aws small and medium business

In.Sight

Perspectives for Smart Business

ISSUE 01

THE ARTIFICIAL INTELLIGENCE ISSUE

A more practical approach to AI for business

AI defined
Understanding AI and generative AI

Leveraging data
Ways to take your data to the next level

Tips for cloud success
Learnings from business leaders

And more
Insights, inspiration, and actionable takeaways

Editor’s note

Welcome to the inaugural issue of *In.Sight,* a quarterly publication for small and medium business (SMB) leaders who want to learn more about how cloud technologies can support their businesses. In each issue, you’ll hear from industry experts and business leaders like you, about emerging technologies that can be employed to address the critical challenges and opportunities SMBs face today.

One such technology, and the focus of this issue, is artificial intelligence (AI). While it seems to dominate headlines and conversations from the c-suite to the kitchen table, for many businesses it still appears aspirational and inaccessible—especially those businesses with limited technology resources. In this issue, we pay close attention to AI, focusing on the essentials of what it is, what you need to know, and even how you can start using it to create new efficiencies and opportunities for your business. While this technology continues to evolve in unanticipated ways, we can provide insight into the possibilities that lie ahead.

We hope you enjoy this inaugural issue. If you’d like to learn more about how cloud technologies can help your business create greater efficiency and scale, please **reach out**. We’re here to help.

—AWS Editorial Team

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AI defined

WRITTEN BY
AWS Editorial Team

AI is one of the most exciting developments unfolding in our rapidly evolving digital landscape. The emergence of generative AI has captured the imagination and piqued the curiosity of business leaders everywhere, because of its ability to create fresh content and concepts – including conversations, stories, images, videos, and music. The capabilities of AI and generative AI and the opportunities they pose for businesses to innovate, increase productivity, and find new efficiencies are fostering new conversations about what is possible.

Though AI has been around for decades, it has become easier and more cost-effective than ever for SMBs to adopt and leverage its capabilities. Its benefits—from analyzing insights from data, generating original content, automating tasks, safeguarding critical data, and streamlining the customer experience—can help SMBs gain the competitive edge they need to succeed. But before employing AI solutions, business leaders should consider their unique challenges and opportunities they present. Only then can they find the right solutions.

The capabilities of AI and generative AI and the opportunities they pose for businesses to innovate, increase productivity, and find new efficiencies are fostering new conversations about what is possible.

The following definitions will help SMBs understand AI and its applications.

AI

AI is the field of computing that makes technology capable of achieving tasks typically associated with human-level intelligence. These tasks include but are not limited to: reasoning, knowledge, planning, learning, and language. Within the domain of AI, machine learning (ML) algorithms and models enable computing systems to learn and think intelligently. In order to learn how to make a decision, predict outliers, or generate images and text, ML must be trained on data. ML seeks to find general patterns in training data that may be applied to data outside of the training set. For instance, before being tasked with identifying the presence of safety equipment in an image, an ML model may need to be trained first, by viewing several images of hardhats or other safety wear.

Want to learn more?

Download the AI for SMBs ebook.

Generative AI

Generative AI can create new content and ideas, including conversations, stories, images, videos, and music. It has been recently popularized by consumer-facing apps including AI chat bots like ChatGPT and image creation tools like Stable Diffusion. Generative AI powered by very large models that are pre-trained on vast amounts of data and are commonly referred to as foundation models (FMs). What sets FMs apart is their ability to perform a wide variety of complex tasks. For example, large language FMs can generate text to assist writers, answer questions on information from its training dataset, or provide a coding companion to generate blocks of software with developers. Additionally, diffusor type FMs assist creatives and designers in generating or editing images, videos, and 2D and 3D models. Beyond simple text and image generation, generative AI models can help scientists and engineers make new discoveries in fields such as medicine, pharmaceuticals, and industrials. This is just a small sample of the possibilities available through generative AI today.

How SMBs can harness the power of generative AI technology with the cloud

WRITTEN BY

Pierre Semaan, Head of Partner Sales Solution Architecture, APJ
Ben Cabanas, AWS Director of Solutions Architecture, APJ

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As AI rapidly evolves, it can be hard for SMBs to keep up. The buzz around AI and generative AI can seem overwhelming and gives way to many questions around what opportunities might be available.

To help SMB leaders better understand the potential of AI technology, Pierre Semaan, Head of Partner Sales Solution Architecture, APJ, and Ben Cabanas, AWS Director of Solutions Architecture, APJ, discussed this new transformative technology, recent developments in the AI space, and what these might mean for SMBs. The following is an excerpt from their conversation for AWS Partner Acceleration Hub:

Pierre Semaan PS: ***One often hears about "conversational AI" and "generative AI". How do these forms of AI differ?***

Ben Cabanas BC: Conversational AI and generative AI both involve artificial intelligence that can help automate numerous tasks—but they go about it differently. Conversational AI is focused on natural language processing and understanding, allowing machines to interact with humans naturally. It automates customer experience interactions, provides virtual assistants, and enables natural language search. An example of conversational AI is Amazon Alexa. Alexa can play music, answer questions, and control smart home devices. It is powered by natural language processing and ML technologies, allowing it to understand and respond to voice commands.

PS: ***How does "generative AI" differ?***

BC: Generative AI generates text, images, or other media in response to directions or prompts. Generative AI systems use generative models such as large language models to statistically sample new data based on the training dataset used to create them. A real

example of generative AI are Generative Adversarial Networks (GAN). GANs are a type of neural network architecture used to generate new data based on existing data. They are used in various applications such as image synthesis, text synthesis, and audio synthesis. One of the most recognizable examples of generative AI is Adobe Photoshop's Content-Aware Fill feature. This feature uses generative AI to analyze the content of an image and generate new pixels to fill in gaps or remove unwanted elements.

