



# CREATING SUSTAINABLE CHANGE THROUGH BACKCASTING

When considering cause and effect, we frequently engage in 'one-step thinking.' *Backcasting* is a technique that can help us see both the forest and the trees.



**IN THE WAR FOR BAGHDAD**, United States' generals developed a doctrine called 'clear and hold': troops would *clear* a neighborhood of guerilla fighters and the Iraqi army would *hold* the area. But Iraqi troops were unprepared, so that when U.S. troops retired to their bases, guerillas returned. Only when the army changed its doctrine from clearing an area to 'protecting its residents' did they understand what 'holding' required: it meant living close to the neighborhoods, rather than in large distant bases, taking a census of the population, providing services and talking with community leaders. The big stick took a back seat.

Executives leading organizational change face the same challenge. They can 'clear' (make changes), but they can't often 'hold' (sustain those changes). As **Kurt Lewin**, founder

of the group dynamics tradition, noted long ago, if leaders focus on a goal without focusing on its permanency, change efforts will fail.

But permanency is hard. Through his exhaustive study of decisions taken everywhere from the Millennium Dome in London to the Denver International Airport, Ohio State University's **Paul Nutt** found that fully *half of all decisions failed*. What is wrong with this picture? For decades, researchers and practitioners have insisted that we should take a 'systems view' of organizational change. But what is the right level of detail for a systems view? We might be advised, for example, to look at the reward system, the organization design, the clarity of the vision or the coalition leading the change. The problem is that this kind of high-level view is too distant from how life is actually lived in an organization: real life is about the relationship

between two executives, how budgets are established, which division has the primary relationship to the customer, and who is friendly with whom.

Consider the early failures of **Euro-Disney**. Attendance numbers were disappointingly low for the first several years, mainly because the planners and executives missed some significant details. For example, the French regularly give their children diluted wine to drink, but Disney didn't serve liquor in its parks; and while Americans are happy to eat their lunch while walking around – munching on a hot dog, for example – Europeans like to sit down for lunch, and as a result, the dining facilities were completely overcrowded. In addition, in Europe many families associate parks with picnics on the grass, but Disney forbade customers from bringing in any food.

The lesson: sometimes we err by missing the trees for the forest. When considering cause and effect, it is striking how frequently we engage in 'one-step thinking'. For example, the continued appeal of crash diets is based on the fact that we only think about a diet's calories, rather than its variety. Our thinking is often limited in this way because the countervailing force – like a boring diet's impact on our willpower – only kicks in *later*. The admonition to 'avoid short cuts' is based on this type of experience, which we might term 'the seduction of the immediate'.

**Circuit City** declared bankruptcy in November of 2008, but in the earlier stages of its cost cutting, it reduced expenses by firing its most experienced salespeople – 3,400 of them – in March of 2008. There was some logic to this: they were the most expensive employees. But what they failed to note is that these experienced salespeople also gave customers the best service. When they were let go, service levels fell, and so did sales, particularly of big-ticket items. The result: short term gains but longer-term losses.

There is a way to overcome such one-step thinking. A challenge we face in envisioning a goal is the difficulty of imagining the conditions that have to be true in the future if our goal is to be reached. If we posit a goal, say, 'Our revenues are 50 per cent higher,' it is apparent that many other conditions must also be true, e.g. 'Our work force is bigger', or 'Our product appeals to customers who have never before purchased this kind of product.' But how can we envision fully the texture of such a future state? What are the conditions that need to be in place in order for us to accomplish our goal?

This is not a theoretical question, since without a relatively complete picture of the future state, we will not be able to map out an implementation plan for achieving our goal. For example, if we believe that revenues can grow by 50 per cent only if we attract customers who have never before purchased the kind of product we sell, then our conception of the actions we have to take now to achieve our goal must include steps for attracting new customers to our product category. Our understanding of our desired future state and our plan for getting there are inextricably intertwined.

