Reshoring America
Bringing jobs back home

An Industry Legend Looks Ahead
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Many manufacturing jobs are coming home to America

By Charlotte Weber

For decades, Americans watched with frustration as businesses shipped thousands of good-paying manufacturing jobs overseas. “Outsourcing,” as it came to be known, enabled companies to take advantage of foreign wage scales that were dramatically less than those in this country.

But today the tide is turning. “Outsourcing” has been joined by a new term – “Reshoring.”

What’s happening is that advances in technology have dramatically increased the productivity of American manufacturing, whittling away at the former cost advantage of overseas workers. At the same time, soaring energy prices have significantly increased the costs of transporting completed products.

As a result, more and more companies, both large and small, are returning those overseas jobs back to this country or cancelling plans to move jobs to foreign plants. They aren’t doing so out of any sense of altruism. They’re doing this because they’ve come to realize that the costs associated with overseas production no longer make economic sense. Examples abound:

- Ford Motor Co. has been steadily adding jobs that were lost during the Great Recession. They include nearly 2,000 jobs that have been returned to Ford’s factories in the United States from foreign suppliers.
- Caterpillar is building a $120 million plant in Victoria, Texas, that will manufacture giant earthmoving equipment, including some models previously built in Japan.
- General Electric reversed a decision to build a new refrigerator plant in Asia and instead invested $93 million to refurbish a plant in Bloomington, Indiana, saving 700 U.S. jobs. GE then followed that positive development by investing another $80 million to revamp a water heater plant in Louisville, Kentucky, rather than ship 400 jobs overseas.
- Other companies joining the reshoring trend range from chemical giant Dow to tiny Buck Knives, which had outsourced 30 percent of its knife production to Chinese manufacturers but recently returned those jobs to North Falls, Idaho, where the company was founded in 1902.

Harry Moser, founder of the Reshoring Initiative, a group promoting the return of American manufacturing jobs, writes more about the reshoring phenomenon in our cover story on page 4 in this issue of Capacity.

Another bright spot in the U.S. economy is seen in increased exports – a trend where West Virginia is a national leader.

As West Virginia Commerce Secretary Keith Burdette points out in his article on page 8 of this issue, “the Mountain State’s export growth has outpaced the national performance for each of the last five years.”

The reshoring trend and the surge in exports come as manufacturing in this country is undergoing nothing less than a revolution with the advent of Additive Manufacturing, a process that fashions three-dimensional solid objects from digital design patterns. RCBI, I’m pleased to report, is very much involved in this remarkable development.

At RCBI, we’re a core partner in the nation’s first Additive Manufacturing Innovation Institute, formed to accelerate the development, integration, evaluation and use of Additive Manufacturing technology for commercial manufacturing.

RCBI is also pleased to play a key role in efforts to develop manufacturing capabilities and help leverage new manufacturing initiatives across southern West Virginia. Made possible by funding from the U.S. Economic Development Administration and the State of West Virginia, the Southern West Virginia Rural Jobs Accelerator Challenge targets manufacturers and entrepreneurs in the state’s southernmost counties with direct technical assistance, manufacturing technology and entrepreneurship support.

The inevitable result of all this – reshoring, the growth of exports and the introduction of innovative new technology – is more jobs. And not just any jobs. But good-paying jobs with benefits, the kind of jobs that enable workers to raise families, buy houses and put down roots. That promises more good news for West Virginia and our great nation.
Here is much to be learned from the past. As we consider the challenges facing U.S. manufacturing today, I think of the insight offered by Alexander Hamilton, Secretary of the Treasury in his Report on Manufacturers from 1791: “Not only the wealth, but the independence and security of a country, appear to be materially connected with the prosperity of manufacturers. Every nation...ought to endeavor to possess within itself all the essentials of a national supply. These comprise the means of subsistence, habitation, clothing and defense.”

In contrast, on Feb. 4, 2012, Christina D. Romer, an economics professor at the University of California, Berkeley, and former chairperson of President Obama’s Council of Economic Advisers, wrote in The New York Times: “Our earnings from exporting architectural plans for a building in Shanghai are as real as those from exporting cars to Canada” and “a persuasive case for a manufacturing policy remains to be made, while that for many other economic policies is well established.”

Apparently the “well established” policies include “a tax cut for households” and “more aid to troubled state and local governments.” Giving people and governments money that does not exist cannot produce a long-term recovery. Bringing back enough manufacturing jobs to balance our $600 billion trade deficit would create about 8 million jobs and also make major inroads into federal and state budget deficits, income inequality and housing market stagnation, creating a sustainable recovery.

While I tried to recover from Professor Romer’s distressing lack of insight, I ate lunch and listened to the Feb. 7 Bloomberg Rewind program. Steve Blitz, an investment expert from ITG Investment Research, repeatedly attributed his confidence in the U.S. economy to the continued strength in U.S. manufacturing. He cited the benefits of Chairman Bernanke’s low interest rate policy, giving manufacturers a case to return to the United States. Blitz understands the economy far better than does Professor Romer.

A major reason for our economic and manufacturing decline is the attitude represented by Professor Romer. At best, it’s benign neglect of manufacturing. Meanwhile, other countries prioritize manufacturing. Germany and Switzerland succeed via apprenticeship programs that allow 70 percent of their youth to become successful “professionals,” whom some here might devalue as “tradespeople.” Japan and China likewise succeed by massively undervaluing currencies and national commitment to supply domestic and foreign companies whatever is needed to locate there and grow.

