



One of the most pressing, critical to success, challenges facing any organization is assuring the deliberate and effective allocation of resources to those endeavors that deliver the greatest strategic advantage and generate the desired performance outcomes. This sounds easy, right? Identify the best projects or opportunities, schedule them, and execute. Well, anyone who has ever tried to solve this basic challenge knows, it isn't easy at all.

Because of just how difficult it is to achieve this desired state; many organizations find themselves in a situation where they are either underutilized or underfunded. Often, they find themselves bouncing back and forth between these two states, on a perpetual roller coaster ride, rarely achieving the right balance.

The real problem when this happens is, that regardless of which side of the supplydemand equation your resource imbalances may lie on, the organization is not only likely to be under-performing to its potential but it is even more likely to fall behind on attaining its goals and objectives.

CHASING THE RESOURCES: A CAUTIONARY TALE

"It's tough to make predictions, especially about the future"

-Yogi Berra

As the popular adage says, "Failure to plan, is planning to fail". Portfolio managers know this well and work feverishly for their organizations to try to help them see around the next corner. Executives have become increasingly frustrated with planning processes, because they recognize speed is important, and plans change often. However, many current approaches to resource planning have become heavy on resources themselves to accomplish and then return an answer that often can't keep up with the information flow, and so lacks accuracy and a clear course of action. They fail to address the realities of our world today, which are the need to embrace agility and expect disruptions, which create the need to iteratively and responsively plan. The days of "lock and loading" the plan is quickly becoming a thing of the past. Like any form of forecasting, planning has become less predictable and is subject to greater unknowns and uncertainties. Even prior to this accelerated pace of change we are experiencing; it is worth noting how challenging this has been historically. Predictions regarding the cost and duration of the world-famous Sydney Opera House project ran over estimates by ~1500% and 10 years. We sometimes forget that it is difficult to actually "predict" when we are the ones asked to do the predicting. Compounding this problem is that across the organization, stakeholders are faced with many barriers to informed decision making. Here are just a few examples.

- Asymmetric, incomplete, disparate and distributed information/data sources
- Challenges bringing the latest available data together to assess what it means
- Keeping up with the pace of change and adapting to new learning
- Exploring different paths forward to understand trade-offs and opportunities
- Aggregating all the various assumptions into "the big picture"
- Difficulty in understanding the current state of progress against the goals
- Making timely and concise recommendations with visibility to risks and impacts

When the worst aspects of the planning process arise, there are some difficult traps that the organization should be aware of. Consider the following scenario:

Several projects that have recently been completed or are currently in flight have become very uncertain and look to be falling short of their forecasted performance expectations. Their risk profiles may be increasing significantly, and their costs are on the rise or already far exceeding expected levels of funding. Pressure mounts to mitigate the risks, and attention turns to a full-on press against the short-term fix with a focus on improving their execution and achieve results. Resources are rushed in to respond with little consideration of what else they might be doing if they weren't drawn into these difficult, and possibly bad, projects. The

resources across the board start becoming overloaded and increasingly spread thin, and so performance suffers across more projects. In the scramble to make things better, the risks and gaps in performance only get worse! As the situation devolves, budgets may get cut, and the opportunities in the queue with a chance of turning the tide, are neglected or shelved, and the cycle repeats, deepens, and becomes increasingly difficult to pull out of. Organizational frustrated grows and support weakens as the efforts don't meet the projections. The problems grow and the pace becomes frenetic. The organization becomes trapped to trying to dig its way out of a hole, rather than climbing.

Explain the Phenomena of Hyperbolic Discounting

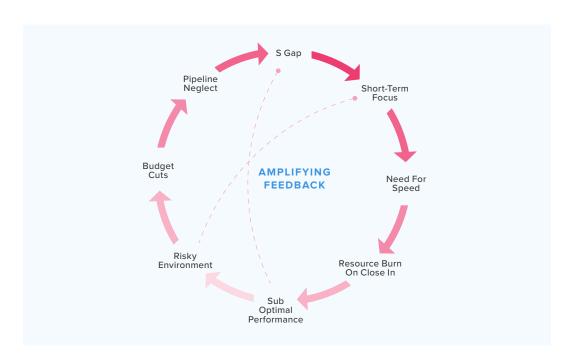
A key challenge to making short term choices versus the longer-term rewards

Would you prefer \$80 today, or \$100 in one year?

