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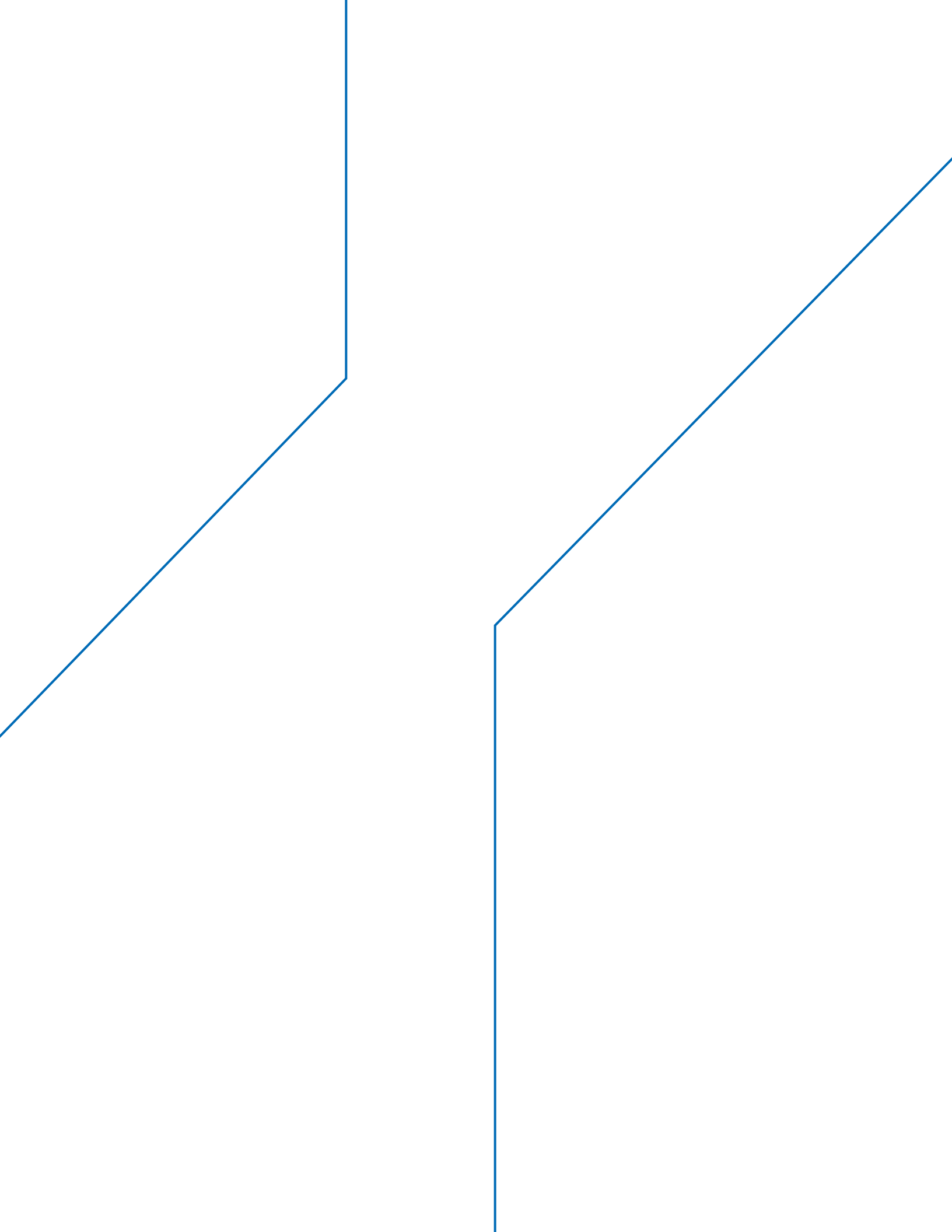
Modernize Government ERP Systems to Improve Innovation and Agility



Modernize Government ERP Systems to Improve Innovation and Agility

IT business environments are changing at a pace never seen before. There is growing demand for custom application functionality, and with modern cloud computing making it easier than ever to meet that demand, the way we think about implementing enterprise resource planning (ERP) solutions is evolving. A trend toward **composable ERP** has emerged across the government.

This paper explores an efficient approach to ERP modernization: embedding a low-code agility layer to unlock adaptability and empower business users to drive continuous improvement.

The problem

Traditional ERP systems are monolithic, inflexible, and time-consuming to implement and customize. Business needs change faster than they can keep up with, and they end up stifling innovation and hindering agility. That's not to say ERP systems aren't essential, but their often-outdated design and inability to fit easily into the modern technology landscape has made them a common pain point.

