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Applied GenAI Process Automation:

Harnessing the Power of Generative AI Models
for Enterprise Process Automation

Applied GenAI Process Automation solutions revolutionize enterprise functions by leveraging the power of Foundational Generative AI Models like OpenAI's GPT, Google Gemini, Meta Llama, and others as well as tuned LLMs.

By effectively integrating enterprise systems with GenAI Models (e.g. LLMs), Applied GenAI Process Automation solutions enable process automation of time-consuming repetitive tasks such as contract reviews, new customer onboarding, and order processing. Leading Applied GenAI Process Automation solutions support multiple LLMs and various hosts, provide high accuracy in content interpretation, and ensure data privacy. By automating repetitive tasks in this way, these Applied GenAI Process Automation solutions transform enterprise workflows to drive efficiency, cut costs, and speed scalability while benefiting from the continuous improvements enabled by GenAI models.

An Introduction to Applied GenAI Process Automation

Foundational GenAI Models became widely available to the market in Q4 2022. These Large Language Models are pre-trained on massive AI datasets across a vast range of domains. The most well-known of these are the Models that regularly make headlines — GPT, Gemini, Llama, Claude, and Mistral, to name a few. These models advance at lightning pace and new models are continuously introduced boasting innovative new features and benefits.

Although the chat interfaces of LLMs have received most of the public attention, most leading models are designed to also be incredibly useful as development tools. They are wrapped in APIs that allow developers and engineers to interface with and apply them in complex, scalable ways.

Enterprise functions and the applications used to manage them will see revolutionary advancements by taking advantage of the power and potential presented by GenAI Models. This will primarily happen in two ways:

> Generative AI presents capabilities that are new to the world but few yet know how to capture them.

1 Data and Discovery

Marrying the power of GenAI Models with data from the organization can address a wide variety of enterprise data challenges including harvesting organizational knowledge, enabling pattern discovery in enterprise data, facilitating search, and enabling proprietary content creation.
An example of this would be an enterprise applying a Retrieval-Augmented Generation (RAG) that directs a Foundational LLM to retrieve and leverage relevant information from authoritative, pre-established knowledge sources that the enterprise controls, or training a custom, fine-tuned model that is weighted to rely more heavily on preferred data sources.

2 Process Automation

By making use of LLMs in combination with other tools and technologies, enterprises are rapidly automating high-volume unstructured, manual activities that have previously required interpretation and intervention by knowledge workers to complete. These include activities such as contract reviews, checking commercial documents in a new account onboarding process, and complex invoice processing. Because Foundational LLMs are trained on broad data sets, they are adept at identifying content, extracting it from unstructured data, and automating the creation or checking of formulaic processes embedded throughout essential enterprise functions. This new paradigm has the potential to address a near infinite number of use cases. Imagine an organization wants to accelerate its order-to-fulfillment process. To accomplish this, it must compress the time required to compare and match purchase orders (POs) to the related sales orders previously entered into its ERP application. GenAI can match POs to ERP data based on the meaning of the content, not only a true match of the actual words listed in the purchase order.

The broadest and most rapid impact on enterprise functions will come from leveraging GenAI models for process automation. It is now happening rapidly and at scale. This paper focuses on the opportunities that these models present for enterprise process automation and how best to put them to use towards productive and profitable ends.

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Market Definition/Description

Here, Applied GenAI Process Automation solutions are defined as SaaS solutions or platforms that efficiently enable the use of Foundational and tuned GenAI models for enterprise process automation. Given a sound technology strategy and rational approach to implementation, these solutions make leveraging the power of such LLMs to advance organizational process automation a reality across the enterprise.