What do you choose?

Would you prefer \$80 in 10 years, or \$100 in 11 years?

What do you choose?



The scenario above may sound all too familiar, and responses like the following may feel like the only way to respond quickly enough.



What is the current splits in the budget? Let's take the new reduced budget and just split it the same way, take a little from everything...



These are all very important efforts we can't kill any of them, we'll need to lean in and find a way to do them anyway.

HOW CAN YOUR ORGANIZATION AVOID THESE TRAPS?

DON'T BOIL THE OCEAN: STRIKING THE RIGHT BALANCE FOR INTELLIGENT ALLOCATION

"The journey of 1000 miles begins with a single step"

-Lao Tzu

Intelligently making resource allocation decisions may seem like a daunting task. It is a complex enough problem, but it is also one that lends itself to over-complicating. When beginning to assess their choices, organizations may balk while thinking of the many things they feel they need to take into consideration. "What is the right mix of projects that will achieve our goals?" "How will this mix balance off the many dimensions between short- and longterm?, risk and reward?, cost and benefit?, legacy and emerging opportunities?" among many others. Then once choices are made, and the projects are in-flight, continuously evaluating the actual situations that have emerged will prompt the search for ways to continuously improve the portfolio. "How will we do that?" The ability of the organization to adapt to new information and explore new opportunities is the key to success, more so than the "perfect", speculative, locked and loaded plan.

Speculative choices made yesterday don't reflect the known or learned realities of today and so they need to be revisited periodically. It is essential that organizations do not become paralyzed in the search of perfect information and data, but rather spend time creating better scenarios that they can spend time communicating, and then bring to the

subjective assessment of decision makers as to what is good for the organization. Being able to nimbly scenario-plan to identify how current opportunities in the portfolio stack up against the organization's resource capacity is the basis for continuous improvement. These capabilities we've outlined above, stand in stark contrast to some familiar methods of resource allocation decisions, where lengthy annual reviews followed by committing to the plan and executing ruthlessly (often without good feedback) are the norm. The historical approaches are being stressed to their limits and can leave the vision, innovation, opportunity and purpose of the organization subject to the forces of momentum and chance rather than context and choice.

This knowledge of all the things that could, or maybe should, be considered can leave organizations falling prey to the old aphorism "the perfect is the enemy of the good enough". In 1969 economist Harold Demsetz coined the term the "Nirvana Fallacy" [ref], which basically stated that people will often set up a false choice between an actual achievable realistic possibility and an unrealistic idealized alternative, and not act while awaiting the latter. This is the basis for many excuses for not establishing a process to manage resource allocation on a continuous and impactful way.



Yes, it is, you have more than you know!

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This is too sophisticated for our team...

No, it's not, start simple and evolve.

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Our company isn't ready yet...

Yes, you are, if not now, when?

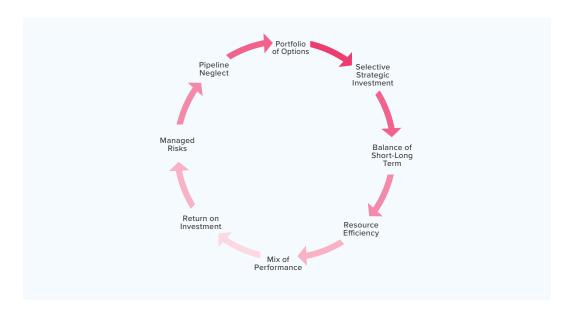
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Using a new approach is hard...

Under-performing or failing is harder.

In a study by McKinsey it was found that organizations who could more rapidly rotate their capital allocation amongst different operating units and objectives were able to generate a 120% greater return than those that could not.

