GROWTH ACCELERATION PARTNERS

BEYOND THE BUZZ: OPERATIONALIZING AI WITH GAP

We're Cutting Through the Hype & Focusing on Scalable AI Solutions to Drive Real Business Value

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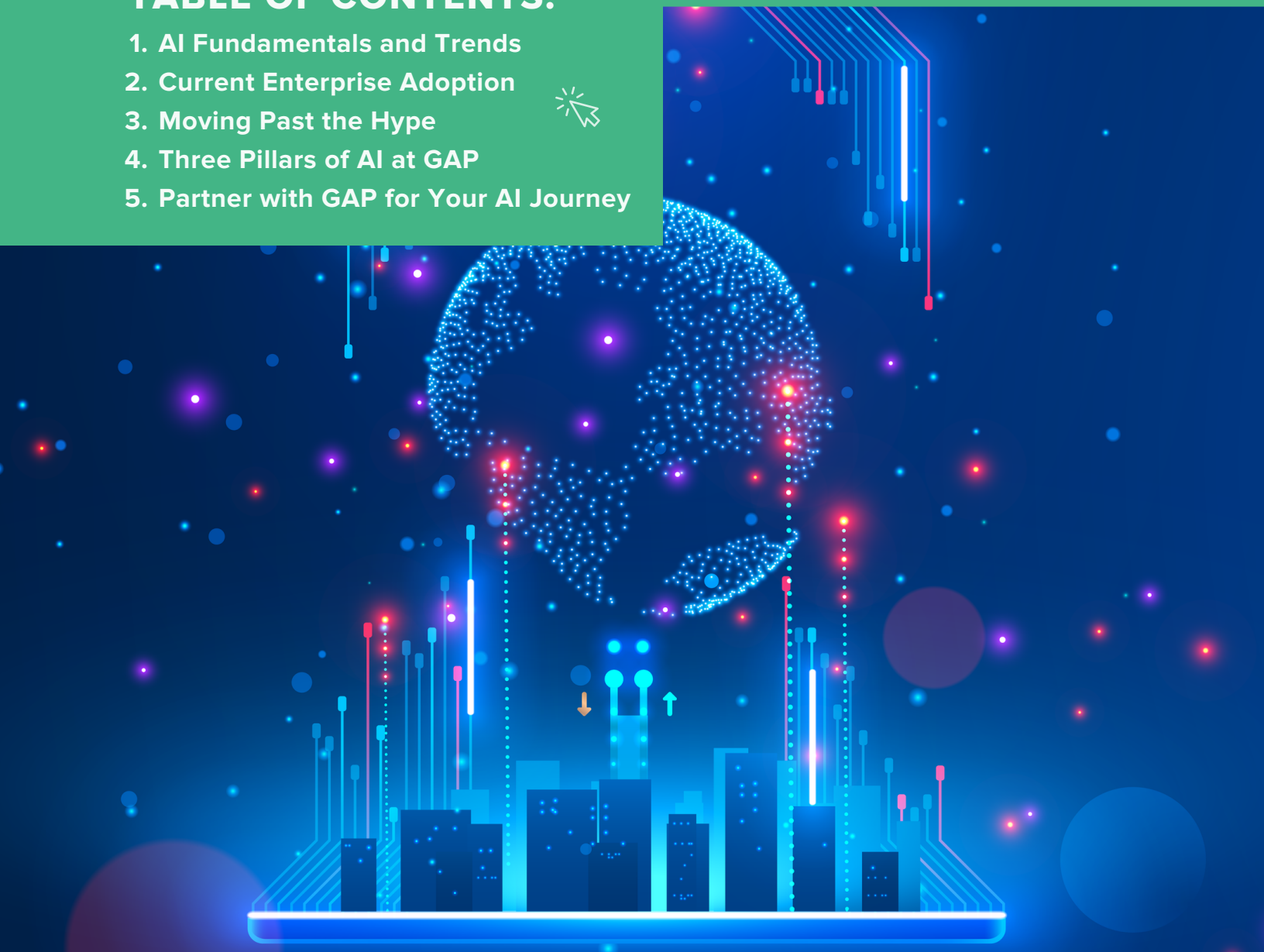

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EXECUTIVE SUMMARY:
Artificial Intelligence (AI) is reshaping the business landscape, and Growth Acceleration Partners (GAP) is here to help sift through the noise. Based on our own experience internally — and through helping our clients — we are committed to delivering robust and contextual solutions designed with precision and foresight.