In contrast, our society abandoned manufacturing careers in favor of a four-year university degree in any field, no matter the availability of related jobs. In addition, we allowed the dollar’s reserve currency status to cause a perpetual 10 to 15 percent overvaluation, making our factories less competitive. At worst, we sacrificed our real economy for diplomatic gains, allowing developing countries’ duties to be lower than ours. We sacrificed our manufacturing sector to get China’s help containing North Korea. This might have made sense in the 1950s when the United States dominated manufacturing but that is now an unacceptable burden on our weakened economy.

There are some positive signs. President Obama conducted the Insourcing Forum on Jan. 11 and then, in his “State of the Union” message, addressed manufacturing 16 times versus 3 times in 2011, focusing on insourcing, better known as reshoring. I had the honor of participating in a roundtable discussion with President Obama and a cross-section of American industry leaders and experts and in one of two panel discussions.

I believe that the fastest, most cost effective way to bring significant numbers of manufacturing jobs back to the United States is to educate companies to make sourcing decisions based on total cost ownership (TCO). As an example of the power of using TCO, I presented to President Obama the results of analyzing 10 cases that compared the United States and China as sources for components or products:
- At price level: U.S. averages 108 percent higher
- At TCO level: U.S. averages only 12 percent higher
- For 100 percent of the cases: the U.S. price is higher
- For 60 percent of the cases: U.S. TCO is lower than Chinese TCO, an average of 22 percent lower

For more information, visit www.reshorenow.org. I look forward to working with you to restore the country Alexander Hamilton envisioned.

Harry C. Moser is the founder and president of the Reshoring Initiative. His article is reprinted here with the permission of Manufacturing Engineering, where it originally appeared.

“Not only the wealth, but the independence and security of a country, appear to be materially connected with the prosperity of manufacturers. Every nation...ought to endeavor to possess within itself all the essentials of a national supply. These comprise the means of subsistence, habitation, clothing and defense.”

Image: Boston Harbor at Sunset by Fitz Hugh Lane c.1850-55 Museum Of Fine Arts, Boston
Exporting: A world of opportunity for West Virginia businesses

By Keith Burdette

Companies have two fundamental techniques to increase business: First, they can sell more to their existing customers or, second, they can win more customers.

Today, 95 percent of the world’s consumers live outside the United States. That’s a large pool of potential customers that many West Virginia companies have yet to approach.

Exporting can enable a company to increase sales, increase cash flow and smooth the normal ups-and-downs in the domestic business cycle. What’s more, competing in the world market is vital to our nation’s economic health today and continued success tomorrow.

To tap into the global market opportunity, more American companies need to start or increase exporting. The federal government’s National Export Initiative sets a goal of doubling U.S. exports by the end of 2014.

West Virginia exporters achieved that feat already. From 2006 to 2010, the state’s exports increased from $3.2 billion to $6.4 billion.

Many West Virginia companies, large and small, are successfully entering the international marketplace. Their combined performances have produced dramatic results.

In 2011, U.S. exports grew 15.8 percent over the previous year. During that same period, West Virginia exports reached a record $9 billion. With an increase of 39.5 percent over 2010’s level of $6.4 billion, West Virginia led the nation in the percentage of growth.

In fact, the Mountain State’s export growth has outpaced the national performance for each of the last five years.

West Virginia’s top export product sectors for 2011 reflected both our state’s traditional economic strength in coal and chemicals, as well as our increasing economic diversity. The categories included coal (which includes equipment as well as the mineral itself), plastics, machinery, optical/medical products, chemicals, aerospace components, automotive components and aluminum.

The increase of coal exports from $2.8 billion to $5.3 billion accounted for much of the growth. Also, non-coal exports reached a record level of more than $3.6 billion. Plastics, the second-largest product sector, exceeded the $1 billion level for the first time in the state’s history.

West Virginia products were sold to 139 countries in 2011. Our top 10 export markets were Canada, Brazil, Netherlands, India, Italy, Ukraine, Japan, China, South Korea and the United Kingdom.

Although increasing at an impressive rate, exports remain a fraction of West Virginia’s overall economy. Thus, there is potential for more development, especially among the state’s economic sectors.
smaller firms. Finding new markets through international trade offers the greatest prospects for growth among West Virginia's small and mid-size manufacturers.

Businesses ready to expand their horizons into the global market can get guidance from the West Virginia Development Office (WVDO) Export Promotion Program. In cooperation with the U.S. Commercial Service and the West Virginia Export Council, West Virginia's export promotion program provides services such as:

- Free consultation to determine a company's export readiness
- Free assistance in identifying foreign markets for an exporter's product or service
- Inexpensive trade missions to dynamic markets
- Subsidized costs for exhibiting in international trade shows
- Logistics support for companies participating in international trade shows and trade missions.

President Alvin Preiser has lined the conference room walls at Preiser Scientific Inc. with framed currency from the countries where the company exports its equipment.

WVDO International works with U.S. Commercial Services to provide Gold Key Matching Services. Gold Key supports businesses with customized market and industry briefings with federal trade specialists, market research, appointments with prospective trade partners in key industry sectors, post-meeting debriefing with trade specialists and assistance in developing appropriate follow-up strategies and help with travel, accommodations, interpreter service and clerical support.

