Software Enterprise: The Changing Ecosystem

Artisan Non-U.S. Small-Mid Growth Strategy

PORTFOLIO MANAGER
Viewpoints

December 2023

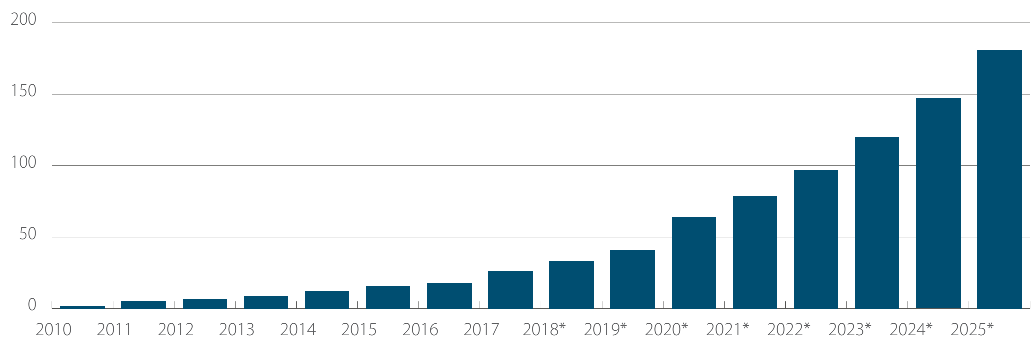
The Evolving Landscape

The big drivers of economic changes in the software industry—the ubiquity of digitalization globally, software's transition to the cloud and the proliferation of artificial intelligence (AI)—are of immense interest to us. Highlighting the ubiquity of digitalization globally, businesses across every industry are facing competitive pressure to automate their processes and gain insights from the vast amounts of data generated, while securing their data and global supply chains. Software companies that fulfill these needs will have meaningful opportunities for many years to come. The second driver is software's transition to the cloud, which provides software companies the potential for higher growth and higher customer lifetime value. Businesses that fail to move to the cloud will likely become irrelevant, left with antiquated software features and the likelihood that legacy software will be discontinued. Thus, regardless of the macroeconomic environment, businesses will have to spend on software with rich feature sets to remain competitive. The third important driver is the proliferation of AI. In addition to changing the paradigm for programmers and potentially the speed at which products iterate, AI will help elevate the value proposition of many software tools toward decision-support for management. This evolution creates greater impact for customers, and therefore increased pricing power for software providers. These structural forces are reshaping the future of business

Rezo Kanovich
Portfolio Manager
25 Years Investment Experience

Data is Growing in a Hyperbolic Manner

Exhibit 1. Volume of data/information created, captured, copied and consumed worldwide from 2010 to 2025 (in zettabytes)



Source: https://www.statista.com/statistics/871513/worldwide-data-created/

*The data was taken from various publications released over several years: Forecast for the years 2018 and 2019 as of 2018; Forecast for 2020 as of May 2021; Forecast for 2021 to 2025 as of March 2021 based on figure for 2020 provided by the source. Figures were rounded to provide a better understanding of the statistic. The figures from 2021 to 2025 were calculated by Statista based on the 2020 forecast figure and the five-year compound annual growth rate (CAGR) of 23 percent provided by the source. The figures prior to 2020 are based on IDC's forecast from late 2018.

The number of Internet of Things (IoT) devices worldwide is forecast to almost triple from 9.7 billion in 2020 to more than 29 billion IoT devices in 2030.

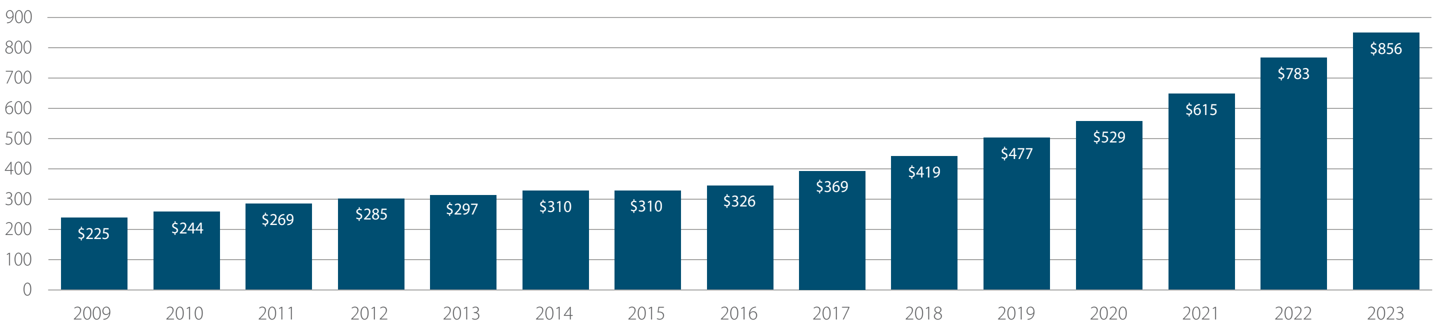
Source: https://www.statista.com/statistics/1183457/iot-connected-devices-worldwide/