This white paper addresses the hesitation many executives feel amidst the AI craze, highlighting the opportunities AI presents and the complexities to consider. While it's too early to adopt AI across all your operations, it's also too late to not use any. Let's investigate the transformative potential of AI while being honest about the tricky parts.

LEVERAGING AI IN SOFTWARE & DATA ENGINEERING FOR OPERATIONAL SUCCESS

Feeling left behind in the AI revolution?

Everywhere you look, tech companies are making groundbreaking advancements with AI. Google has leveraged deep learning to outperform human ophthalmologists in diagnosing diabetic eye disease. LawGeex is an AI startup reinventing contract reviews, achieving speeds 100 times faster than traditional methods and surpassing the accuracy of manual reviews. And seemingly every day, some new AI breakthrough has happened.

AI is creating a lot of buzz, and it's easy to feel like you aren't doing enough to keep pace... especially if you describe your business as cutting-edge, innovative or even just modern. If you want a successful product, you may feel pressured to figure out how to put an AI label on it, or you risk losing out to a "smart" option.

Despite the fact early AI research began in the 1950s — and became more prevalent 20 years ago with robot vacuums, email spam filters and voice recognition software — we've now reached a pivotal moment where everyone can more practically touch and feel AI.

AI isn't just for techy geeks anymore. Generative AI applications like ChatGPT, Dall-E 2, Bard, Microsoft Copilot, Midjourney, Synthesia and so many more enable non-technical people to take advantage of cool AI tools. Plus, the more people are using it, the more it feels like it needs to be a part of your business to transform your organization, or at least bring substantial improvements in operations, IT, finance or marketing.

If you're trying to figure out how AI works — or if you think you need to invest more in AI but are reluctant to make big moves too quickly — you are not alone. And Growth Acceleration Partners (GAP) can help.

Let's dive deep into the potential for AI, trends in enterprise adoption, and how GAP is cutting through the hype with actionable strategies.

1. AI FUNDAMENTALS AND TRENDS

When talking about a subject as complex and diverse as AI, it's always good to get aligned on definitions. AI refers to the simulation of human intelligence in machines; it is the reproduction of behaviors commonly associated with human-like intelligence, such as decision-making.

Traditionally, the idea has been to automate routine and mundane tasks to free up humans to do more complex and creative tasks. As technology evolves, we see emerging AI techniques, such as expert systems (i.e., self-driving cars), generative AI and augmented/virtual reality.

Humans have many capabilities and perform countless functions; as a result, there are numerous types of AI. It's difficult to create an inclusive list of AI technologies because of the breadth and overlap within the field, but here are some categories that exhibit a segment of AI's far-reaching possibilities.

Machine Learning and Deep Learning

Multiple types of AI benefit from machine learning (ML) techniques. ML enables computers to learn from and make decisions based on ongoing data without being explicitly programmed for every scenario. ML allows computers to recognize patterns in data to imply cause-and-effect relationships. Put simply, it can improve performance over time and with experience, just like a human. For example, if you feed the ML algorithm with thousands of example spam emails, the machine can start recognizing new spam emails by itself.

Deep learning is a subset of ML, referring to multi-layered models of interconnected nodes with learning feedback mechanisms used to help represent complex patterns and behaviors. It is a powerful component in all sorts of AI applications, from data analysis to self-driving cars.

Predictive Analytics

Predictive analytics sorts through historical data to identify the likelihood of future outcomes. Patterns and trends are identified through ML algorithms, which apply statistical processes and refine the resulting models. The accuracy of the algorithms improves over time as more information is processed.

A wide range of industries and functions benefit from predictive analytics, enabling organizations to anticipate trends, optimize operations and make data-driven decisions. Predictive models boost the accuracy of sales forecasts, detect fraudulent activities, personalize marketing campaigns and more.

Natural Language Processing

Natural language processing (NLP) recognizes, interprets and generates human language. Your first thought might be Siri or Alexa, but NLP is currently more often used for written language. NLP powers chatbots, search results, email spam filters and voice-to-text services. User reviews and social media posts are also analyzed for sentiment by detecting tone and emotion.

