
The

CEO

SERIES

Business Leaders: Thought and Action

**No Place for Neutrality in
the Digital Revolution**

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CEO Series Issue No. 8
September 1996



Center for the Study of American Business
Washington University in St. Louis

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In an R.R. Donnelley printing plant in Crawfordsville, Indiana, there is a world-class, state-of-the-art printing press that once ran day and night producing sets of encyclopedias that would anchor bookshelves in family rooms throughout North America. Today it is quiet most of the time. We don't think it will ever run on a regular basis again. Why? Because virtually overnight, the preferred medium for encyclopedias switched from print to CD-ROM.

For us, the change in technology was minor compared to what happened to the revenue stream. People used to pay more than \$2,000 for a printed set of encyclopedias. Now they can buy a CD-ROM encyclopedia for \$40 – or get one for nothing with the purchase of almost any family computer. We can produce encyclopedias on CD-ROMs; we just can't make as much money doing it.

The Cannibal Principle

What happened to this important revenue stream is not an isolated example in business today. It is happening to many revenue streams in many industries, and it is directly attributable to an obscure theorem of the Digital Revolution called the "Cannibal Principle," which tells us: "Integrated circuits absorb the functions of previously discrete electronic components, incorporate them in a single new chip, and give the functions of those components back for free."

John R. Walter is chairman and chief executive officer of R.R. Donnelley & Sons Company.

A business built on digital technology does the same thing: it absorbs the functions of other businesses and gives them back to the customer for free. The customer pays less and gets more. The digital supplier gains a new revenue stream. And scores of traditional suppliers lose everything. The result is a “win-win-lose” world.

In this “win-win-lose” world, many traditional businesses might as well have a bull's-eye painted on them. They are targets for someone’s “absorb-and-give-back-for-free” strategy. At R.R. Donnelley, we decided not to be a passive target. The key was not to doggedly defend an indefensible position in the encyclopedia segment of book publishing but to look at the entire book publishing marketplace and search for an opportunity to change the rules to the benefit of our customers and R.R. Donnelley.

Rewriting the Rules of Book Publishing

We zeroed in on the fact that book publishers often miss the market by printing too many copies or not enough. Publishers of adult bestsellers can end up holding 40 percent more books than they need because demand is difficult to predict. Publishers of professional books print two- or three-year inventories and warehouse them until demand slowly catches up with supply. Elementary- and high-school textbook publishers print several thousand copies and then submit a few hundred to state and local adoption committees. If their books aren’t chosen, many of those new books are wasted.

Why do publishers work this way? Because the front-end costs of printing have always been so high that a publisher couldn’t afford to print a few and come back later and print a few more. But the same digital technology that gobbled up our encyclopedia business gave us new options for printing to a publisher’s specific needs. We realized that, with the right combination of digital technology, we could print 25 copies, 1,000 copies or a million copies — and do it economically.

The benefits to the publisher would be less capital tied up in inventories, lower warehouse expenses, and no obsolescence. And the benefits to us would be a larger share of the \$4.5 billion that publishers were spending each year on paper, printing, and binding. Though we produced more than a half-billion books in 1995 and are clearly the leading North American printer for the book publishing industry, our share of book publishers’ production dollars was only about 15 percent.

So we developed a total concept for taking a publisher's content in digital form and running it through digital presses or digitally-enabled presses to economically print only as many copies as the publisher needed. This is more than a new service offering; it's a new capability that changes all the rules in the publisher/printer relationship.

We have given this capability a name: Title Life ManagementSM. We're now building a new plant which will be the most technologically advanced facility in the world for printing and binding multicolor books in small quantities. When it's completed, we will be able to print books economically anywhere from a few copies to a million or more. Our customers will be able to carry less inventory, reduce warehousing expenses, and never have a book go "out of print."

As publishers start to take advantage of Title Life Management, they will change the basic model of their business from "physical inventories stored in warehouses" to "virtual inventories stored in databases." And by using digital technology to change the game, R.R.

This is no day at the beach. You have to bet on a future that is radically different from the present and the past.

Donnelley will "win" far more than we "lost" in the shift of encyclopedias from a print to a digital medium.

Betting on a New Kind of Future

Across the length and breadth of our \$6.5 billion revenue base, we are making changes like this - using digital technology to rewrite the rules of the marketplace to the benefit of our customers and R.R. Donnelley.

