



AMERICAN  
COMPASS

# Pre-Competitive R&D Consortia

BRIDGING THE GAP BETWEEN BASIC RESEARCH  
AND THE MARKET

## WHAT'S THE PROBLEM?

The U.S. has lost its position of **global leadership in advanced manufacturing**, leading to declining innovation.



Modern high-tech products require a **scale and duration of investment** that American companies have been unwilling to undertake on their own.

Other nations are pursuing economic development and competition through **heavily subsidized national champions**, which have surpassed American firms.

## STUNTED INNOVATION

Globalization was sold as a way to increase investment and innovation, but as imports skyrocketed, American industrial output flatlined. Net domestic business investment fell from an average of 4.1% from 1981–2000 to 2.6% from 2001–2020. The U.S. trade balance in advanced technology products declined from a surplus of nearly \$60 billion in 1992 to a deficit of more than \$190 billion in 2020. Europe now has 29 advanced manufacturing sites identified as “lighthouses” by the World Economic Forum. China has 28. America has only 11.

Meanwhile, as modern technologies, systems, and manufacturing processes have become more advanced, integrated, and complex, industrial progress has become more difficult and expensive. Government and academia can lead the way in basic research, but they lack the incentives to translate breakthroughs into products.

Meanwhile, even the largest individual firms lack the resources and know-how to continually incorporate scientific breakthroughs into existing platforms, let alone develop entirely new ones. The necessary investments not only require substantial capital, but are risky and may never offer the kinds of private returns available from other business strategies.

## WHAT'S THE SOLUTION?

In precompetitive R&D consortia, firms that are normally competitors in the market **work together on a common technology platform**, sharing the resulting intellectual property from which they can develop differentiated downstream products to compete against each other. The collaboration pools resources and expertise, and provides a site at which **public policy can constructively subsidize investment without “picking winners and losers.”**

Congress should establish a program that:

- Clearly defines the parameters of a Pre-Competitive R&D Consortium (PCC)
- Provides matching public funds to any industry whose members establish a consortium within those parameters and commit their own capital
- Exempts the consortium from antitrust prohibitions

## HELPING THE PRIVATE SECTOR HELP ITSELF

Rather than attempt to identify the specific industries and platforms that would benefit, policymakers should establish an open-ended template and invite any industry that sees the value to participate. For instance, a PCC must be open to all firms within an industry and have a set formula to guide participation requirements, based on sales, capital expenditures, and other factors, as well as a clear governance structure.

Funding commitments must extend for a significant duration, all participants must have full access to the resulting intellectual property, and both the IP and any production capacity it sparks must remain in the U.S. PCCs have an impressive track record in industries like semiconductors, aerospace, and biotechnology that depend on sophisticated technology platforms far upstream from final competitive products.



## FREQUENTLY RAISED OBJECTIONS

### “PCCS PROMOTE COLLUSION AND CONCENTRATION, WHEN WHAT WE NEED IS COMPETITION.”

PCCs deploy federal funding to promote competition within an industry. Rather than funding R&D at a single firm with market dominance, federally backed PCCs encourage industry-wide collaboration leading to industry-wide competition. New and established firms are on equal footing, with each participant free to commercialize discoveries at their own expense.

### “THIS IS JUST A HANDOUT TO THE PRIVATE SECTOR.”

Broadly applicable R&D is a public good that requires government funding, but policymakers often hesitate to back a single firm, which can encourage rent-seeking. Supporting precompetitive R&D consortia, however, benefits an entire industry and relies upon competitive market forces to distribute the gains from basic discoveries. No one has an advantage when everyone gets the same head start.

### “GOVERNMENTS CAN'T SUCCESSFULLY IDENTIFY THE INDUSTRIES OF THE FUTURE THAT WOULD BENEFIT.”

Policymakers have successfully used PCCs for industries like semiconductor design and fabrication, energy-efficient jet engines, and manufacturing of biologic compounds. The requirement that industry commit to investment before the government provides matching funds ensures that resources will only be expended where industry itself sees potential gains. The proposal here goes a step further, leaving the question of which industries could benefit from PCCs to the industries themselves. For instance, textiles receive little attention in this context, but if producers in the industry want to establish a PCC to develop a new generation of synthetic fabrics or automated production processes, the public should be eager to facilitate its creation and share its cost.

## FURTHER READING

Willy Shih. “On Research and Development.”  
*American Compass*, 2020.

A policy essay outlining the benefits of pre-competitive R&D consortia.

Oren Cass. “Pass the Chips, Please.” *American Compass*, 2022.  
An analysis of the CHIPS Act and the historic role of federal funding for critical industries.

“A Guide to the Semiconductor Industry.”  
*American Compass*, 2021.

A guide to the federal government and private firms' role in the development of the semiconductor industry.

## KEY FACTS

28 Advanced manufacturing “lighthouses” in China<sup>1</sup>

11 Advanced manufacturing “lighthouses” in the United States<sup>2</sup>

+60B U.S. trade surplus in advanced technology products (1992)<sup>3</sup>

-191B U.S. trade deficit in advanced technology products (2020)<sup>4</sup>

## ABOUT AMERICAN COMPASS

Our mission is to restore an economic consensus that emphasizes the importance of family, community, and industry to the nation's liberty and prosperity. American Compass is a 501(c)(3) nonprofit organization.

For more information, visit [americancompass.org](https://americancompass.org)

<sup>1</sup> “Where's the Growth?” American Compass, 2022.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.