Although Siri and Alexa aren't the most common way we interact with NLP technology today, Bill Gates anticipates voice commands will be more prevalent over the next five years. Instead of using apps, "You'll simply tell your device, in everyday language, what you want to do." He also predicts advanced NLP AI has the potential to completely transform productivity and how healthcare and education are delivered.

Large Language Models

Large language models (LLM) are a specific type of NLP. They are deep-learning models that have been trained with vast amounts of text data. LLMs can answer questions, summarize text, translate languages and even write creative content.

We see even more sophisticated solutions when LLMs are integrated with other AI technology. For example, LLMs can be used to analyze large volumes of text data (news articles, financial reports) and then combined with predictive analytics to provide businesses with actionable insights and forecasts.

Generative AI

Generative AI is a term we've been hearing a lot lately. It's another subset of AI capable of creating new text, images, audio or video. Previous AI technologies have primarily been limited to interpreting, summarizing and classifying existing data. Generative AI's creative and generative capabilities are a real game-changer.

For example, ChatGPT is an LLM with generative AI capabilities. It generates text that is coherent and often indistinguishable from text written by humans. Ask ChatGPT to write a poem about your product to see how generative AI pushes the boundaries of contextual understanding and creativity.

While generative AI offers incredible potential for numerous innovative applications, it also presents new challenges and ethical considerations. Previously, AI automation has been leveraged to reduce human error and improve quality. As generative AI emerges, the amount of data that's been fed into these models is so large that it's difficult to moderate, which can induce mistakes, insert bias and violate intellectual property rights.

Some people may think these outcomes seem so "human," but others would definitely raise an eyebrow to see those pitfalls attributed to some inherent humanity in the models. Besides the old adage "garbage in, garbage out," perhaps we can also say "human in, human out."

Moreover, generative AI sometimes struggles to say, "I don't know." AI hallucination occurs when generative AI delivers incorrect or irrelevant outputs. It typically happens when the input or question is ambiguous, misleading or outside the scope of the AI's training data. Unfortunately, these hallucinations are often coherent and difficult to distinguish from fact, highlighting the importance of careful model design and human oversight.

2. CURRENT ENTERPRISE ADOPTION

We've hardly scratched the surface of AI's capabilities, and the possibilities for the future are mind-boggling. So, it seems logical that everyone would be moving full speed ahead, right?

Open AI's ChatGPT has over 100 million weekly active users, including users from 92% of Fortune 500 companies. It's fair to say organizations are eager to adopt discrete applications to boost productivity. Pursuing enterprise-wide initiatives to embed AI in the business is a more significant endeavor, and you may feel pressure to move quickly, think boldly and pivot strategically.

But also, don't fret if you haven't started or are just beginning — you might not be as behind as you might feel. And GAP can help you find the right path for your company based on your needs and the problems you're trying to solve.

OUTLOOK FOR 2024

Gartner forecasts worldwide IT spending will increase by 8% in 2024. While this growth is substantial, most companies will continue to invest in cybersecurity and automation to boost operational efficiency. With all the opportunities AI has to offer, why are organizations limiting themselves to the status quo?

There are so many types of AI and potential use cases, and organizations need to figure out where to focus and ramp up resources. But despite ongoing increases in IT investment, most IT departments are still constrained by time and talent. Leaders also know it is safer to stick with what they know. A common reason for AI project failure is a lack of expertise, and many companies favor known technology with a predictable ROI while leveraging existing resources.

Furthermore, your current resources may be busy supporting the business with existing projects and don't always have the luxury of researching up-and-coming technology advancements. Plus, new AI technology comprises completely new disciplines of knowledge. It's not necessarily realistic for current resources to get up to speed, and new talent with different skill sets needs to be hired.

THINKING WITH URGENCY, MOVING WITH HESITATION

A recent EY report indicates CEOs feel the need to act with urgency to stay ahead of the competition, but are faced with uncertainty and organizational constraints.

Meanwhile, Gartner analysts say CIOs are experiencing “change fatigue,” causing them to hesitate on new generative AI IT projects. They intend to maintain focus on efficiencies and cybersecurity in 2024 and spend time revamping their AI strategy for 2025.

