Quality Meets the CEO

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Corporate management does not care about quality. This is the cold, hard reality of the software world. Management cares about profits, revenues, earnings, and market share. Software is a profit center that makes money. Quality is a cost center that eats money. One of the primary reasons why quality assurance and testing have so little influence within a corporation is because you, the quality professional, insist on talking about quality instead of the bottom line.

I know this because of my fairly unique role as both a writer and speaker on software quality, and also as the CEO of a fast growing software quality business. Every day, I am faced with making difficult decisions regarding the quality of our work in the face of pressures to maintain profit margins, decrease time to market, and pay the bills. Every CEO faces these issues and works to provide "good enough" quality to his customers, while satisfying the needs of the company shareholders, employees, and other stakeholders in the organization. This article is about these tradeoffs and how – by understanding the CEO's perspective – you as a software quality professional can more effectively communicate quality concerns and needs to all management.

The CEO's job

The ultimate role of a CEO is to provide a long-term return on investment to the shareholders of the company. However, shareholders are much like black-box testers. Their perception of the company is based upon what they see as output: quarterly earning reports, new products on the market, new strategic partners. In much the same way that testers will immediately dismiss the quality of a new release if the first five tests fail, investors will reduce the value of a company if short-term earnings do not meet their expectations. The issue of short-term progress vs. long-term gains is the central conflict that a CEO must address when making decisions. Place too much emphasis on the long-term, and investor's will bail (with the exception, apparently, of Internet stocks). Ignore the long-term and some other company will pass you by.

So how does a CEO deal with this short-term versus long-term conflict? I handle each decision as if I'm a shareholder, seeking a return on investment.

Take, for example, the question of buying equipment versus leasing it. While in the long-term it costs less money to purchase equipment, leasing is a better alternative if short-term cash flow is a concern. In this scenario, short-term viability of the business takes precedence over long-term return for the money spent on this equipment.

Of course, it's often not this simple. One might argue in the example above that leasing equipment is always a better alternative, freeing up short-term cash for investment in

something else – but that assumes the money will actually be used in a manner that gives a greater return. All of a sudden a simple decision about how to pay for office equipment has become a complex decision that relies partially on unknown future events and a CEO’s ability to quantify the risk these future events will provide a greater return opportunity.

When you ask me to make a decision, it's not usually about which way to pay for something. But you still have to understand that I do not judge your proposal in isolation; it's one of ten or twelve, all contending for the same pot of money. You have to convince me to *decide* that your proposed action is the best alternative. The proposal that will have the advantage is the one that clearly states a business case – and demonstrates an understanding of the short-term/long-term tradeoffs and any associated risks.

Basically, good decision making relies upon three distinct elements:

- Intent: The decision-maker must want to make a decision that is good for the organization.
- Information: Enough facts and data are available for consideration.
- Education: The decision-maker understands the business, how information relates to both short-term and the long-term results, and how to manage risk in the organization.

I have a colleague who claims to have never made a bad decision. His reasoning is that doing what he thinks is best for the corporation is, by definition, a good decision. He focuses on the fact that at the time of the decision he *intends* to make the right decision, he examines all the *information* provided to him, and uses his *education*, experience and knowledge to make the right decision. While you may have no control over the *intent* of your CEO, you can influence the other two elements of decision-making.

CEO’s often do not adequately understand the *information* provided to make a decision. I am so busy running the company I don’t have time to understand the technical issues and risks at the depth you do. Instead, I rely on you for this. The side that proposes the greatest return on investment, seems to understand the current corporate tradeoff between short- and long-term returns, has thought through the risks associated with its proposal, and has a credible track record of success will typically win my vote.

Recall the three elements of a good decision:intent, information, education. Everyone wants to *educate* the CEO. All sides feel that if the CEO just understood their field or discipline a little better, decisions would swing more in their favor. This is probably true. However, I’m too busy to spend a day on any one subject unless I see evidence of a very large return. Show me some success first and then I’ll gladly want to learn more.

Intent, Information, Education – in summary, these are the key elements of a CEO’s decision-making. Short-term/long-term tradeoffs, risk, time to market, return on investment – these are the terms in which you must phrase your information and education to influence a CEO's decision.

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Quality professionals don't get the CEO's attention because they don't talk in terms of dollars and cents. As unfair as it is, software development doesn't either, but typically gets away with it. Their argument is simple (no product, no revenue), so they often get whatever they need. QA must work harder. Here are four common arguments that often fail, no matter how reasonable they may seem to a QA mindset:

1. We can't test quality into a product.

Of course this is true. However, your proposed solution is often to A) spend a significant amount of short-term money for up front analysis and metrics, B) *do no less testing*, and C) reap the quality rewards a better product will bring. Remember, long-term paybacks are very risky without evidence of prior success, and I have twenty other people who have other ideas about how to spend my money.