> **"Generative AI systems use generative models such as large language models to statistically sample new data based on the training dataset used to create them."**
>
> **— Ben Cabanas**, AWS, APJ

PS: ***Some generative AI apps use Large Language Models (LLMs). What are LLMs, and how do Generative AI apps use LLMs?***

BC: An LLM is a type of AI model that is specifically good at processing, interpreting and generating text- or image-based content. It is a type of AI algorithm that uses deep learning techniques and massively large datasets to achieve tasks such as to understand, summarize, generate, and predict new content. LLMs are trained on huge amounts of data, specifically text data or image data. All of this data, wherever it comes from, is processed through a neural network, a commonly-used type of AI engine made up of multiple nodes and layers. These networks continually adjust the way they interpret and make sense of data based on a host of factors, including the results of previous trial and error.

PS: ***How does the ML component work?***

BC: LLMs don't really "know" anything, but they are very good at figuring out which word follows another, which starts to look like real thought and creativity when it gets to an advanced enough stage. Most LLMs use a specific neural network architecture called a transformer that can read vast amounts of text, spot patterns in how words and phrases relate to each other, and then make predictions about what words should come next … There is some randomness and variation built into the code. For example, a bot might not always choose the most likely word to come next, but the second- or third-most likely, which could obviously lead to interesting results. This is why LLMs are in a constant state of self-analysis and self-correction.

PS: ***Earlier this year, AWS announced the preview for Amazon Bedrock. How does this service make generative AI technology available to customers?***

BC: Amazon Bedrock is a fully managed service that makes ML models—which we call foundation models (FMs)—from leading AI startups, and from us at Amazon, available via an API. Our customers can then choose from a wide range of FMs to find the model that is best suited for their use case without having to manage any infrastructure.

Importantly, Bedrock allows you to train the model with your own private data—and your data stays private to you. With Bedrock's serverless experience, customers can get started quickly, privately customize FMs with their own data, before easily integrating and deploying them in applications using the AWS tools and capabilities they are familiar with.

> **"Amazon Bedrock is a fully managed service that makes ML models—which we call foundation models (FMs)—from leading AI startups, and from us at Amazon, available via an API."**
>
> **—Ben Cabanas**, AWS, APJ

PS: ***How would you describe the advantage of this approach?***

BC: While services built on specific models typically run solely on their language model platforms, Bedrock users can perform specific tasks by selecting from a range of FMs. As an example, a content marketing manager could use Bedrock to create a targeted ad campaign for a new line of handbags by feeding it data so it generates product social media posts, display ads, and web copy for each product. As another example, Coda AI, an AI document generation firm used by companies like Uber and the *New York Times*, is using Bedrock to scale its business operation.

PS: ***How might an SMB explore opportunities and get started with AI solutions such as these?***

BC: If SMBs have limited in-house tech experience, they should check out our **AWS Partner Network** consultants who have a critical role to play here. First, they are uniquely positioned as trusted advisors with their customers who use AWS. Their part focuses around education and driving clarity in this area. Answering questions like the ones we are covering in our conversation: what are these new models, why are they different, what outcomes do they help with, how to implement, etc. Then they can integrate their models—presumably models created for specific industries or use cases—into Bedrock. Lastly, consultants can help deliver value, and build or integrate these models into customer applications on their behalf.

Next steps

Learn more about how SMBs can leverage cloud-based generative AI technology **here**.

“Generative AI is rapidly gaining traction among SMBs and midmarket firms, with a significant majority prioritizing its use and planning to invest in the technology.”

—**Anurag Agrawal,** Founder and Chief Global Analyst, Techaisle

Five ways a company can effectively leverage data to take it to the next level

The following is an excerpt from Authority Magazine.

Even as SMBs look to AI and generative AI to reduce costs, increase productivity, and improve customer support, the first order of business must be to get their data house in order. This is because an AI model will only ever be as good as the data it has access to. SMBs need a modern data strategy to make the most of AI. After all, the models won't know your customers, your products, or your people.

The proper use of data—about team performance, customers, or data about the competition—has the potential to dramatically help businesses scale. But many don't know how to properly leverage their data, or even where to begin.

To address this, *Authority Magazine* published "How To Effectively Leverage Data To Take Your Company To The Next Level" with Ben Schreiner, Head of Business Innovation, US SMB, AWS. The following highlights five ways SMBs can effectively leverage their data and pave the way for the promise of generative AI.

01 Unify and streamline your data to maximize its value

Many businesses have data siloed in different parts of their organization, often in different formats or hard-to-access places. This means the data can provide only a piece of the picture, rather than a complete view, leaving businesses with missed opportunities.

Businesses can migrate all their data from siloed legacy areas to fully managed automated databases in the cloud, providing everyone access to the same data and enabling smarter, more unified decision-making. Connected, accessible data improves visibility into a company's products, processes, and services. As a result, companies can more quickly develop and release products, identify ways to improve efficiency and save costs, uncover new revenue streams, and improve the customer experience.

02 Analyze data faster and generate actionable insights

The cloud enables you to quickly query large quantities of structured data, aggregate data to quickly derive meaningful insights from your apps in a matter of minutes, easily find and use third-party data, and more. And, you can ensure the insights being generated are easy to use and understand. Businesses can create and publish insights-driven reports and dashboards across business intelligence tools.

For example, AWS SMB customer Qure4u started out with Amazon QuickSight to create real-time data visualization dashboards for healthcare providers to see real-time data usage from their patients in order to improve patient care. Over time, these efforts to enhance their data strategy led to 5x growth.

03 Reinvent business processes through data automation

Cloud data and analytics services can help SMBs free up their time to work on high-value, revenue-generating projects while automating time-consuming and tedious efforts. We offer automated cloud solutions like document processing, fraud protection, predictive maintenance, and more that help you move away from the costly, inefficient process of extracting or managing data. For example, automating document processing, which can be done with AI/ML services, can speed up business processes, improve decision quality, and reduce overall costs. In day-to-day business processes, SMBs in almost every industry often manage an onslaught of documents containing information and data that is critical to making decisions. However, most documents are processed manually, which is time-consuming and can be expensive, difficult to scale, and error-prone. But, by building AI into solutions like intelligent document processing (IDP), companies can automate information extraction from documents of different types and formats, quickly and with high accuracy, without the need for ML skills.

