AI-Powered Software Portfolios: A Winning Strategy for Software Companies

Abstract

Digital transformation might be the new normal across industries, but companies now face the challenge of embracing innovation while ensuring business as usual for all processes and functions. Many are leveraging Agile, automation, cloud, and digital marketing solutions to ease this transformation journey. Software being a major enabler, artificial intelligence (AI) is poised to simplify the transition further. More so, as Software-as-a-Service (SaaS) dominates most IT strategies, enterprises now expect all software to be powered by native AI capabilities.

For existing software players, this opens up massive opportunities to help drive a more simplified transformation journey for their customers. While the threat from emerging pure-play native AI firms loom, commercial software companies can consider infusing AI into their existing portfolio offerings. Some independent software vendors (ISVs) are already introducing platform extensions that are powered by AI. This paper highlights how such a portfolio can accelerate digital transformation initiatives—helping enterprises utilize their core systems of record and systems of differentiation effectively.

Embracing the New 'Always Learning' Paradigm

With the advent of As-a-Service approach to software implementation, there rises a need to strike a balance between what the software needs to be and how it can be implemented and configured on enterprise platforms. Needless to say, businesses would want the software's core capabilities to include continuous learning across modules. Ideally, the software should be configured and optimized based on usage.

Poised to unleash the next wave of digital disruption, AI is driving software companies to rethink their product portfolios.

Here's where the buzz around AI starts making sense. Software vendors will now have to reassess their strategy to rebrand and reposition themselves as AI-powered. As market demands grow and evolve, it will help existing software companies strike the right balance between infusing AI in existing modules and developing independent AI portfolios. This may also solve the issue of defining developer, business user, and executive management personas.

But, first things first, established enterprise software companies will need to accelerate the pace for customers to deploy these innovations in their software which have native machine learning capabilities. Some vendors such as SAP, Oracle, and Infor are already making headway—owing to the extent of business processes covered within enterprise resource planning (ERP) and corporate performance management (CPM). SAP[1] has announced that its new expanded public cloud ERP platform will include machine learning capabilities that go beyond existing systems—ensuring customers stay ahead in the digital transformation curve.

These established players will also need to take note of rapidly emerging pure-play native cloud-driven, self-service business intelligence (BI) platforms. One way to go about it is to infuse AI capabilities to existing platforms that provide governed data discovery. This can, in turn, enhance user experience as well as maximize productivity of BI developers, designers, administrators, analysts, and other relevant users. Software companies with products across multiple categories are creating a mesh of AI—interwoven into multiple

products—to deliver more synergies for their customers. Infor's new Coleman AI platform, designed for business users, combines the capabilities of Infor's cloud software with native AI trained on industry specific data sets.[2]

Revisiting Key Software Segments

Taking a leaf out of these recent innovators, software companies will have to take note of several segments:

1. Data management: When it comes to the software's data management components, business and IT functions heavily rely on data integration, quality, and management tools. However, this can be extremely effort intensive. As the data integration market evolves, particularly in terms of the iPaaS, aPaaS, hybrid cloud data store architecture, infusing AI becomes all the more essential to minimize the effort required—from data preparation to quality management.

2. Customer relationship management (CRM) and content services: Enterprises expect CRM to deliver integrated customer insights in the omni-channel environment. Processes within customer service and support, digital commerce, marketing and sales definitely need AI integrated in the system. Similarly, content services platforms, which include enterprise content management (ECM) software, must deliver integrated services and solutions with inbuilt data management capabilities. With AI built in, enterprises can rapidly adopt and leverage these for several business purposes and driving outcomes. As delivering customer experience ranks high across industries, software companies like Salesforce' Einstein[3] are already enhancing core CRM offerings with AI.

3. Supply chain: Some emerging players are developing applications which have native AI capabilities for integrated demand management, supply chain management, and integrated business planning.[4] However, to truly enable digital transformation, these companies must frequently interact with stakeholders across the user community. When it comes to adaptive intelligent applications, Oracle has integrated machine learning capabilities into their customer experience cloud offerings.[5]

4. Security: This segment is using AI for threat detection, pattern identification, and incident resolution. Companies like Cylance[6] have embedded AI in their security product portfolio to identify potential threats and patterns that could lead to security breaches. Independent AI software and solution providers are already delivering ecosystem capabilities to enhance secure operations centers (SOC) and provide next-generation security solutions through integration with leading SIEM technologies.[7]

Anatomy and Architecture: Embedding AI

Software platforms are also deploying machine learning to collect data on customers' software usage, especially in terms of ensuring higher productivity and delivering business outcomes. To plan both long- and short-term AI embedding and/or interoperability, these players must ask:

- Is the current AI adoption primarily led by independent AI software players? If yes, what is the next growth wave in this area?
- How can we adopt and move beyond chatbots? More precisely, how can we infuse augmented intelligence into existing business processes and applications?
- How can we combine AI-enabled open source tools and services with commercial products? How do we design the reference architecture and which usecase attributes do we incorporate?
- What is the future role of system integrators in terms of realizing business opportunities within the intelligent context-aware software application enabled world?