So, how can we identify the network of future conditions surrounding a goal? When we do so, how do we use this knowledge to implement a change within an organization? To answer these questions, we draw directly on, while also modifying, the creative methodology developed by **Eli Goldratt** and his colleagues, called 'the thinking process'. They developed a four-step thinking process for identifying how to improve a situation or setting: first, organization actors link identified symptoms to a root cause; second, they describe how an intervention, by overturning the root cause, can transform the symptoms into desired conditions; third, they specify the prerequisites that must be in place to implement the intervention; and fourth, they delineate the tactics to put these prerequisites into place.

As rich as Goldratt's method is, it is also time consuming and difficult, and as a result, many clients are reluctant to engage with it. My colleagues and I have developed a method to overcome resistance to this way of thinking, one that short-circuits the first two steps and substitutes an interviewing process for the client's work of rigorously thinking in cause and effect terms. Instead of beginning with symptoms, we posit a goal, e.g., 'We have a suitable incentive scheme' and then employ our structured interviewing process to help an organizational actor rigorously identify the prerequisites. We call this interviewing method and the tree of prerequisites it helps us produce, 'backcasting'. Our approach consists of four steps:

1. Specify the goal.
2. Interview the organizational actor(s).
3. Create a draft backcast and its corresponding accomplishments map.
4. Develop a project plan based on the backcast.

I will describe these in turn.

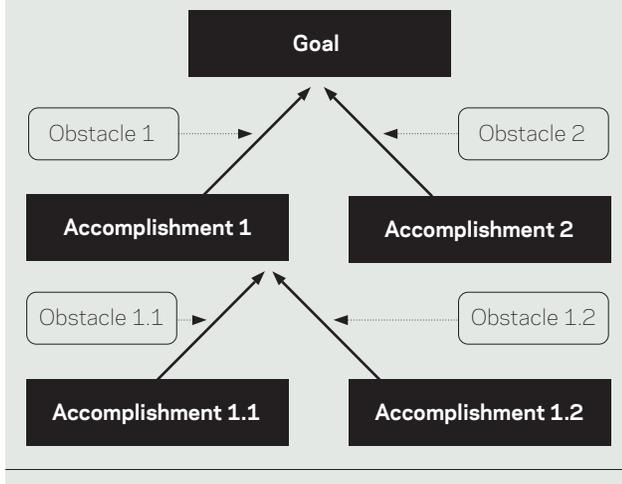
**Specifying the goal.** Ask the organizational actor to specify a desired end state, for example, 'Our incentive scheme rewards collaboration.' The only rule in specifying the end state is that it not be stated as an action (i.e. 'We replace our incentive scheme with one that rewards collaboration.'). since the latter describes a process for reaching our goal, rather than the goal itself. The goal can be stated in somewhat general terms, because the interviewing process itself will elicit the specific meaning or import of the goal to the organizational actor(s). If we ask for too much specificity in defining the goal, we are in essence anticipating the backcasting work itself.

**Interviewing the organizational actors.** Interview the actor(s) using an iterative process based on the following two questions:

1. What obstacles would you have to overcome to achieve this result?
2. What accomplishments represent the overcoming of these obstacles?

## A Simple Draft Backcast

Figure One



- what obstacles you would have to have overcome to achieve these accomplishments;
- What accomplishments represent the overcoming of these obstacles?

There is a tension between a 'vertical' and 'horizontal' approach to the interview: in the horizontal approach, we would ask the actors to first list all the high level obstacles, then to list all the accompanying accomplishments, then to list all the obstacles to these accomplishments, etc. Alternatively, we could follow one line of causation all the way down to the 'bottom' of the backcast tree. Our own experience is that people more naturally follow the latter path. Once they start with one obstacle they are comfortable working their way down through the resulting cascade of accomplishments and obstacles. We have found that the interview helps people access their implicit theory of the causal structure of the setting in which they work.

**Creating a draft Backcast.** Figure One shows a simple backcast diagram, with the goal and accomplishments in rectangles and the obstacles 'squashed' in rounded rectangles. The map is to be read in the following way: 'If we want to achieve Accomplishment 1, we will have to overcome Obstacles 1.1 and 1.2.' While the map is read downwards, the arrows point upwards to indicate that an accomplishment at a level below is a precondition for achieving an accomplishment a level above.