WITH AWS

5x

growth achieved by Qure4u, after enhancing their data strategy with Amazon QuickSight to improve patient care

04 Unlock insights and improve customer experiences with AI and ML

SMBs can harness the power of AI and predictive and ML powered analytics to uncover and forecast hidden insights, trends, metrics, and key drivers in data, enhance customer experiences, and more. There's so much potential for SMBs here. If you operate an e-commerce site, you can quickly deliver personalized recommendations that target customers more accurately with ML-powered personalization services, deploying curated recommendations and intelligent user segmentation at scale. You can create customer service chatbots that can answer FAQs and automate customer journeys. You can generate accurate ML predictions in a visual interface that allows business analysts to create accurate predictions on their own — without any ML or coding experience. You can even easily forecast accurate business outcomes, using the power of your data to predict foot traffic, workforce staffing needs, inventory stock, and more.

Organizations of all sizes are leveraging data to boost their business, and many SMBs may just have the data that another business hasn't found on its own but can benefit from immensely.

05 Monetize your data and insights

SMBs are generating more data than they know what to do with, yet there's an opportunity to put their data to work and consider who else might find value in it. Organizations of all sizes are leveraging data to boost their business, and many SMBs may just have the data that another business hasn't found on its own but can benefit from immensely. We're helping SMB customers monetize data, providing offerings that enable businesses to package and sell the data being generated to their own customers as well as entirely new customers. Essentially, we're enabling SMBs to generate entirely new revenue opportunities with their data.

Looking ahead

We are going to see the next wave of widespread adoption of ML, with the opportunity for every customer experience and application to be reinvented with generative AI. We've been deeply invested in providing industry-leading AI capabilities for years and are doing the same for generative AI, which I believe to be the single most transformational technology of our time. The cloud and generative AI levels the playing field for SMBs, democratizing access to the same leading technology and services that large enterprises are using.

But, to develop the right data foundations for AI/ML, SMBs must start with high-quality, unified data from their business.

Learn more here.

CUSTOMER SPOTLIGHTS

Driving success with the cloud

WRITTEN BY
AWS Editorial Team

SMBs around the world are looking to unify and strengthen their data strategies, and leverage the power of AI and ML to grow their businesses in a myriad of ways.

MDaudit

INDUSTRY
Healthcare

LOCATION
United States

Business challenge

MDaudit—a cloud-based billing compliance and revenue integrity platform designed specifically for US healthcare providers—had the kind of problem every company dreams of: It was bringing on customers faster than it could serve them. Healthcare providers receive a huge volume of external audit requests, with essentially zero margin for error. And although medical records are being digitized at an accelerating pace, there are still plenty of tasks that are largely handled on paper. With more than **650,000 providers** and **2,200 facilities** among its users, including more than **60 of the top US health networks**, the MDaudit's leadership realized they would need a sophisticated AI-powered solution to automate its auditing workflow.

Solution

When an insurer decides it needs more information to determine the validity of a medical claim, the requests come in as unstructured PDF documents, from which MDaudit's software would have to extract data before it could even begin to handle the request. The solution began with AWS object storage. Each customer uploads documents through a unique web portal, which triggers an optical character recognition program to scan the file and convert images of text to machine-readable information. After that, a natural language processing algorithm identifies a predetermined dataset from each document, including fields such as name, date of birth, and date of service. MDaudit's software then compares the formatting of both the character recognition and the natural language processes against past examples stored in an AWS database. If those come up with differences, the process runs again with a wider scope and sends the results back to a human to review. Only then, once a real-life person has given the OK, does the document get stored for later government audits.

Business impact

By implementing AI and ML, MDaudit achieved several positive outcomes. They reduced person-hours needed for top-quality service, coping with customer growth while maintaining affordability. The accuracy of audit responses improved, thanks to AI-processed data. For example, healthcare providers receive an average of 2000 letter per quarter, and MDaudit has been able to **fully extract 90%** of the letters successfully and **10% of the letters partially**—with more training planned in the future. This saves a customer an average of **15 - 20 mins** per letter, resulting in huge processing costs and providing a seamless experience, which is particularly valuable in the cost-conscious healthcare industry. Automation allowed MDaudit to handle more customer requests and provided them with the data they needed to support their healthcare customers more effectively.

neural .love

INDUSTRY
Software

LOCATION
The Netherlands

Business challenge

An EU-based company whose mission is to bridge the gap between AI and people, neural.love had everything—almost. They had a great idea to build responsible, accessible tools that leverage the power of AI for everyday users. Their platform offers a range of generative AI solutions, such as text-to-image, image, as well as audio and video enhancement. But, because of the huge amount of data involved, enhancing video and upscaling to 4K was taking too long. They needed a solution to efficiently handle their data-intensive tasks and keep costs low.

Solution

In a market as fast-moving as generative AI, neural.love couldn't afford to slow down its pace of development—so they partnered with AWS. Not only was AWS able to manage an infrastructure that allowed them to affordably scale, but their AI tools gave neural.love the ability to better predict how much their services would cost. Now, they're able to provide customers with accurate, tailored price points, keeping costs low both for them and their customers, while maintaining fast processing speeds. They also adopted various AWS services for data management, messaging queues, customer authentication, and backend infrastructure to support their growth and innovation.

WITH AWS

2m
users now registered with their services

40m
images created by their users

Business impact

Neural.love has achieved several significant impacts. Their revenue grew six times over since launch, and they reduced time-to-market for new AI features from three months to just one, resulting in six new features annually. They now serve **2 million registered users** who have created **40 million images** using their AI tools. The company has also helped museums make their content more engaging and exciting, allowed printing companies to enhance their source material for easier workflow and better products, and offered app developers the chance to apply neural.love's capabilities to their own apps to design more customer-centric experiences. A cloud-native approach enabled the company to focus on product offerings, user experience, and innovation, leading to more competitive pricing for customers. Additionally, neural.love's responsible data practices and privacy-first approach set them apart in the market.