Preiser Scientific Inc. in Kanawha County is a good example of export success.

Preiser produces scientific instruments, laboratory equipment and supplies. The company began exporting in 1980 and today serves customers in 90 countries. Exporting has expanded from less than 5 percent of the company's revenues to more than 20 percent.

In 2012, Preiser was one of 49 companies to receive the Governor's Commendation for International Market Entry. The award recognizes businesses for successfully exporting to a new country during the previous year. Based on the tradition of displaying the first dollar a business earns, the exporting award presents a currency from each new country to which the recipient business began exporting. Preiser received awards for first-time exporting to Oman, Serbia and the Federated States of Micronesia.

"During the last 10-to-15 years, the world has seen an emphasis on coal as a fuel to produce energy in many countries," said company President Alvin...
Preiser. “Our company is fortunate to make a great many products to test coal, whether for sulfur, volatility, ash, heat value — whatever is in the coal. As the economy slowed here at home, our exports picked up dramatically. The countries we serve have coal reserves or import coal they need to test.”

Preiser credits the company’s success in part to its active participation in industry exhibitions, trade missions, the product presentation on its website and its professionally trained sales staff. “The state Development Office and U.S. Commercial Service arranged for our people — myself included — to join them in going to different countries, meeting people and learning about what they do,” he said. “They go to the right countries, take care of entering the shows, get the exhibit booths and arrange for interpreters. The state has gone out of its way to help the small companies, and we appreciate it.”

Another good example, Wheeling Truck Center in Ohio County, is a full-service Volvo Truck and Medium Duty GMC truck dealer based in Wheeling. Since 2010, the company has been exporting truck parts and used trucks. “We’ve sold to 71 countries so far,” said Chad

Rising U.S. Exports — Plus Reshoring —

Manufactured exports — a bright spot of the U.S. economy in recent years — are set to surge. Combined with jobs created as a result of reshoring, higher U.S. exports could add 2.5 million to 5 million jobs by the end of the decade, as manufacturers shift production from leading European countries and Japan to take advantage of substantially lower costs in the United States, according to new research by the Boston Consulting Group (BCG).

BCG projects that by around 2015, the United States will have an export cost advantage of 5 to 25 percent over Germany, Italy, France, the United Kingdom and Japan in a range of industries. Among the biggest drivers of this advantage will be the costs of labor, natural gas and electricity. As a result, the United States could capture 2 to 4 percent of exports from the four European countries and 3 to 7 percent from Japan by the end of the current decade. This would translate into as much as $90 billion in additional U.S. exports each year, according to BCG’s analysis.

When the increase in U.S. exports to the rest of the world is included, annual gains could reach $130 billion. BCG forecasts that the biggest U.S. export gains will be in machinery, transportation equipment, electrical equipment and appliances, and chemicals.

“The export manufacturing sector has been the unsung hero of the U.S. economy for the past few years,” said Harold L. Sirkin, a BCG senior partner and co-author of the research. “But this is only the beginning. The United States is becoming one of the lowest-cost producers of the developed world, and companies in Europe and Japan are taking notice.”

The analysis is part of BCG’s ongoing “Made In America, Again” series on the changing global economics that are starting to favor manufacturing in the United States. Previous reports in this series have focused on production and jobs that are likely to be brought back to this country as China’s once-formidable cost advantage erodes, but the new research delves more deeply into the competitive position of the United States relative to other developed economies. Together, the developed economies account for about 60 percent of global manufactured exports.

The new analysis raises BCG’s previous estimate of U.S. job gains. Earlier this year, BCG predicted that the United States would gain 2 to 3 million
Remp, operations manager. “Exporting is still a small portion in our overall corporate sales, but the pace of growth is higher than our local sales. It’s becoming an increasingly important part of our business. We’re finding there are a lot of opportunities out there in the world.”

The company received Governor’s Commendation for International Market Entry honors in 2012 for first-time export sales to Argentina, Belize, Colombia, Croatia, Honduras, Malaysia, Nigeria, Pakistan, Papua New Guinea, Romania, Slovenia, Ukraine and Zambia.

Wheeling Truck Center connects with international customers through the Internet, WVDO and the U.S. Commercial Service. The company has taken part in WVDO trade missions abroad.

WVDO worked with Japan-based Nippon Tungsten Co. Ltd. to establish its first North American operation in West Virginia. Nippon Tungsten USA opened in Cabell County in 2010. The company resurfaces large blades used in its parent company’s equipment manufactured in Japan. The blades are redistributed to customers in various countries.

WVDO helped Nippon Tungsten USA transition into a West Virginia-based exporter to Canada, Latin America and South America. In 2012, the company received the Governor's Commendation for exporting to Mexico, Chile and Argentina. Many West Virginia businesses are stepping up to do their part to reach international markets. But more need to take advantage of international opportunities.

Competing for our place in the global market is vital to keeping the economies of our businesses, our state and our nation growing strong.

For more information on international business assistance from West Virginia, visit Worldtradewv.com.

Keith Burdette is Cabinet Secretary for the West Virginia Department of Commerce and Executive Director of the West Virginia Development Office.

**Could Create Up To 5 Million Jobs by 2020**

jobs from higher exports and production work shifting from China to this country.