Financial investors can take advantage of volatility to capture option value. The same opportunity appears to be true when it comes to capital and resource allocation within project portfolios. Those that can quickly plan, allocate, evaluate, reassess and reallocate can adapt to the unforeseen changes that inevitably come from social, technological, environmental, economic and political forces that are sure to shape the context in which they make their choices. So, there is no time like the present, to begin your portfolio management journey, and perhaps speed, rather than precision, is of the essence.



FRAME THE PROBLEM: RIGHT-SIZING THE COMPLEXITY

"It's better to be approximately right, than precisely wrong"

-Warren Buffet

Think about an individual's investment portfolio. The framework for financial portfolio management is the basis for the ideas used in project portfolio management. Essentially in both cases, we are investing resources, in the way of costs, to generate value. To get a beneficial return, at an acceptable level of risks, across a variety of different categories of investment.

With financial use cases, dollars are invested (costs) usually looking for a return in dollars (value) in a mix of different asset classes with different performance profiles (stocks, bonds, mutual funds, real estate, etc. – risks and balance). In project portfolio management, we invest resources (dollars, people/talent, production capacity, etc.) in projects or programs to get a return (capabilities, customer benefit that we may exchange for money, new services, etc.) across a variety of asset classes or dimensions (short-long term, geographic, R&D, operations, etc.). This basic framework of, Value generated for the Costs invested, at an acceptable Risk level, balanced across Categories of interest, is a foundational framework for the problem.



VALUE METRICS Represent measures that an organization is looking to achieve (Revenue, eNPV, market share, cost savings/avoidance, etc)



COST METRICS Represent constraints in a portfolio that may be in limited supply (cost, resources, etc)



RISK METRICS Represent those factors affecting the uncertainty and volatility of the portfolio (Cost risk, schedule risk, probabilities, impacts, etc)



BALANCE Represents organizing of categorical attributes of the portfolio that are important to keep in equilibrium (Regional, oranizational, project type, etc)

Let's see how a meaningful portfolio analysis can come from data as simple as the following:

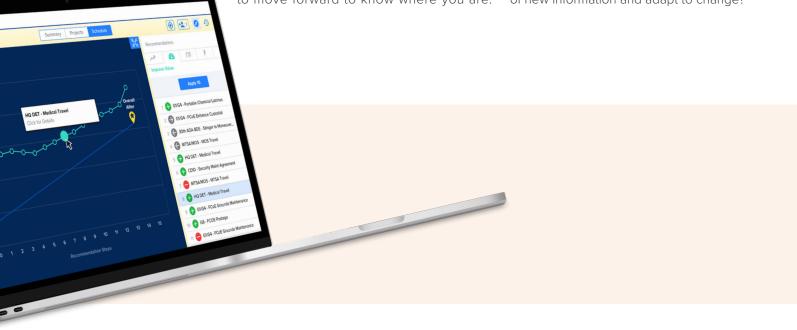
PROJECT	VALUE	COST	RISK	BALANCE
1	***** (5)	***	***	Mid Term
2	*** (3)	***	***	Short Term
3	* (1)	**	*	Short Term
4	**** (4)	**	**	Long Term
5	*** (3)	*	**	Short Term
6	* (1)	**	***	Mid Term
7	**** (4)	***	***	Long Term

This kind of quick characterization of a portfolio can be a very effective at uncovering critical resource planning questions and insights, yet many organizations will delay building this view of their choices arguing that their data is not complete or precise enough. Making a high level directional analysis can often reveal where it is most important to make more refined and detailed estimates. Whenever forward-looking in a forecast, uncertain and likely precisely wrong info exists that also often contains directionally correct information.

This is an important issue to understand, and one that often keeps organizations from beginning to move forward. There isn't a clear case to be made to whiplash the organization into trying to achieve perfect information about your portfolio on day one (you'll never have perfect information). There is also then, no argument for not beginning to analyze and frame your portfolio choices. One of the most challenging and contradictory aspects of portfolio management is that you need to move forward to know where you are.

