Capacity

Why Manufacturing Matters

West Virginia leaders sound off on the issue

A prescription for an ailing America

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Publisher
Charlotte Weber

Editor
James E. Casto

Associate Editors
Martin Spears
George Whelan

Design & Layout
Thomas A. Marsh

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There’s something new – and exciting – at the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI).

Design Works, our newest service, is open for business. Our new Design Works labs offer inventors and entrepreneurs the tools they need to take their idea or concept to reality. We can help aspiring inventors, artists or entrepreneurs shape their ideas into three-dimensional digital computer models that can then be used to create working prototypes. The prototype can then in turn be used to test the form, fit and function of the end-use product.

The Design Works labs offer reverse engineering, dimensional inspections and CAD (Computer-Aided Design) assistance.

We have computer workstations with SolidWorks 3D design software set aside exclusively for clients who need to design their products. In addition, we also offer the use of our FARO ScanArm that is fully integrated into SolidWorks via DezignWorks software. This combination allows clients to use the Faro ScanArm to capture measurements directly into SolidWorks and use them to reverse engineer a part or product.

Inventors, artists and entrepreneurs with no access to CAD software now are able to come in and utilize our equipment.

The RCBI Charleston Design Works lab offers use of RCBI’s Dimension 1200es and Fortus 900mc 3D production center for prototype production. The Huntington Design Works Center offers a ZPrinter 450 3D printer for rapid prototyping and tooling production.

In addition, both labs offer an array of specialized software, including SolidWorks, Rapidform, Mastercam, Geomagic, FARO CAM2, DezignWorks, CMM-Manager and 3D-Doctor.

The RCBI Huntington Design Works lab is located downtown at 1050 Fourth Avenue. The Charleston Design Works lab is located in the Robert C. Byrd Academic and Technology Center at 100 Angus E. Peyton Drive on the Marshall University Graduate College campus.

We expect our Design Works labs will be heavily used by individuals and entrepreneurs taking advantage of our new “Start-up WV Manufacturing” program.

Working in partnership with TechConnectWV, RCBI has obtained an $85,000 grant from the federal Economic Development Administration (EDA) to provide entrepreneurs and start-up firms the expertise they need to get their product or device to market.

If you are entrepreneurial, innovative and interested in using manufacturing technology to make your dreams a reality, this opportunity is definitely for you.

The EDA grant will provide financial assistance to turn an idea into a working model. This opportunity helps resolve the age-old concern of how to pay to produce a prototype or working model. Using our Design Works labs, we will be able to assist in the concept-to-reality portion, which will help jumpstart the idea, turn it into a prototype and then move it forward to the production phase.

For additional information, contact 800.469.RCBI (7224). Grant applications are available online at www.rcbi.org or www.techconnectwv.com.

Charlotte Weber is Director & CEO of the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI).
American manufacturing is the heart of our economy and essential to our leadership in the world. It propelled our country through the industrial revolution, ignited military production during World War II and has built cars, planes and technologies unlike the world has ever seen.

American manufacturing made it possible for families to earn a good living and buy homes. It expanded our nation’s middle class, sustained solid national and local economies and created innovative products Americans proudly rely on.

In West Virginia, manufacturing has always been a critical source of jobs and a vital lifeline for our state’s economy. And today we are working to expand our high-tech manufacturing capability, which is helping our state position itself for the future. To that foundation we have a workforce that is second to none, and companies build plants and factories in our state because of our productivity.

Over the years, as governor and senator, I have worked to bring thousands of jobs to West Virginia, particularly through partnerships with Japanese companies. There are now 21 Japanese companies doing business in West Virginia. This is not a coincidence.

Our early partnerships took years to nurture and included companies such as Wheeling Nisshin and NGK Sparkplugs. After showcasing the highly skilled and dedicated workforce in our state, other companies came to see our strengths, including Toyota with its $1.2 billion investment in West Virginia to date.

Toyota has been the largest industrial investment in the state in the last 50 years, and the plant in Buffalo has expanded six times. This year again I joined Toyota at the Buffalo facility to announce 40 new, good-paying jobs, bringing the total number of jobs at the plant to more than 1,000. In October, Toyota and its employees marked 15 great years of success in West Virginia.

Similarly, Kureha Corporation of Tokyo, a leading global supplier of specialty chemicals and plastics, invested $100 million in West Virginia by building a new plant in Belle last year. Six years ago, then-Governor Manchin and I met with company officials at their headquarters in Japan to make the case that Kureha was a perfect fit for West Virginia. I’m glad they agreed. At full production, Kureha will create up to 50 new, well-paying jobs in West Virginia and it has goals of expanding.

We will work hard to help make those expansion goals a reality, and we will never forget the harsh realities of what happens when manufacturing jobs are lost. In the past decade, West Virginia has lost nearly one-third of its manufacturing jobs, especially in some of its traditional industries such as steel and metal manufacturing. When these jobs are lost, the workers, their families and communities all suffer. Whether these losses are the result of a poor national economy, unfair trade actions by foreign countries or companies seeking cheaper labor abroad, the negative impacts at home are still the same.

