Showing How Safety Can Actually Make Money

Companies have historically regarded safety expenditures as a necessary evil rather than a profitable investment. In modern times, companies have begun to wise up and understand that spending money on safety is "good for business." But even among the enlightened, the perception persists that safety doesn't actually make money; it just helps prevent losing it. In fact, most safety directors concede the truth of this argument and focus all of their attention on the loss side when advocating safety.

The safety-is-good-for-business-because-it-prevents-losses formula is fine as far as it goes. But, while preventing losses is powerful stuff, making money is even more potent. After all, it's the very reason companies are in business. So if you could somehow show management that safety *generates income*, you'd be sitting pretty. Well, guess what? You can make that case and do it validly. Here's how.

Linking Safety & Productivity

Productivity is the key to showing how safety makes money. Stated simply, there's a direct link between safety and productivity. When safety improves, productivity increases; when safety decreases, productivity declines.

Any businessman worth his salt understands the value of productivity and its impact on financial performance. So linking safety to productivity is almost guaranteed to capture management's attention. But how do you demonstrate the link between them? *Answer*: Use the following approaches:

1. Go for the Gut

The link between safety and productivity is something most people feel in their gut. It just seems right to believe that workers work better when they're protected against injuries and illnesses. Some explanations:

- Workers who don’t get into accidents or contract illnesses can keep working;
- Safety improves morale and makes workers more apt to show up for work on time and work harder once they arrive;
- Companies with good safety records can attract and retain the best workers; and
- The discipline of assessing risks, identifying what can go wrong and taking measures to prevent occurrence not only improves safety but makes the production process more efficient.

2. The Foster Wheeler Study

The link between safety and productivity isn’t just a gut feeling. There are studies that demonstrate the link scientifically. A leading example is a1999 study by the UK firm, Foster Wheeler (FW), entitled *A Study into the Link Between Safety Performance and Business Performance*. FW analyzed safety- and performance-related data from 19 construction projects over a 17-year period, focusing on four indicators:

- **Cost Ratio:** (Total project control budget cost/Actual project cost);
- **Schedule Ratio:** (Planned construction span in months/Actual construction span in months);
- **Safety:** (Actual or estimated exposure man-hours in millions/No. of lost time injuries); and
- **Productivity Ratio:** (Budget field man-hours/Actual field man-hours).

By grouping these 4 indicators into 6 pairs, FW was able to use a technique called regression analysis to measure the association between them (R-Square).

PAIRING	ASSOCIATION	R-SQUARE
Productivity/Schedule	Positive	0.83
Productivity/Safety	Positive	0.63
Productivity/Cost	Positive	0.49
Schedule/Safety	Positive	0.43

Schedule/Cost	Positive	0.40
Cost/Safety	Positive	0.20

The key result is the second row of the chart. It shows a 63 percent degree of overlap between safety and productivity. Best of all, the FW study shows that cutting the frequency of injury in half results in a 10 percent increase in productivity. In a separate study of a single petrochemical plant, FW found an even stronger association between productivity and safety. In this case, halving injury frequency rates led to a 15 percent improvement in productivity!

3. Other Studies

There are a number of other studies scientifically demonstrating a link between safety and productivity, including "*Survey on Relationship Between Productivity and Occupational Safety and Health*," Japan Industrial Safety and Health Association (1998) (finding a "positive correlation" between safety and productivity at large Japanese auto plants); and "*Lost-Time Injuries, New South Wales Coal Mines*" (1992-1993) (linking increases in productivity to declining injury rates in Australia coal mines).

The National Safety Council has also published a volume of 12 case studies from around the world examining the link between safety and productivity. *Case Studies in Safety & Productivity, Vol. 1*, National Safety Council.

3 Ways Safety Improves Productivity

Safety boosts productivity because it has a beneficial impact on 3 crucial business factors:

Worker Output: The most obvious way that safety boosts productivity is by its impact on workers. Stated simply, safe workers are more efficient. Since they don't get hurt, they stay on the job. Safety also improves morale and makes workers less likely to miss work, show up late or slack off. A good safety record also makes it easier to recruit and retain the most

productive workers.

The Production Process: The relationship between safety and productivity involves more than worker efficiency. Safer companies tend to be more efficient than unsafe companies. Explanation: A company's safety program is a reflection of its entire production process. In the words of an International Labor Organization study, "firms with dismal safety records often have loose, inefficient work processes as well, and for similar reasons. Workers—their skills and potential contributions as well as their bodies—are treated as disposable. High levels of waste, including the waste of human beings is tolerated. Insufficient control is exercised over the production process itself."

The process of improving safety imposes the discipline companies need to clean up their act. It forces the company to take a good hard look at its work processes, identify risks and make improvements. Not surprisingly, the benefits of this often spill over from safety to business efficiency. As discussed below, studies have shown that many companies have made huge gains in productivity after new health and safety regulations took effect. Why? Because complying with the regulation forced companies to reconsider their production process which in turn created opportunities for reorganization and innovation.

Technology: The effort to protect workers often leads to technological improvements that improve productivity. Sometimes, this can lift not just a company but an entire industry.

For example, in 1978, OSHA published new cotton dust exposure limits for textile workers. The industry complained that the costs of complying would drive them out of business. Actual compliance costs to the industry turned out to be only one-third of predicted levels ($83 million rather than $280 million in 1982). But that was only part of the surprise. In their efforts to comply with the new standards, companies discovered that it was cheaper to replace existing equipment than to retrofit it with new filtration devices. The new technology not only cut cotton dust but significantly sped up production and boosted productivity.

Other Case Studies

There have been a number of studies demonstrating how companies made major improvements in productivity as a result of efforts to comply with regulatory changes (required by OSHA, the Environmental Protection Agency (EPA) and state laws). Here are some documented cases:

REGULATION	RESULT
EPA Benzene Standard	Companies discovered a new and cheaper process for manufacturing chemicals without using benzene
EPA Chlorofluorocarbons (CFC) Standard	Industry scientists invented a new pump spray that didn’t use CFCs that was actually cheaper to produce than aerosol cans
OSHA Vinyl Chloride Standard	Vinyl chloride producers made at least six production changes that eliminated worker exposure and dramatically reduced production costs
OSHA Powered Platforms for Building Maintenance Standard	Allowing greater flexibility in the choice of stabilization systems enabled building owners to save $3.1 million per year

Wisconsin Pollution Standards	3D Manufacturing, Inc., a company with 150 workers, saved over $16,000 per month by changing its painting and finishing operations
Minnesota Pollution Standards	Foldcraft Company increased transfer efficiency 29 percent, cut varnish use by 33 percent and saved $9,500 per year after buying air-assisted airless guns and a high volume/low pressure gun to cut volatile organic compounds and hazardous air pollutants

Conclusion

When making the business case for safety, don’t limit yourself to the savings side. True, loss prevention remains a solid economic justification for investing in safety; but it’s not your only option. Open your mind to using the link between safety and productivity to demonstrate safety’s potential to make money. It takes some moxie and imagination to make this argument. But you owe it to yourself and the workforce you represent to at least consider giving it a try.