鶴見酒造
創業1873年

(TSURUMI SHUZOU)

INDUSTRY
Manufacturing

LOCATION
Japan

Business challenge

In Japan, the number of sake breweries is on the decline, due to aging sake brewers, a shortage of labor, difficulties in passing on skills, and a decline in domestic sake consumption due to the diversification of alcoholic beverages. This changing landscape forced Tsurumi shuzou, a sake brewery established in 1873, to address quality improvement and operational efficiency issues directly.

Solution

To solve these issues, the company introduced temperature sensing using AWS. The system named “Moromi Cloud Diary” connects product temperature sensor data to a gateway via Wi-SUN, a wireless standard for smart meters, and uploads the data to the AWS cloud environment via LTE-M communication using a mobile phone line. Temperature data for koji, shubo (sake mother), and mash were consolidated on AWS and visualized in graphs.

In the past, sake brewing required the toji (master brewer) to live in the brewery and periodically measure the temperature throughout the brewing period. However, with the Moromi Cloud Diary, temperature data can now be monitored via PC or smartphone, so it can be checked from remote locations. The brewery receives notifications only when abnormal temperatures are observed.

WITH AWS

24hr

remote monitoring eliminates the need for overnight stays, improving working conditions and visualization

Business impact

By leveraging AWS Internet of Things (IoT) and cloud-based monitoring, Tsurumi shuzou achieved significant improvements. The ability to visualize the temperature on a graph (tracked with lines rather than points) allows the toji to check the progress curve, making it easier to predict the temperature in the future—a major advancement in brewing technology. In addition, the remote monitoring system has made it possible to accurately determine the timing of various operations based on the data, which previously relied on intuition and experience, improving the sake quality in a short period of time. Since then, Tsurumi shuzou has won gold medals and honors at sake competitions in Japan and overseas, most recently Sanso “Daiginjo” Tsurumi shuzou (Aichi Prefecture) won the Grand Prix at the 2023 US National Sake Appraisal.

With AWS, it is now possible to **check the temperature 24 hours a day from anywhere**, eliminating the need for overnight stays. The improvements in working conditions and the visualization of temperature changes has helped Tsurumi Brewery attract a younger workforce.

SINTAD

INDUSTRY
Software

LOCATION
Peru

Business challenge

Sintad, a company specializing in business products and software for foreign trade, aimed to transition from a local player in Peru to a leading software provider in Latin America. They faced a challenge of spending too much time on support activities **(80%),** while lacking sufficient time for innovation and new development **(20%)**.

Solution

Sintad chose to become a Software as a Service (SaaS) provider and turned to AWS for support. By leveraging AWS services like Amazon Elastic Container Service, Amazon Relational Database Service, and AWS Lambda, in collaboration with Applying Consulting (part of the AWS Partner Network), Sintad successfully shifted their operational model based on these technologies. They created a new Foreign Trade ERP, where the infrastructure responsibility is managed between AWS and Sintad services. This allows trade agents to focus on their operations and not worry about the server infrastructure. This enabled Sintad to reverse the allocation of support and innovation time, moving to **30% support** and **70% new developments**.

Business impact

The transition to AWS enabled Sintad to significantly increase their focus on innovation and new development. By reducing the time spent on support tasks and utilizing AWS services, Sintad transformed its operations. They achieved a remarkable change, **dedicating 70% of their time to developing new solutions and innovations**. This shift not only improved their agility but also positioned them as a leading technology provider in Latin America's competitive market for foreign trade solutions.

WITH AWS

30%

of Sintand's time is now allocated to support, down from 80%.

70%

of Sintand's time is now allocated to innovation, up from just 20%.

“Cloud computing is here to change and drive the creation of new products and businesses. It works as a set of tools; you can use the one best suited for your scenario. It is here to help you focus on your business case—instead of the hardware.”

—**Mario Montenegro**, Product Manager, Sintad

Sky's the limit:
How companies can innovate more effectively with the cloud

The following has been adapted from the article, "How the cloud can bring brighter days", in Raconteur.

Innovation shouldn't be an occasional extravagance. Forward-thinking companies continually seek ways to grow and evolve, eliminating or automating non-competitive work to free up time and people to do this. Yet for SMBs that do not typically have the resources that larger organizations do, innovation can seem well beyond reach. A luxury that falls behind other competing and more pressing challenges of reducing costs, improving security, and day-to-day operations.

However, when implemented correctly, a cloud migration strategy can be a crucial piece in the transformation puzzle, especially when SMBs are facing a squeeze. In fact, the initial allure of the cloud for most leaders is financial. Running an in-house data center requires significant upfront capital investment and this technology is often not even used to capacity. A study by IDC found that typical data centers are 45% underutilized. So why invest in a resource that won't be used half the time?

When operating in the cloud, businesses only pay for the computing power, data storage and services that they use. They can scale their technology consumption up or down based on business and customer demands rather than according to some arbitrary licensing agreement.

"You can do more, for less, more cost-effectively. This opens up time and resources to look at doing innovative things," says Claire Gribbin, Head of WW SMB at Amazon Web Services (AWS).

IDC STUDY FINDINGS

45%

of typical data centers are underutilized

> **"You can do more, for less, more cost-effectively. This opens up time and resources to look at doing innovative things."**

—Claire Gribbin, Head of WW SMB, AWS | **LINKEDIN: /clairegribbin**

You can do more, for less, more cost-effectively

The benefits of the cloud go beyond cost. Once resources begin to open up, Gribbin sees more SMBs innovating the experience they provide their customers. "It is one of the key differentiators for an SMB's success."

