

An Opportunity to Buy into Advanced Technology

Economic recovery hinges on companies getting out of the “operations box.”

By C. Jason Smith, PhD

Companies embracing increased productivity through technology will drive the world’s economic recovery.

That belief is what mandates top-ranked, global technology companies to continue to support strong research and development (R&D) efforts. Without a constant stream of new, innovative, around-the-corner technologies, both the company brand and market-share suffer. That holds true in good times, and especially in a recessionary period.

The current economic recession provides an incredible window of opportunity for forward-thinking companies. Taking advantage of new technologies and making conscientious and researched investments in equipment and instruments when prices are affordable will be the difference in simply existing when the economic recovers and being at a strong, competitive advantage on every single job. In tough times, increasing productivity through the acceptance of technological breakthroughs can be the difference between success and failure. Embracing revolutionary technology will be the difference in being competitive and trailing the competition.

The economic turnaround for the U.S. and the global marketplace will be technology-fueled, driven by the products

developed by companies to increase productivity for the customers that buy them.

This is the time for those innovators who pride themselves on thinking “outside the box” to turn to new technologies. It is also time for more conventional thinkers who do not feel particularly comfortable taking risks, to work to ex-

save time and money on every phase of every job.

The scenario is quite simple. If you find a technology that makes machines and people more productive, the company becomes more competitive. If you look at what technological breakthroughs can do to not only help you make it through a market slide, but exceed, or even double, the average industry productivity measurements, you will be in the driver’s seat when business turns around.

For a reference point, look to history. The companies that emerged strong and viable from the Great Depression in the 1930s adopted emerging technologies after the economy collapsed. Those companies made investments in technology during a devastating economic depression to maximize productivity.

The same situation exists today.

Too many construction-instrument and product-technology manufacturers tend to cut back R&D resources when business slumps. Manufacturing

companies who rely on technological innovations to create their products take the exact opposite approach; they maintain or increase R&D expenditures that transition the negative effects of economic fluctuations.



pand the size and perception of their “operations box.”

The key to any successful business is the managing of time to optimize results. Companies looking for every competitive edge constantly search for ways to

sition the negative effects of economic fluctuations.

These model companies will not be crawling when the economic turnaround happens. These companies will be running full speed and growing their business exponentially because they took advantage of existing opportunities.

For example, Topcon Positioning Systems (TPS) – a global, diversified company offering products, software and instruments in agriculture, construction, survey, GIS, telematics, and mobile control markets—is a company that commits resources to extensive R&D activities.

“The fact is that technology will drive the economic recovery,” said Ray O’Connor, TPS president and CEO. “If you can buy construction technology that will enable a single dozer to do the work of two, 3D machine-control dozers, and give you the accuracy and speed of a grader, wouldn’t you jump at that opportunity?”

That technology innovation, using the best hydraulic control software, inertial sensors and GNSS receivers, is at work today at job sites around the world. “This technology provides more than 100 blade corrections per second, five times the industry average.

Some of the construction industry’s newest products are examples of the most innovative technologies for construction to be announced in the last few years as examples of what can be done to make a good company better and a great company even greater.

Machinery and systems are being introduced that cut down the time it takes to grade a site. In 2008 John Deere introduced a new track dozer that weighs 32,000 pounds and has the speed of a grader and the flotation of a crawler dozer.

Right now, there’s a construction company owner somewhere sitting at a laptop in an office building in this country. At his fingertips is a bevy of construction-site information – oil pressure, idle time, fuel usage, maintenance records . . . even an in-cab view of the job site – on machines in South Africa, or China or South America. Pick a place on the map. Put a piece of machinery in that

spot. Add specific software and GNSS positioning technology like Topcon Tierra’s remote asset management system.

This web-based, telematics service provides real-time information on every piece of equipment. It is a unique on-site job management system that provides meticulous data to companies interested in maximizing productivity and drasti-

cally reducing unexpected and unnecessary equipment maintenance.

Many companies totally overlook or overtly ignore asset management. It is an all-important segment of company operations. Remote asset management is a crucial element in maximizing the machine production on every job site.

In periods of economic instability, smart manufacturing companies focus



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Ash Creek Special Service District

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on two critical areas for viability: short-term actions to hold down expenses wherever practical and a long-term commitment to growth by pushing the development and introduction of technologies. Those actions are what set progressive companies apart from those that are stagnating or moving backward.

There are construction companies today who are making it a common practice to go into “mothball” mode. Mothballing is a term that progressive companies use only as a last resort. In today’s economy, it is “a condition of long storage (for machinery) for possible future use.” Companies who first turn to mothballing equipment rather than examining the possibility of increasing the productivity of every machine and every employee are asking for trouble in the near term, and setting up a scenario for failure in the future.

Opportunities Are There

Despite the present economic conditions, there are still new projects up for bid. The federal government is poised to undertake the most extensive public-works project in the nation’s history; billions will be spent on construction projects; competition for those jobs will be fierce.

What’s next for the contractor? Autonomous vehicles? There are tests being done right now on driverless agriculture equipment. An autonomous car

using advanced GNSS technology recently crossed the Golden Gate Bridge in San Francisco.

Today, a vehicle crossing a bridge sans driver; tomorrow, clearing a massive job site using driverless graders and dozers equipped with sub-millimeter-precision GNSS satellite information and sensors to direct its path and warn of obstructions.

Stop and consider the incredible pace at which changes in the construction world is moving. A year ago, what construction company would have envisioned a dozer that would move dirt at up to 18 miles an hour? Or a dozer that can run twice as fast as a dozer equipped with machine-control technology and

with the smoothness and accuracy of a grader? Or remote asset-management technology that can gather and assess real-time data on heavy iron practically any place in the world?

Engineers, scientists and dreamers will continue to push forward to create a global construction environment that continually relies less on the absolute pushing and digging power of big iron and more on advancements in technology that save time and money. That’s what drives construction innovation, and those two tenets are not likely to be declared obsolete anytime soon.

If a company’s management team recognizes the need to do whatever is necessary to create a lean, efficient operation in today’s economic conditions, the first thing to check out is what technologies are available to increase productivity in their operations . . . and do whatever is necessary to obtain that technology.

In this economy, the future viability of many companies will depend on expanding on or adopting that forward-thinking philosophy. **SLDT**

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