Applied GenAI Process Automation Solution Criteria

- Offered as a dedicated SaaS solution or platform

- Capable of seamlessly integrating and operationalizing outputs within enterprise workflow and related applications

- Designed to prioritize data privacy, retention, residency and IP protection requirements

- Able to process any content type (e.g., various file types for text, image, or audio)

- Improves accuracy of content interpretation

- Offers empirical testing capabilities to align use case / model fit

- Provides options to immediately deploy, test, validate and iterate on different combinations of models, parameters and prompting strategies

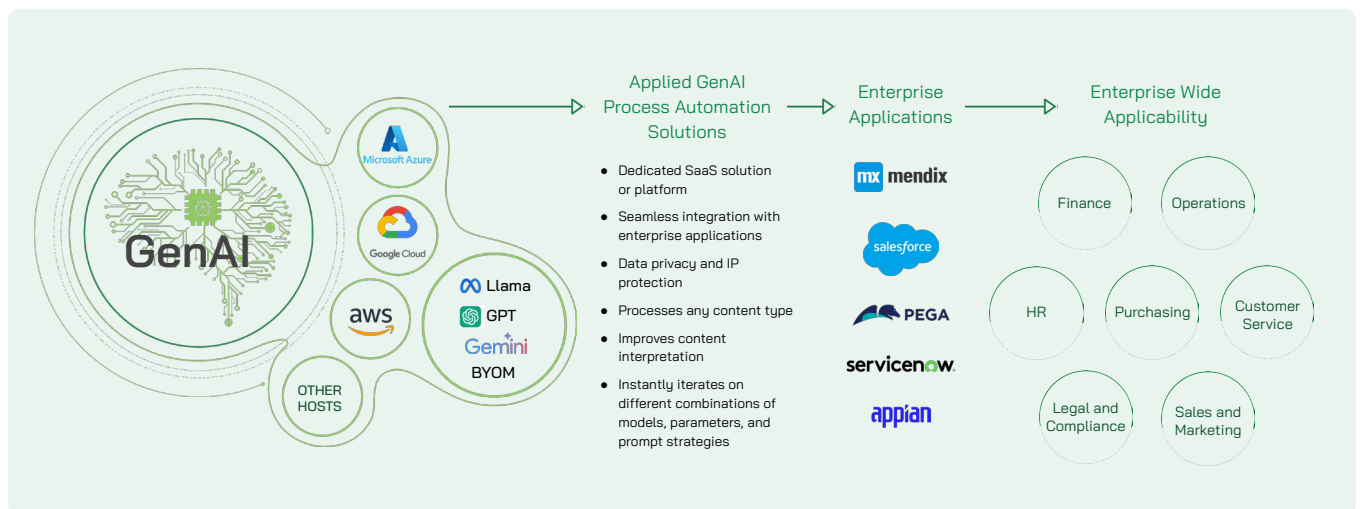## Applied GenAI Process Automation solutions do not address:

Bespoke Generative AI approaches are expensive to develop and maintain over time. For most, there is a short list of specialized requirements that a given enterprise will find justifies the time, resources, cost, and attention these undertakings require. Applied GenAI Process Automation solutions are not designed to incorporate these GenAI approaches. They often take these forms:

- Models that have been fine-tuned to have a predictive capability

- Specialized Vertical AI or Narrow AI models trained by data scientists for narrow problem set or deterministic applications

The Anatomy of Applied GenAI Process Automation Applications/Implementations

To understand all that is involved in successful Applied GenAI Process Automation applications, and to discern which Applied GenAI Process Automation solutions to apply to enterprise process automation efforts, it is helpful to visualize what is involved.

> Applied GenAI Process Automation solutions establish a bridge between enterprise applications and workflows to enable effective, efficient, and protected use of GenAI Models for enhanced business process automation.

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Benefits Enabled by Applied GenAI Process Automation Deployment

By linking enterprise applications with the power of GenAI Models, businesses can radically streamline workflows and massively improve efficiency. This means quickly and meaningfully cutting costs, accelerating revenue generation, transforming the user experience, and reducing or avoiding failures.

Key advantages companies are already realizing by establishing bridges between GenAI models and their enterprise systems include:

- **ENHANCED AUTOMATION:** automating repetitive tasks currently handled manually by employees, freeing them up for more strategic and rewarding work.