Although the reshoring trend – also sometimes referred to as “insourcing” and “onshoring” – is still in its early stages, several large foreign manufacturers have already announced plans to use the United States as an export base for other markets. Toyota, for example, has announced that it will export Camry sedans assembled in Kentucky and Sienna minivans made in Indiana to South Korea, while Honda and Nissan both say that they expect to boost exports of vehicles made in their U.S. plants to the rest of the world. Siemens is building gas turbines in North Carolina to ship to Saudi Arabia for construction of a 4-gigawatt power plant. Rolls-Royce recently opened a new aircraft engine parts manufacturing facility in Virginia citing lower labor costs, productivity and dollarization (doing business in U.S. dollars to mitigate local currency risk).

“Over the coming years, as European and Japanese companies decide where to locate new capacity, we can expect many more announcements like these,” said coauthor Michael Zinser, a BCG partner who leads the firm’s manufacturing work in the Americas. “Producing in the United States offers increasingly compelling cost advantages — to supply not only North America but also some of the most important overseas markets.”

BCG estimates that average manufacturing costs in 2015 will be 8 percent lower in the United States than in the United Kingdom, 15 percent lower than in both Germany and France, 21 percent lower than in Japan, and 23 percent lower than in Italy. Average manufacturing costs in China will still be 7 percent lower than those of the United States in 2015. But those costs do not include transportation, duties and other expenses. And it is less than half of the advantage that China enjoyed a decade ago.

When the many risks and hidden costs of managing extended global supply chains are taken into account, it will be just as economical to manufacture many products in the United States if those goods are sold in the United States.

The Boston Consulting Group (BCG) is a global management consulting firm and the world’s leading advisor on business strategy. Founded in 1963, BCG is a private company with 77 offices in 42 countries.
Everyone benefits from trade, but trade must be kept fair

By Charlotte Lane

Trade is an important part of today’s society. We all know that, either consciously or unconsciously, but the significance of trade cannot be underestimated or undervalued. The items we purchase come from all parts of the world. As a result, manufacturing has taken a real hit in this country. Consider the shoes we wear, the clothes on our backs, the toys we buy for our children, the food we eat and the products used in our homes — all come from other countries. Look at the labels and one is only surprised if it says “Made in U.S.A.”

I know first-hand the significance of trade to West Virginia — both imports and exports. I spent the past eight years as a commissioner on the U.S. International Trade Commission (ITC), which applies this country’s trade statutes to ensure that U.S. industries and foreign industries are playing by the same rules. If foreign goods are sold in this country at less than the cost of production (“dumped”) or are subsidized by foreign governments and these goods are injuring U.S. industries, tariffs are put on the dumped or subsidized goods to level the playing field.

We do live in a global economy. The United States has statutes governing trade and the World Trade Organization has rules governing trade on a global basis. From my seat on the ITC, I had a unique experience to see how trade laws affect U.S. commerce and West Virginia industries in a positive fashion. Because West Virginia is home to so many steel or steel product facilities and chemical plants, many of our cases affected West Virginia industries or had a West Virginia component.

West Virginia industries benefitting from the application of our trade laws include Felman Products, located in New Haven, which produces ferro alloys crucial to the steel industry; Weirton Steel and Wheeling-Ni sshin Steel; Steel of West Virginia in Huntington and Globe Specialty Metals in Alloy, and Clearon, a swimming pool products maker, located in South Charleston.

The ITC, by examining the trade practices of foreign entities and providing remedies when the laws are violated, make it possible for many U.S. industries and West Virginia industries, specifically, to stay in business. Clearon is a prime example. The Chinese were bringing in swimming pool products at dumped and subsidized prices injuring Clearon. The commission found in favor of Clearon and so tariffs were applied to the Chinese products.

Another industry, close to West Virginia’s border, V&M Star in Youngstown, Ohio, produces pipe and tubing used in the oil and gas industry. Because the ITC found that V&M was being injured by a foreign industry, V&M was able to invest in a new $650 million facility and create 350 new jobs.

Another plant, just across the West Virginia border in Marietta, Ohio, made magnetic products and the ITC was able to provide relief in the form of tariffs for that company.

Thus, the ITC is the forum in this country where U.S. industries find relief when unfairly priced foreign goods are injuring them. Everyone benefits from trade, but the trade must be fair and keeping it fair is the ITC’s job.

Hearings relating to a dumping case usually last one day. The domestic industry explains through sworn testimony how the dumped products are injuring its industry. Testimony is presented by the CEOs, employees, labor unions, community leaders and government officials. Witnesses explain the industry operations, how the unfairly traded products were
affecting their industry, and community and government witnesses discuss the importance of the industries to their community. I found it certainly refreshing to see executives, employees, labor unions and members of the community present a united effort to resist unfair trade practices.

The companies that actually produced the products or were importing them into the United States also testify at the hearings. These witnesses often say that the dumped goods are not causing injury to the domestic industry; that the domestic industry is doing poorly for other reasons.

The hearing process provides the members of the commission an opportunity to question the witnesses. Before the hearing, the commissioners have substantial information about the industry relating to its costs and profits.

One of the reasons that this Commission is so important to West Virginia and the rest of the country is that our industries need a level playing field and that is what the ITC does — it applies the trade laws and reaches a decision within a year after the case is filed.

