Fall Series on Industrial Policy:
Rebuilding American Manufacturing

Our roundtable of senior leadership at the White House National Economic Council and U.S. Dept. of Health and Human Services as well as a diversity of viewpoints across political ideologies from Breakthrough Energy, American Compass, MIT’s The Engine, and Employ America discussed competing with China on advanced manufacturing sectors (bioeconomic, semiconductor, quantum, etc.), supply chain resilience, and new visions for industrial policy that can stimulate regional development. This document contains a summary of the event.

**Topic Introduction: Advanced Manufacturing & U.S. Competitiveness**
Featuring: Bill Bonvillian, Lecturer and Senior Director for Special Projects, Massachusetts Institute of Technology

**Panel 1: Framing the Challenge and Identifying Key Misconceptions**
Featuring:
- Arnab Datta, Senior Counsel, Employ America
- Chris Griswold, Policy Director, American Compass
- Abigail Regitsky, Senior Associate, U.S. Policy and Advocacy, Breakthrough Energy

**Panel 2: Ideas for Action**
Featuring:
- Elisabeth Reynolds, Special Assistant to the President on Manufacturing and Economic Development, White House National Economic Council (WHNEC)
- Joseph Hamel, Director, Office for Innovation and Industrial Base Expansion (IBx), Assistant Secretary for Preparedness and Response, Department of Health and Human Services
- Katie Rae, CEO and Managing Partner, The Engine, Massachusetts Institute of Technology

**Follow-up Opportunities**
If these ideas resonate with you, please follow-up with us in three ways!
- Read our Industrial Policy memo and submit your ideas with us here.
- Contribute to our crowdsourced State of the Union here.
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Topic Introduction: Advanced Manufacturing & U.S. Competitiveness

The session began with an introduction by Bill Bonvillian (MIT), who shared a series of reflections, challenges, and solutions to rebuilding American manufacturing:

Advanced manufacturing and supply chain resilience are two sides of the same coin. The pandemic awoke us to our over dependence on foreign supply chains. Unless we build a robust domestic manufacturing system, our supply chains will crumble. American competitiveness therefore depends on how well we can apply our innovation capabilities to the historically underfunded advanced manufacturing ecosystem. Other nations are pouring tremendous amounts of resources because they recognize the importance of manufacturing for the overall innovation cycle. To rebuild American manufacturing, an ecosystem is needed—private sector, educational institutions, and government—to create an effective regional workforce and advanced manufacturing technology pipeline.

You can read more on Bill Bonvillian's recommendations for achieving an advanced manufacturing ecosystem [here](https://example.com).

Panel 1: Framing the Challenge and Identifying Key Misconceptions

Our first panel hosted Arnab Datta (Employ America), Chris Griswold (American Compass), and Abigail Regitsky (Breakthrough Energy). The questions and responses are summarized below:

**What would you say are some misconceptions that have posed obstacles to finding consensus on an industrial policy for advanced manufacturing?**

**Chris Griswold:** The largest misconception is the ideological view that industrial policy is central planning, with the government picking winners and losers—that it is un-American. That's simply not true. From Alexander Hamilton, to Henry Clay and Abraham Lincoln, and through the post-war period and America’s technological rise, the American way has involved a rich public-private sector innovation ecosystem. Recent decades of libertarian economics have weakened supply chains and permitted the flight of industry from American communities.

**Arnab Datta:** People like to say that market choices have forced manufacturing overseas, but really it's been about policy. Germany has maintained a world-class manufacturing base with high wages and regulations. We have underrated two
important factors in sustaining a high-quality American manufacturing ecosystem: financing and aggregate demand. Manufacturing financing is cash-flow intensive, making asset-light strategies difficult. And when you see scarce aggregate demand, you see a cost-cutting mentality that leads to things like consolidation and offshoring. We only need to look back to the once-booming semiconductor industry that lost its edge. Our competitors are making the policy choices necessary to grow and develop strategically; we should do the same.

**Abigail Regitsky:** For climate and clean energy, startups see the benefit of developing and manufacturing in the United States—that’s a large misconception, that startups do not want to produce domestically. The large issue is that they do not have financing support to develop domestic supply chains. We need to ensure there is a market for these technologies and there is financing available to access them.