Before we can create an implementation plan, we first need to develop a textured picture of a future state that includes our original goal, among many other conditions added in the backcast. To do this, we create an **Accomplishments Map** by eliminating all of the obstacles

from the draft backcast. We now have a richer picture of the future state we want to achieve. If we had not worked through this process we could never have intuited that our future state must include – *at least* – these conditions. This method of describing a future state is more exacting than simply asking people to imagine how the future might look. The latter is based on brainstorming, a process that offers no assurance that the picture of the future will be complete or even coherent. The backcast method provides a much higher level of assurance that such criteria can be met.

Let's apply a simple logic of this kind to the aforementioned Circuit City example, but with a twist: we are going to probe for problems – how something can fail – but *also for solutions* – how can we overcome a failure. Imagine that as executives we are about to fire our most experienced salespeople. But first we ask, 'How might firing the experienced salespeople fail to achieve our goals?' The answer: 'Service quality falls.' But we don't stop there. We then ask, 'What can we do to prevent service quality from falling?' And we could answer, 'Redeploy some fraction of the experienced sales people as trainers for the less experienced'. And then we can ask, 'How might *this* fail?' And we answer, 'The trainers do not have an incentive to help the inexperienced salespeople improve,' – for example, they may feel that they are training their substitutes. Then we can ask, 'What can we do to ensure that the salespeople have incentives?' And we answer, 'They share in the upside as individual salespeople become more productive.' And then we ask, 'How might *this* fail...?'

My colleagues and I have applied backcasting to a wide range of strategic situations. A hospital client wanted to introduce 'interdisciplinary rounding' in which physicians nurses, residents and social workers walked around together in the

morning visiting the patients under their care. But they faced one deal-breaker: patients suffering from very different diseases or traumas were often not on the same floor. This meant that a specialist in a particular disease could not see her patients by simply rounding on a single floor with the same nursing team. Instead she would have to go up and down the stairs (the elevators were slow), and interface with several different nursing teams, all within the same hour. This was impractical, and the idea, which had been implemented in a sister hospital, died.

Using backcasting, the clinical leaders of the hospital might have found a different configuration: instead of walking around together, each clinician could have rounded alone, and then at an appointed time, met together in a room. Attending physicians, who could not be in two meetings at the same time, might have rounded with their residents earlier in the morning, and then delegated their resident to meet with one nursing team while meeting with another themselves.

Another hospital client wanted to become ‘the most favored setting for orthopedic surgeons’ in its region. The goal was crystal clear, but how could the senior executives execute against it? The backcast we created highlighted a chain of accomplishments, from a pay-for-performance systems for compensating nurses, to the economic incentives facing primary care referring physicians, that all had to be addressed. In addition, backcasts are helpful in coaching sessions in which the client specifies a goal and the coach leads the client through a backcast interview. The elucidation of the obstacles will enable the client to understand which obstacles are real and which are self-imposed.

Major General **David Fastaband**, chief of military strategy for General **David Petraeus**, the architect of the surge strategy in Iraq, wrote an essay that imagines Petraeus telling the story,

two years into the future of the army’s success with its surge. We call this a ‘history of the future’. Typically, while it is challenging to write a particular scenario – how we would like our part of the world to look, say, five years from now – it is even harder to write the story of how to get from here to there. This is because the story has to highlight the sequence of changes that led to our goal, not just the features of the goal itself. One bonus to doing a backcast is the ease with which one can create a story with the most appropriate and believable sequences.

### In closing

It is important to note that while every obstacle named in a backcast is sufficient to prevent an accomplishment, there may be other un-verbalized obstacles that could also prevent the accomplishment. Our method does not guarantee an exhaustive list of obstacles for each accomplishment; instead, we arrive at a *good enough* set of obstacles by asking organizational actors to scrutinize the tree and add obstacles that they believe are important in moving from the present to the agreed-upon desired future.

An old poem reminds us that, “For want of a nail, the shoe was lost; for want of the shoe, the horse was lost; for want of the horse, the rider was lost; for want of the rider, the battle was lost; for want of the battle, the kingdom was lost; and all for the want of a nail.” Sometimes, of course, we have an extra nail on hand, but backcasting reminds us that very often, we do not. **R**

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