

# Full Steam Ahead

Is something holding your company back?  
Constraint management helps you break loose.

BY MARK HENRICKS

**F**OR FIVE YEARS, Brad Stillahn worked to raise prices and cut sales commission expenses at West Tape & Label Inc. Not surprisingly, the effort didn't please the 25-person Denver manufacturer's sales force and, worse, wasn't helping the firm make money. But it seemed as if it ought to work, so Stillahn kept at it—until recently.

"Now we're looking at completely revamping the way we run our business," says Stillahn. "We'll be substantially reducing prices and raising commissions."

What turned Stillahn around was a set of business management ideas called the Theory of Constraints. Constraint management, as it's known, says the key to helping businesses reach their goals is to focus on the factors holding them back. Then, by arranging operations so the origin of the bottleneck is being used as fully as possible, bottom-line performance is greatly enhanced.

In West's case, Stillahn determined that his printing presses were the constraint. His remedies included rearranging the plant floor and changing press operators' duties. By making these adjustments, he basically subordinated the company's operations to his presses, making sure they were running as often as possible.

The result? "We're doing better than we've done since 1987 in terms of profitability," says Stillahn. "And we think lowering prices and raising commissions will double our profitability."

### ■ ORIGIN OF CONSTRAINTS

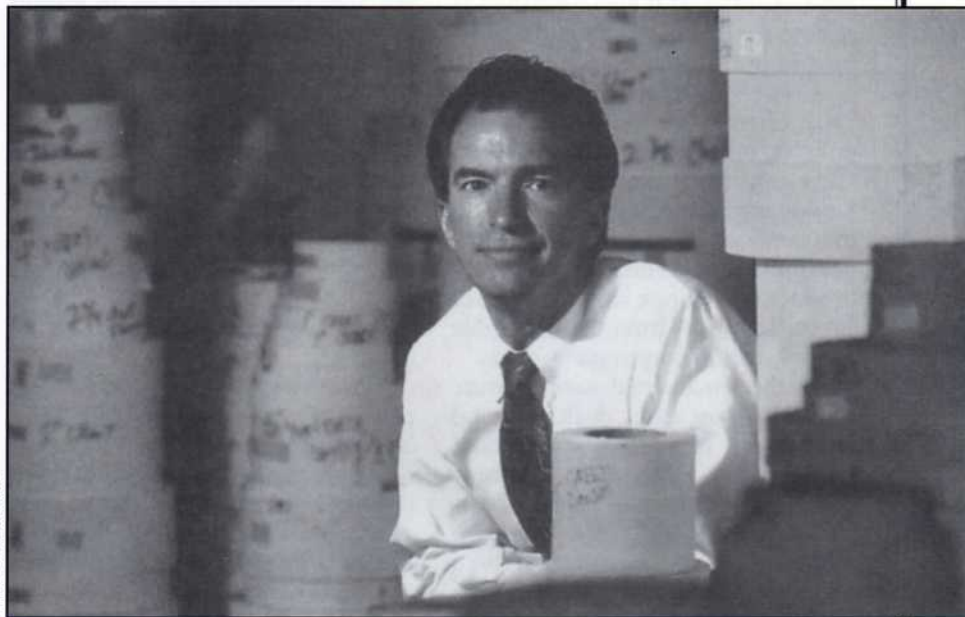
The Theory of Constraints was first promulgated over a decade ago by a little-known Israeli physicist named Eliyahu Goldratt. Goldratt

laid out the theory's principles and practices in a 1986 book called *The Goal: A Process of Ongoing Improvement* (North River Press) that was part fictional novel and part management manual. The quirky book

week course are referred to as "Jonahs," after the protagonist of *The Goal*. Consultants specializing in TOC commonly put the label after their names, much the same way doctors describe themselves as MDs.

Much of the rest of TOC is populated by such curious terms. Goldratt uses one tool called an "Evaporating Cloud." Another special diagram is labeled a "Reality Tree," with leaves, branches, a trunk and roots.

Even fans acknowledge that the profusion of odd jargon, coupled with the exceedingly high regard in which adherents hold the charismatic



**Clearing the way:** Brad Stillahn boosted profits by finding—and making the most of—the bottlenecks in his company's operations.

became an international bestseller and spawned a global group of admirers.

Today, there are numerous Theory of Constraints (TOC) books, including several follow-up titles by Goldratt. Selling TOC videos, audiocassette courses and seminars is booming business. Followers include the likes of Ford, Intel and Bethlehem Steel, as well as several large branches of the government.