This is no day at the beach. You have to bet on a future that is radically different from the present and the past. You have to drive your own organization, your industry, your customers, and your marketplace toward entirely new definitions of themselves and their interdependencies. And the penalties for being wrong are unforgiving. If we're right about this, only the leaders go on from here. The followers will cease to exist.

How do we know we're right? The answer hinges on how we perceive digital technology. Do we believe it will continue to expand its influence in the marketplace, or do we believe it will become less influential? If we

believe in a digital future, then our best bet is to pattern ourselves after “what’s real” about digital technology.

The Cannibal Principle is real. So is Moore’s Law, which states that the power of the integrated circuit doubles every 18 months.

Fire-Aim-Fire-Aim-Fire-Aim

While the Cannibal Principle tells you to absorb discrete functions and give them back at a value over traditional functions, Moore’s Law tells you to “go fast.” You can’t have a three- to-five- year roll-out of a new process when the enabling technology is doubling in speed and power every 18 months.

The speed of technological change also means you have to toss out the financing strategies, the learning curves, and the obsolescence rates that are second nature to you. In their place, you need to build a culture in which

(When) the pace of change outside an organization becomes greater than the pace of change inside, the end is near.

you expect to make mistakes, learn from those mistakes, and quickly apply everything you learn.

We used to make changes in business according to the artillery command: “Ready. Aim. Fire.” But now the command has to be: “Fire-aim-fire-aim-fire-aim.” You fire *in order to aim*. Fire a burst. See what happens. Make corrections. Fire another burst. Build speed into everything you do, and measure yourself against the speed of the world around you. I like to say that when the pace of change outside an organization becomes greater than the pace of change inside the organization, the end is near.

Easier Said than Done

It’s a lot easier to talk about radical change than it is to make it happen. You can’t take an organization designed for an electromechanical world and expect it to lead the way in a digital world. You have to create a culture that supports the kind of behavior you want.

At R.R. Donnelley, we are rebuilding our culture around four key

attributes:

- Learning organization,
- Empowered people,
- Ownership mentality, and
- Open and direct communication.

What is a learning organization? Here's as short an answer as I have found. It comes from Peter Senge: "A learning organization is a place where people are continually discovering how they create their reality. And how they can change it." In a world in which internal processes and external market conditions are changing continuously, a learning organization is not an option; it's a requirement.

What about empowerment? Why do people need to be more empowered now? Because digital technology takes information out of the hands of the few and puts it into the hands of the many. But to turn that change into an advantage, you also have to turn your management philosophy upside down. That's where empowerment comes in — it means everyone shares in the responsibility to act on the information available to them.

Hand-in-hand with empowerment is a sense of ownership throughout your organization. Ten years ago, less than half of 1 percent of our employees owned any stock in our company. A year ago it was 70 percent. And this year it will be 95 percent. People will think more like owners because they *are* owners.

Finally, in this kind of organization, open and direct communication is a must. Time is an issue. Understanding is an issue. Alignment is an issue. Team-based solutions are an issue. The sharing of best practices is an issue. And all those issues require fast, straight-forward communication.

We are not leaving these four objectives to chance. We are aggressively providing the tools our people must have in order to learn, empower and be empowered, think and behave as owners, and communicate openly and directly.

We are also providing the skills our sales force needs in order to deliver value to our customers. Every sales person learns to master a "Discovery Process," which they use to understand the customer's profit model. How do customers create value? How do they meet the needs of *their* customers? How are they adjusting to changes in their marketplaces? If you know the answers to these questions, you can design packages of prod-

ucts and services that deliver real value to the customer.

Innocent Bystanders Get Trampled, Too

When the medium of choice for the encyclopedia business shifted from print to CD-ROM, there was nothing comparable in our experience. The speed, the conclusiveness, and the irreversibility of the shift were unprecedented. Fortunately for us, the encyclopedia business was one segment of one category that is only one aspect of our highly diversified printing operations. But what happens to a segment of a category can also happen to an entire business or an entire industry.

It's been said that digital technology eats everything and tramples anyone who tries to oppose it. We believe that understates the case. You do not have to oppose digital technology to get trampled – innocent bystanders get trampled, too. There is no such thing as neutrality in the Digital Revolution. You must become a digital revolutionary in your own right, or risk losing everything. 

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