I have been pushing for us to do more to promote manufacturing and create jobs in our state and throughout America to reverse this course. Over the past year, I have held roundtable discussions, convened Senate hearings, including one in West Virginia, and introduced legislation with input from manufacturers across the state about how we can strengthen our manufacturing sector, create jobs and train workers.

Over and over again, businesses and employees have expressed their concerns about the influx of cheap imports from countries that don’t always play by the rules, the need to maintain our highly skilled workforce, and how we must gain competitive advantage so we can grow our exports.

In April, I held a roundtable discussion with glass manufacturers. This once iconic industry in West Virginia has faced significant reductions in recent years. At the time of my roundtable, there were slightly more than 400 West Virginians employed in the glassmaking industry, which was down from more than 2,300 in 2001. At the same time, the heavily subsidized glass industry in China has experienced a threefold increase in exports to the United States from 2000-2008.

Earlier last year, I also visited Homer Laughlin China Co., made famous for its Fiesta Dinnerware. It employs nearly 1,000 people in the northern part of the state and its workers shared first-hand their concerns about how difficult it is for American manufacturers to compete with cheap imports from China and other countries, particularly knock-offs of their trademark products.

These problems are unfortunately very real across our state and the country. I’m fighting to help American workers and businesses regain the upper hand. Our glass
manufacturers and Homer Laughlin have personally experienced losing out to China. We can’t allow China to steal any more jobs by manipulating its currency to gain an unfair advantage – which essentially acts as an unfair subsidy for Chinese-made products entering the United States. I co-sponsored a bill that the Senate approved this fall to crack down on China’s currency manipulation and put America back on a level playing field.

We need to make sure that we are supporting our workers as much as possible.

In October, I voted against three free trade agreements with South Korea, Panama and Columbia. There’s no way I can support trade deals that could undercut jobs or business opportunities in our state. Instead, we should focus on bills and ideas that will help encourage investments in American workers and companies.

We also can better encourage American consumers and companies to buy American products and support our manufacturers. This should start with the federal government. I introduced a bill making job creation a major factor in determining federal contracts to help American workers and businesses thrive by encouraging hiring Americans. I’m continuing to introduce and co-sponsor bills that will put American companies on equal footing with foreign competition, incentivize companies to keep jobs in this country and encourage job training programs.

But too many of our workers have already lost their jobs – in many cases because of outsourcing to foreign countries. To protect them and their families, I worked to extend and expand Trade Adjustment Assistance for workers who lost their jobs due to trade. This critical program will enable these families to pay bills, put food on the table and, most importantly, get the training they need to get back to work. The bill passed the Senate last fall and President Obama signed it into law. I will continue to fight for our workers to make sure they have jobs available to them and the training needed to get those jobs.

And to make sure that they can take full advantage of the jobs we are working to bring back to America, we also must prepare future generations by building a strong manufacturing workforce. In my role as chairman of the Senate Commerce Committee, I worked to pass the America COMPETES reauthorization bill which will prepare future generations of highly skilled American workers in science, technology, engineering and mathematics fields. The law will increase our nation’s innovation, competitiveness and economy.

Now is the time to make the tough decisions that will impact our country and workers in the long-term. We can and must help our economy grow, create jobs, train workers, boost American manufacturing and prepare future generations for the workforce – but it may not be easy. As West Virginians, we know what it’s like to face hard times, and to overcome them. You can be assured that I will not rest until all West Virginians have the opportunities they deserve.

U.S. Senator Jay Rockefeller was first elected to the Senate in 1984 and was re-elected in 1990, 1996, 2002 and 2008. Before joining the Senate, he served in the West Virginia House of Delegates, as Secretary of State and as Governor from 1976 to 1984.
Manufacturing Still Matters

Does it still matter if we make things in America? Of course it does. Manufacturing remains the bedrock of America’s way of life, and its strength or weakness has huge implications on our economy, our national security and our well-being. *Capacity* invited comments from a number of West Virginia leaders on two important questions: Why does manufacturing still matter? And, that being the case, what can we do to strengthen it? A selection of their responses is printed here. We believe their insights say much about the importance and promise of American manufacturing.

“The best way I can describe the importance of manufacturing in the USA is to tell our own story: Swanson Industries is the second largest manufacturer with headquarters in West Virginia. We employ 862 workers. Of those, 830 are employed in the United States, including 420 here in West Virginia. We have 32 employees overseas. Our employees make products that are sold around the world, primarily in the energy and construction markets. Our manufacturing jobs pay 1.5 times the median West Virginia wage. Could there be stronger evidence of the importance of manufacturing jobs to the economic future of West Virginia and our nation?” — Mark Carter, Vice President, Swanson Industries, Inc.