The cloud enables businesses to focus on exceeding customer expectations with new insights, products and services, rather than wasting time and money on running their own data centers or managing complex, expensive licensing deals. The real power of the cloud is that it allows companies to innovate at speed.

"In all, AWS Cloud enables businesses to experiment more, at a lower cost and, when they hit that winning idea, to scale it globally in minutes and days, not months or years, it also gives them the freedom to fail sometimes," says Gribbin. Offering a global infrastructure accessible to the newest startup through to the largest organization, AWS allows more experiments to be run to find those magic ideas that will wow customers. Unsuccessful experiments can be shut down and successful ones ushered quickly into customers' hands. The ability to test, pivot or scale allows companies to rapidly turn ideas into action.

The cloud offers the art of the possible

These are still early days for cloud adoption — according to AWS CEO Adam Selipsky, in 2021 only between 5% and 15% of possible applications resided in the cloud. With so much potential already being realized, there is still a huge opportunity to reinvent every industry.

The real power of the cloud is that it allows companies to innovate at speed.

Find out more

Visit aws.amazon.com/smart-business

How a Day 1 culture can propel growth for small and medium businesses

WRITTEN BY

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Maintaining a long-term focus, obsessing over customers and their needs, and boldly innovating to meet those needs lie at the heart of what is known as Day 1 mentality at Amazon. It is both a culture and an operating model that puts the customer at the center of everything Amazon does.

In today's fast-paced business landscape, it is crucial to stay innovative and find ways to differentiate from competitors. Imagine a world where every move you make resonates with your customers, where your success is built on understanding their needs, desires, and pain points. This isn't a farfetched dream—it's the customer-obsessed approach that can transform your business. In fact, think about when and why your business was founded. It was likely because there was an unmet need in the market that your company was created to solve. Customer needs are constantly changing, and at an even faster rate with a new generation of consumers, who are quickly becoming a larger share of the market and starting businesses of their own.

I often think about my own kids—a 21-year-old and a 13-year-old who will not buy any product or service if it is not available on their phone. Even as my eldest joins the corporate world, they will discredit anything that they can't look up in the palm of their hand. Moreover, they likely won't find the product or service in the first place. Needless to say, even if your company has experienced consistent, year-over-year growth for the last 20 years, or you feel that you know your customer as well as can be; emerging technology and a new generation of consumers will quickly outpace and defy what you thought you knew. So how might you reframe how you operate and think about innovation?

At Amazon, we attribute all of our innovation and growth to customer obsession. In fact, every Amazon Annual Report includes Jeff Bezos' original 1997 Letter to Shareholders, as it reinforces the mindset that every Amazonian carries: to relentlessly focus on customers, create long-term value, and make bold bets. These principles form the basis of our "Day 1" mentality. We believe for SMBs, adopting a Day 1 mindset can be a game-changer by allowing you to deeply understand your customers and develop innovative solutions that address their needs effectively.

Let's explore key elements of Amazon's Day 1 culture and how small businesses can adapt them to drive their own growth and success.

Obsess over customers

At the heart of maintaining a Day 1 culture is an unwavering commitment to customer obsession. For an SMB, this means going beyond providing a product or service—it's about understanding your customers on a personal level. Consider a local bakery that prides itself on crafting artisanal pastries. To truly obsess over customers, the bakery could engage with customers on social media to understand their favorite flavors, experiment with new recipes or add gluten-free and vegan options to accommodate frequent requests, and even offer personalized pastry subscriptions based on individual preferences.

By actively seeking customer feedback and listening to your customers' pain points and aspirations, you will learn to identify opportunities for improvement and innovation. This approach ensures that innovations are customer-driven, rather than isolated solutions looking for a problem.

Make high-quality, high-velocity decisions

Another component of a Day 1 culture is how an organization approaches decision-making. As businesses grow, decision-making processes may become more complex, leading to slower responses to market changes and customer demands. To accelerate quality decision-making, we propose adopting mechanisms or tools. One effective approach we use at Amazon is a concept called one-way and two-way doors.

A one-way door decision is irreversible, often requiring more research or significant expenses and resources. Whereas a two-way door is a quick and reversible decision, with minimal consequences. Two-way door decisions enable rapid testing, learning, and adaptation without fear of failure. For these types of decisions, it is not as necessary to gather loads of data and proof points to justify benefits to the customer or ROI. Most decisions are two-way door decisions and only need about 70% of the information you wish you had. If you wait until you know it all, you're likely being too slow.

We believe for SMBs, adopting a Day 1 mindset can be a game-changer by allowing you to deeply understand your customers and develop innovative solutions that address their needs effectively.

Embrace external trends and resist the status quo

Organizations with a Day 1 mindset will insist on fostering curiosity and constant experimentation. They also resist the tendency to prioritize familiarity, internal processes, and business outcomes over delivering great experiences or driving outcomes for customers. Staying agile and innovative requires SMBs to be constantly aware of external trends, technological advancements, and changing customer demands.

Let's consider a manufacturing business. Monthly reports suggest business is booming with solid month over month growth rate. Some customer reviews, however, include feedback that the store is losing its edge—that there are no real-time shipment tracking capabilities or that the inventory often arrives with defects. A Day 2 business would chalk up the reviews as outliers, as the data is clearly showing growth and demand. A Day 1 business would further investigate the customer anecdote and identify ways to improve transparency with customers or better utilize data to predict defects or issues in products before they happen.

It's always Day 1

Maintaining a Day 1 culture is a continuous effort, especially as businesses grow. SMBs must remain committed to customer delight, high-velocity decision-making, and a willingness to embrace change and external trends. By applying these principles, SMBs can build a thriving company that consistently meets customer needs and leads in their industry.

Learn more about our **culture of innovation here**.

SMBs must remain committed to customer delight, high-velocity decision-making, and a willingness to embrace change and external trends.

A FORRESTER STUDY

The competitive advantage of data and analytics for SMBs

WRITTEN BY
AWS Editorial Team

Untapped data and analytics opportunities for SMBs offer growth, resilience, and a competitive edge.