For most companies, AI is already sprinkled throughout their enterprise, and leaders recognize the need to take a step back and formulate a cohesive strategy to operationalize AI. Connecting the dots and developing a roadmap will drive wise and confident investments.

As CTOs consider their AI strategy, they must also identify and bridge talent gaps to ensure the strategy is sound and achievable with their existing resources. They are deciding between developing and hiring the talent in-house or identifying a knowledgeable AI business partner to guide them through the process.

3. MOVING PAST THE HYPE

McKinsey predicts generative AI will unleash the next wave of productivity. In the coming years, it’s expected to transform how work is performed in customer operations, sales and marketing, software engineering and R&D.

The opportunity is immense and so is the scope. **Here are a few dimensions that require careful consideration as you move forward in developing your strategy.**

Operationalizing AI

As with most things, there isn't a one-size-fits-all solution. Every organization has its own unique starting point and existing systems in place. Meanwhile, there are a lot of products with "AI" labels on them. Beware of flashy presentations and jumping on the bandwagon without knowing where you are going.

To get the most bang for your buck and cut the hype, you need to operationalize AI with contextual solutions and embed it throughout your organization.

Consider these aspects:

- Robust and Scalable: The AI solutions you implement today must be scalable to grow with your business and evolve with the ever-changing AI technology.
- Cohesive: Integrate systems, data streams and AI tools to optimize productivity and capitalize on future AI capabilities.
- Drive Value: All the different types of AI present both an opportunity and a challenge. Strategize and prioritize your roadmap to drive value.

Calculating ROI on AI

From a bird's eye view, AI seems like a no-brainer: automate repetitive work, leverage predictive analytics, enhanced data management, generative capabilities, boost quality, lower costs... the list goes on. A 20%+ ROI is achieved in some applications, but you can't generalize these kinds of figures across the board.

In reality, AI investments can be expensive, and the ROI doesn't always pencil out financially. The time savings and productivity gains don't necessarily result in significant cost reductions because those employees will just do other things that need to get done. Likewise, revenue increases may be difficult to directly attribute to AI investments.

Recognizing the soft benefits that are more difficult to measure is critical. Employees who are challenged will expand their skill sets and grow their careers with your company. Similarly, AI tools can personalize and improve your customer's experience. Less tangible benefits should not be ignored, and embracing AI will make your business more agile and responsive.

The ROI conundrum is not a reason to avoid AI. The thing about AI is, it's either now or later. As generative AI technology evolves and advances, McKinsey predicts half of today's work activities could be automated by 2045. In the meantime, it's critical to be honest with yourself (and your stakeholders) about the near-term financial ROI versus the long-term cost of moving too slowly.

Uncovering AI's Hidden Layers

A recent BBC article stated it is likely that the greater the impact AI has on our lives, the less we will understand how or why. This phenomenon is already evident in personalized advertising.

We are also hearing media buzz saying even the most brilliant AI experts don't completely understand the "black box" and "hidden layers" of deep learning algorithms. While there are real concerns to be addressed, these reports can be misleading and borderline fearmongering.

The truth is AI experts do know how these models work. However, despite knowing how they are designed and how the information is represented within them, the algorithms keep surprising experts in the speed at which they are advancing, the breadth of tasks they can be used to solve and the scope of applicability.

Meanwhile, legitimate concerns about transparency arise as AI guides critical decisions in organizations. AI algorithms can digest millions of factors and data points from various sources almost instantly. How to cite all those sources? How to decipher how the model arrived at specific decisions or predictions? It's crucial to break down the basis for those decisions.

Instead of getting lost in the hidden layers, consider taking a practical approach: **If an AI tool can't provide transparency in decision-making, organizations should rethink how they rely on that information.** And risk can be anticipated and greatly reduced by having the right team — with the right expertise — working with AI.

Reliability and Quality

To expand on the importance of AI transparency, we must recognize sometimes AI is wrong. Humans feed AI the data it learns from, and sometimes this data is flawed with bias, discrimination and incorrect information. Moreover, remember AI hallucinations? Generative AI can literally make things up when it doesn't know the answer.