“Twenty years ago, a report from the Massachusetts Institute of Technology concluded that ‘to live well, a nation must produce well.’ That statement is worth pondering after decades of de-industrialization in the United States. Just as innovations in manufacturing spurred tremendous economic growth in the decades following World War II, a renaissance in 21st century manufacturing can lead to renewed prosperity and the creation of thousands of jobs — good, high-paying jobs that support a family and make the American dream a reality. As a nation, we must once again commit ourselves to the very best in education, research and development, and innovation to ‘produce well.’” — Anne Barth, Executive Director, TechConnectWV

“Manufacturing matters because half of the research and development dollars spent in America are spent by the manufacturing sector. And because manufactured goods are easily tradable around the globe helping to redress our trade deficit.” — Dan O’Hanlon, Vice Chancellor for Technology, WV Higher Education Policy Commission

“There are a number of serious issues that challenge the ability of U.S. businesses, especially manufacturers, to compete on today’s global stage. These include illegal trade practices in some countries, inventory taxes (especially in West Virginia), needless and burdensome government regulation i.e., EPA and OSHA, and rising external costs that include corporate taxes, health care costs and tort litigation. All added together, these factors add an additional 18 percent to the cost of doing business. Until we as a nation are willing to successfully confront these issues, we are going to be at an enormous competitive disadvantage in the international marketplace.” — Ken Busz, President, Morgantown Area Chamber of Commerce
“To create wealth, we have to make it, mine it or grow it. No economy can survive as a service economy. Manufacturing has always been a significant part of our West Virginia economy. As technology advances, we will see some products become outdated, but new, better, safer, more high-tech products will evolve. Our workforce is key to our success. We need more students who have been trained for middle skill jobs, jobs that pay an average of $50,000 to $75,000. In addition to the new jobs, manufacturers are facing a wave of retirements and we need thousands of employees over the next few years to meet this need. Also, we still need to address the manner in which we tax capital investment, which is a constitutional issue. This will take the involvement and cooperation of counties, education, labor and business to create an acceptable solution.” – Karen S. Price, President, WV Manufacturers Association

“The key to long-term economic growth in West Virginia and the United States – the key to investments and jobs – is innovation. But innovation is much more than just the creation or development of new ideas, technologies and products. That, in itself, is invention. Innovation takes invention a (huge) step further to include not only the creation of new technologies and products but also the commercialization of those new technologies and products. Manufacturing still matters because it is one of the key steps in the innovation pipeline. Before any of us can buy and use an iPad, someone has to manufacture it. Manufacturing simply produces the things society needs – and wants – creating economic growth, high-paying jobs, and even more innovation.” – Kevin DiGregorio, Ph.D., Executive Director, Chemical Alliance Zone

“Manufacturing is extremely important to the United States, not only for our economic well-being, but also for our national security. The primary reason that so much U.S. manufacturing has moved to other countries is the cost of production. I am not expert on this topic, but I do understand the concept of incentives. Obviously, there are considerable monetary incentives for American manufacturers to build things outside of the United States. I agree with Bill Clinton on this topic. We need to bring manufacturers back to America. In his recent book, Back to Work, the former President lays out his strategies for bringing high end manufacturing jobs back to this country. It’s all about the right incentives to achieve the right results, i.e. strategies that reward the job generators in America.” – Keith Cotroneo, Ed.D., President, Mountwest Community & Technical College.

“When I started State Electric in Huntington in 1952, the whole business was just me and my truck. Today State Electric and Service Wire are multi-state operations with hundreds of employees. I say this not to boast or brag. I offer it as an example of what can be accomplished in this great country if you’re dedicated to something and willing to work really hard. If you pick up a newspaper or turn on the TV news these days, all you hear is ‘China, China, China.’ It seems as if a lot of folks have given up on our country. They’re written us off. It’s hard to go into a store and find anything for sale that’s made in this country. But we still have good quality manufacturing here – and we need to make sure we always do.” – Art Weisberg, founder, State Electric Supply Co. and Service Wire Co.

Please see It Still Matters Page 18
By Rep. Nick Rahall

A s our nation looks for ways to reignite our economy, we might do well to consider President Franklin Roosevelt’s philosophy of bold, persistent experimentation: “It is common sense to take a method and try it: If it fails, admit it frankly and try another. But above all, try something.”

Those words sprang to mind recently, when I was joined by the U.S. Economic Development Administration (EDA) to launch a new $500,000, five-year federal initiative aimed at bolstering manufacturing and stimulating job growth.

Calling upon the innovative resources of the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI), Marshall University and Concord University, and serving 17 West Virginia counties, the Southern West Virginia EDA University Center will provide technical assistance and applied research to help increase productivity of businesses, spur innovation and entrepreneurship, and increase long-term regional competitiveness and economic diversification of industries across our region.

This new Center will follow a time-tested American formula for job creation of combining the assets of academia, the government and the private sector in a transformative venture. Not only did our land grant colleges and universities usher in the greatest agricultural economy the world has ever known, but the first G.I. Bill also equipped the “Greatest Generation” with the tools that crafted the world’s largest economy.

Much of our current training grounds, workshops, research and product development revolve around an alliance among business, industry and universities.

