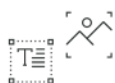# GEN AI ACCELERATORS: POWERING AI TRANSFORMATIONS

GenAI is taking the industry by storm and will impact everyone in every department. Because it can create a wide variety of content, such as images, videos, audio, text and more, it will be used to both augment exiting apps and processes, but also create new innovative opportunities. The business possibilities are boundless. However, there are tough challenges to achieve enterprise ready GenAI adoption. One example is going beyond a PoC and into production. To address this and other enterprise requirements, InCycle has developed GenAI accelerators (packaged offerings) that help you achieve your AI goals faster, inclusive of your enterprise standards, and security requirements.

INCYCLE SOFTWARE
A better way

Unleashing Unstructured Data

A single organization typically has 3-4 times more unstructured data (such as text, audio, and video) than structured data.

Versatility and Problem-Solving

GenAI is general-purpose and not purpose-built for specific tasks. It can solve multiple complex problems simultaneously and can be applied across various functions within an organization.

Impact on Productivity

A study analyzing GenAI's impact on 19 industries revealed that 44% of working hours could be influenced by GenAI.

GenAI is a Game Changer

GenAI allows organizations to extract valuable insights from this unstructured data, enabling better decision-making about customers, partners, and employees. One of the most exciting elements of GenAI is that it offers a fresh approach to addressing long-standing challenges, such as content generation, personalization, and predictive modeling. Unlike traditional AI, which relies on pre-programmed rules, GenAI captures patterns using neural networks to generate solutions. By delving deep into data nuances and uncovering hidden correlations, GenAI transcends superficial analysis, revolutionizing the way modern businesses operate in the digital age.

GenAI Use Case Categories

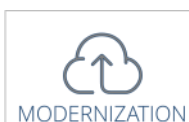| AUTOMATE ROUTINE TASKS	INNOVATE BUSINESS PROCESSES	REDEFINE BUSINESS MODELS	AUGMENT HUMAN CREATIVITY
Save time and work more efficiently by automating various business processes, such as data entry or information retrieval and categorization.	Help design and improve complex systems. Increase processes quality. Assist in content creation and enhancement.	Define new experiences or application that was just impossible without the ability to analyze huge amount of data almost in real-time.	Assist in content development and the generation of highly innovative ideas. Synthesize and merge concepts to create more powerful and impactful ideas.

80% of enterprises will use GenAI API or models, and/or GenAI apps in prod by 2026 from 3% in 2023.

Gartner

MODERNIZATION INNOVATION ANALYTICS AI ENGINEERING

Microsoft Solutions Partner
Data & AI
Azure

Microsoft Partner Specialization
Analytics
DevOps with GitHub
Kubernetes on Azure
Migrate enterprise application to Azure

