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The New Network Effect:
How AI Transforms the Value of Enterprise Software

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The tension between building and buying technology is as old as industry itself. Henry Ford once owned rubber plantations and sheep farms to secure materials for his cars. Today's semiconductor industry, by contrast, has largely split between companies that design chips and those that manufacture them. Each era brings its own version of this fundamental choice.

Now artificial intelligence (AI) has reignited this debate in enterprise software. Some companies, like fintech firm Klarna, have created a bit of a stir by suggesting they can use AI to write code and build some of their own core business systems rather than buy them from software vendors. This raises a fundamental question: In an era where AI can write code and replicate some aspects of complex software systems, how should we measure the value of enterprise software and the software as a service (SaaS) sector?

This isn't merely theoretical — it strikes at the heart of enterprise software economics and could reshape how businesses approach some important technology investments. But viewing SaaS offerings merely as replaceable code bases misses a crucial point: Some of the most defensible SaaS businesses in this emerging era aren't just selling code, or even software per se. They're selling access to actionable business intelligence that derives from the cumulative knowledge, data, and capabilities enabled by their software and that individual customers would find challenging to replicate.

Software code by itself is not a defensible business moat — it almost never was. Business intelligence built on the combination of code, data, inference, and algorithms at scale is a highly defensible moat because there is nothing more important and valuable to many decision makers.

To see how these network effects create real business value, consider how Coupa, a business spend management platform in Thoma Bravo's portfolio, helps global enterprises navigate procurement decisions. With more than $6 trillion in transactions flowing through its network, Coupa doesn't just process individual company spend data — it creates collective intelligence that becomes more valuable as the customer base grows. When a company joins the platform, they quickly benefit from insights drawn from thousands of other businesses and contribute to the network's growing intelligence. This represents the essence of modern SaaS value creation: a virtuous network effect where a new customer both benefits from and enhances the collective knowledge of the system and the entire customer base.

This aggregate intelligence can manifest in a few highly sophisticated — and highly valuable — ways:

First, consider data synergies and pattern recognition. The deeper power of modern SaaS platforms lies not just in managing data, but also in drawing insights from it at enormous scale. Imagine a city planning department considering traffic flow adjustments: A sophisticated software platform, learning from thousands of similar changes across hundreds of cities, could simulate precise outcomes. What happens if you shorten a green light interval by two seconds? How might that ripple through the morning rush hour? An algorithm training on a massive dataset that has hidden within it subtle patterns becomes exponentially more valuable than one limited to a single city's experience. The power of AI in SaaS is that weak signals, at scale, become actionable insights.

Second, there's collective learning and improvement. The code and functionality in a modern SaaS platform represent years of incremental improvements, driven by diverse needs and feedback from a large customer base and millions of use cases. This "learn-by-doing" over time and at scale creates a depth of functionality and edge-case handling that would be challenging-to-impossible for any single organization to match.

Third, consider dynamic compliance intelligence. Regulatory requirements constantly evolve, often in complex and nuanced ways. Leading SaaS providers amortize the cost of staying ahead of these changes across their entire customer base, providing a level of compliance assurance that would be prohibitively expensive for most individual companies to maintain in-house. It's basically the same logic for why companies hire outside law firms, after all.

Finally, and perhaps most importantly, sophisticated SaaS systems are becoming "what-if" engines that enable complex modeling, simulation, and prediction of the consequences of decisions – the holy grail for executives aiming to grow a business. The natural evolution of this capability is coming into view: high-fidelity digital twins, where business experiments can be run in silico at fractions of cost. A production manager asks, what if we shifted a certain amount of production from facility A to facility B, where energy costs are cheaper at night but shipping costs are higher? What if we substituted one material for another with slightly different properties? These are the kinds of questions that next-generation SaaS platforms can help answer through simulation rather than costly real-world experimentation.

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∧naplan

Anaplan's connected planning platform shows how pattern recognition creates value at scale. When analyzing potential business decisions, the platform learns from thousands of similar scenarios across its customer base to help identify subtle patterns and potential outcomes that would be invisible to any single company. Each customer's experience improves the predictive capabilities for all, creating a continuously evolving intelligence network.

proofpoint.

Proofpoint demonstrates network effects in cybersecurity. When a customer encounters a new type of attack, its customers benefit from that specific intelligence, as well as the pattern and anomaly recognition capabilities that it enables. This collective defense system becomes stronger with each new participant, creating a level of awareness, prevention, and protection difficult for any individual company to develop or maintain independently. Real-time and actionable threat intelligence shared across the entire customer base enables more effective response to emerging threats.

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AI systems are expected to increasingly do more than answer these kinds of fundamental questions. The best modern systems are learning to explore the possibility space in ways that humans often do not. In other words, to suggest what questions that production manager — or her CEO — *should* be asking about their business, but may not have even thought of yet.

For private equity firms and their limited partners, this evolution demands a more nuanced approach to valuation that bridges conventional financial metrics with these emerging forms of value. LPs are increasingly asking, "Will this company actually matter in five years?" This shift — from what simply makes money at this particular moment to what really matters — reflects growing attention to long-term relevance in a period of overlapping market and technology uncertainties.

The next wave of enterprise software value creation won't come from simply writing better code or automating existing processes. We expect it will emerge from platforms that harness collective intelligence at unprecedented scale, enabling businesses to experiment, learn, and adapt faster than ever before. We believe the most valuable SaaS companies won't just be selling software — they'll be selling access to accumulated business intelligence that becomes more valuable with every interaction, every data point, and every insight generated.

For investors and operators alike, the key question isn't whether AI will disrupt SaaS — it's how to identify and nurture the platforms that will define this new era. The winners will be those that build powerful network effects into their core offerings, creating value that grows exponentially as their networks expand. That's the kind of sustainable competitive advantage that has always separated good businesses from great ones.

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Based in San Francisco, he joined the firm in 2005. Holden is responsible for finding and executing new deals, monitoring and growing the portfolio as an active board member, and helping to manage the firm. Previously, he was with Morgan Stanley Capital Partners in London, Thomas H. Lee Partners in Boston, and Morgan Stanley in New York. Additionally, Holden is the President and Chair of the Spaht Family Foundation, a non-profit he founded in 2019 focused primarily on mental health, the environment, and the arts. He also formerly served as Chair of the Board of Trustees for Schools of the Sacred Heart San Francisco. A Fulbright Scholar, Holden earned his BA in Economics at Dartmouth College and his MBA at Harvard Business School.

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