What is so fresh and appealing about the EDA concept behind the new Center was succinctly described by the Deputy Assistant Commerce Secretary Matt Erskine when he stated: “We’ve made significant investments to help America’s regions identify their unique strengths and provide resources that will help them build on them in order to prevent a ‘race to the bottom’ in which cities, counties and states undercut each other to attract short-term growth.”

Initiatives such as the EDA University Center represent one component in the type of effort our federal government ought to be pursuing to re-grow our manufacturing economy and improve the well-being of all Americans.

We also need to be making substantial and reliable investments in essential infrastructure – in roads and highways, ports, rail, airports, water and waste water, communications and broadband delivery – that go a long way toward laying a solid foundation upon which manufacturers depend.

As the top Democrat on the House Transportation and Infrastructure Committee, I have championed initiatives investing in these areas to keep commerce moving. I am not alone in my support for these basic tenants of the nation’s infrastructure. The U.S. Chamber of Commerce and the AFL-CIO have joined forces in support of a multi-year federal transportation bill as well.

In addition, government ought to be making sustained investments in research and development upon which innovative manufacturing relies. By building a well-trained workforce and taking advantage of national investments in cutting-edge research and development, we can be a stronger competitor in the worldwide marketplace, diversify our economy and bring new jobs to southern West Virginia.

That’s why I am a cosponsor of legislation to boost and make permanent the research and development tax credit, and have pushed hard for additional investments in math and science education, co-sponsoring the America COMPETES Reauthorization Act.

And while we certainly need to be promoting wiser investment in these initiatives that benefit business and industry and help to create manufacturing jobs, we also need to ensure that government does not impose overly burdensome requirements on the private-sector through regulations that impede their success. Toward that end, I have supported several initiatives to help reduce unfair and excessive regulatory burdens that pose a threat to jobs creation, including legislation to repeal onerous IRS reporting requirements on small businesses and bills to reign in regulatory overreach that threatens to
undermine our energy sector.

I have long believed that we need to maintain a balanced and level playing field in international trade. West Virginia manufacturers rightfully take pride in the products they ship around the globe, but far too many Administrations have turned a blind eye to predatory and protectionist trade practices abroad. West Virginia workers can compete and win on a level playing field, but it will require more than half-measures in slapping down illegal trade practices that hurt our steelworkers, our coal miners and manufacturers and that cost American workers their jobs.

For that reason, I have strongly supported legislation to enable the United States to fight illicit and illegal trade subsidies like currency manipulation that have contributed significantly to alarming U.S. trade deficits and job losses for American workers.

Economic circumstances are ever-changing. Therefore, if we want to ensure that the economy is strong and our workforce is employed, we have to be ready and willing to adjust public policies and investments to meet the times. As a former small business owner, I understand that a one-size-fits-all prescription from Washington, no matter how well intended, can sometimes do more harm than good, but I also have been around long enough to see the consequences of government inaction.

Bold, persistent experimentation, as President Roosevelt advocated, is a key to new jobs and a brighter future for West Virginia.

U.S. Representative Nick Rahall, of Beckley, represents the Third Congressional District of West Virginia. First elected in 1976, he is currently serving his 18th term in Congress and is the Dean of the West Virginia Congressional Delegation. He is the Ranking Member of the House Transportation and Infrastructure Committee for the 112th Congress, and formerly served as Chairman of the House Natural Resources Committee.

Left: At Concord University, Rep. Nick Rahall talks with a television reporter about the important role to be played by the new Southern West Virginia EDA University Center.
By Dr. Paul L. Hill

Public higher education in West Virginia is a diverse enterprise with a multitude of institutions participating in a broad range of activities connected to the cultural, intellectual, and professional well-being of the state. These institutions play a vital role in improving economic opportunity and the quality of life in West Virginia. More specifically, these institutions provide high-quality educational opportunities to prepare students for the jobs of today — and tomorrow.

Further, each institution is committed to providing students with the knowledge and skills needed for success in today’s ever-changing world — a world defined by an increasingly competitive and knowledge-driven economic marketplace.

In recent years, higher education has faithfully executed this mission by expanding academic offerings and increasing student enrollment. However, much work remains. Too few West Virginians are pursuing and completing postsecondary education, limiting not only their personal and professional opportunities, but also placing the state at a competitive disadvantage in terms of economic development.

The primary goal of the state’s postsecondary system is to expand educational opportunities for all West Virginians, thereby enhancing the human capital potential of our current — and future — workforce.

Analyses by the National Center for Higher Education Management Systems show that for every 100 ninth-graders in West Virginia, 72 will graduate from high school on time. Of those high school graduates, 43 will enroll in college in the next year and only 17 will earn degrees in a timely manner. Without addressing leaks in the educational pipeline, our state will not have the number of citizens with education and training beyond high school that’s needed to meet workforce demands.

To retain existing jobs and attract new jobs, West Virginia must have skilled workers. According to a recent study by Georgetown University regarding job projections, West Virginia will need an additional 20,000 college graduates by 2018 to meet projected workforce needs and maintain our economy at its current level. To grow and diversify our economy and to keep West Virginia and the United States competitive, we will need to produce an even greater number of graduates. We need an educated workforce to keep pace with the fastest-growing fields and the best-paying jobs, which will increasingly require a college degree.