This risk of incorrect outputs from AI applications could pose severe risks. Perhaps this is an exaggeration for the high school student using ChatGPT for homework, but the hazards are substantive for the DevOps engineer using generative AI software to write code for the operation of a power plant.

Organizations must evaluate all AI applications as they are implemented to understand the possibility for errors, bias, discrimination and hallucination. Risk management professionals should evaluate the likelihood and severity of the risks. Accordingly, internal controls for human oversight must be integrated into processes to verify AI outputs and mitigate these risks.

Privacy

There are multiple facets when it comes to privacy concerns and AI, but they primarily revolve around how data is collected, analyzed, utilized and stored. This data could be personal identifiable information (PII) for individuals and intellectual property for businesses.

Large datasets are a target for cyberattacks, and organizations must be mindful of the AI systems and tools they use to manage data. Users who consent to sharing data may not fully understand the implications of consent or how the data could be used. Even if information is anonymized, AI algorithms could re-identify individuals by correlating data from multiple sources.

Regulating AI

There is a growing movement within the AI community and governments to establish guidelines and regulatory frameworks to ensure secure, trustworthy and ethical AI. However, at this point, the rapid development of technology is outpacing the creation of laws and regulations for transparency, traceability and privacy.

In the meantime, organizations should proactively implement controls and robust governance frameworks to safeguard themselves and their customers. Responsible and transparent AI is crucial to verify outputs. Intellectual property and privacy must be protected.

4. THREE PILLARS OF AI AT GAP

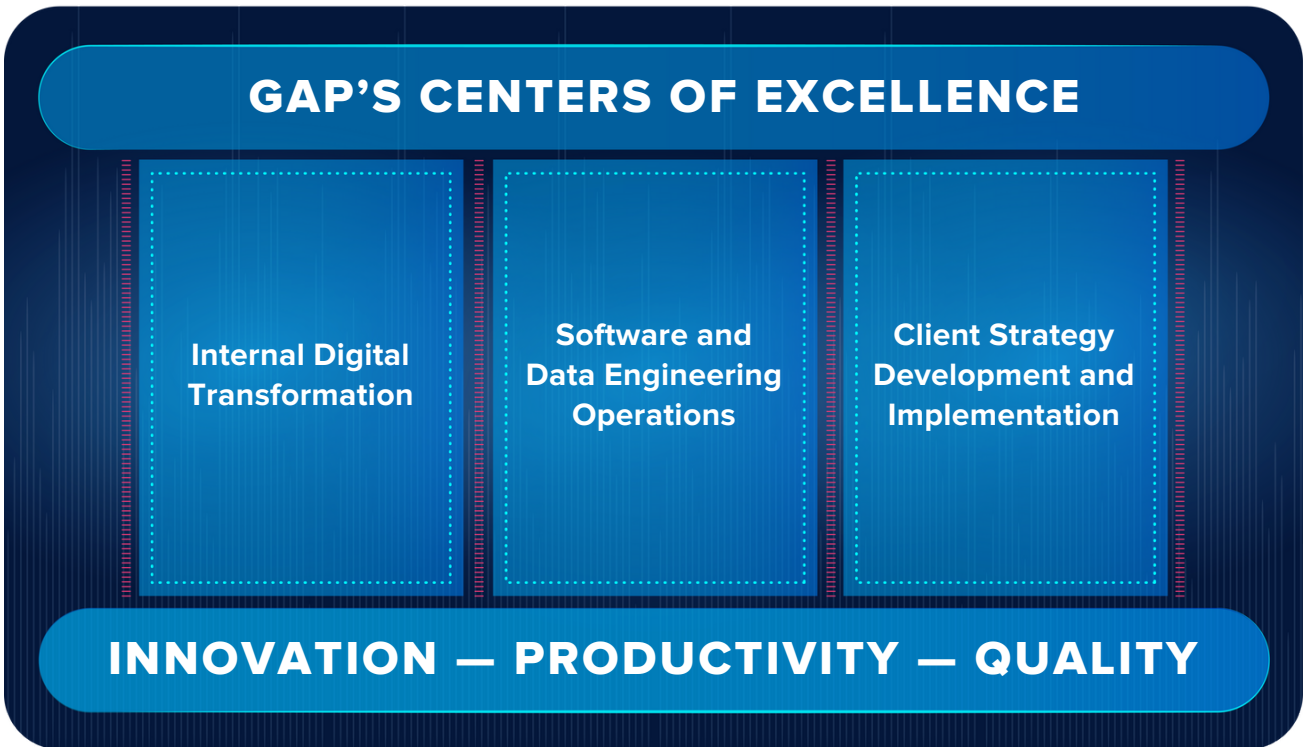
GAP has been helping enterprises explore and implement AI for years. GAP employees (affectionately known as GAPsters) are at the forefront of technology and encouraged to collaborate cross-functionally through GAP's 19 individual Centers of Excellence (CoEs).

