

## When Does AI Become Infrastructure?

*By: Kylie C. Kim*



*Edited by Justin Stewart-Teitelbaum & Angela Landry*

## When Does AI Become Infrastructure?

*By: Kylie C. Kim*

Every generation of technology faces some version of the same question. At first, it's a product: companies compete to build a better version, customers pick among rivals, and market leaders come and go. Then, in some cases, the technology quietly becomes something more. Railroads were once just transportation companies until commerce came to depend on a select few, and they turned into infrastructure.

Telephone and telegraph networks went from commercial services into systems the rest of the economy couldn't function without. The internet took a similar route, evolving from a patchwork of private networks into a foundational platform that governments, businesses, and individuals now treat as indispensable.

Artificial intelligence isn't there yet. But the question of whether it will get there is starting to surface, and the answer will matter for competition law.

### I. Infrastructure Is an Economic Concept Before It's a Legal One

Infrastructure doesn't have a settled place in antitrust doctrine. Courts define markets, measure market power, and police exclusionary conduct. They don't typically ask whether some technology counts as infrastructure in a broader economic sense.

Even so, competition disputes keep cropping up in industries that function like infrastructure regardless of whether a court ever uses the word: electric grids, railroads, payment systems, telecom networks.<sup>i</sup> What these industries have in common is that their value isn't really in the product itself. A railroad matters because of the commerce it carries, not because of the actual railroad. A telecom network matters because of the business and communications that move across it, not because of the network.

Two dynamics tend to generate competition disputes in infrastructure industries. The first is dependence: other markets build on top of the infrastructure the way commerce was built on top of rail lines. The second is the absence of meaningful alternatives. A shipper in a town served by only one or two railroads is effectively captive to whatever



those railroads choose to charge or provide. That combination—dependence on one side, no real alternative on the other—is what tends to invite antitrust scrutiny, whether framed as bottleneck control, essential-facilities concerns, or disputes involving dominant platforms and network industries.

Those same dynamics provide a useful framework for thinking about a foundation model. The relevant questions become how dependent other businesses are becoming on it, and how many real alternatives would they have if they wanted to switch.

## **II. Foundation Models Exhibit Infrastructure-Like Characteristics**

The first question is easy to answer. Foundation models already serve a function familiar from traditional infrastructure. Businesses build customer-service tools on top of them; developers use them to write code; lawyers use them for research; healthcare companies use them to turn patient visits into clinical notes; and startups build whole new products around them. The model isn't always the end product—often it's an input.

That role resembles other technology platforms that eventually became indispensable to downstream businesses. In *Microsoft* and Epic's cases against Apple and Google, the concern was that other businesses had come to depend on the platform to reach customers: software developers depended on Windows; app developers depended on Apple's App Store and Google Play Store.<sup>ii</sup> As that dependence deepened, disagreements over the platform's rules turned into disputes about competition itself. Foundation models may eventually occupy a similar position if businesses keep building more of their products and services around a small number of leading models.

The second question is harder. For now, foundation models are competing head-to-head: customers choose among ChatGPT, Claude, Gemini, and a growing list of alternatives, and companies compete on quality, speed, price, and capability. But the scale of investment and the deepening web of partnerships among the leading AI developers are fueling concern that this field could narrow quickly. Once that happens, competition may hinge less on which technology is best and more on who



can get access to it, on what terms, and under what conditions.

Some scholars already assume AI is headed in that direction. Tejas N. Narechania and Ganesh Sitaraman find concentration across the AI stack—hardware, cloud, models, and applications—and call for governing it with antimonopoly tools built for networks, platforms, and utilities.<sup>iii</sup> Jai Vipra and Anton Korinek reach a similar conclusion at the foundation-model layer specifically: high training costs and low deployment costs drive large economies of scale and scope, strong first-mover advantages, and barriers to entry in talent, data, compute, and IP—forces that all point toward natural monopoly.<sup>iv</sup>

Regulators and private litigants have already similarly begun scrutinizing whether control over key AI inputs—even if not necessarily foundation models themselves—could shape competition throughout the broader AI ecosystem. The Federal Trade Commission’s January 2025 staff report on the Microsoft-OpenAI, Amazon-Anthropic, and Google-Anthropic partnerships flagged exactly this kind of lock-in risk,<sup>v</sup> a pending lawsuit accuses Microsoft of using an exclusive compute deal to restrict the

compute input OpenAI needed to compete with Microsoft’s own AI products,<sup>vi</sup> and competition authorities have increasingly focused on Nvidia’s position as a dominant supplier of the chips that power modern AI systems.<sup>vii</sup>

### **III. What This Means for Competition Law**

The open question of concentration means whether foundation models will eventually become infrastructure remains uncertain. Technology markets are hard to predict: today’s dominant model could be outdated in a few years, open-source alternatives could close the gap, and new technical approaches could loosen any one provider’s grip. Courts have good reason to be cautious about assuming permanence in an industry that moves this fast.