In a recent study by the West Virginia University Bureau for Business and Economic Research, nearly half of our recent graduates stayed in West Virginia to work after graduation. According to the study, graduates working in the state in 2010 earned $2.7 billion, an average annualized wage of $42,247. This study demonstrates that West Virginia has good paying jobs for individuals who choose to live and work in the state after completing their educational studies.

We must accelerate educational progress here in West Virginia and across the country and we must do it now. Business and industry need employees with the ability to respond and adapt to new technologies and an ever-changing market. In West Virginia, we are responding to this need by setting a public higher education agenda built upon civic and corporate partnerships and articulating opportunities to establish a workforce that is equipped to compete. Specifically, our goals are to:

- Increase the number of graduates with degrees in science, technology, engineering and mathematics (STEM) fields, and equip them with critical reasoning and communication skills;
- Provide lifelong learning opportunities to enable our citizens to advance professionally and remain connected to economic developments;
- Partner with public agencies and private enterprises for internships, on-the-job training, continuing education and public service programs;
- Develop an advocacy framework to connect current graduates to employment opportunities through public and private sectors and alumni, and
Capitalize on the cultural, educational and entrepreneurial opportunities offered by our colleges and universities to attract business and industry as well as out-of-state and international students.

By partnering with public and private entities to enable entrepreneurship, innovation and research, we are capitalizing on existing strengths in order to better position West Virginia as a globally competitive, economically prosperous and dynamic state. By accomplishing the goals outlined above, higher education will create a partnership that works for all West Virginians.

The past year presented a historic opportunity for public and private entities to partner for the benefit of our state. In December 2010, the Dow Chemical Co. transferred ownership of the South Charleston Technology Park to the state of West Virginia. Under the leadership of the Higher Education Policy Commission, the new West Virginia Regional Technology Park has created countless opportunities for the Kanawha Valley and the state of West Virginia. In the short-term, the state was able to save 550 high-paying jobs. In the long-term, the state will create a place where innovations can move from idea to marketplace.

With support from city, county, state and regional leaders, the Commission has secured more than $60 million in funding to diversify the Tech Park’s mission and infrastructure. In the months and years to come, the Commission will engage in redevelopment and renovation efforts by indirectly providing 1,600 jobs and an economic impact of $627 million.

By remodeling existing facilities and recruiting new tenants to engage in innovative product development, the Tech Park will create a positive revenue impact for local and state government that exceeds $15 million. The Tech Park is an investment that will result in immeasurable success, but will require the input and support of business and industry, in collaboration with the state’s higher education system.

In the end, we must all dream bigger dreams, dreams that all West Virginians share for current and future generations of economic prosperity.

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Dr. Paul L. Hill was named Interim Chancellor of the West Virginia Higher Education Commission effective January 15, 2012 and served as both Vice Chancellor for the Division of Science and Research and as the Executive Director of the West Virginia Experimental Program to Stimulate Competitive Research (WVEPSCoR). While serving as Vice Chancellor, Dr. Hill was the recipient of more than $50 million in federal research funding. Before joining WVEPSCoR in 2001, he was Chairman and CEO of the United States Chemical Safety Board having been appointed by President Bill Clinton and confirmed by the U.S. Senate. A native West Virginian, Dr. Hill holds degrees from Marshall University (B.S. and M.S.) and the University of Louisville (Ph.D.) in biology and chemistry.
A Prescription For an Ailing America

By James E. Casto

In September 2010, newspaper columnist and best-selling author Thomas L. Friedman visited China for a meeting conducted at a massive, ultra-modern conference center in the city of Tianjin. The center, he learned, had been constructed from the ground up in eight months’ time.

When Friedman flew home to Maryland, he was telling his friend Michael Mandelbaum and his wife, Anne, about the spectacular conference center and how quickly the Chinese had erected it.

At one point, Anne asked: “Excuse me, Tom, have you gone to our subway stop lately?”

Friedman instantly knew where she was going with her question. “We all live in Bethesda,” he notes, “and often use the Washington Metrorail subway to get to work in downtown Washington, D.C.”

The station's two short escalators had been under repair for six months.

The comparison is striking. The Chinese built a world-class conference center – including several giant escalators – in 32 weeks, but it was taking the Washington Metro repair crews more than 24 weeks to repair two escalators of 21 steps each.

Reading a newspaper account of the slow pace of the subway repairs at his stop and others, Friedman says he was struck by the comment that many, if not most, D.C. commuters seemed resigned to the situation.

“People have sort of gotten used to it,” one man told the newspaper.

And that, Friedman writes in his new book, is exactly why the United States is in such dire straits today.

Five Best-Selling Books

Tom Friedman is the winner of three Pulitzer Prizes and the author of five best-selling books. His columns in The New York Times are “must” reading not only for the movers and shakers in official Washington but for thousands of Americans who have come to value his ability to render complex economic problems – and possible solutions – in terms understandable to the layman.

