

Solution Matrix Ltd



Opportunity costs and avoided costs can be real and measurable—if you understand the reasoning behind them.

What is opportunity Cost? And, what about so-called avoided cost? Are these costs real? Do they belong in a business case?

When opportunity cost comes into the discussion for decision support or planning, it's very likely that someone will step in and challenge its right to be there. Participants in our [business case seminars](#) talk about the disagreements and sometimes heated discussions in their own organizations about whether and how to use **opportunity** cost. They ask:

What is opportunity Cost? How do you measure it?

Is it a "real" cost? Does it appear in the budget anywhere?

Should command the same respect as other costs, such as capital costs or operating expenses?

Can you use opportunity cost in the business case?

Similar questions arise about another problematic cost term that is troubling for some people—**avoided costs**. In a nutshell, yes opportunity cost and avoided costs are very real and measurable. But you don't exactly put them into the business case as cost items. You *find them* with the business case.

This newsletter focuses on the simple rationale for each of these concepts. Understanding the rationale should help you stand firm when someone questions your right to use them

It's All Relative

The ideas of cost savings, avoided costs, and opportunity costs are all based on similar reasoning. These are *relative* terms that have meaning only when one outcome is compared to another. When any of these terms appears in business planning or decision support, the key questions are: Which courses of action are really possible? And, what are the outcomes under each option?

Consider first the simpler and less controversial term, cost savings.

Cost Savings

Most people readily accept cost savings as a legitimate benefit in the business case, when a proposed action will clearly reduce costs. If, for instance, we plan to lower the electric bill for office lighting by switching to energy saving fluorescent bulbs, no one rejects the legitimacy of the cost savings benefit for the plan.

Of course the analyst has to estimate kilowatt consumption as it is and as it will be, make assumptions about light usage under the new plan, and consider all the costs of switching. Any of those points might be debated or challenged, but the idea of cost savings itself is acceptable and legitimate. No one doubts that the savings are real and measurable, and next year's operating budget may be adjusted downward based on this belief.

Avoided Cost and Opportunity Costs

Many people are less comfortable, however, when avoided costs and opportunity costs enter the picture. The rationale legitimizing these costs is similar to the reasoning behind cost savings, but they cannot be granted legitimacy automatically until a few additional assumptions are made..

Example Case

These cost terms are probably better understood through an example case. The very simple case below, however, makes point immediately: when several actions are in view, each with its own cash inflows and outflows, the potential for confusion around "opportunity cost" and "avoided cost" is understandable. Even in simple situations like this, cash flow summaries of this kind may be necessary to show clearly what is being compared to what. Nevertheless, the avoided costs and opportunity cost shown here real and are useful concepts for discussion.

Consider a company that has a customer service call center, where call volume is increasing rapidly. This means that call center agents are "at capacity" and, without a better solution, management will soon have to hire more call center agents to handle the volume. "Business as usual," in other words, means hiring more staff. In fact, however, management determines that that two different solutions for the call volume problem are possible:

- (1) **Business as Usual Scenario:** Hire an extra call center agent in year 1, and another additional agent in Year 2, in order to meet call volume needs.
- (2) **Training and Equipment Scenario:** Train current call center staff in more efficient call handling and provide them with better information access and call support software.

Either solution brings new costs, but each solves the call volume problem. Either way, customer satisfaction needs are met, and as a result, annual growth in gross profits is projected at a 10% annual rate. Management, however, is also considering another possible use of the same funds.

- (3) **CD Investment Scenario:** a certificate of deposit (CD) paying a very attractive 10% interest per year is available as well. Under this scenario, however call center service degrades and projected gross profits growth is less.

Business as Usual and the two proposal scenarios are competing for funding and only one will be implemented. The business case analyst attempts to compare the three scenarios fairly, by projecting cash inflows and outflows under each. Notice that the three cash flow scenarios at left have exactly the same cash inflow and outflow line items: that is what makes the comparison fair. (For a complete introduction to business case scenario building, see [Business Case Essentials](#) or the [Business Case Guide](#).)

In order to bring out the avoided costs and opportunity costs, however, the analyst also has to produce incremental cash flow summaries for the two proposal scenarios. (Incremental cash flow is the difference between the proposal scenario value and the corresponding Business as Usual Cash flow).

Business Case Cash Flow Scenarios

CD INVESTMENT SCENARIO			
Cash Inflows	Y1	Y2	Total
CD interest earned	10	11	21
CD principle recovered . . .	0	100	100
Product gross profits.	1,600	2,000	3,600
Total inflows	1,610	2,111	3,721
Cash Outflows	Y1	Y2	Total
CD purchase	(100)	0	(100)
Salaries & hiring costs. . . .	(400)	(420)	(820)
Training & equipment costs	0	0	0
Total outflows	(500)	(420)	(920)
Net Cash Flow	1,110	1,691	2,801

TRAINING & EQUIPMENT SCENARIO			
Cash Inflows	Y1	Y2	Total
CD interest earned	0	0	0
CD principle recovered . . .	0	0	0
Product gross profits.	1,760	2,200	3,960
Total inflows	1,760	2,200	3,960
Cash Outflows	Y1	Y2	Total
CD purchase	0	0	0
Salaries & hiring costs. . . .	(400)	(420)	(820)
Training & equipment costs	(50)	(50)	(100)

Avoided Costs

Both incremental scenarios show an avoided cost for hiring and salaries. This is legitimately called an avoided cost, and a cash inflow on the incremental summary, if and only if the extra hiring was truly coming under Business as Usual. Mathematically, an avoided cost appears in comparisons exactly the same way that cost savings appear. The difference is that under cost savings, the scenario looks forward to reducing spending already taking place, while with an avoided cost, the increase has not yet occurred. The legitimacy of the avoided costs depends on the analyst's ability to show that the increase will certainly come without the proposed action.

Opportunity Cost

Opportunity cost is normally defined as foregoing a gain that would appear by choosing a different course of action. There are several opportunity costs in this example, as well, but the definition in each case depends on which comparison is in view.

If the "Training and Equipment" proposal or the Business as Usual scenario is chosen, then the potential interest earnings from the CD investment are an opportunity cost, relative to that option.

Solution Matrix
304 Newbury Street, Suite #350
Boston, Massachusetts 02115
United States