**With the recently introduced bill for an Industrial Finance Corporation from Senator Coons’ Office, what would you say are the unique benefits of using government corporations and why should the general public care? And how might something like this stimulate job and economic growth regionally?**

**Arnab Datta:** The unique benefits of a government corporation are two-fold: flexibility in affordability and in financing. In some of our most difficult times, government entities were empowered with a range of abilities to accomplish important goals. During the Great Depression and World War III, the Reconstruction Financing Corporation was necessary to ramp up wartime investment through loans, purchase guarantees, and other methods. America has faced difficult challenges, but government corporations have been a bright spot in overcoming these challenges. We face big challenges now. The Industrial Finance Corporation (IFC) bill arrives at a similar moment, granting the government the authority to tackle big problems related to industrial competition—national security, climate change, etc. We need a flexible entity, and the public should care because they are taking risks in this competition with their tax dollars. They should be able to have a stake in the product, and the IFC’s equity investments and other methods provide that. It will also help with job growth across regions. Currently, we are witnessing rising capital expenditures to a degree not seen for a very long time. We were told manufacturing jobs would never come back, but the demand is there. Creating an institution that establishes permanence for job growth in manufacturing should not be an exception but a norm.
Abigail Regitsky: We need a political coalition to get the policies in supply to support the clean energy agenda. An IFC could support a factory that leverages hydrogen in a green way, or something even more nascent. These moves require a lot of capital, but we can create a lot of economic returns and jobs if we see the long-term linkage and support it.

What would you say might be the conservative case for industrial policy for advanced manufacturing? And what specific aspects of the advanced manufacturing ecosystem specifically do you see opportunities and needs?

Chris Griswold: It's the same as the general case—it's a common sense, good idea. Fortunately, there is much more consensus on this now than there was just a few years ago. Some specific arguments that should appeal to both sides include:

a. The national security imperative to bolster our currently vulnerable supply chain and industrial base.

b. Having national economic resiliency to keep up with competitors. It's almost unanimous at this point that it will be difficult to compete without an effective advanced manufacturing sector and resilient supply chain. Offshoring all of our capacity has diminished our know-how and degraded our ability to innovate ourselves back out of this situation. We can’t just flip the innovation switch back on—it takes time to get our manufacturing ecosystem up to speed with the pace of technological progress.

c. Deindustrialization has hurt working communities and created regional inequality. It has made not just our country weaker in general, but it has harmed many specific working-class local communities. Working class people without a college degree have been hit the hardest. Working class communities of color have been harmed in unique ways. At the heart of these large discussions is a moral imperative about workers and their families. They matter. We must do more to support local economies, which means caring about the composition of those economies.

Abigail Regitsky: It's the idea of losing the “know-how” or “learning-by-building” phase of innovation. This is crucial for developing solutions to solve climate change. With climate, time is of the essence; when you are able to tie manufacturing to the innovation process, it fosters a faster scale up of new technology. We need the
manufacturing know-how to scale up emerging technologies and reduce emissions to zero by mid-century.

**Panel 2: Ideas for Action**

Our first panel hosted Dr. Elisabeth Reynolds (WHNEC), Joseph Hamel (ASPR), and Katie Rae (MIT's The Engine). The questions and responses are summarized below:

*In the last panel, we heard from a variety of perspectives on this deep and comprehensive issue, what are a few priorities you have for improving the manufacturing base?*

**Elisabeth Reynolds:** The last panel presented the imperative and opportunity of today’s moment perfectly. The administration is working to reframe the nation’s thoughts on industrial policy. All of those problems outlined existed before the pandemic. What we’re addressing now is a new commitment and understanding that this is not just about national security—it’s about economic security. We don’t need to build and make everything here, but we need to build and make a lot here, from commodities to next-gen technology. We have to support small and medium-sized businesses. The administration’s plans compliment the Industrial Finance Corporation bill and the initiatives included in it. There is a real effort to include and support communities, schools, and people who have not been included. We’re focusing on the regional level—we are aiming to have workforce training at the regional level to build a pipeline for the next generation of workers in manufacturing. Another critical component is the climate agenda, which manufacturing facilities should leverage demonstration funding, tax credits, and procurement to facilitate, especially on the latter, with the role of government as a buyer. Finally, each of these issues, must be approached through an equity lens, in terms of geographic, racial, small vs. big business, and more. We need to create a level playing field, that is where America will thrive.