According to Gartner®, ERP systems have historically missed the mark in multiple ways, including:

- Failure to provide industry-specific (public sector/ government) differentiating functionality.
- A user experience (UX) that often falls short of employee and supplier expectations.
- The need to customize the ERP vendor's proprietary technology stack, static data models, development/ integration tools, and business logic to meet business needs.

These issues can affect adoption and lead to high operations and maintenance (O&M) costs and lengthy deployment schedules.

But still, ERP systems are critical to business operations, so they aren't going anywhere anytime soon. So how do we improve the situation? In recent years, we have seen a move toward a more modern approach to deployment that alleviates many of the most common problems with ERPs and significantly reduces risk. We call it composable ERP enabled by a low-code agility layer.

The solution: A composable ERP with a low-code agility layer

A composable ERP with a low-code agility layer offers a paradigm shift. This approach leverages independent, best-of-breed microservices that seamlessly integrate through open APIs. A low- code platform empowers users with minimal technical expertise to configure workflows, interfaces, and business logic that extend these microservices, fostering rapid innovation and adaptation without reliance on costly and time-consuming IT intervention.

> A low-code agility layer offers an efficient and low-cost method to modernize traditional ERP systems without the need for a complete overhaul.

Low-code platforms are rapidly changing the game for ERP modernization. By providing a flexible and cost-effective way to extend and adapt existing systems, they empower businesses to unlock their full potential and thrive in the ever-evolving digital landscape. These platforms democratize development, enabling business users with limited coding skills to quickly build and modify applications. This empowers them to directly address specific needs and optimize processes without increasing the burden on IT teams that are already overstretched.

A low-code agility layer offers an efficient and low-cost way to modernize traditional ERP systems without a complete overhaul.

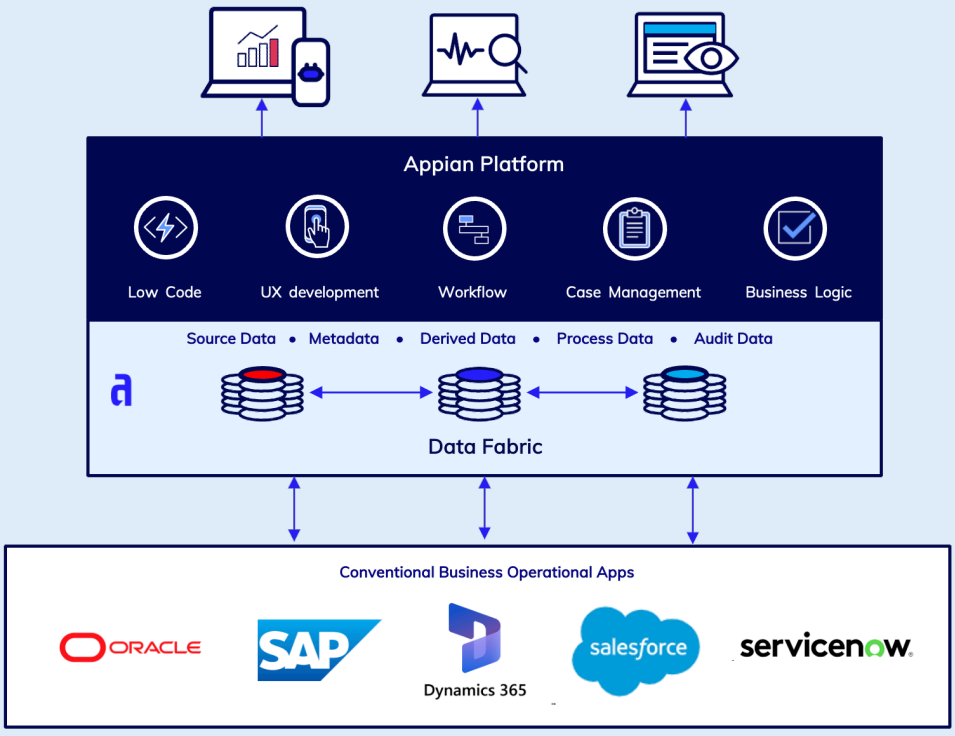
What is a low-code agility layer?

An agility layer is a thin, adaptable digital layer abstracted from your existing ERP system.