CoEs are internal communities of GAPsters who are expanding their professional and technical expertise. Each CoE focuses on specific domains (i.e., leadership, cybersecurity) and technology platforms (i.e., Java, AWS). Expertise within each CoE is leveraged to support innovation and continuous learning, yielding transformative outcomes for GAP and our clients. And this culture of innovation and continuous learning has been critical to the success of GAP's AI strategy.

GAP's AI strategy can be divided into three pillars:

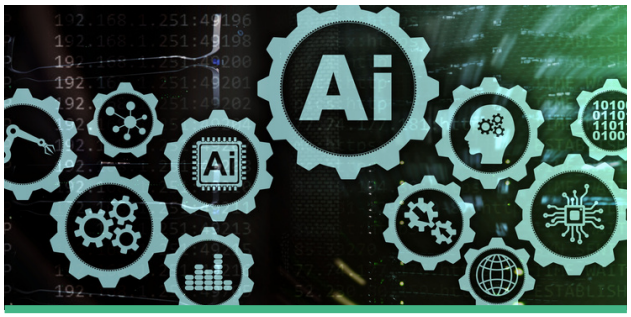
1. **Embedding AI in GAP's internal digital transformation journey**
2. **Embedding AI in GAP's engineering and delivery services**
3. **Helping our clients develop and implement a cohesive AI strategy**

None of the pillars stand independently from the others. They are connected with the same foundation of innovation, productivity and quality. Cutting-edge technology and domain knowledge are shared and dispersed between the pillars through GAP's CoEs.



LET'S TAKE A LOOK AT THESE PILLARS IN MORE DETAIL:

GAP's Digital Transformation Journey



At GAP, we practice what we preach and don't just talk the talk; we walk the walk. As we help our clients develop and implement strategic technology solutions, we achieve our internal business goals with a strong culture of excellence and digital innovation.

As GAP's CTO Paul Brownell explains, "We've been doing AI at GAP for over six years, focusing on the power of ML models, data quality and data governance. We are now exploring how to responsibly add the latest generative AI tools to our toolbox."

For instance, the Analytics CoE is dedicated to leveraging the power of data. Machine learning and predictive analytics have been employed to increase productivity, accurately measure business performance, and inform decision-making, both for GAP internally as well as for our clients and their customers.

GAP's CRM system provides inputs for predictive analytics for marketing campaigns and sales forecasts. ML models automate mundane work and highlight trends for analysts and managers so they can spend their time on high-value analysis and decision-making.

Our sales teams also leverage outside public data sources and AI tools to identify companies that fit the markets we serve and have a published need for our technology services. Our AI model consumes public internet information from company websites and sources such as LinkedIn and quarterly company shareholder reports.

The GAP Academy is the internal training platform for GAPster training and development. NLP AI applications are used to generate text-to-voice and text-to-video materials. All training is being modernized and AI-powered with interactive learning systems.

AI-powered HR and IT virtual assistants (e.g., superpowered chatbots) are also being developed to provide quick assistance to GAPsters. These virtual assistants are stocked up with a knowledge base of HR policies and common IT inquiries. Whether an employee needs to reset their password or has a question about health benefits, rapid support is at their fingertips.

GAP's internal initiatives around AI evolve with the technology. As GAP's CEO Joyce Durst puts it, "With the emergence of ChatGPT and generative AI in 2023, we dialed in on what we can't and shouldn't do with AI to instill secure and responsible practices. Now, we are exploring what we CAN do with generative AI to become 25% more productive."