ISVs too have to plan their products and services, prioritizing AI infusion, keeping in mind certain factors:

- Developer experience for delivering enriched applications on core portfolios
- Leveraging an AI platform on top of the exisiting platform to address existing business use cases
- Partnerships with independent AI players for rapid alignment to respond to digital transformation opportunities
- Allowing extensions and maintenance of AI capabilities in core modules

The Convergence: Native vs. Interoperable

The current cloud computing world offers several options and reference architectures for businesses to drive agility, automation, and user experience. Figure 1 highlights a possible reference structure for enterprises on the path to digital transformation, specifically for processes which have dependences across multiple layers of commercial enterprise software, integration, data and analytics, and mobile platforms.

Global System integrators are already developing AI Applications and chatbots leveraging industry leading independent AI platforms like IBM Watson, Microsoft Azure, Amazon LEX, Tensorflow, and more. Take for instance a sales AI assistant which can help sales executives with contextual intelligence 'anytime, anywhere' along with correlation and recommendations for new and exisiting accounts.

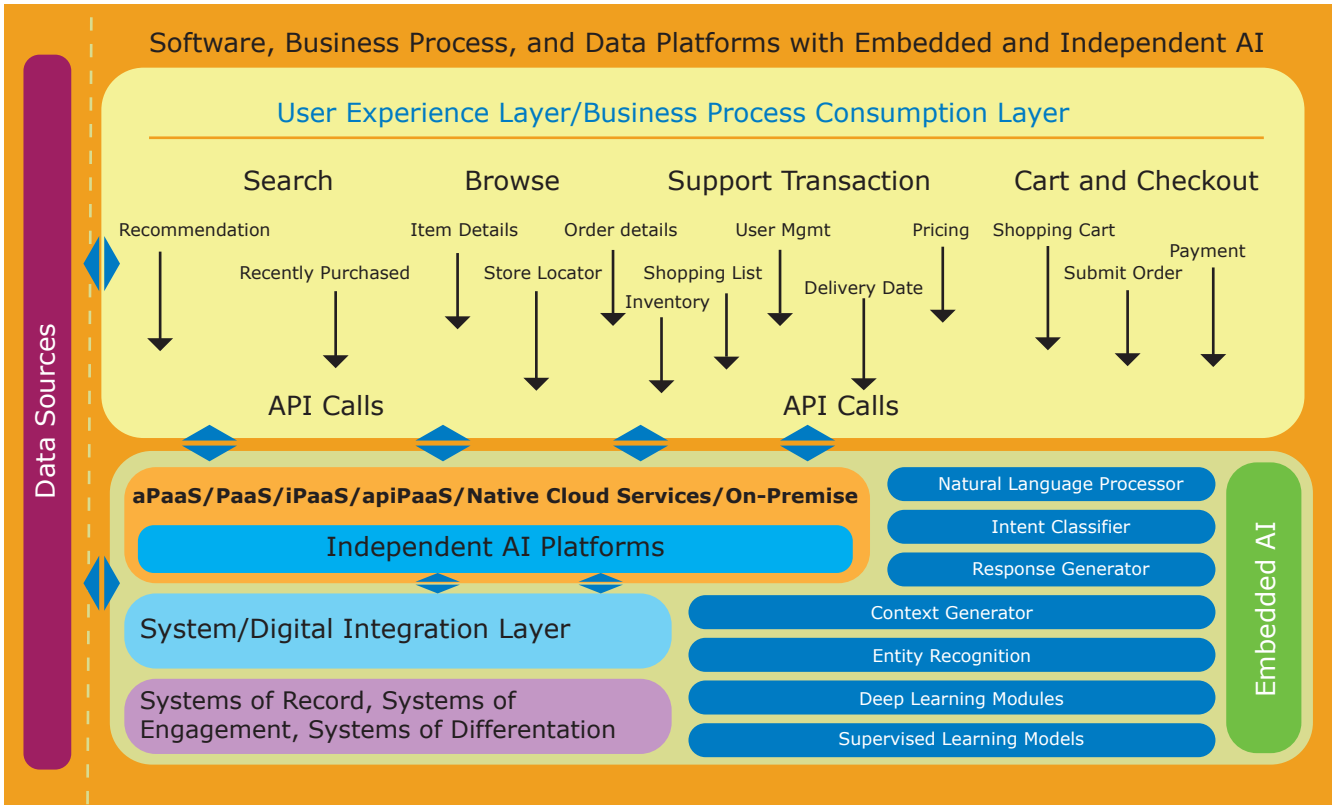

Figure 1: Software, Business Process, and Data platforms with Embedded and Independent AI

Figure 2 depicts the potential reference architecture components for software, business process, and data platforms with native AI. This might just help existing players offering commercial off-the shelf (COTS) products natively embed AI as part of their core offerrings across dimensions—like transforming the day-in-the-life of business users and developers.