Despite its broad popularity, constraint management seems more than a little strange on first acquaintance. While almost any management theory has its unique jargon, TOC's strikes many as especially odd. For instance, managers who have completed a two-

Goldratt, smack of a management cult. That oddball tinge is a significant barrier to widespread acceptance.

Individuals and some organizations are trying to bring TOC into the mainstream by sponsoring symposiums, publishing practical manuals and, in some cases, actively distancing themselves from TOC's roots.

"We think terms like 'Jonah' don't do the concept well," explains John Covington, who once led Jonah classes for Goldratt's TOC institute before founding a TOC consulting firm, Chesapeake Consulting Inc., in Severna Park, Maryland. "Our firm has tried to make an effort to decultivate this thing."

## ■ CONSTRAINT BENEFITS

The basic promise of constraint management is to identify and help remove obstacles to any business's objective. Typically, that goal is to increase profits, and TOC identifies three ways to achieve it: increase throughput, cut inventory or lower operating expenses.

Throughput is a key concept in constraint theory, much of which is devoted to finding and dealing with bottlenecks. TOC throughput differs from other throughput concepts, however. Rather than, say, the number of units that pass through a manufacturing stage, throughput in TOC terms refers to finished products that generate sales. It is also described as related to cash flow, similar to gross margin in distribution companies.

Constraints may be found internally, often in the form of company policies, or externally, which generally means the market. Market limitations may, for instance, arise from the presence of competitors. Internal limits may result from physical production ceilings, as in the case of West Tape, or from less tangible factors such as corporate policies.

Of the two, internal constraints are often the most easily dealt with and produce the most rapid and marked results, says independent educator and management consultant Thomas McMullen. He cites one case of a company whose management used TOC to identify a policy against overseas expansion as a limiting factor. Merely deciding to enter foreign markets helped the company significantly, he says.

Often, companies achieve major benefits simply by changing outdated performance measurement methods.

Says McMullen, "There have been many cases where companies used TOC thinking to identify one or two policy constraints and with a stroke of a pen, really turned things around."

## ■ TOC TOOLS

TOC uses a lengthy list of techniques to accomplish its ends. Goldratt offers five focusing steps to locate bottlenecks, and an equal number of thinking processes, along with the Evaporating Clouds, Reality Trees and a number of other tools.

A systems approach characterizes Goldratt's style. The five focusing steps, for example, start with identifying the system's constraint. Managers are urged to decide how to exploit that constraint, to subordinate their other decisions to that goal, to elevate or add capacity to the constraint, and finally to start over again.

Constraint management covers a variety of issues, often relying on vivid imagery. The Evaporating Clouds, for instance, are used to settle disputes, which Goldratt likens to clouds covering the real motivations behind the participants in the conflict.

The thinking process tools are especially effective for improving problem-solving, according to McMullen. They are based on cause-and-effect diagrams—complex flow charts, some of which, TOC orthodoxy maintains, can only be properly prepared by a certified Jonah.

While occasionally arcane, the TOC tools are well worth learning for any manager. McMullen believes they will eventually become standard business tools: "Goldratt has basically articulated a structured way to work through problems on any level."

## ■ LEARNING LESSONS

Entrepreneurs interested in learning more about TOC have a myriad of sources, ranging from *The Goal* to consulting contracts that may run to two years and six figures. Seminars that teach TOC in detail typically cost \$500 to \$1,000 per person per day.

Originally presented in a manufacturing context, TOC has since been applied to service industries and other areas such as marketing. It is recommended as a tool for daily problem-solving as well as strategic planning. Still, says Covington, "TOC is not a panacea for everything. It's not going to solve cultural problems within an organization."

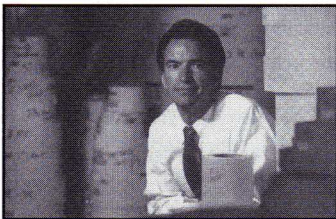
That is a significant limitation, given the often-patriarchal, control-oriented cultures found in many entrepreneurial firms. Entrepreneurs in any culture will also need accurate insight into their businesses to uncover the appropriate bottlenecks. And McMullen cautions that introducing TOC into a company is likely to result in considerable disruption of established practices.

Indeed, says Stillahn, constraint management has affected everything from where his printing presses are located to what they're running. Products he once thought were stars are now considered losers, and vice versa. But he plans to push ahead against his constraints.

"In every business, there's a bottleneck," says Stillahn. "If you don't relieve that bottleneck, you don't do any better anywhere else."

*Mark Henricks is a New York City writer who specializes in small-business topics.*

## MANAGEMENT



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