GEN AI PRODUCTION IMPLEMENTATIONS

INCYCLE SOFTWARE

A better way

Enterprises Face
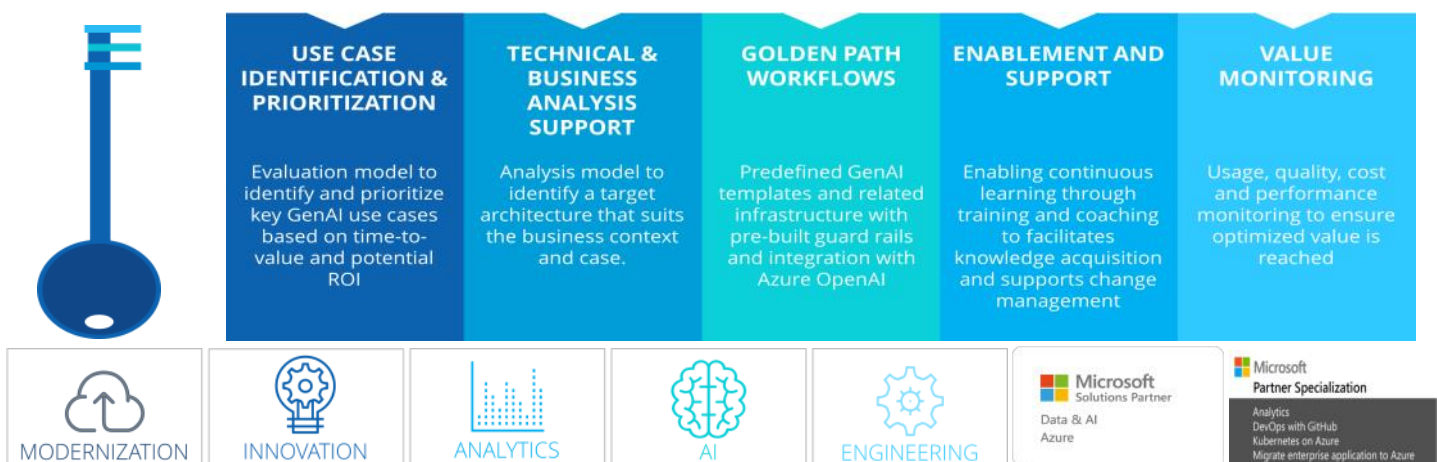**Unique Challenges**

Going beyond PoC & Pilot and into Production

Organizations often struggle to transition from successful proof-of-concept experiments to full-scale operationalized implementation. Top challenges include:

- **Clear and realistic objectives and business case** — Like any application development, GenAI initiatives must have a solid business case to justify investment.

- **Reliable data as the foundation** — GenAI's success hinges on high-quality data. A modern data estate is the foundation to success.

- **Skills gap** —GenAI is a new and evolving technology. Without the acquisition of new skills, training, and support to effectively work with GenAI, projects are delayed, cost more and fall short of business goals.

- **Absence of guard rails,** —Without clear guidelines and automated governance, GenAI initiatives are chaotic. Establishing guardrails limits risk, remove hurdles and common obstacles that slow down implementation.

- **Lack standard code and environment templates** — Standardized templates for code, deployment, and infrastructure are key to consistent, repeatable and efficient projects. A must have for scale.

- **Focus on opportunity and value creation**— Best practice suggests leveraging technologies like OpenAI and Azure OpenAI. The focus should be on how to apply theses technologies, not recreating them.

- **Visibility and cost management challenges**— Effective monitoring and cost management are important for the enterprise. Organizations need visibility into GenAI model performance, resource utilization, and costs.

Key to Enterprise Success

Essential elements for achieving a successful GenAI transformation.

USE CASE IDENTIFICATION & PRIORITIZATION	TECHNICAL & BUSINESS ANALYSIS SUPPORT	GOLDEN PATH WORKFLOWS	ENABLEMENT AND SUPPORT	VALUE MONITORING
Evaluation model to identify and prioritize key GenAI use cases based on time-to-value and potential ROI	Analysis model to identify a target architecture that suits the business context and case.	Predefined GenAI templates and related infrastructure with pre-built guard rails and integration with Azure OpenAI	Enabling continuous learning through training and coaching to facilitates knowledge acquisition and supports change management	Usage, quality, cost and performance monitoring to ensure optimized value is reached

MODERNIZATION   INNOVATION   ANALYTICS   AI   ENGINEERING

Microsoft Solutions Partner
Data & AI
Azure

Microsoft Partner Specialization
Analytics
DevOps with GitHub
Kubernetes on Azure
Migrate enterprise application to Azure

GEN AI ACCELERATORS ENABLE ORGANIZATIONS TO SWIFTLY DEPLOY INTELLIGENT WORKLOADS

INCYCLE SOFTWARE
A better way

OpenAI

InCycle Provides the Heavy Lifting: Easy as 1-2-3!

Customer leverage our industry leading services that uniquely combine the power of our flagship GenAI accelerator platform, an outstanding team of expert GenAI architects, and a collaborative approach (training, coaching, mentoring etc.) that quickly gets your organization delivering production-ready GenAI solutions. All InCycle GenAI Accelerators include 3 essential elements for successful adoption, briefly:

1
InCycle's GenAI Accelerator Platform

Assists in use case analysis, feasibility assessment, business case development, and architecture design.

2
Experienced Solution Architect

Packaged & "ready to deploy" GenAI models (e.g., Fine-tuning, RAG, etc.), platform engineering templates, automated infrastructure setup, chargeback and performance monitoring.
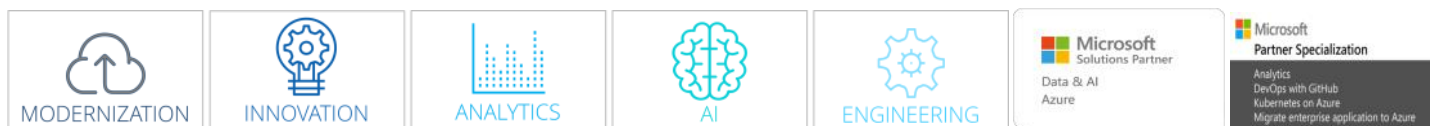
3
Enablement & collaborative approach

Expert services for implementation, operationalization, and coaching to ensure a successful adoption journey.