The Benefits of Cloud

Everything tech is moving to the cloud. No longer a novelty or a "nice to have," cloud is a "must have" with all the innovation in software taking place there. The main barriers in terms of hardware infrastructure and security concerns are fading, and the pressures to cloud adoption are increasing. Providers can no longer develop two tracks of solutions—one for on-premise software and one for software as a service (SaaS)—and timelines for customers to migrate legacy software to the cloud are compressing. Customers must catch up with the latest feature innovations or risk being at a severe competitive disadvantage. Global enterprises and small businesses alike continue to meaningfully grow their proportion of information technology spending on cloud computing. SaaS is forecasted to reach over $400 billion in global market size by 2026.

Cloud models give their customers greater flexibility and have attractive economics to the vendors, such as benefits of scale, attractive profitability profiles, high customer lifetime value and recurring revenues. SaaS solutions versus on-premise software also tend to be better architected products that promote faster feature innovation and a more seamless rollout of updates without the cumbersome process at the individual client level. This, in turn, provides a better customer experience, increasing customers' willingness to pay. Additionally, economics are more favorable for SaaS vendors, as subscription-based models versus license-based models result in recurring revenues with predictability that allow them to better plan for longer-term investments. Lastly, the architecture also makes it easier to develop new products, which leads to more upsell and cross-sell opportunities that increase revenue and profit growth.

Exhibit 2. Enterprise Software Spending Forecast (Billions of U.S. Dollars)



Source: https://www.statista.com/statistics/203428/total-enterprise-software-revenue-forecast/

The Coming of Age of AI

Big data coupled with the rapid conversion to cloud computing have created the conditions for AI to evolve from being a concept to a reality. Once a tool with limited accessibility, AI's democratization has accelerated its implementation across public and private entities around the world. The ability to act on data-driven insights is fueling innovation across every industry. For example, health care companies are incorporating AI for remote diagnostics and optimized cancer radiation therapies, and financial companies are using AI to better detect fraud.

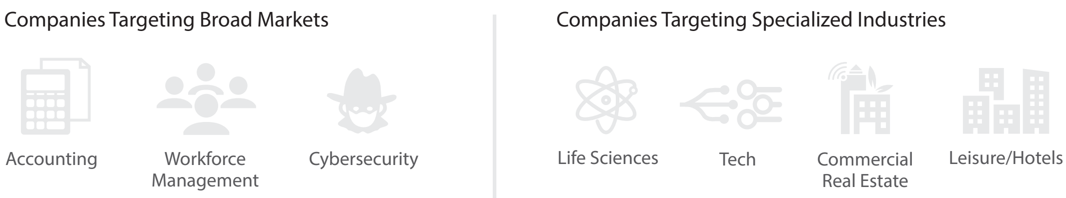
AI's growing prominence in data analytics also presents exciting opportunities for smaller, more agile enterprise software companies to create disproportional value for their customers, resulting in sustained pricing power for both. Customers' willingness to pay tends to be directly related to the economic value derived from the product, and this economic value is rising. A richer feature set and the promise of cloud-delivered AI via software means businesses can avoid expensive hardware purchases, lower maintenance and overhead costs and perform higher value-added services. In addition, switching from one SaaS solution to another is difficult once a business fully integrates it, creating sticky revenue streams for providers. We thought it would be interesting to present two ways one can group these software companies—those that serve a broad array of industries, and those that specialize in a niche industry or in a subset of industries.

Examples of the former group with large and growing addressable markets, diverse across industries, include NICE, Fortnox and CyberArk. NICE has incorporated AI across its key business segments. In its customer interaction software, AI is enabling businesses to use real-time predictive insights to better serve customers by directing them to the appropriate representative. In its workforce management solutions, AI is powering NICE's robotic process automation tools and is enabling massive deployment of analytics and management tools that meaningfully enhance productivity. Lastly, NICE has incorporated AI in its financial fraud and compliance platform, Actimize. In aggregate, AI is facilitating NICE's ability to meaningfully broaden the number of seats within its customers' enterprises and to cross-sell high value analytics.

Fortnox is a provider of accounting software for small businesses. The company has also created an ecosystem of products available in an online marketplace for invoicing, inventory, payroll and expense management as well as higher margin financial services, such as real-time credit scoring and insurance brokering. The successful integration of AI has enabled Fortnox to meaningfully grow its customer base, deliver double-digit revenue growth for the past five years and generate healthy cash flows from operations.

