During the dot.com boom, says Ray Trotta, businesses large and small spent billions on technology because ... well, they weren't always sure why. They certainly didn't calculate an expected negative return on their tech investments.

"Frankly, much of it was out of fear," says Trotta, co-founder of iValue, a Chicago-based consulting group focused on creating shareholder value from technology. "Companies would see that their competitors had this huge, intergalactic Web site, and they'd want one too, just to be on the bleeding edge."

Trotta and partner Chris Gardner bring the techniques of finance, risk measurement, and quantitative analysis to what Gardner says has been "a crap shoot. There's been no yardstick to size up the economic potential [of IT projects] and manage them for successful outcomes."

iValue's team has brought that yardstick to clients such as Citibank and McGraw-Hill, where iValue's thumbs-down on a costly new imaging system touched off "a near riot" among the publishing group's staffers, according to Gardner.

"We did a top-to-bottom analysis, and we couldn't make the economics work," Gardner says. "When we walked the division president through our analysis, he realized we'd put it on the line. They decided not to move forward with the system."

Trotta believes the debacles at Enron, WorldCom, and other fallen companies presage not only ethical reforms, but a demand for more transparency in IT spending. "Once you get past the $5,000 wastebaskets and the corporate apartments, the governance people are going to look at the billions spent on technology. 'What's the value to come? And what risks are we taking on these investments?' That's where we come in."