SMBs form the cornerstone of the global economy. These businesses generate huge amounts of data every day—and that data can be an invaluable asset for businesses able to capitalize on it. But taking full advantage of that data presents unique challenges for SMBs, which often lack the technical and financial resources of much bigger organizations.

In a recent study, commissioned by AWS, Forrester highlights the impacts that a robust data analytics strategy can have for SMBs. It examines the main obstacles SMBs face in trying to optimize their data strategies and offers suggestions for companies looking to future-proof their business and stay ahead of the competition.

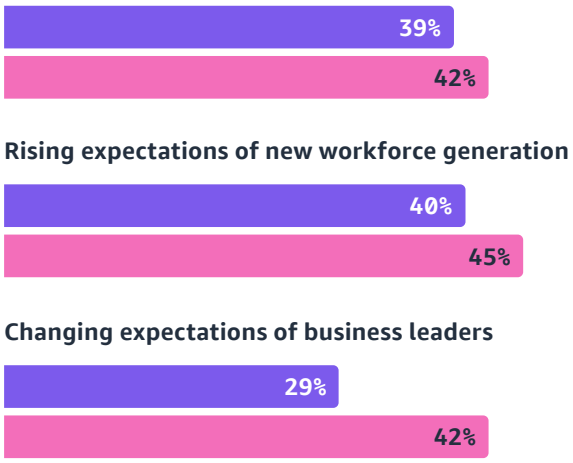
In June 2023, Forrester surveyed 320 data and analytics decision-makers in healthcare, manufacturing, retail, technology, and media/leisure, with a focus on businesses establishing or consolidating their data and analytics environments. The study aims to provide insights for SMB business and technology leaders planning data and analytics investments.

Download the study here.

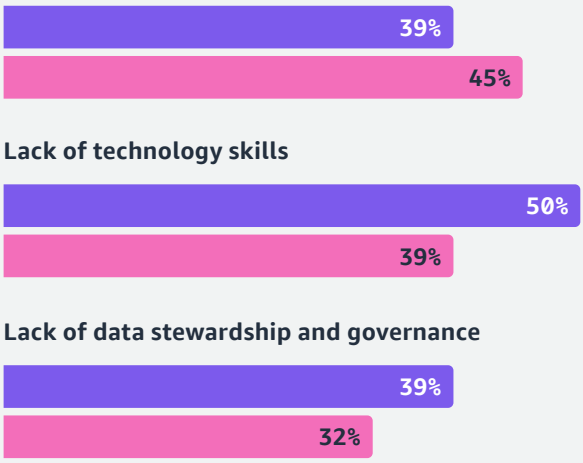
Cloud enables SMBs to develop insights-driven business capabilities

SMALL BUSINESSES MIDSIZED BUSINESSES

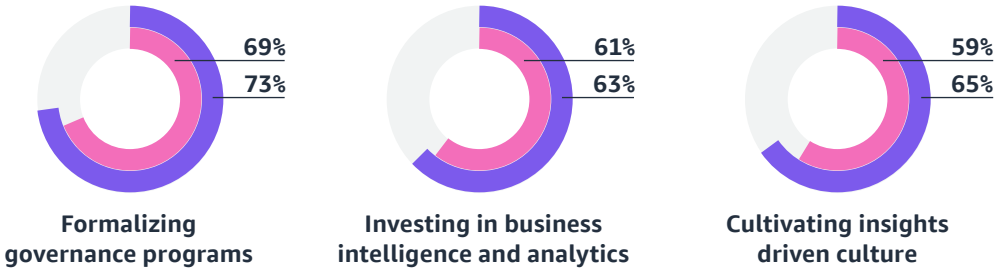
Stakeholders' tech expectations lead SMBs to become more insights-driven



Underdeveloped data management is holding SMBs back



SMBs are building foundational data capabilities to become insights-driven



SMBs will leverage cloud to expedite their data and analytics readiness

Base: 320 data and analytics decision-makers at SMBs.
Note: Forrester defines small SMBs as those that generate annual revenues between $10 million and $30 million. Forrester defines midsized SMBs as those that generate annual revenues between $30 million and $100 million.
Source: A study conducted by Forrester Consulting on behalf of AWS, June 2023

The support SMBs need to build their business

WRITTEN BY
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Whether it's time to modernize your business, take it into an innovative new territory, or expand your solutions, the AWS Partner Network can be a game-changer. This robust community features **over 100,000 vendors** from **more than 150 countries**, who can help SMBs deliver greater value for their business, increase agility, and lower costs.

The AWS Partner Network can help streamline the migration process for companies interested in cloud adoption. During the first summer of the COVID-19 pandemic, the United Kingdom Health Security Agency (UKHSA) decided that its myriad projects and health services—including the NHS Test and Trace Program—needed to reside in a single, secure, visible, and resilient cloud environment. The solution? Migrating to AWS Cloud, where some of their services already resided. The UKHSA partnered with BJSS, an AWS Public Sector Partner that had experience building successful solutions for government agencies and creating healthcare solutions on AWS. In only two months, BJSS used AWS services and the cloud landing zone accelerator BJSS Enterprise Cloud to build a secure, resilient, scalable, and immediately deployable solution called HALO. Today, HALO hosts over 90 workloads, 200+ AWS accounts, and more than 25 million users whose data is secure thanks to Amazon DynamoDB.

100k **vendors who can help SMBs deliver greater value feature in the AWS Partner Network**

These vendors are also able to help create a wide range of AI and ML solutions, depending on a customer's needs. **CloudSmart**, an organization that builds business intelligence solutions for the **AWS Marketplace**, noticed that AWS Partners only have access to certain data from their customers, leaving them at a disadvantage when it comes to predicting exactly what they will want next. Even worse, they have to pull this information by hand, meaning that they waste time extracting, transforming, and preparing data.

