

From platform to ecosystem competition

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To repeat the past is to be doubly wrong: *“To do what has been so successful in the past is always the wrong thing; and to do more of it is to be doubly wrong. It is simply not adequate [...] to do a little better what by now almost everybody can do, and [...] is trying to do”* — Peter F. Drucker (1974)¹

Executive summary

The accelerating pace of digital transformation and global change is outpacing traditional business models, requiring companies to evolve toward more adaptive organizations. One solution is business ecosystems, which are inherently more resilient and flexible. Fortunately, technology has evolved to meet these demands. Dataspace technology enables secure, sovereign data sharing, providing the data fuel needed to drive collaboration across company boundaries and even the next level of AI success. Its decentralized architecture, much like the Internet, makes it a natural fit for ecosystem-based collaboration. With first data ecosystems, such as Catena-X, already taking shape, companies must urgently upgrade their capabilities to respond.²

Overrun and outrun: Engine rebuild required – now

The acceleration of change is outpacing a traditional business’s ability to adapt:

First, **technology innovation is accelerating** at an unprecedented pace. Generative AI tools like ChatGPT are breaking adoption records. Where radio took nearly 100 years to reach 90% penetration and television about 50, the internet hit 20% in just two years. ChatGPT, launched in November 2022, surpassed 100 million users in just two months. Meanwhile, the **range of technology options is expanding** rapidly. Take your next cars: once the choice was gas or diesel—now it includes battery-electric, hybrids, and hydrogen fuel cells. If that feels complex, imagine

¹ Drucker, P. 1974. Letter to Mr. Richard H. Jenrette of Donaldson, Lufkin & Jenrette, Inc. Correspondence from Peter Drucker (1974-06-17), Drucker Archive, Drucker Institute, Claremont Graduate University, Claremont

² The author has been involved in Catena-X, the first end-to-end, collaborative, and open data ecosystem for the automotive industry, from its inception. He wrote Deutsche Telekom into the €250 million Catena-X Consortium, contributing from the initial 15-page government proposal to the final 1,700-page agreement that unified 28 partners, including BMW, Mercedes-Benz, Volkswagen, leading suppliers like Bosch and ZF, and software vendors such as SAP. Much like DARPA funding accelerated the Internet’s core technologies, the three-year (2021–2024) Catena-X Consortium leveraged government matching funds, serving as the technology incubator for today’s Catena-X data ecosystem. When the project adopted an agile structure under the SAFe framework, the author took on an operational role as part of the three-member Product Management team, with overall responsibility for the design and delivery of the software—now available as an open-source reference implementation through the Eclipse Foundation’s Tractus-X project

being an automotive CEO who must place bets today on technologies that won't hit the market for four years—and stay profitable for six beyond that.

Second, the **business environment is growing more volatile and less certain**. Ever-longer, often byzantine global supply chains dramatically increase a company's expose to natural disasters, geopolitical conflict, and economic instability. Disruptions in one region ripple worldwide—a factory shutdown in China can trigger shortages across Europe. The old joke about a bag of rice tipping over in China affecting Europe is now reality.

In short, innovation at “China speed,” deep global interconnectedness, and mounting uncertainty demand a new organizational model—one that sustains profitability while being inherently more adaptive and resilient.