2. Our product quality is poor.

Sure, if it's poor, then we should improve it. But, a CEO's definition of *poor* is market failure. Don't argue for more resources if the last version of the product is a market success. Don't argue for more resources if the current version under development shows no worse bug rates than the version on the market did during its testing. Also, don't be too quick to judge that a market failure is necessarily about quality. There are often a lot of factors that determine a product's success, and you will look foolish if you play the quality card when Management has data that says the problem is something else.

3. We need more resources.

Maybe you do. What is your business case? Poor quality? See arguments above. Overworked staff? You might have a point. Show me the hours worked by your staff and then explain to me why cutting back on some tasks will push the product from "good enough" to poor. I use risk assessment in my analysis and tasks – so should you. Look for opportunities to save money (and time) by cutting out tasks that demonstrate progress but don't impact the final quality that much. Don't think I care that you follow the IEEE standard for test planning when you could simply be enumerating your test requirements instead. Traceability? How much would we risk, in *this* project, if we did spot checks at key project milestones rather than elaborately maintaining traceability throughout development?

4. Testing needs the power to "stop the presses".

As CEO I'm besieged with people who want more power. A request for the testing department to be able to dictate the release date is likely to be perceived by me as a power play. Besides, the ship date is a management decision; *your* job is to assess the risks of shipping and provide a recommendation. Don't let your management convince you "quality ensurance" is your job. They may be trying to set you up as a scapegoat if the product does fail in the field.

How to Talk to Management

While we've been discussing quality and the way a CEO makes decisions, this discussion applies equally well to discussing quality with any manager. Managers are trained to

think in terms of the bottom line, and typically the CEO's perspective on short-term and long-term goals will trickle down through the entire management structure. If anything, managers will think *more* short-term than CEO's because the managers are responsible for the day-to-day results produced by their divisions. I maintain that if you understand how to talk to a CEO, you will be successful talking to your Management.

Often quality professionals focus on trying to educate management about quality. This is the wrong starting point; instead, focus first on tactical successes that impact the short-term bottom line. "Short-term" means from now until the product ships. Sure, I understand that increasing quality is likely to decrease customer service calls during maintenance. I've been making that argument as a QA professional for years. But does this mean it's good business to give you more money? Think about the equipment purchase/rental scenario. Do you have enough data to justify a solid return on investment? If not, I'd rather apply this money where the risk is lower and the payoff is as great. How much does technical support cost versus the amount of money you think you need? Have you thought this through?

To build up short-term success and parlay that into long-term influence, consider these tactical approaches to Management:

- If your product is of adequate quality, propose providing that level of quality for less cost in this release. Quantify it with a revised budget of less money.
- If your product is of inadequate quality, propose more quality for the same cost in this release. Be prepared to measure customer service calls and other post-release data so your initiative is seen as a success.
- Begin reporting on "progress made" in terms of meeting milestones and cost goals instead of test completeness. I don't care if your testing is complete – I care if the product fails in the field. Sometimes your completion criterion does not correlate as well as it could with quality.
- Stop being process- and document-centric and think in terms of return on investment. Is your ISO 9000 box checking completely necessary? How about implementing ISO 9000 "lite" and applying the rest of your resources elsewhere? Is being able to repeat a poor process really of any value? Many of the process models out there think so. How about working to create a process that works for you?

A few other things to consider:

- Don't cry wolf. No one listens to quality people if they always equate any market loss with poor quality.
- I'm busy. Be patient. I speak to dozens of people a day. I can't always remember what we talked about last week. Remind me.
- Be proactive about issues you see that will impact the schedule. Often quality professionals have a more realistic view of code status than development does.
- Remind Management when you see something that, in the past, has led to a disaster. Don't expect them to listen to you the first time. A point is not a trend. However, if the same disaster happens again, they are likely to listen to you the next time.

If you're able to demonstrate short-term success, you are on your way to building a track record of return on investment. In the same way that investors like a hot stock that always seems to go up, your track record will determine your ability to educate Management on the benefits of quality in the long-term. A good example of this strategy is Motorola and their *6-sigma* program, an initiative begun as way to decrease the manufacturing costs of their hardware. After *6-sigma* demonstrated success after success in the originating organization, corporate Management was willing to listen and learn how to apply these techniques across the company.

Remember, CEO's and Management may *want* to care about quality, but they *have* to care about staying in business. Demonstrate a business case for quality and you will be more successful.

Jeffery E. Payne is the President and CEO of Reliable Software Technologies. Reliable makes software behave, providing software assurance solutions to clients with software security, reliability, and safety concerns. Mr. Payne has led Reliable from an initial bootstrap operation to one of the 500 fastest growing private companies in the country. He can be contacted directly at jepayn@rstcorp.com, or www.rstcorp.com.

SIDEBAR

Questions to ask yourself before presenting to management

- What is the short-term return on my proposal?
- What is the long-term return on my proposal?
- What is the risk that it will not deliver?
- Have I demonstrated success in the past? If not, am I proposing something small with very measurable returns?
- Am I providing information to Management or trying to educate them?
- What is everyone else proposing?
- Am I talking in terms of dollars and cents?