Aware that they would need support to fix this issue, CloudSmart enlisted the help of **Belle Fleur Technologies**, an **AWS Advanced Partner** and consulting company. With Belle Fleur Technologies focusing on the technological aspects of the equation, allowing CloudSmart to remain more customer-focused, the two companies used **Amazon QuickSight**, as well as other AWS services, to build a solution called CloudSmart Insights. Today, CloudSmart Insights empowers AWS Partners with automated data analytics processes, creating a personalized roadmap of sales that allow them to develop data-driven strategies and campaigns.

The AWS Partner Network is made up of strategic experts and experienced builders that help address your specific business needs...Our community has the same customer-focused mindset as AWS, and provides local, industry, and use case expertise. Working with a partner helps SMBs keep pace with cutting-edge technologies while focusing their attention on what matters most to their customers.

Get started

Engage with the AWS Partner Network for innovative and cost-effective scalable solutions and capabilities for your organization **here**.

From the frontline:
A solutions architect on generative AI

IN CONVERSATION
with **Ashish Mehra**

LINKEDIN: /mehra-ashish

At AWS, solutions architects (SAs) guide customers to build cost-effective and future-proof solutions to help their businesses stay relevant with the increasing pace of innovation. Whether a customer needs expert advice from industry and domain experts, or support from the AWS Partner Network, SAs are the first line of defense to expedite, support, and build successful business outcomes.

From the Frontline series covers current topics and trends from the perspective of these technology experts, working on the ground with SMBs. In this first piece, Ashish Mehra, US SMB Solutions Architect Manager, answers some questions on the topic that's top of mind for everyone in the business and technology industries—generative AI.

Why is there so much interest in generative AI?

Ashish Mehra AM: Generative AI has captured the attention and imagination of the world, and SMB customers in virtually all industries are curious to learn and understand how generative AI can help them build innovative solutions to boost their employee's productivity, streamline redundant tasks, and deliver new solutions and services to their end customers. Among all the different customer industries, SMBs have been the early adopters of new technologies that can help improve internal and customer experience.

What are some common generative AI use cases?

AM: Conversational chatbots, text generation and content summarization, code generation and optimization, business Intelligence and reporting, sentiment analysis, image editing and creation, and this is just the beginning.

What would you say is the value of generative AI to every level of an SMB (admin, operations, innovation)?

AM: Generative AI is a type of AI that can create new content and ideas, including conversations, stories, images, videos, and music. Generative AI models are very large models pre-trained on vast amounts of data and are commonly referred to as FMs.

Generative AI models have the capability to impact different lines of business, including engineering, marketing, customer service,

SMBS USING CODEWHISPERER WERE

27% **more likely to complete tasks successfully and did so on average 57% faster than those who did not use CodeWhisperer**

finance, and sales. For example, code generation is one of the most promising applications for generative AI. During the preview of CodeWhisperer—a general-purpose, ML-powered code generator—Amazon ran a productivity challenge: participants who used CodeWhisperer were 27% more likely to complete tasks successfully and did so on average 57% faster than those who did not use the code generation tool.

Using generative AI, SMB customers can improve customer experience through capabilities such as chatbots, virtual assistants, intelligent contact centers, and content moderation. They are experimenting with intelligent document processing, maintenance assistants, quality control and visual inspection, and synthetic training data generation. SMB customers in the media and entertainment industry are using generative AI to turbocharge the production of all types of creative content, from art and music with text, animation, video, and image generation.

If customers want to learn more and have access to their AWS Account Team, they should contact their account manager or the aligned SA. Account teams can help get them access to the Amazon Bedrock, demonstrate the art of the possible, get the funding (if eligible), or get them in front of AI/ML specialists to start their generative AI journey.

How can SMB leaders maximize generative AI exploration?

AM: AWS was built to be self-service, so our customers have access to hands-on labs, no-cost workshops with the AWS Generative AI Innovation Center to support their business needs, and several reference architectures and implementations to start exploring generative AI. AWS's "Choosing an AWS machine learning service" can help customers choose the right AI and ML services, frameworks, and foundation models to support their business. Customers should contact AWS for a discovery call to learn about the different programs available to expedite generative AI adoption.

How can SMBs explore generative AI I safely without putting their data at risk?

AM: For AWS, security is job zero, and we don't launch a service until we are satisfied with the security pillar of the service. With Amazon Bedrock, customers can customize FMs privately, retaining control over how their data is used and encrypted. Amazon Bedrock makes a separate copy of the base foundational model and trains this private copy of the model.

In essence, with AWS SMBs do not bring their data to the model, but rather the model is brought to the SMB—keeping its data secure.

Learn more here.

The big secret to getting value from AI? Solve a problem

WRITTEN BY
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In the early 2000s, the talk of the Consumer Electronics Show was internet-enabled microwaves, dishwashers, fridges, and other home appliances. The possibilities of having these devices connected to the internet—reminiscent of the *Jetsons*—seemed like an exciting wave of the future.

Over two decades later, however, it's unlikely that you know anyone who owns an internet-enabled dishwasher, much less an entire kitchen. So, what went wrong? Essentially, those fancy new smart appliances weren't widely adopted because they weren't created to solve a customer problem. Instead of focusing on functionality, the makers of these devices focused on conducting tech for tech's sake, or a type of "science" project. Today, they are museum pieces, remembered by few and owned by even fewer.

The value of AI

The hype around generative AI is loud and building every day. As with earlier major technological transitions, such as the internet and the cloud, we know that AI, ML, and generative AI have the ability to bring about large, industry-wide change. But if we focus too much on the tools and not the problems, we run the risk of wasting our resources on fancy science projects.

Instead of getting lost in the discourse, CEOs and board members of SMBs should ask themselves: What does generative AI mean for my business? How will generative AI affect my company's existing value proposition? How will it affect my customers' value proposition—and when will we see its effects? How will generative AI change my business model? And is my organization ready for these changes?