GAP's Software and Data Engineering Services

Various cutting-edge AI tools are operationalized in GAP's software and data engineering services. The GAPster community is committed to continuously boosting productivity and elevating quality.

Software development engineering and modernization projects are accelerated with GAP's AI migration tools. AI powers the automated migration of legacy code such as Visual Basic 6 to modern languages like C#.net and infrastructure. In addition to translating and converting, these tools provide code analysis capabilities to help identify critical code components and potentially missing code. Productivity tools reduce the mundane work for engineers so they can focus on anomalies, solve complex problems and expand their skill sets.

In partnership with GAP's CoEs, engineering teams promote innovation and evaluate tools to refine procedures and best practices.

For example, developers compared Github Copilot and Tabnine in a controlled test to identify the preferred tool to assist engineers in writing code.

However, AI is not used mindlessly at GAP. **GAPsters receive mandatory AI Mindset training to ensure everyone is aligned on how to use AI tools safely, ethically and responsibly.** All team members are personally accountable for error-free work; AI recommendations and outputs must always be verified.

Additionally, client security is paramount. Client AI policies are adhered to rigorously. For clients who don't have an AI policy, the GAP team will take all necessary steps to ensure our client's intellectual property is contained and protected. GAPsters are well-versed in which plug-ins, extensions and features must be disabled when working with sensitive data.

Helping Clients on Their AI Journey

GAP has real-world AI experience assisting clients on their AI journey. We provide expert consulting services to help you design a cohesive AI strategy and the know-how to deliver the solutions.

One of GAP's clients is BookmarkED, a library management solutions provider that aims to empower parents, preserve library diversity and comply with local laws. They approached GAP to help them build a comprehensive database of books that highlights specific content markers in the storyline, such as female protagonists, violence or the presence of drugs.

GAP explored their requirements and discussed various approaches to achieving BookmarkED's goals and objectives. An AI page scraper was used to automatically extract information from across the Internet. This technology captured book descriptions and reviews from pages like publishers' websites and Goodreads.com. NLP semantic understanding made judgments on whether books were likely to contain specific topics and classified the information into a user-friendly platform. The second phase will drive an ML recommendations engine based on reader preferences.

Another client — an enterprise data and analytics company — chose GAP more than five years ago as a strategic partner to shape its AI strategy and elevate its data capabilities.

GAP continues to collaborate with and advise this client on data transformation, predictive models and data architecture orchestration. GAP's tailored approach leverages sophisticated LLM-based techniques while emphasizing scalability, efficiency and compliance to ensure this database marketing company's long-term success.

GAP's data and software engineers have also tackled complex data projects for clients. AI language models have been used to replace manual inspection in complex data merging operations, significantly reducing time and effort. Semantics within the data were detected and interpreted to correctly map data and match records from divergent data sets.

GAP recognizes the importance of high-quality data for AI models and enables clients to provision their services and data pipelines quickly and accurately with GAPBuilt Accelerators. Instead of weeks or months, data services can be provisioned in days. These configuration templates are flexible and AI-ready; ML and predictive analytics can easily be added to deliver speed and value.

Operationalizing AI isn't a one-size-fits-all service. GAP solutions are context-aware and tailored to your business. As your technology partner, GAP is committed to delivering technically sound, scalable business solutions.

5. PARTNER WITH GAP FOR YOUR AI JOURNEY

Our clients are the heart of GAP's business. We have a passion for manifesting visions into real digital solutions. We work with clients to create modernization roadmaps and help them navigate from design to delivery.

You can be confident taking your AI journey with GAP. We have a track record of helping our clients reach their goals and achieve a competitive advantage through technology in record time.

GAP doesn't offer flashy demos. Instead of showcasing cool parlor tricks that demo well but don't actually deliver true value, we help clients cut through the hype. GAP builds strategic AI roadmaps. We research and implement proofs of concept specific to the context of your business, your data and your applications.

Operationalizing scalable AI solutions that play well together is challenging. There are countless AI use cases, technology is moving quickly and your business is growing. You need a comprehensive and cohesive AI strategy that will stand the test of time. The experts at GAP will help you strategize, prioritize and implement.

Ready to put our team to work for yours? GAP is ready to help you cut through the AI hype and operationalize scalable solutions.

LET'S GET STARTED!

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