The United States and West Virginia export a substantial amount of goods and products. Because exports are vital to our economy, the federal government's trade policy is focused on doubling exports in a five year period. The U.S. government is working very closely with the states to achieve this goal. The ITC conducted hearings in St. Louis, Washington, D.C., and Portland to determine how the export process could be streamlined.

Exporting is very important to West Virginia. In 2011 West Virginia did $9 billion worth of exports, which was a 39 percent increase from 2010. Seventeen percent of all manufacturing jobs in West Virginia depend on exports. West Virginia exports go to Canada, Brazil, India, the Netherlands, Italy, Japan, China, the Ukraine, the United Kingdom and South Korea. The products most frequently exported are coal, plastics, machinery, optical, medical and organic chemicals.

In 2011 West Virginia led the nation in the growth of exports. West Virginia’s trade delegations to Japan and other countries are critical to the future of West Virginia’s economy. It is very important that West Virginia have a presence in foreign countries and make these trade missions. Many foreign countries want to establish manufacturing operations in this country and West Virginia is an ideal place for them to do so. Further, trade missions help create markets for West Virginia’s goods in other countries.

Charlotte Lane was appointed in 2003 by President George W. Bush and confirmed by the U. S. Senate as a member of the U.S. International Trade Commission. Although her term ended in December 2009, she stayed until her replacement was confirmed in December 2011. She’s now engaged in the private practice of law with the Shuman, McCuskey & Slicer law firm in Charleston.
An Industry Legend Looks Into the Future

By James E. Casto

Richard E. Dauch is a living legend in the automotive industry. After a 30-year career in key executive slots with General Motors, Chrysler and Volkswagen, Dauch bought a handful of dilapidated parts plants that GM was eager to rid itself of. He rehabilitated the plants, erased the red ink on their books and used them as the foundation of his own company, American Axle & Manufacturing (AAM) that today is a global giant in the industry.

Now, Dauch has written a book, American Drive: How Manufacturing Will Save Our Country (St. Martin’s Press, $27.99), that recounts some of his experiences in his remarkable career and offers his thoughts on the future of American manufacturing. As the book’s subtitle suggests, he’s optimistic about that future.

Hank H. Cox, retired vice president of media relations with the National Association of Manufacturers, is Dauch’s co-author. (Cox is a 1968 graduate of Marshall University. In 2008, RCBI honored him with its Distinguished Alumnus in Manufacturing Award.)

Dauch grew up on a dairy farm at Norwalk, Ohio, near Cleveland, the youngest of seven children. By age 9, he was driving a pickup truck around the farm, and by the time he was 15 he was doing repairs on the farm’s machinery. When he went to Purdue University, he studied industrial management. With his new degree in hand, he landed his first job as a manufacturing trainee at Chevrolet’s auto and truck plant in Flint, Michigan. He rapidly rose in the company’s ranks and in 1973, at age 30, became Chevrolet’s youngest plant manager ever, supervising 3,000 workers at its Livonia Spring and Bumper plant. Shortly thereafter, he moved to run Chevrolet’s Detroit Gear and Axle plant, with 7,000 employees.

After 12 years with Chevrolet, he was recruited by Volkswagen of America as vice president for manufacturing. His job: rebuild and put back into production an old Chrysler plant in Westmoreland County, Pennsylvania. Within two years, the plant was turning out 1,000 VW Rabbits a day. Lee Iacocca lured Dauch to Chrysler Corp. in 1980 to resurrect the company’s ailing manufacturing operations. As the company’s executive vice president of worldwide manufacturing, he tore down old plants, revitalized the more-promising ones and built sophisticated new production facilities.

A 2004 profile of Dauch in Fortune magazine hailed his role in modernizing Chrysler’s outdated technology: “When he joined, the company had fewer than 50 robots, when he left some 12 years later, it used 3,000. He raised the number of industrial computers from 1,000 to 15,000 ... Chrysler’s productivity almost doubled, and the company began reporting some of its biggest profits ever.”

The same profile credited Dauch with helping improve relations between Chrysler and the United Auto Workers (UAW), an interesting observation given his future bare-knuckle brawls with union leaders.

In his book, Dauch writes: “When Iacocca announced he would retire in 1993, I was not chosen to succeed him. There were many people who thought that was a mistake, I among them, but such is life.” Retiring from Chrysler, he spent a year working on his first book, Passion for Manufacturing, published by the Society of Manufacturing Engineers. Then he started looking around for a new opportunity.

In December 1992, GM put 18 of its parts plants up for sale. Dauch raised $300 million from investors and after protracted negotiations bought five of GM’s old axle and drivetrain plants in Detroit. (One of those investors was Ray Park of Cleveland, who’s well known in West Virginia business circles for his efforts to breathe new life into the former U.S. Naval Ordnance Plant in South Charleston.)

As part of the deal, GM pledged to keep buying the parts the plants produced – but only if their quality could be dramatically improved. Making that happen would be a tall order. The five plants were rat-infested relics of an earlier era. Some of their antiquated equipment was 40 years old.
The roofs leaked and wind blew through the many broken windows. Employee morale was at rock bottom.

Dauch immediately set about making big changes. He upgraded the equipment, installing the most modern production machinery available. He invested in training, offering each employee 50 hours a year. All of the changes weren’t on the factory floor. He identified deadwood management staffers and eased them out the door.