“*President Biden recently issued an Executive Order 14017 directing the US government to undertake a comprehensive review of six critical US industrial base sectors. ASPR is the lead for the public health and biological preparedness industry base review. What can you tell us about these efforts to date?”*
Joseph Hamel: These efforts are focused on furthering the relationships and leveraging partnerships that were discovered during pandemic response, from the Food and Drug Administration to the Defense Advanced Research Projects Agency and National Institute of Standards and Technology, it is important to explore the right level of coordination. We are conducting a review of essential medicines to identify the most critical and relevant, then exploring potential threats and ways to invest and improve the supply chain for these drugs. We’re bringing in clinicians, manufacturers and distributor partners to ask questions like “what is the most vulnerable item in our global supply chain and how can we act on it? We’re also establishing an innovation laboratory with FDA to evaluate a wide array of products that are subject to shortage and geographic production dependencies. We are also investigating overlooked capacities for the assembly of these products and leveraging opportunities inside and outside of government so manufacturers can realize new capabilities at scale. We need a more resilient global supply chain, as was demonstrated in the pandemic. And we have to think about doing this with lower-cost, lower-footprint environmental impact so that we can become competitive inside a larger ecosystem.

A few weeks ago the Day One Project held a listening session with several startups in cleantech, semiconductor, and bioeconomy industries that governments overseas provide more incentives, from subsidies to more available tools, to manufacture there than in the United States. What is the most important way to make it easier for small and medium sized companies to manufacture in the United States?

Katie Rae: The Engine was founded to go after the world’s biggest problems. Advanced manufacturing is one of them—ensuring foundational industries are built here. This collides with everything, including our supply chains. The impact is not theoretical—how do we get vaccines to everyone? There’s been a lot of innovation, but our current system didn’t want to support the ideas because they were out of favor for investments. We had the ideas, but we didn’t have the financing, this was a market failure. We need funding to bring these ideas to life. When startups begin scaling, they need capital to do so. It is not inherently provided by the private market, so governments are not picking winners and losers but rather ensuring that money goes to a list of potential winners.

Elisabeth Reynolds: The comments about the financing gap are exactly right. We have less support for the scale up of cutting-edge technologies at their later stage of development. We need more time and capital to get these ideas there. Katie’s team is focused on finding this capital and supporting the commercialization into
government. We also have a growing shift in the mindset of the country—first thought has been to take manufacturing offshore, but the equalization of the costs is bringing some of this production back to our shores.

*If you were to ask the audience to work on a specific domain, what would you challenge them to do?*

**Elisabeth Reynolds:** We should build in on the positive programs we have; Joe's is a great example. We also can’t forget about the examples of work outside of government. We innovate well across a wide range of places and the government needs to be a partner in supporting this.

**Katie Rae:** Loan guarantee programs in procurement is a must-have. Other governments will do it and our companies will relocate their headquarters there.

**Joseph Hamel:** Furthering investments in platform technology development. We need to leverage what is growing as a bioeconomy initiative and use these applications to create end products that we never thought were achievable. We should explore material science applications and innovation in quality by design, up front.

**Follow-up Opportunities**

The Day One Project is committed to sourcing diverse ideas from a wide community. We encourage you to stay engaged with us as we cultivate more science and technology policy ideas to set the agenda on industrial policy and beyond.

If these ideas or the proposals on our website resonate with you, we encourage you to follow-up in the following three ways:

- Read our [Industrial Policy memo](#) and submit your ideas with us [here](#).
- Contribute to our crowdsourced State of the Union [here](#).
- Keep up with our industrial policy roundtable series [here](#). We will have two more events in the coming months:
  - “Procurement as an Instrument of Policy: Novel Approaches to Buying What Works”
  - “New Vehicles to Advance Competitiveness in Strategic Domains”