

THE U.S. SHOULD DEVELOP AND IMPLEMENT A ROBUST MANUFACTURING STRATEGY

The electronics manufacturing industry is at the heart of the modern economy. It is both a large, vertical industry in its own right, and it is essential to the performance of automobiles, aircraft, medical equipment, retail, energy, industry, IT and telecom, consumer technologies, and more.

And yet, the last 25 years have been turbulent for U.S. electronics manufacturers, marked by significant contraction and government policy neglect. Thousands of electronics manufacturers have closed their doors, and the number of U.S. PCB manufacturers and assemblers has ebbed. Segments of the electronics industry were viewed as expendable so long as U.S. companies led the innovation and owned the intellectual property.

The upshot is a dramatic weakening of the nation's industrial base. The U.S. printed circuit board industry, which once accounted for more than 30 percent of total global production, today accounts for less than 5 percent. Furthermore, all electronic systems are reliant upon electronics manufacturing services (EMS), but only four of the top 20 EMS companies are based in the United States.

Looking ahead to the coming decade, electronics manufacturing is on the cusp of tremendous change, driven by advancements in artificial intelligence, automation, digitization, and machine-to-machine communications. The factories of the future could be the basis for a U.S. manufacturing resurgence in the United States – or for further decline. The U.S. Government should develop a strategy to support the industry's migration to factories of the future.

IPC POLICY RECOMMENDATIONS

- **Establish an Interagency Manufacturing Policy Lead.** The U.S. Government has individual programs to support manufacturers but there is very little coordination among agencies, nor is there a national, interagency strategy that identifies clear goals and initiatives to meet those goals. If manufacturing is a truly a top priority for the United States, then an individual who reports to the president should be given the responsibility for developing and implementing a federal strategy.
- **Invest in Factories of the Future.** Electronics manufacturing is a thin-margin business, making it difficult to upgrade costly manufacturing equipment. And yet, such upgrades will be necessary to perform the sophisticated work expected of U.S. manufacturers. IPC encourages investments in Defense Production Act Title III funds to support industry modernization. Likewise, the Department of Commerce should explore funding mechanisms to support capital equipment upgrades through federal subsidies and no-interest loans. Commerce Department authorities have never been fully leveraged to support an ambitious U.S. manufacturing strategy.

We are also interested in proposals to implement new credit facilities and other funding sources and tax incentives, including an extension of the bonus depreciation tax credit expiring in 2023, to help U.S. manufacturers revitalize manufacturing facilities, an effort which aligns with IPC's [Factory of the Future initiative](#).

- **Invest in R&D for the Entire Electronics Ecosystem.** Companies in Asia and Europe—with the support of national governments—are undertaking research that will enable them to lead the world in PCB fabrication and assembly. Meanwhile, in the United States, the focus is almost singularly on one or two segments of the electronics industry, e.g., semiconductors, to the exclusion of others. The DoD should pursue R&D in the areas of PCB fabrication and assembly that are necessary to support advancements in microelectronics.

Under the Tax Cuts and Jobs Act (TCJA), companies can fully deduct R&D costs from taxable income in the year that those costs occur. But starting in 2022, companies will be required to amortize their R&D costs over five years. IPC supports maintaining full expensing to avoid discouraging investment and economic growth.

Furthermore, IPC supports the current corporate income tax rate as it levels the playing field with other countries and provides greater opportunities for companies to invest in R&D and in their workforce.

- **Bring Back the U.S. Supply Chain.** A robust manufacturing strategy requires a more localized ecosystem for raw materials, components, and parts. The Biden administration recently concluded its 100-day supply chain review, and IPC was pleased to see it address the importance of the U.S. electronics supply chain. We are [encouraged](#) that the administration is committed to further dialogue and policy action. The electronics supply chain is an ecosystem, and all segments of the industry must be strong for the entire ecosystem to thrive.
- **Support Industry-Driven Standards.** Industry is developing standards to accelerate the migration to factories of the future, and industry should continue to drive this process. The U.S. Government can help by encouraging U.S. participation in global standards-setting as other countries do.

According to the [U.S.-China Economic and Security Review Commission's 2020 Report to Congress](#): "The Chinese government views technical standards as a policy tool to advance its economic and geopolitical interests. It has systematically tried to expand its influence in international standards-setting organization." In contrast, the approach taken by the U.S. government relies on the market dominance of U.S. companies. IPC supports the Commission's idea that a Committee on Technical Standards be created to coordinate U.S. government policy and priorities on international standards

IPC's ROLE

On behalf of electronics manufacturers, IPC is eager to be a partner in building an updated U.S. manufacturing industrial strategy.

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