Still, antitrust law has long treated control over assets other people depend on as a different kind of problem than ordinary product competition. When a technology is viewed primarily as a product, antitrust analysis tends to focus on traditional questions of market power, pricing, output, and consumer choice. Competition is assumed to occur among rival products, and market leadership alone is not unlawful.



The fact that one company builds the most popular foundation model does not itself create an antitrust problem.

That changes once a technology becomes a platform other firms depend on. Questions of access, interoperability, and participation move to the forefront, and disagreements that might otherwise look like ordinary commercial disputes start to resemble fights over who gets to participate in the ecosystem at all. In some cases, those disputes may also test the limits of *Trinko's* no-duty-to-deal principle.<sup>viii</sup>

The shift also helps explain why many emerging AI disputes already look familiar to antitrust lawyers. Disputes over cloud-computing partnerships, access to foundation-model APIs, and the rules governing interoperability and safety rarely come up when firms are simply competing to sell rival products; they show up once businesses depend on a shared technological layer to operate at all.

If foundation models come to occupy that role as infrastructure, the rules governing their usage may attract the same scrutiny that courts have applied to platform rules in

*Microsoft* and Epic's cases against Apple and Google. Similar concerns animated the Sixth Circuit's decision in *Realcomp II Ltd. v. FTC*, 635 F.3d 815 (6th Cir. 2011), which held that a multiple listing service's display rules reduced the visibility of certain listings and disadvantaged a category of competitors operating within the platform. The lesson is not that every rule governing a shared platform is suspect, but that rules that appear operational or technical on their face can nonetheless affect who is able to compete effectively.

Treatment of foundation models as infrastructure could also influence how policymakers think about remedies. Antitrust disputes involving infrastructure-like industries have often produced demands for access, interoperability, or nondiscriminatory participation rather than structural separation. Whether such remedies would be appropriate in the AI space is not yet clear. But the fact that these conversations are already occurring suggests that the question of whether AI is infrastructure may shape the coming wave of AI competition disputes.

---

<sup>i</sup> See *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973); *United States v. Terminal Railroad Assn. of St. Louis*, 224 U.S. 383 (1912); *SCFC ILC, Inc. v. Visa USA, Inc.*, 36 F.3d 958 (10th Cir. 1994); *MCI Communications Corp. v. AT&T*, 708 F.2d 1081 (7th Cir. 1983)).

<sup>ii</sup> See *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001); *Epic Games, Inc. v. Apple Inc.*, 67 F.4th 946 (9th Cir. 2023); *Epic Games, Inc. v. Google LLC*, 147 F.4th 917 (9th Cir. 2025).

<sup>iii</sup> Tejas N. Narechania & Ganesh Sitaraman, *An Antimonopoly Approach to Governing Artificial Intelligence*, 43 YALE L. & POL'Y REV. 95 (2024), <https://yalelawandpolicy.org/antimonopoly-approach-governing-artificial-intelligence>.

<sup>iv</sup> Jai Vipra & Anton Korinek, Market Concentration Implications of Foundation Models: The Invisible Hand of ChatGPT, BROOKINGS (Sept. 7, 2023),

<https://www.brookings.edu/articles/market-concentration-implications-of-foundation-models-the-invisible-hand-of-chatgpt/>.

<sup>v</sup> FTC, Partnerships Between Cloud Service Providers and AI Developers: FTC Staff Report on AI Partnerships & Investments 6(b) Study (Jan. 2025), <https://www.ftc.gov/reports/ftc-staff-report-ai-partnerships-investments-6b-study>.

<sup>vi</sup> See *Bryant, et al. v. Microsoft Corp.*, No. 3:25-cv-08733 (N.D. Cal., filed Oct. 2025).

<sup>vii</sup> See, e.g., Nvidia (NVDA) Subpoenaed by Justice Department in Antitrust Investigation, Bloomberg (Sept. 3, 2024), <https://www.bloomberg.com/news/articles/2024-09-03/nvidia-gets-doj-subpoena-in-escalating-antitrust-investigation>.

<sup>viii</sup> See *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004).