This layer, built with a low-code platform, acts as a bridge between your old and new systems, enabling you to:

- **Extend functionalities.** Develop custom applications and workflows that seamlessly integrate with your core ERP system, filling in any gaps and addressing specific needs.
- **De-silo your environment.** Create a unified view of enterprise data with a **data fabric**, an architecture layer and toolset that connects data across disparate systems.
- **Improve the user experience.** Build modern, intuitive interfaces that are easy to use and navigate, boosting user adoption and productivity.
- **Increase agility.** Respond quickly to changing market demands and business needs by rapidly deploying new applications and customizations.
- **Integrate with modern technologies.** Connect your ERP system with cutting-edge solutions like RPA, AI/ML, IoT, APIs, and cloud platform services to unlock new possibilities.

Appian AI-Powered Process Platform provides an agility layer



Benefits of modernizing with a low-code agility layer

Integrating a low-code agility layer with your existing ERP system creates a powerful hybrid environment. Business users can easily extend functionalities, automate workflows, and build tailored solutions while the core ERP system maintains data integrity and security. Advantages of using an agility layer with your ERP include:

- **Reduced costs.** Low-code development requires less coding expertise and resources, leading to lower development and maintenance costs compared to traditional approaches.
- **Faster time to market.** Quickly build and deploy new applications, accelerating your time to value and gaining a competitive edge.
- **Improved user experience.** Modern interfaces and intuitive workflows enhance user satisfaction and boost adoption rates.
- **Increased agility.** Respond swiftly to changing business needs and market demands by iterating and deploying solutions rapidly to drive innovation and growth.
- **Lower risk.** Minimize disruptions to your core ERP system by making non-invasive changes through the agility layer.
- **Reduced IT burden.** Free IT teams from routine customization tasks, allowing them to focus on strategic initiatives.
- **Democratized innovation.** Empower business users to take ownership of process improvement and drive continuous innovation.

Modernize your ERP system with a low-code agility layer.

- Break free from the constraints of traditional ERP.
- Empower business users to drive innovation and agility.
- Future-proof your ERP system for the ever-evolving digital landscape.

8 steps to implementing a low-code agility layer

Modernizing your existing ERP system with a low-code agility layer can be a game-changer that drives business agility, improves user experience, and unlocks new possibilities. Here's a step-by-step approach to navigating this journey:

1. **Identify pain points.** Conduct a thorough assessment to identify specific limitations and challenges within your current ERP system. Are rigid workflows, clunky interfaces, integration gaps, or a lack of scalability hindering your operations?
2. **Set goals.** Clearly define your desired outcomes for the modernization project. Aim for improved user adoption, faster innovation cycles, better business process automation, and/or data-driven insights. Look to eliminate or reduce core ERP system customization. Prioritize areas of greatest impact for your organization.
3. **Select a platform.** Select the best low-code platform based on its ease of use, features, integration capabilities, scalability, security, and cost. Prioritize user-friendliness for both developers and business users.
4. **Map the architecture.** Plan how the agility layer will interact with your existing ERP system and other applications. Create a clear roadmap for data flow and communication.
5. **Design workflows and applications.** Use the platform's visual tools and pre-built components to design and develop your desired functionalities and interfaces. Focus on user-centricity and intuitiveness.
6. **Engage stakeholders.** Involve key stakeholders from business and IT teams throughout the process. Ensure alignment with business needs and technical feasibility. Conduct business process reengineering (BPR) to define the as-is and to-be states of your business processes slated for modernization.
7. **Develop rapidly.** Leverage the strengths of low-code platforms to build applications quickly and iteratively. Embrace agile methodologies for continuous improvement.
8. **Deploy in phases.** Consider a phased roll-out and agile delivery approach to minimize disruptions and manage user adoption. This allows for adjustments and refinements based on initial feedback.

Additional considerations

- **Data integration:** Choose a platform that provides seamless and secure data integration capabilities with your existing ERP system. Maintain data integrity and avoid siloing.
- **Change management:** Prepare users for the transition to new applications and workflows. Address resistance to change through effective communication and training.
- **Low-code vendor partnership:** Consider collaborating with a reputable low-code vendor that offers expertise, support, and best practices throughout the implementation process.

Successful ERP modernization with a low-code agility layer is a collaborative journey. By prioritizing user needs, embracing agile methodologies, and focusing on continuous improvement, you can unlock the full potential of your ERP system and drive your business forward in the digital era.

Examples of ERP modernization with low-code

A complex organization like the United States Army must provide trained and ready forces across the globe at any moment. With more than 85,000 entities needing more than 100 updates to their force structure annually, how can one platform provide immediate enterprise level information?

Currently, the Army makes force management decisions based on the information gathered by mining 14 legacy systems for pertinent information. Simply finding the data needed to drive decision-making is largely manual. Further complicating force management for the Army, the end users spend countless hours manually retrieving the data needed to make decisions, and the data could be outdated.

