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A Call to America: Let's Return Tech Manufacturing to the U.S.

Making the Case to Bring Tech Manufacturing Back Home

June 2020

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Right now, what our economy needs is a big opportunity.

A major change that will kick-start growth, hire people who need work, and reinvigorate our nation. We have such an opportunity right in front of us—moving technology manufacturing back to the U.S. from overseas.

Big changes happen in times like these, whether we act on them or not. Let's seize on an opportunity to make a big change that benefits America for decades to come.

In the past 50 years, America slowly moved from a manufacturing economy to a service economy. We shut down entire manufacturing industries within our borders, with politicians paving the way for companies to move their production to nations like China.

Now, thanks to COVID-19 and the worldwide supply shock it created, we can see how over-dependent the U.S. economy has become on Chinese goods.

We don't have to be, though. We can take this opportunity to repair our economy, and make America stronger and more secure.

How? **By returning tech manufacturing to the U.S.**

By "tech manufacturing" we mean American workers in American facilities, making computer components like motherboards, CPUs, and memory/RAM. LCD screens. Cellphone parts. Cables. Networking equipment. Electronic circuits. All of it.



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We've seen objections to bringing back tech manufacturing for years. Usually spawned by the same organizations invested in offshoring manufacturing of all kinds, and profiting from the process.

The whole game has changed.

To prove it, consider the 9 arguments in this white paper. Each argument illustrates why & how reshoring either solves a major issue, or generates an economic benefit (or both).

You'll see how, in light of the world as it is now, the case for reshoring our tech manufacturing has only grown stronger.



Opportunities
Await in
Opportunity Zones



Major ROI for
National
Cybersecurity



Domestic Trade
with Domestic
Materials



Prevent
Human Rights
Abuses



Reduce Supply
Chain Costs across
the Board



Lead the World in
Reducing Global
Pollution



Restore &
Rejuvenate the
Middle Class



A Thriving,
Fully-Employed
STEM Workforce



Out-Compete
China on the
World Stage

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Argument #1 Opportunities Await in Opportunity Zones

Moving manufacturing operations back to the U.S. will take private investment. However, the investments would take advantage of newer technologies like 3-D printing and automation to reduce costs and improve efficiency.

Where would companies place these factories? We have thousands of potential locations—America's "Opportunity Zones."

Designated in 2017, "Opportunity Zones" are areas in every state that have economic potential, but need investment. Investors get tax breaks when they invest and help the area grow. The IRS has posted an Opportunity Zones FAQ¹ with state-by-state lists.

These Zones revitalize an area that needs it. Bringing in money, real estate development, manufacturing jobs, IT jobs, skilled labor, and triggering economic growth for everyone.

Some Opportunity Zones contain inactive factories and unused government properties. A recent Brookings article² shows that the government possesses over 70,000 unused/vacant properties.

Why not sell these properties to tech manufacturing businesses at a discount? This would save the U.S. taxpayer maintenance costs, and reduce start-up costs for the new manufacturer.

Public interest in "Made in the USA" goods has spiked. We have proof—traffic to PlanetMagpie's article on "Computer Components Made in USA"³ rose over 300% in April 2020!



Argument #2 Major ROI for National Cybersecurity

With any business decision it's important to factor in all aspects of ROI. What are the advantages of reshoring tech manufacturing?

- Savings on distribution
- Shorter, more reliable supply chains
- More skilled job prospects in manufacturing & manufacturing support areas
- A stronger, more independent America
- No tariffs to increase product costs
- Improved cybersecurity nationwide

Wait, cybersecurity? How does reshoring help that?

Right now, the U.S.' cybersecurity as a whole teeters on a dangerous edge. Cyberattacks skyrocketed at the start of the year (a 37% increase⁴ in Q1 alone). Why? A burgeoning market for cybercrime, both home-based and nation-state sponsored.

According to Emsisoft,⁵ COVID-19 has given us a bit of a breather—ransomware attacks have gone down at the moment. That's good news, but how long will it last?

Worse, a huge amount of existing IT hardware in use now actually weakens our cybersecurity. How? It enables spying and hacking by China, due to state-mandated collusion. Let's look at two examples.



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Argument #2 (CONTINUED) Major ROI for National Cybersecurity

Example One

HUAWEI: Network Backdoors En Masse

Huawei is an often-cited example⁶ of colluding with the Chinese government against other nations.

Huawei stands accused of accessing mobile phone networks⁷ that use its hardware, stealing data through backdoors intended for law enforcement. Huawei denies wrongdoing, but the evidence was strong enough to prompt a full ban on Huawei networking equipment.⁸

Think about that for a second. A Chinese company, with a long history of cooperating with the Chinese Communist Party (CCP), sells hardware that contains backdoors. The CCP can intercept data from individuals, corporations, and governments who use Huawei hardware at any time—thereby facilitating IP theft and cyber-espionage.

