KPMG insight on: semiconductor shortages

The problem: In a world increasingly reliant on all things digital, a sudden shortage of semiconductors—the silicon brains that run everything from cellphones to cars today—is seriously impeding the global manufacturing industry’s ability to deliver goods. Automakers suffered the most and their troubles filled the headlines, but the chip scarcity is also affecting companies that make PCs, smartphones, video games, as well as manufacturing equipment used for non-electronics product. And there are few signs of immediate relief.

This supply-chain emergency is the result of a perfect storm of natural and man-made events, including the COVID-19 pandemic. When the economy sputtered from lockdowns, many manufacturers canceled chip orders, but the switch to remote working triggered a surge in demand from companies providing computing and infrastructure devices. When the economic rebound began, chipmakers were already maxed out and couldn’t ramp up their production capacity fast enough to oblige all buyers (chip fabrication plants are staggeringly expensive and can take up to two years to build).

What you can do: The semiconductor industry has previously experienced cycles of supply/demand imbalance, and this won’t be the last. To avoid supply problems in the future, C-suite executives of companies using semiconductors will need to quickly adapt their operations to the reality of growing chip dependency.

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Your next steps
1. **Ditch just-in-time thinking**: Sourcing semiconductor components requires long-term planning that takes into consideration chipmakers’ constraints.
2. **Collaborate more closely with chipmakers**: Form partnerships, share long-term roadmaps and forecasts, and embrace direct sourcing.
3. **Invest in chip-making capacity**: Guarantee supply by reserving capacity from chipmakers.
4. **Reduce reliance on custom parts**: Use standard parts that can be modified/updated with software.
5. **Lift organizational barriers**: Create a dedicated team to oversee and streamline semiconductors supply chains.

The KPMG Strategy team has taken an in-depth look at the cause and effect of the ongoing chip shortages impacting the automotive industry. To find out the lessons for all industries relying on semiconductors, please download the KPMG report, “Surviving the silicon storm.”

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