In all, Dauch and his fellow investors spent more than $2 billion upgrading not just the plants but also the crime-ridden neighborhoods where they were located.

He writes: “I controlled the plants, but not the other structures in the surrounding area – the prostitution houses, drug dens, beer joints, and gambling parlors.”

The solution? AAM quietly began buying up the properties in and around its plants, and then immediately bulldozing the structures on them. In all, the company spent nearly $10 million on its highly effective brand of urban renewal. Detroit police reported a 35 percent decline in the neighborhood crime rate.

Dauch takes readers through the highs and lows of building AAM, from the incredible turnaround in productivity and profit at the Detroit plants, to the down-to-the wire negotiations that kept the company afloat during the recent recession, auto industry bankruptcies and crippling labor strikes. And he cites the key factors he says kept the company on course – a steady focus on research, development and innovation, a commitment to expanding globally and a passion for perfection.

After a long struggle with the Detroit UAW leadership over wages and benefits, AAM shut down its Detroit plants in February 2012. Dauch says it was a painful decision to make after he and his team had transformed the rusted-out plants, along with the surrounding neighborhoods. But today AAM continues to thrive and grow as a world-class global company, expanding operations and hiring more workers at its other plants in this country and abroad. (The company has plants in Indiana, Michigan, Ohio and New York. It also owns or has joint ownership of plants in Brazil, China, Mexico, India, Scotland and Poland.)

Despite AAM’s problems in Detroit, Dauch remains upbeat about the future of U.S. manufacturing. Conceding the steady erosion of the nation’s manufacturing base over the years, he notes that even so the United States remains the world leader in manufacturing.

“You see those ‘Made in China’ stickers on socks and stuffed toys sold in Walmart; you don’t see the ‘Made in the USA’ sticker on the satellites spinning overhead.”

And he adds: “We hear a lot about ‘outsourcing’ when U.S. companies are taken to task for investing in foreign countries.... Instead of complaining about outsourcing – we need to promote insourcing, encouraging more foreign companies to invest in the United States. Just as foreign nations send delegations to AAM to encourage us to invest in their countries, we should send delegations to foreign-based corporations to encourage them to invest here.”

“I am a manufacturing guy,” Dauch writes, “and I freely admit to a pro-manufacturing bias, but I do honestly believe we are on the threshold of a great new age of manufacturing – an age in which the United States will solidify and expand its global leadership. Despite all of our difficulties in recent years, we have managed to preserve our world leadership – and not by accident. We are still the most innovative people in the world, and manufacturing is the seedbed of that creativity, where new ideas are born and translated into reality.”

James E. Casto is associate director for public information at the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI).
Gestamp West Virginia plans to invest a minimum of $100 million in the former South Charleston stamping plant and create 400 to 700 jobs. Gestamp is an international group dedicated to the design, development and manufacture of metal components and structural systems for the automotive industry. The plant will be a primary supplier for Honda and Ford. The successful effort to bring the venture to West Virginia was a collaborative effort between Gestamp, the Park Corporation (owner of the stamping plant site), the city of South Charleston and the state of West Virginia.

Rubberlite Inc. in Huntington had undertaken a major expansion that includes 30 new jobs, a new building and equipment upgrades. The $5.7 million project was supported by a $3 million loan from the West Virginia Infrastructure and Jobs Development Council. Currently, Rubberlite has 145 permanent full-time employees in its 300,000 square foot facility.

The West Virginia Economic Development Authority (WVEDA) has approved a $9.9 million capital lease loan for the purchase of new equipment for an expansion by Allevard Sogefi USA in Prichard. WVEDA will purchase and own the equipment and lease it back to the company. In April, Allevard Sogefi announced plans to expand its capabilities in Wayne County and add up to 45 jobs by the end of the year.
Hino Motors investing $6 million in truck plant

Japanese truck maker Hino Motors is investing nearly $6 million to support a Wood County assembly plant expansion, creating 20 full-time jobs. The company says $2.9 million will be directly invested in the state for machinery, equipment and improvements. Another $3 million will be used to purchase tooling that will be located at suppliers outside of the state.

Protea expands into new lab at its Morgantown facility

Morgantown-based Protea Biosciences Group is expanding into a new 11,000-square-foot facility in Morgantown. The firm plans to expand its current mass spectrometry services to the biopharma market. The new space will provide more room for instrumentation and analytical capabilities, including use of the company’s LAESI DP-1000 system for distribution profiling of biomolecules.

PETITTO MULE

Monongalia County mine equipment manufacturer makes first sale to China

Morgantown manufacturer Petitto Mine Equipment has made its first sale to China. The family-owned firm has been pursuing export opportunities in the China market in cooperation with West Virginia University and the West Virginia Development Office. The company manufactures the Petitto Mule™ to remove shields from longwall mines. Datong Coal Mine Group of Shanxi Province purchased the equipment for use in underground mines in China.

Fairmont Tool Inc. gets $800,000 to buy, install new equipment

The West Virginia Economic Development Authority has approved an $800,000 loan to Fairmont Tool Inc., enabling the company to purchase and install equipment to increase manufacturing capability at its Marion County facility. Fairmont Tool, a manufacturer of machined and fabricated parts, currently has 46 employees.
GE Moves Appliance Production from China, Back To Factory in Louisville

After decades of neglect, General Electric has a newfound love affair with its appliance manufacturing division. The 122-year-old company created by Thomas Edison has re-committed itself to developing and producing a new line of innovative products in America. It is re-invigorating its 900-acre Appliance Park located in Louisville, Kentucky, with $1 billion of investment in a new generation of designers, engineers, workers and production systems. And for the first time, it is applying the lean methodology to all of its operations.