A native of Minneapolis, Friedman was graduated from Brandeis University with a degree in Mediterranean studies, attended St. Antony’s College at Oxford and received an M.Phil. degree in modern Middle East studies from Oxford.

After three years with United Press International, he joined The New York Times, where he has worked ever since as a reporter, correspondent, bureau chief and columnist. At the Times, he has won Pulitzers in 1983 for international reporting (from Lebanon), in 1988 for international reporting (from Israel), and in 2002 for his columns after the September 11th attacks.


His fourth book, The World Is Flat: A Brief History of the Twenty-first Century (2005) rocketed to the top spot on the New York Times bestseller list. To date, it has sold more than 4 million copies and has been published in 39 languages. The book’s seemingly silly title actually describes a phenomenon with tremendous consequences for America and Americans. As the book makes clear, computers, the internet, orbiting satellites and the jet aircraft have combined to erase the barriers of time and space that once separated nations and national economies.

Friedman continued to explore that theme in his next book, Hot, Flat, and Crowded, which he published in 2008.

Now, Friedman has teamed up with his friend Michael Mandelbaum, director of the American Foreign Policy Program at The Johns Hopkins University, to publish...
“It makes no sense for China to have better rail systems than us, and Singapore having better airports than us. And we just learned that China now has the fastest supercomputer on Earth – that used to be us.” — President Barack Obama

That Used to Be Us: How American Fell Behind in the World We Invented and How We Can Come Back (Farrar, Straus and Giroux, $28). Their new book might be described as a prescription for an ailing America.

Four Major Challenges

Friedman and Mandelbaum argue that today’s America “faces four major challenges, on which its future depends: globalization, the revolution in information technology, the nation’s chronic deficits and its pattern of energy consumption.”

They argue that we are failing to meet these challenges and warn that “if we delay any longer, soon it will be too late for us to pass along the American dream to future generations.”

They explain how the end of the Cold War blinded the nation to the need to address these issues seriously, and how China’s educational successes, industrial might and technological prowess remind us of the ways in which “that used to be us.” They explain how the paralysis of our political system and the erosion of key American values have made it seemingly impossible for us to carry out the policies the country urgently needs.

And yet Friedman and Mandelbaum say they believe that the recovery of American greatness is within reach. And they back up that belief with vivid profiles of individuals who have not lost sight of the American habits of bold thought and dramatic action. People such as Robert Stevenson, the president and CEO of family-owned Eastman Machine Co. in Buffalo, New York, where it’s been operating since 1888.

Today’s world keeps getting flatter, and so today Eastman Machine does make some of its products in China, but Stevenson stubbornly refuses to move his main production line there. The world, he argues, still recognizes the value of the words “American made.”

Friedman and Mandelbaum argue that it’s essential to keep manufacturing in this country “to produce innovation and sustain the American dream.” What’s not certain, they write, is whether we as a nation have the collective will required to take that and other equally essential actions that will be required if we’re to alter the road ahead.

“As we were writing this book,” they explain, “we found that when we shared the title with people, they would often nod ruefully and ask: ‘But does it have a happy ending?’ Our answer is that we can write a happy ending, but it is up to the country – to all of us – to determine whether it is fiction or non-fiction. We need to study harder, to save more, spend less, invest wisely and get back to the formula that made us successful as a country in every previous historical turn. What we need is not novel or foreign, but values, priorities and practices embedded in our history and culture, applied time and again to propel us forward as a country. That is all part of our past. That used to be us and can be again – if we will it.”

James E. Casto is associate director for public information at the Robert C. Byrd Institute.
Thai firm’s first North American facility to create 25 jobs in West Virginia

Precision Converting Solutions (PCS) LLC will open a manufacturing facility in the Charleston area. Plans call for PCS to begin operations in January 2012 in an interim center while construction of the new 20,000-square-foot clean room manufacturing/R&D center is completed. The new company is a subsidiary of Siam Precision Components, a Thailand-based manufacturer of precision laminated components. When fully operational in two years, the project is expected to create 25 high-technology jobs and represent an investment of approximately $6 million. Siam Precision Components first learned about opportunities in West Virginia when it visited the state’s exhibit at the Bio International Convention in Washington, D.C. in June.

Harbor Steel plans $1 million expansion in Wayne County

Metal service center and distributor Harbor Steel & Supply Corp. is planning a $1 million investment and expansion at Prichard in Wayne County. Harbor Steel is installing new equipment capable of handling larger pieces of steel, enabling the company to serve an expanded range of industries.

Wyoming County firm provides Port Security Barriers for U.S. Navy

Truston Technologies is producing Port Security Barriers (PSBs) for the U.S. Navy. The U.S. Navy requires commercial shipyards to maintain U.S. Navy-approved barriers to deter terrorist attacks. At the center of the PSB fabrication process is the Truston facility in Pineville, which has 21 employees.
Simonton Windows takes top spot in J.D. Power customer satisfaction survey

Simonton Windows, which operates manufacturing plants in Ritchie County, ranked the highest in customer satisfaction in the J.D. Power and Associates 2011 Windows and Patio Doors Satisfaction Study. This is the second consecutive year that Simonton has earned the ranking.

