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Taking R & D Seriously

By Paperitalo Staff

The publicly-traded US pulp and paper industry has almost completely abandoned research and development, especially basic (or pure) research. The few activities going on can be, at best, most charitably called product development. For the causes of this, one of the reasons your author has been touting recently has been the apparent lack of accretion that technology brings to the final selling price of any pulp or paper product-my estimate being about 20%.

So, has everything related to pulp and paper been invented? Of course not--just like other activities in the human experience, one can expect constant change and constant modification of both ways to make products and end product applications, utility and performance. What has happened? How can I justify the opening sentence of this article?

Justification is easy--look at the amount of research going on within our companies and at our centers of research in academia and otherwise. It is miniscule as compared to other industries, even old, rust-belt industries.

How did we get to this condition? We let others take control of our industry over a period of time. Our first mistake was being aloof and adopting a sense of invincibility. After all, our industry grew steadily for more than 150 years as we found the relatively easy technologies to make our products and an ever-expanding role for our products in the modern world.

In the 1970's, twenty years before pulp and paper's peak in the United States, four forces appeared that would have a lasting and long-ranging impact on our industry. These were and are environmental awareness, energy costs, inexpensive computing capabilities and sophisticated public investment tools. All four of these were destined to create massive impacts within our industry, we just did not see them coming.

Early in this era, we had a taste of environmental issues and energy costs, and grudgingly accepted (but never got ahead of, to this day) their impacts on our business. We saw what we

perceived as a false impact on our business by computers, in the early alarms about the paperless office, which took another twenty-five years to materialize.

The one issue to which we paid attention was the growing sophistication of investment, particularly the rise in power of specialized stock analysts. Let me pause and say I think many stock analysts are providing an excellent service to our industry. In the next breath, however, we need to acknowledge that the combination of the rise in stock analysts' stature, coupled with a late coming fifth element, executive bonuses tied to stock price, have become deadly in the long term.

For these five elements have created executives who are defensive, short term players.

Environmental issues have been transformed into a stalling strategy. I'll state it in the first person this way: "If I can be the last to install the expensive new control or process changing equipment to comply with _____, I'll reap the benefits of apparent lower production costs (higher profitability) the longest." It pays to be last.

In energy, traditional ROI calculations are used, so energy costs are always behind the curve, thus one cannot possibly reap the benefits of an energy cost improvement at the time it is needed. The time it is needed is simultaneous to reaching an acceptable ROI threshold, but it is then not implemented until construction is complete. In a rising cost energy market, one never catches up. In a declining cost energy market one cancels previously justified projects that no longer pass the economic threshold.

Inexpensive computing capabilities have always had the power to destroy certain communications papers markets (newsprint, directory, cotton-content papers, drawing velum and so forth). We just never believed it would happen. We saw the phenomenon of the destruction of the slide rule by cheap calculators (that one took less than a year), but we did not see the link to us. The fact that the cry of "Wolf!" commenced nearly twenty-five years before the wolf arrived did not help us create any sense of urgency or preemptively react in time.

The rise of the stock analysts' voice coupled with a move towards stock denominated bonuses turned senior leaders into short term thinkers. It works like this: a manager is promoted to the senior ranks with about five to ten years left to serve. Such an individual, unless possessing extraordinary love and altruism towards the industry, thinks of their stock price in this time frame. No room here for any investment with a time frame longer than this horizon.

In other words, no room for long term research and development, particularly of the "pure" ilk that may not reap rewards before one wishes to cash in their stock.

So, if one looks at who is doing research these days, one can see that the industry has followed this model nearly lock-step with only a few exceptions. In the northwestern United States, we find a large publicly traded company with a long tradition in extracting the highest value possible from their timber resources. They are doing such research. In the southeastern United States, we find a large, formerly public, company doing basic research--no stock issues. And, Texas based, we find a company with high margins that does a considerable amount of research because they have long been ahead of the curve and produce high-margin products.

High margins, and hence better results, can come from basic research. In the chemical industry, large companies such as Dow and DuPont are still heavily involved in self-funded research. And the chemical fields in which they are working are much older than the modern pulp and paper industry. Yet, they are on the right side of the curve, and they can thus be offensive rather than defensive.

Some day, companies with offensive strategies will enter the portions of the US industry that live in a defensive culture. Such companies will truly be offensive to the existing players, for they will force them to either join the offensive ranks or force them from the business. This has happened in many, many industrial sectors before. What will your company do? How will you get ahead of the curve?

Of course, from a safety standpoint, we cannot afford to be anything but offensive. Bad habits must continually be rooted out and eliminated.

Be safe and we will talk next week. ##