It's much to think about—and it's important to understand that these are basic business

questions. These same questions were asked whenever a new technology was introduced to the market. When the internet emerged or when the cloud was introduced, we also wondered: How will this new, exciting tool affect my business, change what we do, and transform customer expectations? How will this new thing strengthen my value proposition?

Companies that treated these queries as business questions tended to have very different outcomes than those that didn't.

Using technology to solve pain points

In 2002, FedEx noted that the paperwork their 40,000 FedEx Express couriers were required to file each time they picked up or delivered one of the 3.5 million packages they collectively interacted with daily was resulting in time lost. The company partnered with Motorola, Inc. to develop the FedEx PowerPad handhelds, a custom-made device designed to eliminate the need for FedEx Express couriers to do paperwork, ultimately saving them 10 seconds at each stop. The $150 million investment was projected to save the company approximately $20 million per year.

Netflix also used technology to improve their value proposition. Seeing that people were unhappy about incurring late fees with movie rentals, Netflix created a mail-in model without late fees. Then, when cloud technology developed, Netflix did something courageous. They disrupted themselves, switching from their successful mail-in DVD model to on-demand, unlimited streaming. They were able to keep innovating because they did not grow complacent. Instead, Netflix kept asking: "What would make our customer experience better?" Like FedEx, Netflix used available technology to solve real pain points.

Generative AI and SMBs

The companies mentioned above are larger businesses with plentiful resources to devote to experimenting with new technology. When one of their projects fails, the company suffers a minor setback. But when an SMB devotes the same amount of time and resources to an unfruitful project, the stakes are significantly higher. If a failed project means grave financial distress for an SMB, where does that leave smaller companies? Emerging upstarts actually have a huge advantage when it comes to using new technology. While they may have fewer resources, they are often hungrier, more nimble, and able to spot—and capitalize—on innovative solutions first.

Twenty years from now, no one will remember half of the generative AI science projects that we are seeing today. But if SMB leaders work backwards—beginning with customer pain points and working to solve them with the technology that makes the most sense—they will end up creating brilliant, lasting solutions.

SMBS SHOULD ASK

What does generative AI mean for my business? How will generative AI affect my company's existing value proposition? How will it affect my customers' value proposition—and when will we see its effects? How will generative AI change my business model? And is my organization ready for these changes?

A look at the numbers

According to research from McKinsey, which was published in June 2023, the potential impact of generative AI on the global economy is high. McKinsey estimates that new generative AI cases are projected to rake in between $2.6 and $4.4 trillion. Meanwhile, AI as a whole—which includes advanced analytics, traditional ML, and deep ML—is estimated to bring in a whopping $11 trillion to $17.7 trillion total.

The disparity between the impact of AI and generative AI is huge—but, most people are excited about capturing their share of the latter market because generative AI is newer and shinier. While It's important that users experiment with generative AI to see how it can help their business, they shouldn't overlook AI as a whole. At the end of the day, no one wants to miss out on their chance to capture a large and lucrative share of the AI market.

MCKINSEY ESTIMATES

UP TO

$4.4tn

could be made from new generative AI cases

UP TO

$17.7tn

expected to be brought in by AI as a whole

Moving forward with intention

When thinking about generative AI, it is useful to return to the old parable of the tortoise and the hare. The fable's lesson—steady and purposeful vs fast and chaotic wins the race—can be applied to the question of Generative AI, as well.

Generative AI has the ability to transform how we do business, how we work, how we serve our customers; it is no wonder that it has everyone excited. Take ChatGPT, for instance. This tool became popular—and dominated the media cycle—because of its accessibility and speed. Users can access it from home with only their laptop or phone. And while that in itself is exciting, it hasn't always been clear exactly how it can be used to best help business growth.

Now, ignoring generative AI is not the solution. It is a profoundly important business tool with unknown potential and now is the time to experiment with it and see how it can help your company grow.

Remember, the internet and the cloud have helped certain companies solve major problems. And the introduction of generative AI holds the same potential. But if you are an SMB leader only having a conversation about ChatGPT, you are likely having the wrong conversation. Instead, ignore the hype and devote your energy to solving long-term problems with tools you know and understand. Companies that capture the largest share of the market, will be the ones who create meaningful use cases that solve real problems and *deliver better value to their customers.*

Generating “real” value with AI and generative AI

You’ve answered the big strategic questions about your company’s value proposition and business models—now what? These three questions will help SMBs reveal the potential impact AI and generative AI initiatives can have on their business:

1. **What (and for Whom)?** What problem are we trying to solve and for whom? What are the specific pain points? How is the new process/experience better? What are the measurable benefits?
2. **How?** Should we use AI, ML, or generative AI to solve this problem? Why? Is this the best way to solve it? Could we solve it another way? What are the benefits/drawbacks of these alternatives?
3. **When?** How should we prioritize and fund the initiative (and alternative approaches)? With a transformational technology like AI, one must carefully evaluate “ease of execution” along with ROI. For example, how feasible is this initiative in terms of the data and tools required or resources/skills required? Be careful to not simply embark on the highest ROI projects, some may have a very high level of difficulty. Similarly, don’t ignore modest ROI projects that are low-hanging fruit…they may provide valuable learnings and confidence to the team.

aws small and medium business

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About Amazon Web Services (AWS)

Since 2006, Amazon Web Services has been the world's most comprehensive and broadly adopted cloud. AWS has been continually expanding its services to support virtually any workload, and it now has more than 240 fully featured services for compute, storage, databases, networking, analytics, machine learning and artificial intelligence (AI), Internet of Things (IoT), mobile, security, hybrid, virtual and augmented reality (VR and AR), media, and application development, deployment, and management from 102 Availability Zones within 32 geographic regions, with announced plans for 12 more Availability Zones and four more AWS Regions in Canada, Malaysia, New Zealand, and Thailand. Millions of customers—including the fastest-growing startups, largest enterprises, and leading government agencies—trust AWS to power their infrastructure, become more agile, and lower costs.

To learn more about AWS, visit **aws.amazon.com/smart-business**