- **SPEED TO OUTCOMES:** applying models to dozens of micro-processes across the enterprise can be done in a matter of days or weeks.

- **ENTERPRISE SCALE:** integrating models for enterprise use cases at scale ensures consistency, ultimately driving efficiency and competitive advantage.

- **CONTINUOUS IMPROVEMENT:** enterprise applications riding on the rails of Foundational models benefit directly from these models' rapid advancements. Enterprise applications see improvements in speed, consistency, and accuracy without any change in their current implementations.

The Struggles Are Real, but Manageable

In this new paradigm, there are both known and unknown challenges being actively debated and addressed including:

- **DATA QUALITY AND BIAS:** AI outputs can only be as good as the data used to train a given LLM. When connecting enterprise applications with Foundational GenAI Models, inaccurate or biased outputs could inadvertently be created by model training data, incorrect/incomplete enterprise data, or a combination that may be impossible to disentangle.

- **EXPLAINABILITY AND TRANSPARENCY:** GenAI model providers can often be secretive about the training data used to train their models. As a result, AI applications can often work as "black boxes," with outputs being difficult or even impossible to explain.

- **SECURITY AND PRIVACY CONCERNS:** Foundational GenAI Models require vast amounts of data. In many cases, critical data is sensitive or proprietary. Ensuring the security of enterprise data and protecting stakeholder privacy is crucial.

- **COST AND INFRASTRUCTURE:** Training and running AI applications is computationally expensive, requiring significant investment in computing and the expertise required to train and integrate these models with enterprise systems.

- **FOCUS AND VALUE PROPOSITION:** GenAI models can perform many tasks, but not all translate to clear business value. Enterprises need to carefully identify specific use cases where these models can deliver a tangible ROI.

Considering the breakneck speed of development of GenAI models, the rising popularity of tuning LLMs, and that the science of applying them to enterprise process automation is nascent, the most concerning challenges may be the "unknown unknowns." Safety of outcomes generated must be continuously considered and monitored over time.

Regardless of these challenges, the weighty benefits of linking LLMs with enterprise applications are significant. Prepared with the right strategy, technology, and advice, businesses that embrace this approach will see a transformational impact on even discreet aspects of their operations.

Capabilities to Look for in an Applied GenAI Process Automation Solution

The solutions emerging in the Applied GenAI Process Automation category require capabilities that simplify the complexity associated with applying Foundational GenAI Models. Capabilities to require in a solution include:

- **AGNOSTIC MODEL AND HOST INTEGRATION AND MANAGEMENT:** Enterprises must be able to easily choose the model type and model hosts required for the applications and functions associated with the processes they are working to automate. For this reason, Applied GenAI Process Automation solutions must handle multiple models and the many model hosts (e.g., AWS, Microsoft Azure, Google Cloud Platform, etc.) that GenAI models rely on to facilitate their massive data and computing demands. This includes the ability to juggle licensing, data capture and transformation, security, load balancing, exception handling, model optimization, and connections.

- **CONTENT PROCESSING:** The ability to quickly and dynamically deploy and process data anywhere in any time zone, based on business and compliance needs. This is critical for regulated multi-national enterprises who have specific requirements around the location of data management and processing.

- **CONTENT FORMAT AND FILE TYPE CONTROL:** Foundational GenAI Models do not support many of the formats and file types that are the lifeblood of typical enterprise operations. For example, at the time of this writing, none of the Foundational models natively support legacy office files (.doc, .xls, etc.), and PDF files that are saved as images generally cannot be processed. Given the variety of inputs, embedded content, and content types that models will need to consider to be useful to enterprise process automation, an Applied GenAI Process Automation solution with this power is a necessity.

- **ORCHESTRATION AND PROCESSING CAPABILITIES:** The nature of Foundational GenAI Models and the massive data sets used to pre-train them allow for unforeseen content rationalization and interpretation. For these and other reasons, Applied GenAI Process Automation solutions must offer the use of a combination of research techniques and tools that drive accuracy and mitigate hallucinations to get reliable results for the enterprise.