Huawei isn't the only example of this. We banned 5 other Chinese companies for the same reasons⁹ in 2019. The 2019 ban would have helped American manufacturing, if companies like Intel, Micron, and Qualcomm hadn't sidestepped it and resumed trade¹⁰ with the banned Chinese companies days later. How 'American' is that?

By 2021, cyberattacks will cause \$6 trillion in global damages every year (according to a Cybersecurity Ventures report).¹⁶ Reshoring tech manufacturing promotes our cybersecurity, via the IT infrastructure supporting those facilities & related industries.

Reshoring is one of the few ways America could get ahead of the cybercrime wave coming. That is definitely a strong ROI.

Example Two

ZOOM: Dangerous Ties Exposed

Zoom has become the darling of remote teams, yet some school districts¹¹ and governments¹² have banned its use. Even Google banned it.¹³ Why?

Zoom is not what it appears to be.

- Zoom routes traffic through Chinese servers (where it's open to Intellectual Property collection by Chinese authorities & data theft by cybercriminals)
- Zoom lied about its end-to-end encryption,¹⁴ which is essential for cybersecurity (especially on multi-party video conferences!)
- The New York Attorney General demanded Zoom institute new security practices & privacy controls.¹⁵ Why didn't Zoom have those controls in place already?
- Zoom's founder and CEO, Eric Yuan, is a Chinese national who previously worked at Webex and Cisco—with whom Zoom now competes in the video conferencing space.

Zoom is easy to use, yes. It's also an open hole in America's cybersecurity.

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Argument #3 Domestic Trade with Domestic Materials

Many computer materials already exist in the United States. We have elements in abundance for making computers—silicon, steel, copper, etc.

- STEEL – America still has plenty of iron to make steel.
- SILICON – Comes from sources like quartz. We already produce lots of silicon domestically, and can scale that up.
- TIN – Look to Alaska! It has most of our country's tin deposits.
- COPPER – The U.S. already produces large amounts of copper.
- LITHIUM – A useful metal for batteries. America does have a decent amount, as do Chile and Argentina (the world's #1 lithium producer).
- PLASTICS – Comes from oil, which we have here in abundance.

We can leverage international trade to source other materials—South Africa, for instance, produces more chromium than any other country. The U.S. doesn't produce a lot of cobalt, but several allies do: Australia, the Philippines, and Canada, among others.



Argument #4 Prevent Human Rights Abuses

Until recently, manufacturing in China was cheaper than doing so in America. Cheaper because China makes it that way, at the expense of their own people. China keeps their costs artificially low with several unsustainable practices:

- Paying workers very low wages
- Working people to burnout
- Replacing workers at the first sign of burnout or protest
- Running after-hours government operations on the same lines as U.S. products, meant to copy the same technology for Chinese use

Not only is this horrible treatment of workers, even a high-population nation like China can't maintain the productivity level forever. In fact, China has already begun raising pay rates¹⁷ to keep workers in this "system," which makes those cost savings go away.

The economic argument of 'cheaper in China' goes with it. In addition, pulling manufacturing from China eliminates any culpability we might have in China's human rights abuses. America is better than that.

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Argument #5 Reduce Supply Chain Costs across the Board

Reshoring our tech manufacturing would make big changes to the nation's supply chain—and that's a good thing.

It would shorten supply chains to within our nation, eliminating the need for hundreds of import container ships making the six-week journey from China.

COVID-19 has taught us the perils of sourcing hardware from China. Tech hardware delivery delays have been rampant, which means relying on one source—China—is no longer economically viable. One supply shock and the chain breaks.

Supply chain costs play a big role in TCO - Total Cost of Ownership. You shorten the chain, you drop prices.

The Reshoring Initiative, a nonprofit devoted to manufacturing reshoring, has a free TCO Estimator tool (<https://reshorenw.org/tco-estimator/>) that helps manufacturers calculate the total cost of their sourcing options using 30 cost factors (including the costs of shipping overseas). The U.S. Commerce Department has endorsed this tool.

Even if we couldn't fully manufacture every product in the U.S., we could use 'nearshoring'—manufacturing in nearby countries like Mexico and Canada—to keep supply chains shorter and cheaper. IBM practiced this in the 80's and 90's, and produced the best available server components, desktops, and laptops in North America.



Argument #6 Lead the World in Reducing Global Pollution

Pollution surrounds the tech manufacturing industry, both in the manufacturing process and in shipping.

China has some of the world's worst air pollution. Decades of ignoring the problem resulted in hazardous air quality¹⁸ across all of China's major industrial cities. Air this bad leads to mass premature deaths—852,000 deaths in 2017.

China's leaders have responded with air quality improvement measures, but only within the past 10 years. It will take decades to reduce the damage to the world's air.

Does that mean we'd face the same pollution hazards if we reshored tech manufacturing? No.

Manufacturing here in the U.S., where we have higher environmental standards, would improve the entire process.

Consider everything we've done to reduce pollution: carbon capture, cleaner energy, less long-distance transportation, robotic assemblies. It all works for tech manufacturing, too.