CyberArk is a global leader in identity security. It offers a complete platform of end-to-end solutions that includes privileged access management—which prevents unauthorized entities from accessing an organization's most sensitive, password-protected systems; workforce access—which provides single sign-on solutions with multi-factor authentication; and endpoint privilege security—which protects workstations and servers. As the trend toward digitization accelerates across many industries, the volume and impact of cyberattacks are increasingly elevated. These forces are driving higher demand for cybersecurity protection, requiring greater specialization and allowing best-of-breed players to emerge. Additionally, as the transition to cloud progresses and the network architecture evolves, comprehensive cybersecurity solution providers like CyberArk should continue to benefit from increased recurring revenue and sticky customer relationships.

Exhibit 3. Horizontal and Vertical-Oriented Software Enterprise Companies



If the above are examples of "horizontal" solutions, the following can be thought of as "vertical" solutions. Characteristics of the latter group include specialty in an industry or set of industries, especially in those with a high degree of complexity, deep understanding of individual customer needs, nimbleness, and a high degree of difficulty for product substitution. Being "one to many" allows vertical software companies to aggregate and anonymize data and become the optimal user of the data. Model N and Altus are examples of such companies.

Model N is using AI to optimize customer contracting software for the life sciences and high-tech industries, which have a broad base of sophisticated customers, complex pricing structures and government regulations that differ by geography. AI-enabled tools have proven more effective than humans at crafting optimal discount structures, which result in very high savings for Model N's customers, including many large industry leaders. Model N continues to amass data, and the more data it has, the more it can attract additional companies into its ecosystem. The disproportional value Model N can create supports sustained value creation opportunities for customers and the company alike.

Altus develops Argus, the de facto "Bloomberg-like" software solution for the global commercial real estate industry. Argus performs many essential tasks, such as valuation analyses, appraisal management, risk scenario analyses, portfolio management, data consolidation for reporting and document creation. In addition to providing automation tools, the company is using AI to aggregate and analyze vast amounts of real estate transaction data for its customers, making an opaque industry more transparent, and to ingest and analyze non-real estate data, such as pedestrian traffic and volumes per cell phone tower, to highlight real estate values and pricing in interesting ways. A network effect of sorts has emerged, as smaller owners, brokers and financial service providers also want access to the data that nearly every large commercial real estate owner has as customers of Altus. As this industry increasingly digitizes and transitions to the cloud, Altus' ability to monetize its high-value market intelligence meaningfully increases.

Lightspeed provides point-of-sale (POS) and enterprise resource planning software functionality for retailers and restaurants. Far more than just a payment software company, Lightspeed offers a suite of differentiated and value-added solutions such as inventory management, advanced analytics, e-commerce enablement, workflow integration and other products to meet the complex needs of its customers. For restaurants, Lightspeed uses AI and blockchain technology to track food preferences, forecast sales, reduce food waste, optimize menus and manage promotions and loyalty programs. Similarly, retailers enjoy access to the retail analytics, sales and payment tools thanks to the AI capabilities in Lightspeed retails POS system that directly help their bottom line. Digitalization of these industries have been greatly accelerated in recent years and is set to continue, positioning companies like Lightspeed for further growth at the center of these networks.

Our Approach to Investing

We seek to be long-term owners in high quality businesses exposed to structural tailwinds that should drive sustainable growth in end markets. We look for well-run, innovative companies with meaningful competitive advantages, structurally high returns on capital, strong balance sheets and the ability to self-finance growth. Wonderful businesses, however, are rarely available at attractive prices, so we look for ways to acquire them in a contrarian fashion in times of adversity or perceived adversity. We aim to double our shareholders' money over five years and identify smaller companies that can become the industry leaders of tomorrow.

The transition occurring in software has created an environment for small companies to succeed. This monumental shift, like all those that have come before it, will create winners and losers. Our investment approach within technology is highly nuanced, focused on company fundamentals and sustainability, and is price disciplined. Regardless of the prevailing risk-on/risk-off environment, technology continuously creates value for its customers. If one creates disproportional value and respects long-term customer relationships, then one should be able to exercise pricing power in a disciplined fashion and be harder to replace. AI's increasing role in data analytics opens the next frontier for enterprise software companies, and we are very excited about how smaller companies can use this to their advantage. Compounding high returns on capital in such businesses, in our view, will serve our investors well over the long term.

For more information: Visit www.artisanpartners.com

Current and future portfolio holdings are subject to risk. The value of portfolio securities selected by the investment team may rise or fall in response to company, market, economic, political, regulatory or other news, at times greater than the market or benchmark index. A portfolio's environmental, social and governance ("ESG") considerations may limit the investment opportunities available and, as a result, the portfolio may forgo certain investment opportunities and underperform portfolios that do not consider ESG factors. Growth securities may underperform other asset types during a given period. International investments involve special risks, including currency fluctuation, lower liquidity, different accounting methods and economic and political systems, and higher transaction costs. These risks typically are greater in emerging markets. Securities of small- and medium-sized companies tend to have a shorter history of operations, be more volatile and less liquid and may have underperformed securities of large companies during some periods.