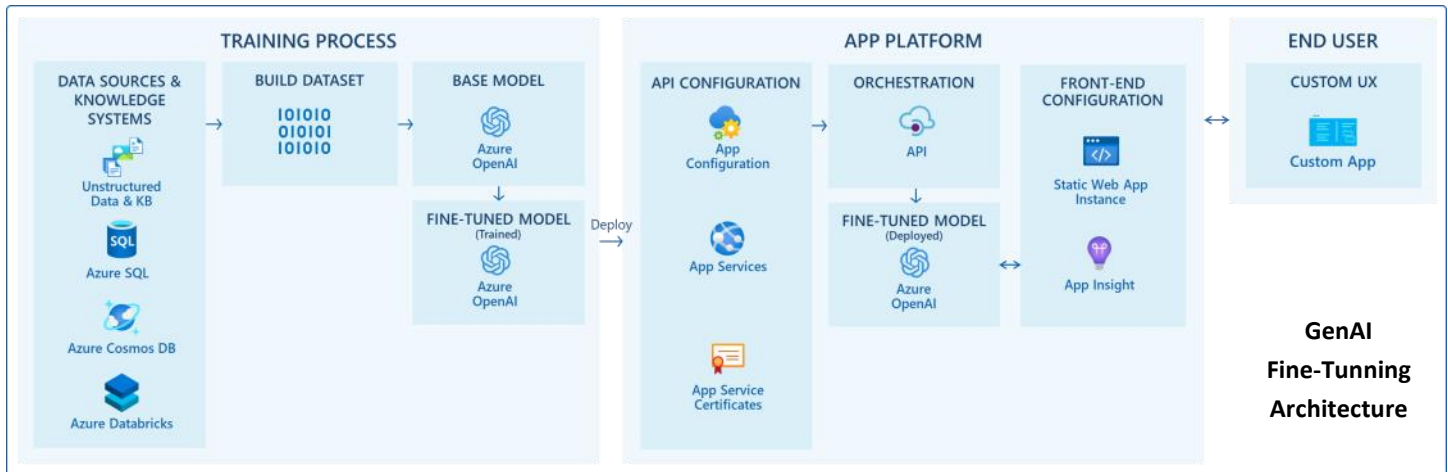**A better way to rapidly deliver production-ready GenAI solutions**

InCycle's accelerators are perfect for customers seeking expert guidance to navigate the dynamic and complex landscape of GenAI. If you have a vision GenAI in the enterprise, and aim to avoid setbacks and move quickly, InCycle is the ideal partner for you.

MODERNIZATION   INNOVATION   ANALYTICS   AI   ENGINEERING

Microsoft Solutions Partner
Data & AI
Azure

Microsoft Partner Specialization
Analytics
DevOps with GitHub
Kubernetes on Azure
Migrate enterprise application to Azure

GEN AI ACCELERATOR
FINE-TUNED MODEL

INCYCLE SOFTWARE
A better way

GenAI with Fine-Tunning Solution

Fine-tuning is the process of taking a pretrained machine learning model and further training it on a smaller, targeted data set. The aim of fine-tuning is to maintain the original capabilities of a pretrained model while adapting it to suit more specialized use cases.

GenAI Fine-Tunning Architecture

WHAT?

Taking a pre-trained model (a model that has already learned general patterns) and making it more proficient for a specific task or dataset.

SCENARIOS

- Task-Specific Applications
- Limited Resources
- Enhancing Model Performance

EXAMPLE

For an "English language sentiment analysis" model, fine-tune it for Spanish using a Spanish dataset is more efficient than training a new model.

BENEFITS

EFFICIENCY
Less resource-intensive compared to training a model from scratch.

QUICK RESULTS
Achieves better performance in a shorter time, as the model is already equipped with basic understanding.

