

CALCULATING RETURN

The ROI is the ROI—Except When It's Not

BY PETER EDMONSTON

How could three little letters cause so much confusion?

Most executives know that ROI, or return on investment, is the dollars-and-cents payoff of a project. Calculating ROI for technology initiatives is a fairly recent development, but one that has fast become a requirement since the dustup over Internet valuations.

But bringing ROI analysis to technology is not easy. Part of the difficulty lies with the underlying numbers. Technology managers often underestimate the costs of maintaining software, for example, and a frequent gripe about enterprise applications is that benefits—such as happier customers—cannot be equated with dollars. The result? ROI figures that are, to put it kindly, creative.

Another major source of ROI-related angst is the surprising range of opinions about how to calculate it, even within the financial community. The basic concept behind ROI is simple: the net benefits of a project divided by the costs, expressed as a percentage. But within that definition, there is a lot of room for interpretation.

Technology vendors have only added to the muddle by introducing custom-made techniques that tend to flatter their own products. “There are an awful lot of people out there doing a lot of things to make the numbers look good,” says Rebecca Wettemann, research director at Nucleus Research in Wellesley, Mass. (See “Metrics Marketing,” *Baseline*, May 2002, p. 22.)

When justifying your next project, you will find it pays to know your way around an ROI analysis. The chart at right shows you some common formulas, and where they come up short. ◀

DRILL: WILL THE REAL ROI PLEASE STAND UP?

A company is considering a new call center package that will cost about \$100,000 to set up. Once installed, estimates the company, it will cost about \$25,000 a year to maintain but yield \$75,000 in annual benefits. The result is a net benefit of about \$50,000 a year. So what's the expected return on investment over three years? It depends on who's crunching the numbers, it seems. Here are three ways to find this project's ROI, and what each number really means. (For more information and a spreadsheet that calculates the ROI for your own project using these methods, visit WWW.BASELINEMAG.COM/WHICHROI/.)

150%	124%	50%
$\frac{\text{Total net benefits}}{\text{Initial costs}} = \frac{\$150,000}{\$100,000}$	$\frac{\text{Present value of net benefits}}{\text{Initial costs}} = \frac{\$124,343}{\$100,000}$	$\frac{\text{Average annual net benefit}}{\text{Initial costs}} = \frac{\$50,000}{\$100,000}$
<p>This formula sums the project's net benefits over three years and divides by the initial cost. Often called cumulative ROI (CROI), this calculation often yields the highest number, making it a favorite of marketing departments. But CROIs are misleading. They lump together several years of returns instead of considering them annually—sort of like a savings bank advertising 9% interest rates, when what it really offers is 3% for three years.</p> <p>This method also ignores the time-value of money, giving equal weight to payoffs no matter when they occur. But a dollar today is worth more than a dollar tomorrow. For a project whose benefits are back-loaded, CROI can dramatically overstate the time-adjusted return.</p>	<p>To calculate a discounted ROI, which reflects the time-value of money, you first choose a discount factor—a number that reflects the annual penalty for tying up your company's cash. Typically, a discount factor approximates your opportunity cost, or the return sacrificed by devoting funds to this project rather than to other investments. Our discount factor of 10% yields total benefits of \$124,343.</p> <p>If you were to subtract startup costs from that sum, you'd get a commonly used financial measure called net present value (NPV)—in this example, \$124,343 - \$100,000 = \$24,343. If NPV is less than zero, it usually means that the project doesn't offer enough payback to justify the investment.</p>	<p>By averaging the yearly benefits, this ROI comes closest to the textbook definition of an accounting rate of return. It is also the most conservative number. But like other versions of ROI, it says little about the payback period—how long before the project recoups its startup costs. Here, the payback period is two years.</p> <p>Some financial executives prefer the internal rate of return (IRR). The IRR is the discount factor that makes the present value of all benefits equal the initial costs exactly. Essentially, it represents the project's benefits as an interest rate. They can look good on paper, but lofty IRRs are often impossible to achieve because they assume you can reinvest all the benefits at the same high rate.</p>