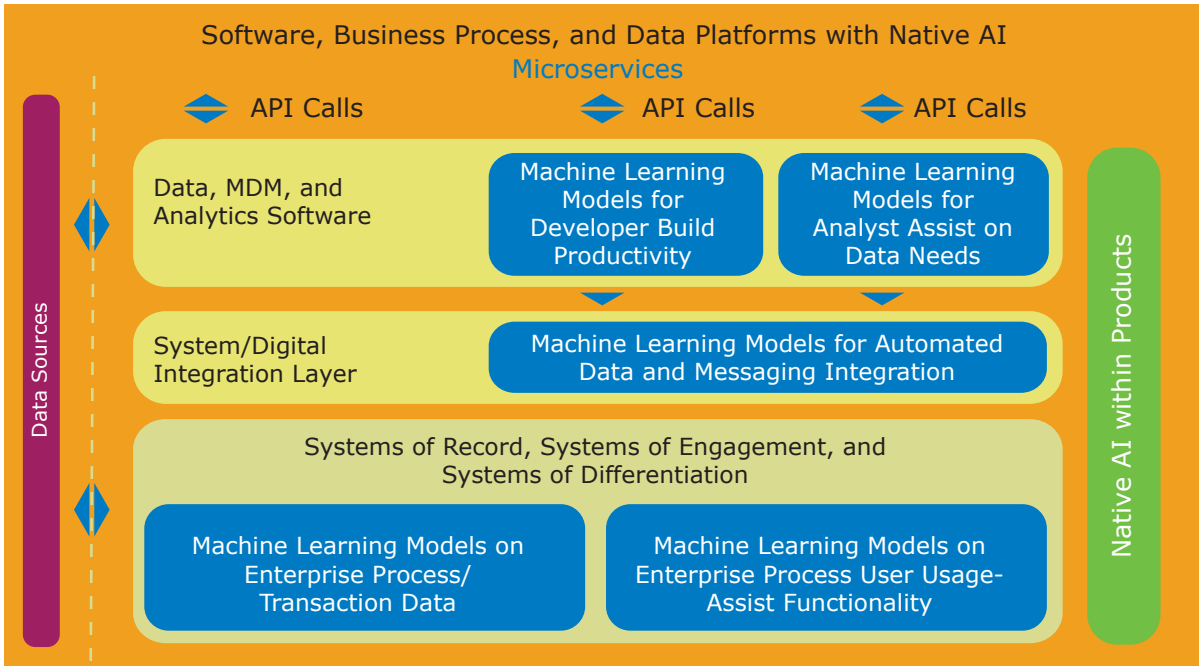

Figure 2: Software, Business Process, and Data platforms with Native AI

With a support desk virtual agent solution in place, these players can provide a seamless self-service conversation interface to customers—resolving, for instance, common recurring printer-related issues and creating incident tickets in the cloud using natural language processing (NLP) tools.

A product purchase advisory bot can be an intelligent, highly responsive, contextual and advisory virtual assistant to guide users in making product purchase decisions faster—communicating similar to how we converse. This bot can also derive sentiment analysis and user feedback from social media channels.

An IT self-service bot can ensure optimized service management leveraging machine learning.This bot can resolve common support issues faster—setting an example of how service support agents and machines can collaborate effectively.

An HR staffing cognitive bot and analytics solution can accelerate and improve the hiring process wherein candidates can answer questions about the job role, location-wise skills, and so on. This can also provide personalized, contextualized search on job profiles posted by recruiters based on specific filters and parameters.

Ushering in an AI-Powered Future

With the aim of delivering consistent compelling customer experience, enterprises will expect partner software companies to integrate the necessary intelligence across product offerings. In terms of gaining a competitive edge, these companies will invest in areas that justify returns on investment (ROI) and meet time-to-market requirements.

Partnering with software companies, enterprises can create enhanced value for their customers in overall business operations by automating key functions intelligently and deriving insights from critical data. Now is the time vendors step up their game and deliver differentiated offerings, and in turn, acclerate AI adoption for enterprises across their business processes and technology dimensions.

Powered by AI, enterprises will stay ahead in terms of reinventing and reimagining their business models—through intelligent and adaptive supply chains, delightful customer experiences, energized human resource management, and highly productive corporate functions like finance, sales, and operations.

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