TARGETED PERFORMANCE
Enhances the model's capabilities in specific areas, making it more relevant and accurate for particular tasks.

GET STARTED

Supercharge your GenAI initiatives today with a reliable and experienced partner. Get in touch with us at info@incyclesoftware.com or explore our website at www.incyclesoftware.com. For immediate assistance, call us at 1(800) 565-0510.

MODERNIZATION | INNOVATION | ANALYTICS | AI | ENGINEERING

Microsoft Solutions Partner
Data & AI
Azure

Microsoft Partner Specialization
Analytics
DevOps with GitHub
Kubernetes on Azure
Migrate enterprise application to Azure

GenAI with Retrieval Augmented Generation (RAG)

RAG is a model and technique for enhancing the accuracy and reliability of generative AI solutions with information fetched from external sources by integrating retrieval-based techniques.

GenAI RAG Architecture

WHAT?

A framework that enhances/specializes response capabilities of a LLM (such as ChatGPT), by integrating in real-time an information retrieval system

SCENARIOS

- Complex Questions
- Dynamic Information
- Enterprise specific information or processing
- Reducing Hallucination

EXAMPLE

For a medical diagnosis assistant that needs to access the latest medical research and patient data information from proprietary data, and medical databases or journals.

BENEFITS

REDUCES HALLUCINATIONS

UP-TO-DATE AND ACCURATE CONTEXT-AWARE RESPONSES

IMPROVED TRANSPARENCY

FASTER PROCESSING

SCALABILITY

INDUSTRY AND DOMAIN AGNOSTIC

GET STARTED

Supercharge your GenAI initiatives today with a reliable and experienced partner. Get in touch with us at info@incyclesoftware.com or explore our website at www.incyclesoftware.com. For immediate assistance, call us at 1(800) 565-0510.

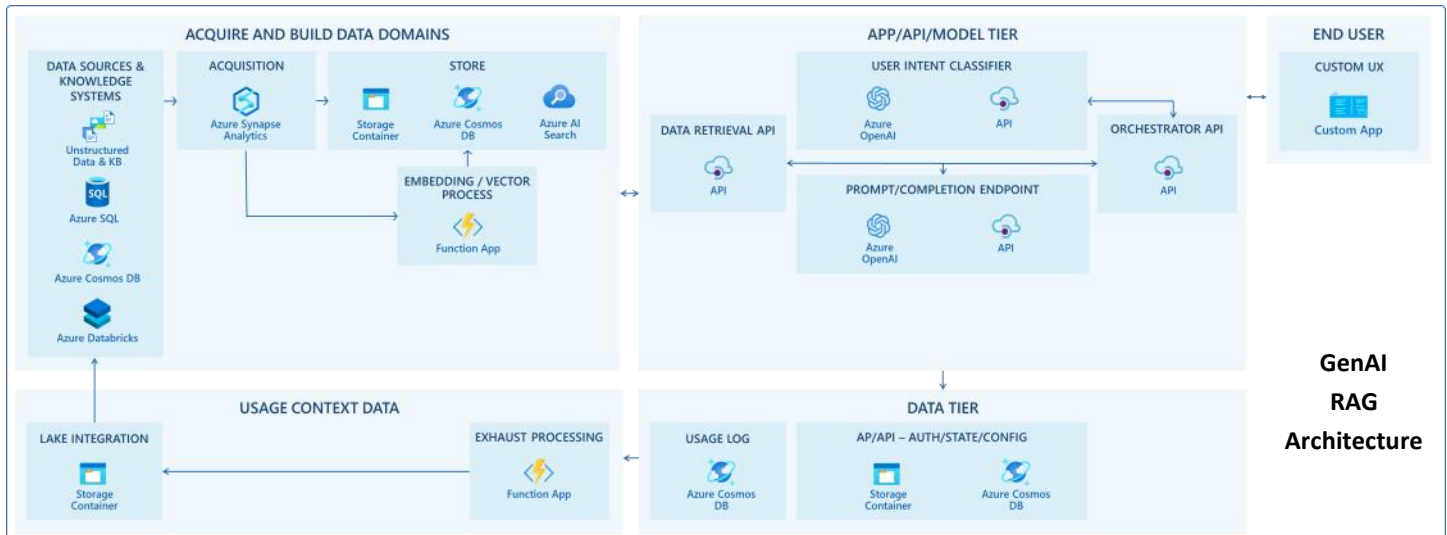MODERNIZATION   INNOVATION   ANALYTICS   AI   ENGINEERING

Microsoft Solutions Partner
Data & AI
Azure

Microsoft Partner Specialization
Analytics
DevOps with GitHub
Kubernetes on Azure
Migrate enterprise application to Azure