Reshoring itself reduces pollution in two ways:

- Cutting emissions from container ships. Beyond Green, a sustainable plastics manufacturer, reshored¹⁹ for exactly this reason. The pollution created from overseas shipping went against their desire for sustainability. So, they moved production to California.
- Preventing ocean contamination. Over 1,500 containers fall off container ships each year,²⁰ resulting in thousands of tons of product being dumped into our oceans. Expensive and environmentally damaging.

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Argument #7 Restore & Rejuvenate the Middle Class

You might have heard, “We can’t duplicate China’s range of tech manufacturing capacities.”

Why not? America wrote the book on technology and ingenuity. We still manufacture components here. A wide range of them. Expanding the existing facilities isn't impossible by any stretch.

Here’s an excellent example of an American computer manufacturer—Trenton Systems, based in Georgia.²¹ In business since 1989, Trenton specializes in rugged computers and servers, meant for industrial/military purposes. All designed, manufactured, and supported here in the USA.



Photos of Trenton’s tech manufacturing facilities in Georgia. Courtesy of Trenton Systems.

China built out its manufacturing capacity through constantly overworking people,²² some to death²³—a phenomenon they call “guolaosi.” America can and will find a better way. In so doing, we’d restore America’s longest-serving and strongest economic sector: a resilient middle class.



Argument #8 A Thriving, Fully-Employed STEM Workforce

Manufacturing technology, and supporting the facilities used to make it, will take a workforce with technical skills. You might think America no longer produces enough STEM workers to meet such needs.

This is not true. We have millions of STEM grads and tech pros already. The STEM gap is a proven lie.

Professor Hal Salzman of Rutgers University has researched the H-1B situation for years. His research found²⁴ that American colleges typically produce between 40%–100% more STEM grads than are hired into U.S. STEM occupations each year!

Companies like Google, Facebook, and HP want you to believe in the shortage. Meanwhile, they lobby Congress to increase H-1B visas, and to create programs like the “Highly Skilled Immigrant” bill (HR1044). Programs like these provide tech giants with underpaid labor from places like India and China, at the cost of American workers’ jobs.

Professor Salzman’s research proves we DO have the workers. If an opportunity presents itself—as it has right now—we have the talent to act on it.

Even better, we could quickly retrain out-of-work people to work in manufacturing facilities. Imagine the explosion of success from millions of people with stable jobs!

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Argument #9 Out-Compete China on the World Stage

China uses underhanded tactics to improve their advantage:

- Dumping products like steel²⁵ on the world to crash prices
- Forced Technology Transfer²⁶—demanding a company's Intellectual Property in exchange for manufacturing their gear
- Theft of Technology²⁷—China continues to steal technology from other nations, especially the U.S., though economic espionage campaigns.
- Money Lockdowns/"Cross-Border Sweeping"²⁸—blocking or delaying the transfer of revenue out of China, for international companies.

How do we compete when China uses such tactics?

- a. Deny China the opportunity. Start manufacturing back up in the U.S., using the materials we would have sent to China (e.g. copper, coal, aluminum).²⁹ Break the hold they have on our supply chain, and our demand for their products.
- b. Trade more with America's allies, and make each other stronger in the process. Raw materials, food, manufactured goods, etc. Use trade to encourage reshoring from China to benefit their economies as well.

The Case for "Made in the USA" Technology Products is Clear

There is no downside to bringing our manufacturing back home. It's a large, complex effort. However, the pandemic has shown us three things about America:

1. It has millions of good people ready and willing to work.
2. Americans want to buy and use technology made in the USA.
3. We can rise to meet any challenge. We've done it before, and we're doing it now.

Action Steps – How You Can Help Reshore Tech Manufacturing

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Action Steps – How You Can Help Reshore Tech Manufacturing

Ready to support a nationwide reshoring effort? We can do it, if we do it together. Here are some steps you can take to help.

- 1 Buy American products.** When faced with a new purchase, do some online research and find out which brands are made in America. Ask vendors about American-made brands too, so they start seeing the demand.
- 2 Buy IT hardware from existing manufacturers here in America.** We have a list of these on our website.³⁰
- 3 Publicize companies making technology products in America now.** These include PNY Technologies,³¹ Patriot Memory,³² Mushkin,³³ and Trenton Systems.³⁴
- 4 Encourage your elected representatives to vote down any increase in H-1B visas.** H-1B workers take jobs away from American STEM grads, rob U.S. workers of valuable real-world training in cybersecurity and application development, and keep IT pay levels artificially below-market.
- 5 Support the federal governments' efforts to bring in more tech manufacturing.** Recent efforts include Taiwan Semiconductor building a chip fabrication plant in Arizona,³⁵ and Intel weighing a plant for American CPU manufacturing.³⁶
- 6 Politicians—You can encourage the start or expansion of new tech manufacturing businesses.** Make your constituents aware of how to use Opportunity Zones and create tax incentives.

We may never have a better opportunity to return technology manufacturing to the U.S. Let's do the American thing, and seize it!

About PlanetMagpie

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