Maybe this is counterintuitive, but once it is understood and some level of comfort is accepted to use imperfect information that is refined as more becomes known about the opportunities, it can make the once stalled organization nimble, adaptive and responsive to the emerging challenges that once set them spinning.

By moving to measures and estimates that can be re-evaluated in short enough time cycles that support the speed of decision making, organizations can begin to truly fight, rather than flight or freeze in the face of disruptions and challenges. Think about this simple idea. If the analysis is so mired in heavy data collection and false precision that makes it slow rather than responsive, it may be providing a false sense of security. It may feel comforting to have so much detail in front of you, but it may also be lagging, while appearing thorough and precise in appearance. The key question to ask is, is it allowing you to move resources at the speed of new information and adapt to change?



DECISION LENS RESOURCE PLANNING: OPTIMIZATION & ALLOCATION

"There's a way to do it better—find it!"

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-Thomas Edison

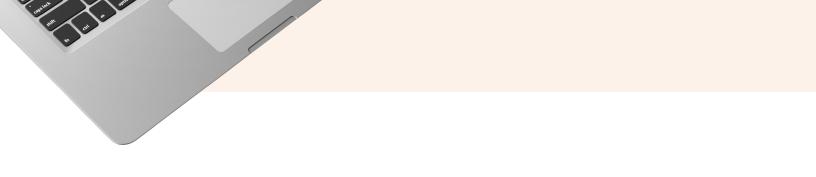
Using Decision Lens Accelerate resource planning solution, portfolios can be easily brought together and analyzed to inform your most challenging resource planning questions. Decision Lens can take your measures or help you quickly estimate the value, cost, risk and balance of your projects and programs across the portfolio.

in one place, and bring together a view of your portfolio of portfolios. Depending on where you are on the maturity curve, you can use simple quick estimates to establish the difference in importance between projects. If you want to use multiple measures of value, we have a comprehensive score carding process to enable your evaluations.

You may have categories of investment within your portfolio, or have multiple portfolios that need to be aggregated in to a big picture view. By providing you a means to bring your data together through either our import wizard, API integration and easy to use collaborative interface, we can map your data to the Decision Lens framework. Decision Lens can help you keep your data updated

Alternatively, we can simply work with you performance measures and forecasts to guide your decisions. When populated with the various sources of funding, across many time periods in your planning horizon you can easily start to see how your priorities, performance and goals are impacted by your resource supply and demand picture.

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The only certain information in the resource planning process may be that which is sitting in the 20/20 rearview mirror. Preserving the data about how projects were forecasted to cost and perform and reassessing them as they progress (on the dimensions of value, cost, risk and balance) can provide important context for making the next choices under uncertainty as you continue looking forward into the future. Using Decision Lens suite of resource allocation tools, your organization will be able to take knowledge of past results and performance along with estimates of current and future projects, and nimbly navigate the possible paths forward.

Using this robust set of scenario planning capabilities your organization will be able to compare and contrast the different resource allocation plans that highlight recommendations to pivot and move your organization toward more value, lowered costs, manageable risks, and a better balance. This is done in a way that is adapted in response to your current environment and its emerging or most disruptive challenges.

Decision Lens can help you quickly communicate why options could be considered and what the driving forces are that make them attractive, along with what the impacts and risks of the resource trade-offs that these choices entail. Decision Lens provides a solution with a set of tools that allows you to start simply and refine your view with better and better data and learning over time to drive continuous improvement of your resource allocation process. The ability to make choices knowing where you've been, where you are, and where you might go, assisting your best judgement with algorithms and analytics that search out options, and highlight differences that can lead to insights and opportunities that may otherwise go unseen.

Providing planners with this powerful set of tools enables more time for meaningful resource allocation discussions and decisions rather than time spent data jockeying and trying to formulate difficult to conceive of scenarios. Reapportioning the time spent by portfolio managers and decision makers to insights and decisions will change your organizations performance, and move you more effectively toward your goals and objectives.

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