Caiman Energy to invest $500 million in Marshall County processing plant

Caiman Energy will invest $500 million to increase the capacity of its Fort Beeler cryogenic gas processing plant. The plant currently processes about 120 million cubic feet of gas per day. The planned expansion is expected to boost the total gas processing capacity to 520 million cubic feet per day by summer 2012.

Chemical firm to invest $1.7 million to expand capacity of Tyler County plant

Specialty chemicals company Momentive Performance Materials plans to invest $1.7 million to expand the capacity of its Sistersville plant to produce amino silanes. The Sistersville plant will also resume production for trimethoxysilane, Silquest A-187 brand epoxy silane and Silquest A-174 methacryl silane. Silanes are used to help materials such as adhesives and fiberglass bond to surfaces such as rubber, glass, metal, stone and plastic. They are used in automotive, construction, electronics and other industries.

Dominion to build $500 million natural gas plant in Marshall County

Energy company Dominion plans to build a $500 million natural gas processing plant adjacent to the PPG Industries Natrium plant near New Martinsville. The plant is expected to create 40 to 50 permanent jobs when completed in 2012. The Dominion plant will be strategically positioned to access production in the Marcellus Shale and the Utica Shale regions. Its location will also provide easy access to barge, rail, truck and pipe modes of product transportation.

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President’s Jobs Council Calls For Increased Training In CNC Machining

President Obama’s new Jobs and Competitiveness Council headed by General Electric CEO Jeffrey Immelt says the nation’s unemployment problem results not so much from a shortage of jobs, but a shortage of trained workers.

This is especially true in the manufacturing sector, which has lost 5 million jobs over the past decade. The Jobs and Competitiveness Council’s remedy for this problem: increase training in CNC machining and advanced production. The Council’s plan would generate a total of 2,000 jobs in the first year. It is estimated that the country needs to generate 21 million jobs to get to full employment.

“We urge the creation of a nationwide jobs training pilot program geared towards advanced manufacturing,” said Darlene Miller, President and CEO of Permac Industries. “It would include two, eight-week training sessions with private partnerships of companies that seek employees with these types of skills: foundations in technical math, computer-aided machining and design, CNC machining and manufacturing processes.”

The Jobs and Competitiveness Council is recommending that the federal government start a pilot project with technical colleges nationwide. If the pilot program spreads to a half a dozen states, then the Jobs Council says the number of jobs created in the second year would be 4,000.

WTO, Other Groups Said Moving To End ‘Country of Origin’ Labeling

The World Trade Organization (WTO), the Organization for Economic Cooperation and Development, the International Chamber of Commerce and the European Commission are moving aggressively to eliminate “Country of Origin” labeling, claiming that it does not reflect the current structure of global trade. The Europe-based organizations instead want to adopt a “Made in the World” logo for all products on the grounds that global supply chains have rendered country of origin labeling inaccurate and obsolete.

The intent of the proposal is to reduce public pressure on politicians for protectionist trade policies. “We are going to make history on how we look at trade statistics,” says Lucian Cernat, chief economist in the trade division of the European Commission. Europe, which had a $96 billion trade surplus with the United States in 2010, “is ready to act,” he said.

The WTO has been working on “Made in the World” since late 2007, “but in the past two or three years there has been huge momentum to get the necessary information” that would be used to rationalize elimination of country of origin labeling, says Andreas Maurer, chief of the WTO’s International Trade Statistics Section.

“In 2012, there will be a breakthrough in the availability of data” that will accurately describe all of the countries in which value is added to exported products, Maurer said.
India Drafting Strategy to Create 100 Million Manufacturing Jobs

The Indian government is putting the final touches on a new strategy to increase manufacturing employment in the country by 100 million workers by 2025. The government’s National Manufacturing Policy has been cleared for release by the Group of Ministers and has received approval by the Prime Minister.

The goal of the program is to increase manufacturing’s percentage of GDP from its current level of 15 percent to 25 percent or even as much as 30 percent over the next 15 years.

At 15 percent (compared to 11 percent in the United States), India’s manufacturing sector contributes the lowest to the national GDP compared to other countries in the region such as “China at 34 percent, Thailand at 40 percent and South Korea, Poland, Turkey and Malaysia contributing approximately 26 percent to 30 percent to their national GDP,” says the Confederation of Indian Industry.

“It is a known fact that no major country in the world has become economically prosperous without going through long periods of manufacturing dominance. This is true for U.S., Western Europe, Japan and now China. India cannot be an exception.”

The plan aims to make India a “favored destination” for manufacturing, says a Confederation spokesman.

Rising Costs, Other Factors Make Case Against Shifting Production to China

Rising costs in China along with dozens of hidden costs are making it more economical to either keep manufacturing in the United States or bring it back from China, according to research into the true costs of outsourcing.