GE is re-designing all of its major appliance lines, the first of which is a hybrid heat-pump electric water heater called GeoSpring. Its water heater line that began commercial production in February is the first new manufacturing operation to open at GE Appliance Park since 1957. It has the GE people in Louisville feeling good for the first time in generations, as employment steadily declined from a high of 22,000 to under 4,000. Over that period, massive production buildings sat empty, rusted and dilapidated. The management team and workforce — along with the local community — felt the world had passed them by.

When asked by Manufacturing and Technology News if the 80 percent drop-off of manufacturing workers was caused by robotics, automation and high levels of productivity, virtually every GE person who responded said the same thing: No. The loss was due to offshore outsourcing. The lack of commitment to investment in U.S. manufacturing, innovation, new product development and renewal of the workforce demoralized Appliance Park. The company’s dishwashers, refrigerators, ranges, washers and dryers were viewed as low tech commodity products with low margins and no future.

Breaking the ice on the transformation is the GeoSpring water heater, the production of which has now moved from China to Louisville. It is the first of a series of product reintroductions at Appliance Park that ultimately will include ranges, refrigerators, washers, dryers and dishwashers. “It’s a super exciting time for us to see this factory change,” says Rich Calvaruso, the lean leader of GE’s appliance division. “It is a completely amazing thing to grow a new factory from the ground up.”

In moving production back to the United States, GE decided that every aspect of its water heater needed to be redesigned through a team approach under a lean planning system that included GE’s sales division, designers, product and process engineers, accountants, executives and workers. It included the involvement of plumbers, retailers and customers. Anybody involved was allowed to suggest improvements.

Apple Uncovers Problems at Suppliers

Apple’s contractors in China are running operations riddled with environmental, health and safety practices that would be illegal in the United States, according to an audit conducted by Apple. The audit describes hundreds of situations in which suppliers are not in compliance with Apple’s standards for work hours, hazardous waste disposal, worker safety and ergonomics, dormitory conditions for workers and other business and human rights practices.

The company conducted 229 audits last year among its overseas parts and component suppliers, up from 127 in 2010, 102 in 2009 and 39 in 2007. It plans to do a lot more, hiring the Fair Labor Association to help conduct third-party audits using the association’s Code of Conduct performance evaluation. Among the 229 audits Apple conducted in 2011, it found hundreds of violations. Only 38 percent of the facilities it audited were in compliance with Apple’s policies regarding working hours. “At 90 facilities, more than half of the records we reviewed indicated that workers had worked more than six consecutive days at least once per month and 37 facilities lacked an adequate working day control system to ensure that workers took at least one day off in every seven days,” according to the Apple audit report.

Only 69 percent were in compliance with paying appropriate wages and benefits.
Advanced Manufacturing in Trouble, Needs Assistance, Task Force Says

Advanced manufacturing in the United States is in trouble and needs concerted action from government, industry and academia in order to reverse trends that are not good, according to the National Science and Technology Council, an arm of the White House Science Office.

“Manufacturing capability gaps in the United States have led to the loss of substantial economic benefits,” says the NSTC in its new “National Strategic Plan for Advanced Manufacturing.” Americans are no longer gaining the benefit of billions of dollars being spent on federal research and development because an advanced manufacturing infrastructure is not in place to produce new technologies.

Without an advanced manufacturing infrastructure, the United States is having a difficult time rapidly introducing new products and new industries “that are most likely to ‘stick’ in the United States because they are hard to imitate,” says the NSTC.

Advanced manufacturing is essential to the U.S. military, intelligence community and homeland security agencies.

“These impacts justify Congressional and executive branch attention to Federal policies that affect advanced manufacturing,” says the plan, co-chaired by some of the longest-serving government manufacturing executives.

The United States has either lost or is on the verge of losing a number of “vital” defense and national security technologies, the plan notes, listing a “sampling of specific vulnerabilities” including aircraft landing gear; large rotor disks for turbines; rocket engine parts; missile launch systems; unmanned aerial and ground vehicles; nuclear power components; aircraft fuselages; orbital vehicles; network routing and switching; optical data transport; advanced power electronics; low cost composites, and transmission conductors.

“Currently, Germany, Korea and Japan each have more R&D intensive manufacturing sectors than the United States,” says the plan. Of particular concern is the growing inability of American companies to produce American inventions. This gap has led to huge trade deficits in high-tech goods, amounting to $81 billion in 2010 and soaring by 23 percent in 2011 to $99.3 billion.

The government must implement a “robust innovation policy that would reduce the gap between R&D deployment and advanced manufacturing innovations,” says the study. It must put in place a strategy to strengthen “the industrial commons,” whereby innovative firms are able to utilize the latest production technologies such as nanomaterial processing, additive manufacturing, advanced robotics, “smart” manufacturing and green chemistry to bring their new products to market.