GEN AI ACCELERATOR SOLUTION & SERVICES

INCYCLE SOFTWARE
A better way

Project Strategy and Approach

Every project kicks off with a personalized GenAI introduction. After establishing a solid understanding of the basics, we delve into the business context, viability, and solution evaluation. The most promising use cases are then selected as pilot projects.

1 Business context definition	2 Scenario feasibility & assessment	3 Pilot validation	4 UI development & integration	5 Response validation & testing	6 Operationalization & scale-up
• User persona discovery • AI scenario classification • Scenario/scope prioritization	• Data analysis • Acquisition & serve discovery	• MVP API and architecture implementation • GenAIOps – Pipeline / Infra / Config - Everything-as-code	• Wireframe acceptance and development • Deployment and authentication	• Accuracy and reliability testing • Performance baseline validation	• Monitoring • Scaling • Lifecycle

After a successful pilot, the focus shifts to preparing for full-scale deployment. Utilizing established architectures, our implementation services encompass cutting-edge GenAIOps practices, including pipeline setup, configuration management, and infrastructure as code. As the solution progresses, we refine the user interface and conduct rigorous testing for enhanced accuracy and reliability. This phase also involves comprehensive validation, including establishing performance benchmarks. The final stages of implementation center around enterprise scalability, continuous monitoring, and effective GenAI lifecycle management.

Next Steps

Unless you are ready for a pilot, the best way to kickstart your journey is with a tailor-made **GenAI workshop**. This immersive experience offers a unique chance to uncover the boundless potential of generative AI and how it can elevate your business. Beyond just exploring features and capabilities, our workshop dives deep into transformative applications that can truly revolutionize your business.

Microsoft Programs!

As an industry leading Microsoft partner, InCycle has privileged access to numerous programs and customer incentives that expedite every stage of GenAI solution development, starting from conceptualization to full implementation. Clients benefit from valuable resources and project funding. Reach out to **InCycle today to propose your project for consideration!**

ACCELERATE

IMPLEMENT

DESIGN

CONTEXTUALIZE

DISCOVER

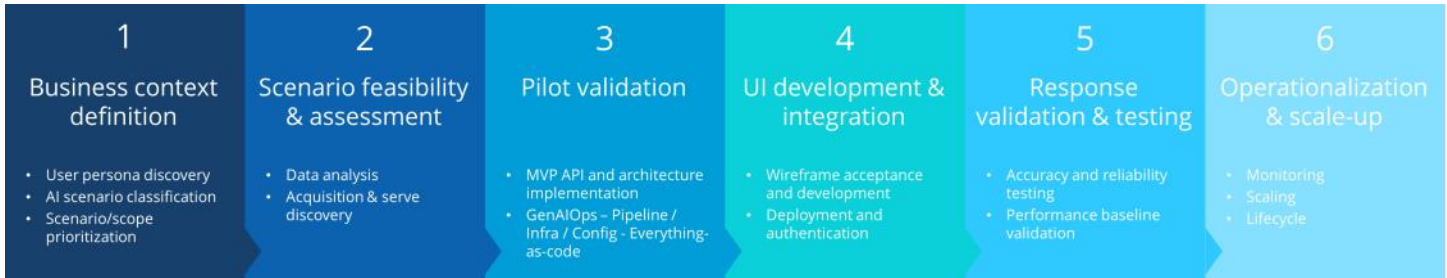INCYCLE SOFTWARE
A better way

GET STARTED

Supercharge your GenAI initiatives today with a reliable and experienced partner. Get in touch with us at info@incyclesoftware.com or explore our website at www.incyclesoftware.com. For immediate assistance, call us at 1(800) 565-0510.

MODERNIZATION   INNOVATION   ANALYTICS   AI   ENGINEERING

Microsoft Solutions Partner
Data & AI
Azure

Microsoft Partner Specialization
Analytics
DevOps with GitHub
Kubernetes on Azure
Migrate enterprise application to Azure