisation in response to demands that are not visible to those sitting in the centre, at least not until it is too late.

Below is a table which summarises the position of BB, Agile and Lean with respect to each other, and in opposition to the 'anti process' embedded in traditional management practice. Because there are slightly different challenges involved, I have chosen to differentiate between Lean in manufacturing and service sectors.

Table 1

| Anti Process  | Budgeting   | Make and Sell   | Call Centre   | Waterfall PM  |
|---------------|---|---|---|---|
| Context       | Predictable business environment  | Predictable level of demand   | Predictable customer needs  | Fixed, specified requirements. Known technology and context.  |
| Process       | Beyond Budgeting  | Lean Production   | Lean Service  | Agile Development   |
| Context       | Uncertain and changing business environment and performance potential                             | Uncertain level of customer demand (but output – i.e. product – internally specified) | Uncertain customer demand and needs (output not internally specified)             | Uncertain new product, service or capability requirements   |
| Aim           | Deliver consistent, high relative performance   | High quality, low cost responsive supply  | Consistently meet the needs of the customer                                       | Deliver change quickly and effectively  |
| Requirements  | Ability to change plans (resource allocation) quickly in response to threats and opportunities    | Ability to change production levels to meet demand                                    | Ability to change nature of service delivered to meet (individual) customer needs | Ability to change deliverables and means of delivery to meet emerging requirements                            |
| Objectives    | Maximise performance, minimise wasted resources and decision making lead times                    | Meet demand with minimum waste (time/stock/variation)                                 | Meet (individual) customer needs with minimum waste (time/stock)                  | Change and deliver to meet requirements as they emerge with minimum waste of time and money                   |
| Manifestation | Short planning cycles. External frame of reference. Change financial constraints. 'Business Flow' | Small batch sizes. Flexible capacity. No rework. 'Product Flow'                       | Tailored interactions. No/ few handoffs. No failure demand. 'Service Flow'        | Short development cycles. Continuous reprioritization. Iterative design, incremental delivery. 'Project Flow' |
| Key Enablers  |   |   |   |   |
| Structure     | Small cross functional teams close to the market  | Small production cells  | Small teams of multi skilled agents – designed around customer needs              | Small self contained development teams  |
| Purpose       | Deliver consistent, high relative performance   | High quality, low cost responsive supply  | Consistently meet the needs of the customer                                       | Deliver change quickly and effectively  |
| Authority     | Localized decision making   | Localized decision making   | Localized decision making   | Localized decision making   |
| Control       | Goals, freedom within boundaries, Self control with sanctions (by exception)                      | Visual  | By exception  | Big visible charts  |
| Information   | Transparent. Dynamic.   | Transparent. Dynamic.   | Transparent. Dynamic.   | Transparent. Dynamic.   |
| Values        | Team values and trust. Leader as coach. Good judgement.   | Team and trust. Continuous learning and improvement                                   |   | Team working and trust. Continuous learning.  |

Having set the context in this paper, the next one will set out the implications for resource allocation at a practical level, starting with those practices required to support an Agile approach to development.