- **FULL OPTIONALITY:** Connecting the dynamic world of the enterprise with dynamic Foundational GenAI Models requires Applied GenAI Process Automation solutions to be not just ready for change, but supportive of change. For myriad reasons, effortlessly shifting enterprise processes to a different LLM or model host and adjusting for the structure, volume and latency of data and content types is imperative. Seamlessly accommodating change is essential to insulating enterprise processes from disruptions or undesired limitations.

- **DYNAMIC CONSTRAINT MANAGEMENT:** Linked to optionality is the ability of an Applied GenAI Process Automation solution to address the many constraints characteristic of foundational models and the environments in which these complex systems are hosted. Because models are capacity constrained, they establish technical and operational limitations that Applied GenAI Process Automation solutions must be able to manage. For example, usage quotas or token limits may require the Applied GenAI Process Automation solution to dynamically load balance, distributing requests across multiple hosts.

- **ZERO RETENTION ENVIRONMENT:** Enterprise data is private and should remain so. Look for an Applied GenAI Process Automation solution that can enable GenAI process automation without retaining your data on their systems. Be wary of those who might use your enterprise data to train their own Generative AI models or share your data with others.

In addition to ensuring the Applied GenAI Process Automation solution you select is built on sound science, it is essential that those behind the solution also understand the art associated with making great outcomes. Look for teams that are practiced and proven in marrying enterprise applications and the vagaries of organizational dynamics with GenAI models and the hosting services where they operate.

In this quickly evolving category, there are various approaches being offered by solution vendors and service providers. Enterprise teams must consider the offerings or combination of offerings that are best to address their process automation requirements.

OFFERINGS	DESCRIPTION	PRODUCTS/PROVIDERS
Applied GenAI Process Automation Platforms	Robust and comprehensive platforms designed to optimize the use of foundational LLMs within an enterprise context.	Fisent BizAI
GenAI Extensions/ Functions on Enterprise Software	Established enterprise software systems that have enabled connections to one or another GenAI model for discrete related purposes or as connections to a foundational LLM. Typically, these are "developer focused" enabling you to do more within their tool.	Salesforce, Pegasystems, SAP, Oracle, ServiceNow, Mendix, Appian
GenAI Connectivity Tools	Enabling connections to and processing with one or more Foundational GenAI Models	Groq, LangChain, LlamaIndex, etc.
Services	Business and IT consultants developing bespoke solutions or implementing available solutions and tools under the moniker of GenAI.	Deloitte, KPMG, PwC, Accenture, etc.

Applications and Processes Ripe for Applied GenAI Process Automation Improvements

GenAI models can be applied to dozens of microprocesses across the enterprise in a few weeks. Industries and enterprise functions that are primed for optimization using Applied GenAI Process Automation approaches are those that:

- Have high volume, manual activities, which combine content (e.g., data, documents) and knowledge worker interpretation

- Are associated with complex workflows

- Have limited variation in the possible processing scenarios (this is specific to reducing Applied GenAI Process Automation implementation time)

Enterprise functions and processes prime for automating with Applied GenAI Process Automation include:

- **FINANCE:** purchase order validation, invoice processing, AR/AP compliance, financial statement interpretation

- **OPERATIONS:** automation of customer onboarding, email triage and routing, account maintenance, digitizing application requests (e.g., loans, membership, etc.)