Global Robotics Industry Growing Fast

Global sales of robots increased by 30 percent in 2011 to 150,000 units, a level that “exceeds all expectations,” according to the International Federation of Robotics (IFR) located in Frankfurt, Germany. The federation said investments in robot automation “again surged in all regions” of the world. Sales of robots have been buoyed by demand beyond the traditional automotive sector and by the adoption of automated manufacturing in China.

“The growth of sales of machine tools seems to be slowing down under the influence of Europe’s currency crisis and Chinese tight-money policy, but this does not apply to robots,” said IFR president Shinsuke Sakakibara. Added IFR vice president Arturo Baroncelli of CAMAU in Italy: “The use of robots always guarantees fast return on investments and dramatic improvements in terms of quality.”

There was strong growth in demand in the electronics, solar and food and beverage industries last year, especially in Asia. “We expect the strong trend towards a significant shift in manufacturing footprint to Asia to be maintained,” said Per Vegard Nerseth, head of ABB Robotics in Switzerland. KUKA Roboter of Germany experienced a 40 percent increase in sales of robotic systems, with China being the most rapidly growing robot market in 2011. The industry is being driven by “global mega trends like sustainability, increasing industrialization and demographic shifts,” said KUKA CEO Manfred Gundel.
New Survey Shows U.S. Diecasters Are Gaining Business from Reshoring

The American die casting industry is starting to benefit from “insourcing,” or “reshoring,” but segments of the industry continue to lose work to overseas competitors. In a survey of its membership, the North American Die Casting Association (NADCA) found that 23 percent of those responding said they gained business last year from offshore competitors. “And while the tide has not completely turned — 13 percent of the respondents reported they lost business and 63 percent were unable to determine any change — the upturn in work is encouraging,” said NADCA.

Companies that reported work returning from overseas said volume increased by an average of 10 percent, worth an average of $500,000 (with a low of $20,000 to a high of $12 million). “The weight of additional casting ranged from 10,000 to 500,000 pounds,” NADCA said.

Die casting is an integral part of the manufacturing infrastructure, providing original equipment manufacturers with parts and components. Being close to customers is proving to be a benefit to U.S. based die casters that have been able to stay in business. Ninety-four percent of the die casting business returning to the United States last year came from Asia. Reduced lead and delivery time was cited as the primary reason for business to return to the United States (28 percent); followed by lower costs (24 percent); improved quality (21 percent); proximity to the supply chain (18 percent); improved service (6 percent) and being “green” (3 percent).

Of the companies that lost business last year to overseas competitors, the overwhelming reason was cost (64 percent), followed by supply chain (21 percent), tooling (12 percent) and piece price (3 percent).

In order to capitalize on the reshoring trend, the United States needs to “develop a more coherent manufacturing strategy and remove some of the competitive barriers affecting domestic operations,” said NADCA. Policymakers need to fix the tax code to encourage investment in U.S. production and hold China and other countries accountable for illegally manipulating their currency to gain unfair advantage.

“Resolving the many issues affecting U.S. manufacturing and domestic production is a difficult problem affected by many economic, political and even social factors,” said NADCA. “The complexity of the issue precludes any quick fixes. But the recent trend to onshore production indicates that many business leaders are beginning to more fully understand all of the ramifications of moving business offshore.”

U.S. Is Losing Ground on Global List

The United States dominates the latest Fortune 500 list of the largest global companies, but its position continues to erode while China’s continues to grow.

In 2011, there were 73 Chinese companies on the list, up from 61 in 2010, 35 in 2008, 24 in 2007 and 11 a decade earlier. While China’s share of top global companies soared by 663 percent, the United States was heading in the other direction. The United States had 132 companies on the list in 2011, but that was down from 153 in 2008, 162 in 2007 and 197 in 2002, a drop of 33 percent in one decade.

“No country has lost more companies during the last decade,” Fortune spokeswoman Kerry Chyka told Reuters. Fortune magazine wrote that “one of the more remarkable shifts has been in the number of Chinese companies on the list. They range from state-controlled resource giants like China National Petroleum (No. 6) to emerging consumer brands like computer manufacturer Lenovo (No. 37) and carmaker Zhejiang Geely Holding Group (No. 475), which boosted revenue by 126 percent last year after acquiring Volvo from Ford.”

These companies have studied their western competitors. They have exploited Chinese manufacturing efficiencies and “they are now poised for global market gains,” wrote Fortune. The companies have established a strong presence in China and are just beginning to grow in emerging and Western markets.

In 2005, six of the top 10 largest global companies were headquartered in the United States – Walmart (1), ExxonMobil (3), General Motors (5), DaimlerChrysler (6), Ford Motor (8) and General Electric (9). By 2011, the number of U.S. companies in the global top 10 had shrunk to four, with none being manufacturing firms, three of them being oil companies (ExxonMobil in second place, Chevron in eighth place and ConocoPhillips in ninth place) and one being retail giant Walmart (in third place).
$1,700,000,000,000

- The cost of federal regulation: $1.7 trillion annually.

95% of the world’s consumers live outside the U.S., making it critical for manufacturers to have access to global markets.

- Direct tort costs total almost 2 percent of GDP in the U.S. — the highest level in the world.

The United States now has the highest corporate tax rate among the major industrial countries.

- Health care costs in the U.S. have increased an average of 12 percent over the last 10 years.

More than 500,000 new jobs would be created if the federal research and development credit were strengthened and made permanent.
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