

## Next Generation Manufacturing Study

*This week we came across a couple of articles of interest. Definitely manufacturing is not dead for North America but we are building up a huge demand and it will only be the companies that have successfully restructured to absorb rapid growth that will be able to take advantage. For example while GM, Chrysler are busy collapsing capacity by shuttering plants Toyota is investing heavy in training of their team members (100 hours per member to be completed by end of September).*

*In other cases we hear of companies in order to reduce costs cannibalizing idle lines for parts which will thwart start-up capability when customer demand returns. One company that we know had significantly under-estimated returning demand. As demand grew they could not bring additional lines on-line quickly because so many components were missing ... add to that they were required to proceed with a rapid hiring program of additional members. Of course productivity, quality and ultimately profit are suffering. Just think if they had used the down-time to create Visual Work Instructions to support Rapid Training and conducted some Preventative Maintenance they would now be basking in glory.*

*What is your strategy? And are you ready for the upturn?*

The following article was found on the American Small Manufacturers Coalition web-site [www.smallmanufacturers.org](http://www.smallmanufacturers.org)

### Next Generation Manufacturing Study

In stressful economic times it may seem out of place to focus on the future of manufacturing when survival is the priority of the day. While recession challenges the resiliency of American manufacturers, the impending recovery will test the preparedness of U.S. firms to win in a rapidly growing, highly competitive, global economy. We face a real possibility of surviving the downturn but losing the economic future – if competitors elsewhere in the world are better positioned to capture the next decade's dynamic market growth. The risk is real and borne out in the results of this study.

Manufacturing employs 13 million Americans and drives job growth in supporting industries such as logistics, marketing, transportation and business services. Manufacturing accounts for roughly two-thirds of U.S. research and development expenditures and employs more engineers and scientists than any other private sector industry. Manufactured goods represent two-thirds of our exports and drive more net wealth creation than any other sector. Beyond the risks posed to our global manufacturing stature in these areas, U.S. manufacturing also faces intense international competition, increasing market volatility and complexity, a declining workforce, and a host of other challenges.

History and current experience around the globe shows that a strong manufacturing base drives a strong economy. The answer is not to shift away from manufacturing, but to transform our manufacturing base into a faster, more flexible industry capable of capturing global market share. Manufacturers that excel – Next Generation Manufacturing (NGM) firms – will execute new strategies, be led by people with different skills and backgrounds, and engage employees, suppliers and local service organizations in fundamentally different ways. The future of America's manufacturing industry will hinge on its ability to execute Next Generation Manufacturing strategies.

*"Unless you try to do something beyond what you have already mastered, you will never grow."*

Ronald. E. Osborn

Where Lean Thoughts can become Reality

## Unintended Consequences of Cheap Oil

### *A compelling argument to on-shore manufacturing*

When oil reached \$147 a barrel in the summer of 2008, panic was setting in among the sages in Congress. Windfall profit taxes on oil companies and government intervention to support alternative energy were the mantra of congressmen and Presidential candidates. Government intervention was going to work its magic. Instead, the markets adjusted rapidly to a worldwide decline in demand and the price plummeted to less than \$40 a barrel. This drop has put an additional \$200 billion of money back into the pockets of Americans. This was a needed relief in the midst of a grinding recession. The law of supply and demand worked without government intervention. The short-term focus of our politicians and many Americans will likely squander this temporary reprieve.

The pundits concluded that oil reaching \$147 a barrel was due to speculators. Once the speculators were forced out, oil prices collapsed. Their view is that this temporary crisis has passed and life will go back to normal. American oil demand declined by 13 percent in September 2008, but Chinese demand grew by 28 percent. Auto financing at 0 percent for five years on SUVs will prevail and all will be well. The ignorance of the true facts by our leaders will lead to a future crisis that will make the current financial crisis seem like a walk in the park. The current economic downturn which has temporarily decreased worldwide demand will end. Oil demand will resume its upward slope, while supply has likely reached its peak.

The facts based on exhaustive research by oil insider Matt Simmons are as follows. Sixty percent of the world's oil is consumed by 10 percent of the world's population. America represents 5 percent of the world's population and consumes 24 percent of the world's oil. Middle East oil use is growing more rapidly than China's. China now uses 8 million barrels per day versus 3.5 million barrels per day in 1997. China now consumes 2 barrels per person per year versus 24 barrels per person per year in the U.S. The U.S. has 220 million automobiles for 305 million people. China has 32 million cars for 1.3 billion people. Peak supply of 86 million barrels of oil per day has been reached. Demand will grow to 115 million to 125 million barrels per day in the next 20 years.

The price of oil is now dangerously low. There are large amounts of untapped resources in non-traditional places. These include oil sands in Canada, oil shale in the Western U.S., and deep water oil. At \$40 a barrel, the cost to extract oil from these sources is greater than the revenue that can be generated. Therefore, all projects in these areas will be stopped or delayed indefinitely. Drilling rigs are being shut down, employees are being laid off, and all expensive deep water projects are being abandoned. Supply has topped out at 86 million barrels per day. Mature oil fields throughout the world are in decline. Projects can take decades to bring online. Projects not started today will result in supply shortages in the future.

If the U.S. leaders allow today's low prices to reduce its sense of urgency regarding energy independence, the consequences will be shocking. The existing energy infrastructure is rusting away. The estimates to rebuild the crumbling infrastructure, that is 80 percent beyond its original design life, run as high as \$100 trillion. The Cantarell oil field in Mexico is collapsing and will lead to Mexico becoming an oil importer in the next five years. The U.S. currently gets 11.1 percent of our supply from Mexico, almost as much as from Saudi Arabia. Another 30 percent comes from unstable countries such as Venezuela, Iraq, Nigeria, and Russia. We are not in command of our energy future. By doing nothing today, we insure that \$147 oil will seem like a bargain in the not too distant future. Converting our country to wind power, natural gas, and nuclear power would decrease our dependence on foreign oil and keep \$700 billion in the United States rather than transferring it to the Middle East.

Read the complete article ... [Great Summary of the Economic Fiasco](#)

**Richard Kunst**

President and CEO

Tel: 519 651 2341 E-mail: [rkunst@kunstofsolutions.com](mailto:rkunst@kunstofsolutions.com)

Web: [www.kunstofsolutions.com](http://www.kunstofsolutions.com)