Companies are not adequately accounting for dozens of hidden costs and growing risks associated with outsourcing production to China, according to David Meeker of Neoteric Product Development based in Acton, Mass., and a lecturer at the Massachusetts Institute of Technology. When companies tally all of the costs of offshore outsourcing and adopt new design techniques for streamlining manufacturing, the cost advantage of moving production to China disappears, Meeker said.

“If you look at all the costs and total them up and you do a really good job of doing design, the chances are you can manufacture in the United States just as competitively and with a lot less risk and a lot less lead time,” he said. “You have more control over what you are doing.”

Companies are mesmerized by low labor costs and by low-ball quotes from Chinese suppliers for parts and components as well as turnkey manufacturing. “People in business say, ‘Wow, look at this price!’ But that’s all they look at,” said Meeker. “They don’t consider the costs of having a quality problem and having to send someone over there to fix it, or opening an office there, or the costs when the container ship arrives after a rough trip on the ocean and the four weeks it takes to get here.”

There are high quality manufacturers in China now, “but you pay a premium to get them,” Meeker said. “The question is, is that premium that much lower than what you can find in the states.”

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WANTED: 600,000 Skilled Workers

American manufacturing companies cannot fill as many as 600,000 skilled positions - even as unemployment numbers hover at historic levels - according to a new survey from Deloitte and the Manufacturing Institute.

The survey, “Boiling Point? The Skills Gap in U.S. Manufacturing,” recently polled a nationally representative sample of 1,123 executives at manufacturing companies and found that 5 percent of current manufacturing jobs are unfilled due to a lack of qualified candidates.

“The survey shows that 67 percent of manufacturers have a moderate to severe shortage of available, qualified workers,” said Craig Giffi, vice chairman and consumer/industrial products industry leader with Deloitte LLP. “Moreover, 56 percent anticipate the shortage to increase in the next three to five years.”

“These unfilled jobs are mainly in the skilled production category - positions such as machinists, operators, craft workers, distributors and technicians,” said Emily DeRocco, president of the Manufacturing Institute. “Unfortunately, these jobs require the most training and are traditionally among the hardest manufacturing jobs to find existing talent to fill.”

Giffi points out that the inability to find workers is taking its toll on manufacturers’ competitive readiness. A case in point: 64 percent of respondents report that workforce shortages or skills deficiencies in production roles are having a significant impact on their ability to expand operations or improve productivity.

“Ironically, even as unemployment numbers remain bleak, a talent shortage threatens the future effectiveness of the American manufacturing industry,” says Giffi. He points out that when respondents were asked to look ahead three to five years, they indicated that access to a highly skilled, flexible workforce is the single most important factor in their effectiveness - above factors such as new product innovation and increased market share by a margin of 20 percentage points.

According to DeRocco, companies need to partner with educational institutions to make developing workforce skills a top strategic priority. “Our education system must also do a better job aligning education and training to the needs of employers and job-seekers. To support this effort, the Manufacturing Institute is deploying the Manufacturing Skills Certification System endorsed by the National Association of Manufacturers (NAM) - a system designed to build educational pathways to in-demand manufacturing jobs.”

“I was raised in Charleston, where for two generations Union Carbide put food on our table. Today I work in North Central West Virginia, where we have an aerospace industry that most folks don’t know about because you can’t see it from Interstate 79. At our airport and business park we have internationally renowned companies such as Lockheed Martin, Bombardier and Pratt & Whitney and two premier training facilities -- the Robert C. Byrd National Aerospace Education Center and the Robert C. Byrd Institute for Advanced Flexible Manufacturing. Much has changed since my father and grandfather worked for Carbide. But manufacturing still matters in West Virginia because something important hasn’t changed – the pride our workers take in doing a quality job. Our aerospace companies report far lower turnover rates here in West Virginia than they experience elsewhere. West Virginians have an incredibly strong work ethic -- it’s in our DNA.” – Tracy Miller, President, Mid-Atlantic Aerospace Complex

“To have a healthy economy and a strong middle class you have to create wealth through manufacturing. To create the wealth that spurs growth you must have a pulsating manufacturing economy. This simple truth has been the key to America’s greatness. Yet, in spite of this obvious truth, our country and its leaders continue to support policies that send manufacturing jobs overseas, often to countries with plants operated with slave labor. When I graduated from high school in the Huntington of the 1960s, you could go to work at Owens-Illinois or Kerr Glass, at Houdaille Industries or ACF or any one of a long list of other manufacturers. Most of them are gone now. The few that remain employ only a fraction of their former numbers. Unless we reverse the outsourcing mentality and protect our manufacturing jobs, by force if necessary, we face a continuing decline in our middle class, our freedoms, and our country as a whole.” – Rick Houvouras, Managing Partner, Star Technologies, LLC.
67% of U.S. manufacturers have a moderate-to-severe skills shortage in their overall workforce.

64% of U.S. manufacturers have a moderate-to-severe skills shortage in their production workforce.

18% Manufacturing workers earn 18% more than other workers.

78% of the American public believes manufacturing is very important to U.S. economic prosperity.

140% Manufacturing has the highest multiplier effect of any industry at 140%.

57% Manufacturing accounts for 57% of all U.S. exports.
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