The Global Force Information Management (GFIM) solution, developed on the Appian Platform using low-code and process automation, provides a holistic and real-time view of the Army's data. When it is rolled out in the near future, approximately 160,000 Army users will leverage GFIM to help staff, equip, train, and resource the force more effectively by eliminating the need for manual processes and incorporating AI to consolidate and automate critical data across disparate systems.

The GFIM solution will make the Army's force management operations far more effective and efficient by consolidating the 14 legacy systems into a single platform bolstered by AI technology to deliver real-time data to decision-makers in a single interface.

As the leading natural gas distributor company in France, GRDF wanted to rebuild their IT landscape with future-proof technologies. They chose the Appian Low-Code Platform to modernize their legacy systems, automate their business processes and leverage automation technologies such as RPA and AI/ML. To date, GRDF has replaced four legacy systems and developed seven applications on the Appian platform to automate one million processes that they execute annually to orchestrate the fulfillment of 80,000 gas connections.

HALLIBURTON

Halliburton Wireline's existing, homegrown ERP system was expensive to maintain and difficult to use and adapt to business process changes. They used Appian to provide a more flexible solution that can more easily adapt as business requirements change and retire the existing legacy system, which had over $1,000,000/year in sustainment cost. Appian integrated SAP and various other related systems to automate project and task data synchronization, eliminating swivel chair processes for coordinators and field personnel. The new solution eliminates duplicate data entry, and the Appian mobile offline capability enables the operators to execute processes at scale and speed. In addition to sustaining cost savings, by retiring the legacy system, Halliburton is achieving significant ROI by streamlining and automating their business processes on the Appian Platform and increasing user adoption. Generic web service protocols (SOAP/REST) were used to establish data integration between the ERP system (SAP) and Appian.

The HELLA Group is a publicly traded, family-owned company with 39,000 employees and operations in over 125 locations and 35 countries. HELLA manufactures lighting and electronic components and systems for the automotive industry, with a focus on products for specialist vehicles. HELLA's workflow system had become too inflexible for its evolving business requirements. They needed a solution to automate and integrate Salesforce and SAP processes, increase the effectiveness of its engineering projects, improve customer and user experience, reduce costs, and decrease time to market. The solution had to be scalable and performant, easy to implement, flexible to change, and able to significantly reduce system administration overhead. HELLA chose the Appian Platform to modernize their legacy systems with low-code and develop their future-proof solution.

HELLA's first applications went live on Appian in just six months.

HELLA's first two applications went live on Appian's fully managed, EU-hosted platform-as-a-service in just six months. This timeframe included workflow implementation, system setup, and development of the initial interfaces for HELLA's ERP system and databases. The future applications will automate additional business processes across all divisions and cross-functional departments. With Appian, HELLA has been able to standardize and simplify workflows, streamline user experiences, manage and automate business processes and tasks, and provide process monitoring on a single unified platform.

MARINES

TDM-CATALYST, developed on the Appian Platform, is a cloud-hosted low-code application that replaces four legacy systems and automatically ingests and validates data on every repair part and end item configuration in the Marine Corps inventory, enabling global logistics awareness. Notably, it provides clean data to other downstream systems and users in support of logistics planning, operations, and lifecycle management activities across the Marine Corps.

With TDM-CATALYST, Marines no longer have to adapt their mission to fit the tools they receive. Rather, they can modify their tools during development and after fielding to better support the mission. TDM-CATALYST aimed to resolve several problems with legacy cataloging and provisioning systems, including swivel-chair and manual data entry, slowness in obtaining NSNs, difficulty searching and finding data, "workarounds" needed to bypass the system due to its outdated and difficult UI/UX, and poor data quality.

The vision for TDM-CATALYST was to provide users with an easy-to-use system to generate and access clean data on an automated platform that was developed and fielded quickly. It consisted of three parts:

- Make a cloud-based data platform that is responsive to users' needs and allows users to build low-code/no-code applications.
- Build the platform so the acquisition, logistics, and product cataloging community can streamline and largely automate the provisioning and cataloging process, improve data quality and visibility, and transform the user experience.
- Plan future projects to rapidly integrate logically grouped legacy functions and design features to quickly automate new business process segments.

Learn more about the Appian AI-Powered Platform that transforms your business with low-code and process automation. Visit **appian.com** or contact **info@appian.com**.

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Appian is a software company that automates business processes. The Appian AI Process Platform includes everything you need to design, automate, and optimize even the most complex processes, from start to finish. The world's most innovative organizations trust Appian to improve their workflows, unify data, and optimize operations—resulting in better growth and superior customer experiences. For more information, visit **appian.com**. [Nasdaq: APPN]