- **HR:** application and resume triage, dispute analysis/ policy compliance

- **PURCHASING:** trade compliance, RFP analysis and response, due diligence

- **CUSTOMER SERVICE:** customer complaint triage and resolution, collections, order fulfillment, claims resolution

- **LEGAL AND COMPLIANCE:** Contract reviews, covenant analysis, SOW analysis

- **SALES AND MARKETING:** cross sale automation, RFP response generation, automated inquiry analysis and response to improve prospect targeting, optimize sales team

Here is an illustration of where a finance enterprise may apply Applied GenAI Process Automation to gain efficiencies throughout its operation:
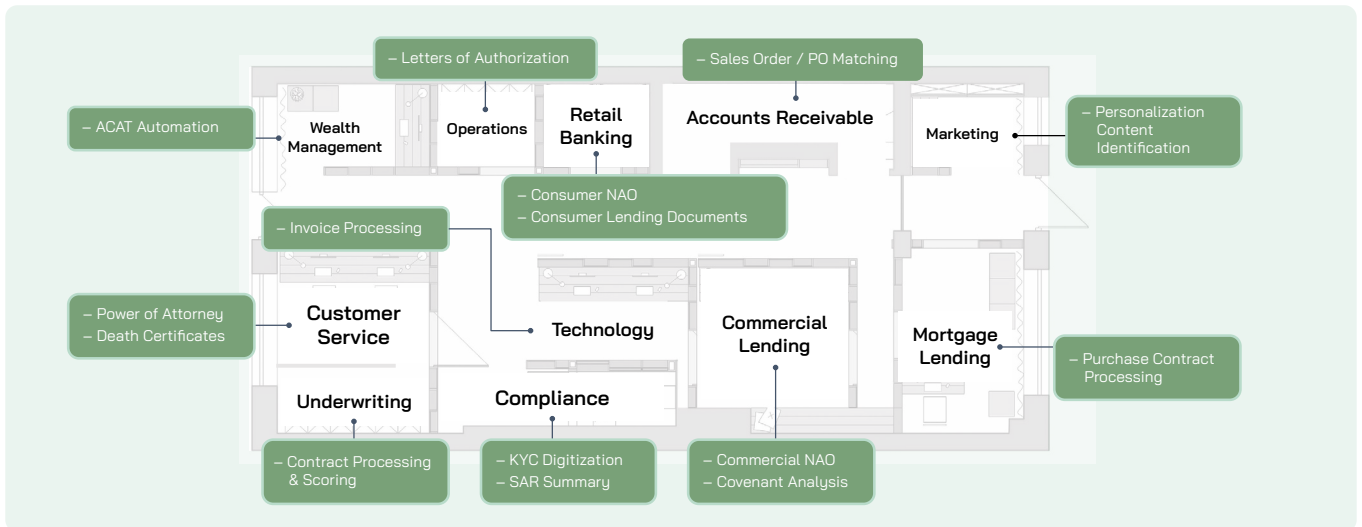
Industries Benefiting from Applied GenAI Process Automation Applications:

- Banking and Finance
- Healthcare
- Insurance
- Retail
- Manufacturing
- Energy
- Government
- Telecommunications

Applied GenAI Process Automation at Work Today Streamlining and Enhancing Enterprise Processes

Clearly, organizations should embrace the capabilities of these powerful models with deep knowledge. But how?

Finding a proven platform that delivers the capabilities outlined above and is backed by an experienced team is the first step. A leading Applied GenAI Process Automation solution at work in the market today is Fisent's BizAI.

Addressing all the Applied GenAI Process Automation requirements, BizAI is an AWS-architected SaaS offering which enables the end-to-end automation of repetitive business tasks that currently require human interpretation of content. The Fisent team has helped enterprises from small banks to Fortune 500 corporations capture the value of Foundational GenAI Models ensuring their success in applying this transformative technology.

The BizAI platform allows users to choose their preferred LLMs and related model hosts to process almost any content type ensuring the intended outputs. What's more,

Fisent BizAI's pre-built connectors accelerate integration to enterprise process automation applications, such as Pegasystems' Pega Platform or other legacy platforms.

Fisent's deep knowledge and experience with respect to integration, a critical component in the Applied GenAI Process Automation space, gives the company a strong edge over competitors.

This combination of capabilities simplifies the complexity associated with bridging enterprise functions with the power of various GenAI models while ensuring simple, real-time management, monitoring, and analytics.