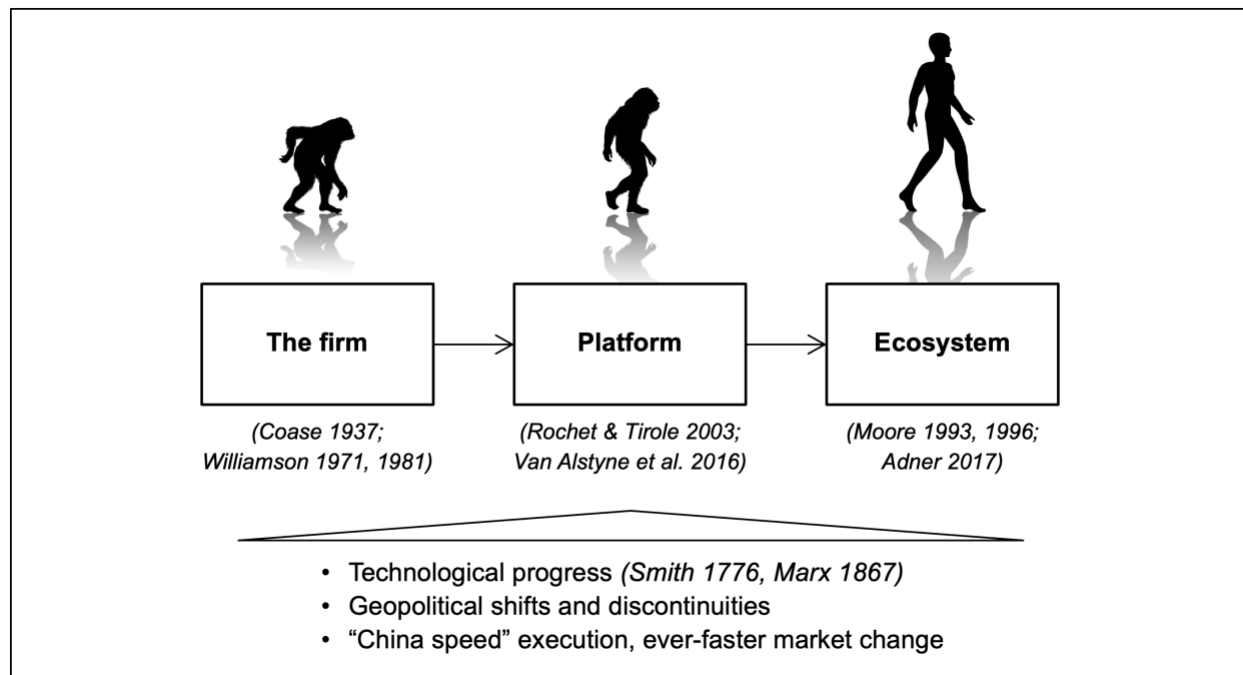


Figure 1: From the firm to platform to ecosystem: Evolution of the locus of value creation

Beyond platforms: The rise of ecosystems

Seeds grow into trees, children grow into adults, startups evolve into companies, and economic models are growing up as well—from hunter-gatherer systems to specialization with conveyor-belt automation to platforms and now ecosystems. Figure 1 illustrates how competitive dynamics have reshaped the **organization of value creation**, evolving from the firm as the dominant unit to platform models and, today, to ecosystem-level value creation.

Platforms. Some of the world's most valuable companies have become platform businesses with two-sided markets, reshaping entire industries. Merriam Webster defines platform in the computing context as “an application or website that serves as a base from which a service is provided”. Popular examples include leading tech companies: Google, on one side attracting users with search and infotainment, and on the other side monetizing their attention through advertisers; Amazon, both a retailer and a marketplace for vendors (Rochet & Tirole 2006, 2003). Today, ecosystems are emerging to supplant platforms—enabled by new decentralized technology, which allows for the ongoing pursuit of more profitable, adaptive, and resilient business systems.

Decentralized technology. While Adam Smith and Karl Marx—two of the most influential pioneers of economic system theory—held fundamentally different views on societal change, both traced its roots to technological progress (Smith 1776, Marx 1867). So, what’s changed technologically that’s prompting companies—and their investors—to move on from platforms, just as many have finally mastered them? The answer lies in a continued shift toward **decentralized systems** that offer inherently greater flexibility and resilience: a progression from Web1 (Internet and e-commerce), through Web2 (mobile and social media), and now to Web3 enabling business ecosystems at scale.

For an overview of the evolution from Web1 to Web3 and its business implications, please see [Data 4: Dataspace super-apps – Compendium](#).

Business ecosystems. are more than just partnerships—they are networks where the whole delivers more than the sum of its parts, proving that 1 + 1 can equal 3. They allow for best-of-breed solutions, true end-to-end customer journey optimization substituting own capital or debt with collaboration, even involving competitors. Their existence and superiority are not theoretical; they mirror biological ecosystems, which have long demonstrated adaptability, resilience, and superior performance in nature. Business has already built success stories by **mimicking biological systems**, using nature as a blueprint for solving complex challenges. A prime example is GenAI, which borrows neural networks from biology to replicate biological learning. The challenge, however, lies not in the concept, but in the execution. Here too, GenAI offers a useful parallel—it took decades of evolution for the technology to deliver meaningful results, and then it suddenly exploded (Bloomberg 2025).

For a brief review, please see [Data 1: Ecosystems 2.0: Built on data – Compendium](#)).

Dataspaces enabling scalable ecosystems

Europe’s top regulator, the European Commission, together with key member state governments—including France and Germany—has taken a leading role in advancing technology for **industrial data sharing** with built-in sovereignty protection to safeguard Europe’s sizable industrial base. Drawing inspiration from the U.S. DARPA model, which was instrumental in the development of the Internet, policymakers have sponsored the incubation of a shared software stack to overcome fragmentation across 27 member states and coordinate efforts within an SME-dominated industrial landscape. This solution has taken shape as **dataspace network technology**—a system that enables cross-organizational data transactions with embedded governance (Guggenberger et al. 2025). It allows data to flow across silos and between organizations, while ensuring that providers retain full control over access and usage rights. It also offers an immediate cost advantage: instead of storing data in centralized repositories 'just in case,' it allows data to remain at the source and be accessed only when needed. With data volumes projected to explode, this approach may even become an obvious choice. Strategically, dataspace provide the foundation for **data ecosystems**, supporting value creation in a coopetition setting as well as complementing generative AI by providing domain-specific training data and enabling Retrieval-Augmented Generation (RAG) for more context-aware outcomes.

For the 3-layer ecosystem software stack model, see our CEO-2-pager: [Data 0: README](#).

Act on two horizons: Pilot today, build tomorrow

In closing, and heeding Peter Drucker’s guidance that “tomorrow is being made today” (Drucker 1980), act on two horizons at once. Today, pick one high-value use case, launch a governed pilot

with select partners, ship an MVP within a quarter, and iterate with clear KPIs and decision gates. In parallel, use the pilot's iterations to design the "tomorrow" model: establish processes for the data-product lifecycle, partner onboarding, usage-rights governance, and SLA reviews, and formalize the new roles and job descriptions required to run them. Most important, use the pilot to reset the culture toward collaboration and to adopt a software-first operating model, less like a traditional manufacturing enterprise and more like an agile software business.

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