Portfolio Manager: Artisan Non-U.S. Small-Mid Growth Strategy—Rezo Kanovich

This summary represents the views of the portfolio manager as of 31 Dec 2023 and is subject to change without notice. Security examples are for informational purposes only and are not representative of the entire portfolio. There is no guarantee that investment within the securities mentioned will result in profit. While the information contained herein is believed to be reliable, there is no guarantee as to the accuracy or completeness of any statement in the discussion. This material is for informational purposes only and should not be considered as investment advice or a recommendation of any investment service, product or individual security.

Unless otherwise indicated, the Artisan Strategy characteristics relate to that of an investment composite or a representative account managed within a composite. It is intended to provide a general illustration of the investment strategy and considerations used by Artisan Partners in managing that strategy. Individual accounts may differ, at times significantly, from the reference data shown due to varying account restrictions, fees and expenses, and since-inception time periods, among others. Where applicable, this information is supplemental to, and not to be construed with, a current or prospective client's investment account information.

For the purpose of determining the portfolio's holdings, securities of the same issuer are aggregated to determine the weight in the Strategy. The holdings mentioned above comprised the following percentages of a representative account within the Composite's total net assets as of 31 Dec 2023: Nice Ltd 3.9%, CyberArk Software Ltd 2.0%, Lightspeed Commerce Inc 1.6%, Model N Inc 0.9%, Fortnox AB 0.8%, Altus Group Ltd 0.5%. Portfolio holdings are subject to change without notice and are not intended as recommendations of individual securities.

This material is provided for informational purposes without regard to your particular investment needs. This material shall not be construed as investment or tax advice on which you may rely for your investment decisions. Investors should consult their financial and tax adviser before making investments in order to determine the appropriateness of any investment product discussed herein. We expressly confirm that neither Artisan Partners nor its affiliates have made or are making an investment recommendation, or have provided or are providing investment advice of any kind whatsoever (whether impartial or otherwise), in connection with any decision to hire Artisan Partners as an investment adviser, invest in or remain invested in any funds to which we serve as investment adviser or otherwise engage with Artisan Partners in a business relationship.

Artisan Partners Limited Partnership (APLP) is an investment adviser registered with the U.S. Securities and Exchange Commission (SEC). Artisan Partners UK LLP (APUK) is authorized and regulated by the Financial Conduct Authority and is a registered investment adviser with the SEC. APEL Financial Distribution Services Limited (AP Europe) is regulated by the Central Bank of Ireland. APLP, APUK and AP Europe are collectively, with their parent company and affiliates, referred to as Artisan Partners herein.

Artisan Partners is not registered, authorized or eligible for an exemption from registration in all jurisdictions. Therefore, services described herein may not be available in certain jurisdictions. This material does not constitute an offer or solicitation where such actions are not authorized or lawful. Further limitations on the availability of products or services described herein may be imposed.

This material is only intended for investors which meet qualifications as institutional investors as defined in the applicable jurisdiction where this material is received, which includes only *Professional Clients* or *Eligible Counterparties* as defined by the Markets in Financial Instruments Directive (MiFID) where this material is issued by APUK or AP Europe. This material is not for use by retail investors and may not be reproduced or distributed without Artisan Partners' permission.

In the United Kingdom, issued by APUK, 25 St. James's St., Floor 3, London SW1A 1HA, registered in England and Wales (LLP No. OC351201). Registered office: Reading Bridge House, Floor 4, George St., Reading, Berkshire RG1 8LS. In Ireland, issued by AP Europe, Fitzwilliam Hall, Fitzwilliam Pl, Ste. 202, Dublin 2, D02 T292. Registered office: 70 Sir John Rogerson's Quay, Dublin 2, D02 R296 (Company No. 637966).

Australia: This material is directed at wholesale clients only and is not intended for, or to be relied upon by, private individuals or retail investors. Artisan Partners Australia Pty Ltd is a representative of APLP (ARBN 153 777 292) and APUK (ARBN 603 522 649). APLP and APUK are respectively regulated under US and UK laws which differ from Australian laws and are exempt from the requirement to hold an Australian financial services license under the Australian Corporations Act 2001 in respect to financial services provided in Australia.

Canada: This material is distributed in Canada by APLP and/or Artisan Partners Distributors LLC, which conduct activities in Canada under exemptions from the dealer, portfolio manager and investment fund manager registration requirements of applicable Canadian securities laws. This material does not constitute an offer of services in circumstances where such exemptions are not available. APLP advisory services are available only to investors that qualify as "permitted clients" under applicable Canadian securities laws.

For Institutional Investors Only—Not for Onward Distribution

A R T I S A N P A R T N E R S