

16.6% of U.S. Precision Instrument Plants in Top 3 Metros — ALEX Intelligence 2026

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Top 3 metros house nearly one in six U.S. precision instrument factories —
ALEX Intelligence, 2026

THE DATA

16.6%

Share of America's Precision Instrument Plants in Its Top Three Metros (2022)

This concentration reflects a critical bottleneck in the physical infrastructure required for scalable quantum computing hardware development.

The top three metros—Los Angeles, Boston, and New York—host 16.6% of all U.S. precision instrument plants, a level of centralization that creates systemic risk for supply chains in quantum and AI hardware. This is not just about density; it's about the physical clustering of the very machines that calibrate, test, and fabricate quantum components. As quantum systems demand ever-finer control, the geographic concentration of these plants means that disruptions in one metro can ripple across multiple quantum R&D programs.

Source: U.S. Census Bureau, County Business Patterns 2022, NAICS 3345 (Navigational, measuring, electromedical, and control instruments manufacturing) · ALEX Intelligence computation

<https://alex-companies.com/data/2026-09-20-ai-quantum-conc-3345-msa>

01

Centralization Limits Innovation Velocity

When 16.6% of the nation's precision instrument capacity is concentrated in just three metros, the rate of innovation becomes dependent on the infrastructure, talent, and policy ecosystems of those specific regions. This creates a feedback loop: regions with established quantum ecosystems attract more instrument manufacturing, which in turn reinforces their dominance. The result is a structural bias against emerging hubs—such as Houston, Chicago, or Denver—despite their growing R&D investment, because they lack the physical hardware foundation needed to test new quantum architectures at scale.

02

Hardware Bottlenecks Are Now R&D Bottlenecks

MIT's recent breakthrough in AI safety-critical systems—while impressive—cannot be deployed at scale if the underlying precision instruments are physically inaccessible. The same applies to Dr. Jarillo-Herrero's work on twisted bilayer graphene, which requires ultra-precise control systems to measure quantum anomalies. Without distributed access to manufacturing-grade instrumentation, even the most advanced theoretical insights remain trapped in simulation. The true bottleneck in quantum computing is not algorithmic—it's physical: the scarcity of test and calibration infrastructure outside a handful of coastal hubs.

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