Fisent is purposefully designed to be future-proof with BizAI built to grow alongside perpetually evolving foundational models. This means BizAI:

- Is a viable solution for any industry/any company size
- Provides critical optionality that ensures sustainable success
- Simplifies the usage of and adoption of GenAI for your organization
- Speeds up the implementation time to value relative to your GenAI program

Looking ahead, Fisent also expects to integrate autonomous agents into business processes.

Fisent's BizAI is a safe and proven means of successfully embedding GenAI capabilities into workflow to drive automated content interpretation, intelligent decisioning, and optimized process execution at scale.

Real Life Stories of Applied GenAI Process Automation in Action

Fisent offers Applied GenAI Process Automation solution BizAI to automate key business processes, allowing its customers to spend their time where it matters most. Here are just some of the ways this solution is quickly delivering enterprise process automation.

Case: IT Components Retailer Automates its PO/Sales Order Matching Process

OUTCOME: Using Applied GenAI Process Automation solution BizAI from Fisent, this company saw significant improvements to their "time to revenue" by digitizing and automating their "Purchase Order to Sales Order Matching" process. This process went from an average SLA of four hours to less than four minutes. This meant orders were processed and fulfilled faster, enabling an increase in revenue and a reduction in costs. The positive impact on the customers and sales team member experience has been immeasurable.

- **TIME TO OUTCOME:** 60 days
- **ADDITIONAL PROCESSES IMPROVED BY BIZAI FOR THIS CUSTOMER:** RFP Correspondence, Trade Compliance, SKU Process Management, Assets Management, Invoice Processing

Case: Mutual Insurance Underwriting Company Eliminated Manual Reviews and Reduces Processing Errors

OUTCOME: Applied GenAI Process Automation solution BizAI can ingest and process complex commercial insurance content that comes in the form of emails and/or highly unstructured commercial insurance contracts. The content is utilized in the underwriting process to approve, price, or deny an application for commercial coverage. The results include the elimination of manual reviews, reduced processing errors, and faster time to revenue.

- **ESTIMATED TIME TO OUTCOME:** 90 days
- **ADDITIONAL PROCESSES IMPROVED BY BIZAI FOR THIS CUSTOMER:** Insurance Contract Processing, Commercial Insurance Application Review, Customer Onboarding, Customer

Case: Financial Services Firm Slashes Processing Time While Reducing Errors

OUTCOME: Fisent recently integrated workflow with BizAI to build a comprehensive and regulated dispute testing and monitoring system, fully digitizing, and automating the entire process. This enabled the firm to transition from a manual knowledge worker-based approach to a digital AI-powered system that reduced manual input errors by 90%. This shift reduced time spent on quality assurance and accelerated testing by 50%.

- **ESTIMATED TIME TO OUTCOME:** 90 days
- **ADDITIONAL PROCESSES IMPROVED BY BIZAI FOR THIS CUSTOMER:** Credit Report Analysis, Death Certificate Processing, Home Appraisal Analysis

Summary

Applied GenAI Process Automation solutions revolutionize enterprise functions by leveraging the power of Generative AI models like OpenAI's GPT, Google's Gemini, and others. By effectively integrating enterprise systems with many types of GenAI models, these solutions enable process automation of time-consuming repetitive tasks such as contract reviews, customer onboarding, and order processing.

The right Applied GenAI Process Automation solution will support multiple LLMs and hosts, provide high accuracy in content interpretation, and ensure data privacy. By automating repetitive tasks in this way, these Applied GenAI Process Automation solutions transform enterprise workflows to drive efficiency, cut costs, and speed scalability while benefiting from the continuous improvements enabled by Generative AI models.

Although challenging, the potential benefits of linking GenAI models with enterprise applications are significant. Businesses that embrace a purpose-built Applied GenAI Process Automation platform are likely to quickly realize significant financial and operational outcomes over a multitude of enterprise processes.